

6<sup>th</sup> Congress on  
**Neurobiology,  
Psychopharmacology  
& Treatment Guidance**

ICNP2019



ΨΥΧΗΣ ΙΑΤΡΕΙΟΝ

**June 27<sup>th</sup>-30<sup>th</sup>, 2019**

Athos Palace Hotel

**Chalkidiki, Greece**



INTERNATIONAL SOCIETY of NEUROBIOLOGY  
& PSYCHOPHARMACOLOGY

Co-organized by



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Under the auspices of:



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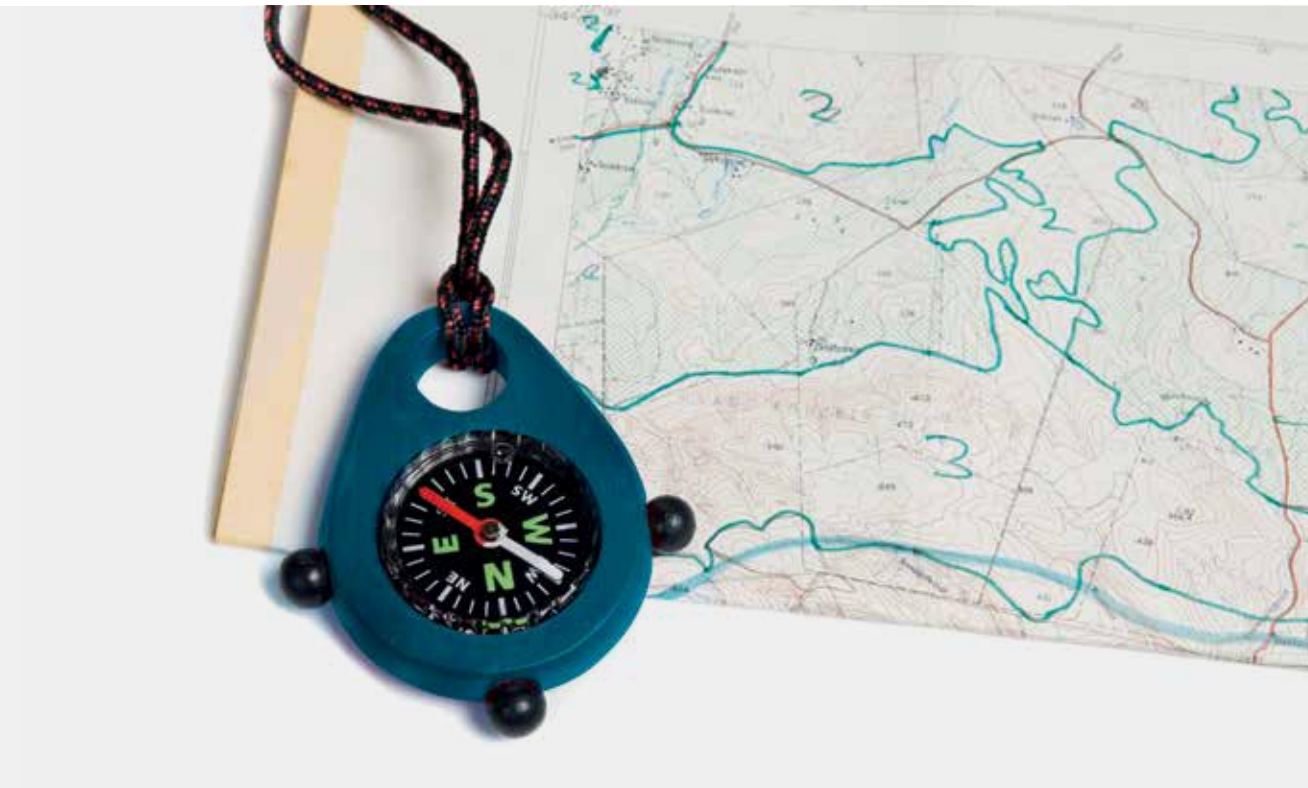


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263 MG/PF. SYR	BTx1PF.SYRx263 MG+2ΒΕΛΑΟΝΕΣ	681,44 €
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Dear colleagues,

It's a great pleasure to invite you to the **6<sup>th</sup> Congress on Neurobiology, Psychopharmacology and Treatment Guidance** which will take place in Chalkidiki, Greece, on June 27-30, 2019.

After the great success of the 5<sup>th</sup> Congress which was held in 2017, this sixth Congress again aims at being valuable for the clinicians who fight daily in the front line for the treatment of real-world patients. In this frame, our goal is to provide a global and comprehensive update of the newest developments in Psychiatry and the allied sciences in a manner, which will be both focused and enriched. The rule is to avoid content-free eloquence and authority and to face hard questions on the base of research findings.

Many worldwide experts have been invited to share with us their knowledge and experience once again with the support and guidance of the European Psychiatric Association, the World Psychiatric Association and under the Auspices of the School of Medicine, Aristotle University of Thessaloniki.

During these difficult circumstances for the world economy, advanced education and training is the only way to the future. Teaching clinical usefulness and application of new knowledge and informed treatment with psychopharmacological agents in a truly multidisciplinary approach is the central axis of the meeting and although the congress will embrace high tech research concerning psychopathology, new treatment methods, genetics and molecular biology, it also aims on putting the emphasis on the human factor, both the therapist and the patient.

Apart from the humanistic tradition of Psychiatry and life sciences, the continuous and unconditional investment on the high level training of professionals and education of patients and their families, emerged as a significant challenge during the last few decades. Medical scientists and public health policy makers are increasingly concerned that the scientific discoveries are failing to be translated efficiently into tangible human benefit. Today, in an all the more complex and technologically advanced environment, the human factor emerges again as the most valuable one, the factor that determines the final outcome.

This **6<sup>th</sup> ICNP** specifically focuses on the ultimate aim: that is to empower and eventually free patients and their families from the burden of mental disease and fighting for full remission and functional rehabilitation. It also includes the distinguished aim to spread high-level training to younger generations by including symposia organized by medical students and psychiatric residents from around the world.

As hosts and organizers, we shall spare no effort in making your participation scientifically rewarding and meaningful and your stay in Chalkidiki as enjoyable as possible.

**Konstantinos N. Fountoulakis**

Professor of Psychiatry,

Aristotle University of Thessaloniki, Greece

Chair of the 6<sup>th</sup> International Congress on Neurobiology,  
Psychopharmacology & Treatment Guidance - ICNP2019

Chair, WPA Section on Pharmacopsychiatry and Section on Evidence-Based Psychiatry



The Abbey Library of Saint Gall is a significant medieval monastic library located in St. Gall, Switzerland. In 1983 the library together with the Abbey of St. Gall were designated a World Heritage Site, as “a perfect example of a great Carolingian monastery”.



The library was founded by Saint Othmar, founder of the Abbey of St. Gall. During a fire in 937, the Abbey was destroyed, but the library remained intact. The library hall, designed by the architect Peter Thumb in a Rococo style, was constructed between 1758-67.



A Greek inscription above the entrance door, ΨΥΧΗΣ ΙΑΤΡΕΙΟΝ, translates as "clinic of the soul".

The library collection is the oldest in Switzerland, and one of earliest and most important monastic libraries in the world. The library holds almost 160,000 volumes, with most available for public use. In addition to older printed books, the collection includes 1650 incunabula (books printed before 1500), and 2100

manuscripts dating back to the 8<sup>th</sup> through 15<sup>th</sup> centuries; among the most notable of the latter are items of Irish, Carolingian, and Ottonian production. These codices are held inside glass cases, each of which is topped by a carved cherub offering a visual clue as to the contents of the shelves below; for instance, the case of astronomy-related materials bears a cherub observing the books through a telescope.[4] Books published before 1900 are to be read in a special reading room.[5] The manuscript B of the Nibelungenlied is kept here.

A virtual library has been created to provide broader access to the manuscripts: Codices Electronici Sangallenses. Currently, more than 400 manuscripts are available in digital format.



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## Main Topics of the Congress

The main topics of the congress are the following:

- Animal Models
- Anxiety disorders
- Basic Neuroscience
- Behavioural disorders
- Bioethics
- Biological rhythms
- Biomedical Technology
- Childhood and adolescence disorders
- Clinical Psychiatry
- Clinical Psychopharmacology
- Dementia
- Drug development
- Eating disorders
- Evidence-based psychiatry
- Experimental Psychopharmacology
- Forensic Psychiatry
- Health Economics and Quality of Life
- Information technology and neuroscience
- Learning abilities and disabilities
- Major disaster and mental health
- Memory and cognitive disorders
- Methodology in Psychiatric research
- Molecular Psychiatry
- Mood disorders
- Neural Networks
- Neuroimaging
- Neuropsychology
- Neurophysiology
- Neuropsychobiology
- Neuropsychoenocrinology
- Non pharmacological biological therapies
- Nosology and classification
- Pharmacogenetics
- Psychiatric Genetics
- Psychogeriatrics
- Psychoimmunology
- Psychometrics
- Psychopharmacology
- Psychophysiology
- Psychosocial and other non-biological therapies and interventions
- Schizophrenia and other psychotic disorders
- Sexual behaviour and disorders
- Sleep
- Social Psychiatry
- Stress
- Substance abuse and dependence
- Suicide
- Transcultural Psychiatry
- Treatment guidelines
- Violence



**Honorary Chair of the Congress:** Bert Sakmann (Germany)  
*Nobel Laureate in Physiology or Medicine 1991*

**Executive Chair of the Congress:** Konstantinos N. Fountoulakis (Greece)

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Dr. Judd was one of a generation of prominent psychiatrists who came to believe that the work of Freud and Jung, on which they had trained, was more art than science. Biology and genetics were the way forward, they argued, and Dr. Judd was in the right place at the right time to help make that happen. His work as head of the NIMH helped put in place the so-called Decade of the Brain, an ambitious research agenda focused on brain biology as the key to understanding and treating psychiatric problems.

In 1987, after helping to build the U.C. San Diego psychiatry department into a leader in research, he was chosen to take over the National Institute of Mental Health in Bethesda, Md., the world's largest source of funding for brain and behavior research.

Lewis Lund Judd was born in Los Angeles on Feb. 10, 1930, the first of two sons of Dr. George Ezra Judd, an obstetrician-gynecologist, and Emmeline (Lund) Judd, a homemaker. His younger brother, Howard, also a doctor, died in 2007. Besides his wife, he is survived by three daughters - Stephanie Judd, a psychologist; Catherine Judd, a professor of English at the University of Miami; and Allison Fee, an occupational therapist - and five grandchildren.

Dr. Judd entered the University of Utah, where he completed a degree in psychology in 1954. He studied medicine at George Washington University and at the University of California, Los Angeles, finishing his medical degree in 1958. He completed his internship and a residency in psychiatry at U.C.L.A. After a stint in the military as base psychiatrist at Griffiss Air Force Base in Rome, N.Y., he joined the U.C.L.A. psychiatry faculty.

In 1970, Dr. Arnold J. Mandell, the founding chairman of the psychiatry department at the University of California, San Diego, recruited Dr. Judd. The two built the department from the ground up, making it a leader in federal research funding. It was while consulting on an outside program to help adolescents with drug problems that Dr. Judd met a social worker, Patricia Hoffman, whom he married.

Dr. Judd became department chairman in 1977 and, after three years as head of the N.I.M.H., returned to U.C. San Diego. He remained there for 36 years and became a recognizable public face in brain science. He also maintained a small clinical practice, specializing in treating severe depression.

When he retired as chairman in 2013, Dr. Judd was asked by a university press officer about his legacy.

*"The thing I'm most proud of is how psychiatry is becoming increasingly recognized as a real biomedical science," he replied. "It used to be disdained. A broken mind wasn't as real as a broken bone. We lionized physical medicine, but dismissed brain biology, which has an enormous effect upon not just our behavior, but our bodies as well."*





# IN MEMORIAM



**Lewis Judd  
(1930 - 2018)**

Per Bech became specialist in psychiatry in 1978 and was appointed as a professor of clinical psychiatry at Odense University, Denmark, in 1991. Shortly thereafter, he moved on to Mental Health Centre North Zealand where he established the psychiatric Research Unit. In 2008, he was called by Copenhagen University to take on as professor of Clinical Psychometrics, a discipline that he himself had developed. Per Bech continued his extensive research activities as a professor until his death.

Per Bech's research mainly focused on the development and validation of psychiatric rating scales. In 1981, he defended his thesis: 'Rating Scales for Affective Disorders: Their Validity and Consistency' with Max Hamilton as opponent. Later, he published a comprehensive work titled: 'Rating Scales for Psychopathology, Health Status and Quality of Life' (Springer-Verlag) followed by a number of books on clinical psychometrics. For more than 50 years, he belonged to the forefront of psychiatric research due to his continued contribution to the psychometric field. Throughout his career, he was also very interested in psychopharmacology and in new treatment modalities for depression.

Per Bech was elected as a President of European Psychiatric Association (EPA - at that time AEP) in 1993 and was responsible for the first EPA congress in Copenhagen in 1994 as well as the congress in Copenhagen in 1998. During the period 1987-1991, he was Secretary General of the European College of Neuropsychopharmacology (ECNP). He was active in the Danish University Antidepressant Group (DUAG), of which he was the current chairman. In 2014, he was made an honorary member of the Danish Psychiatric Society for his long-standing contribution to Danish psychiatry.

In the period from 1995 to 2005 at Mental Health Centre North Zealand Per Bech led one of WHO's most important European Collaboration Centers, which focused on depression, stress, quality of life, psychometrics, and diagnostic assessments. He created and disseminated one of WHO's most widely used assessment tools, the WHO-5 Wellbeing Scale, and was responsible for much of its scientific validation.





# IN MEMORIAM



**Per Bech  
(1942-2018)**

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1. ΕΟΦ (Εθνικός Οργανισμός Φαρμάκων)

  
ANGELINI

# Trittico®

## ΠΕΡΙΛΗΨΗ ΤΩΝ ΧΑΡΑΚΤΗΡΙΣΤΙΚΩΝ ΤΟΥ ΠΡΟΪΟΝΤΟΣ

### 1. ΟΝΟΜΑΣΙΑ ΤΟΥ ΦΑΡΜΑΚΕΥΤΙΚΟΥ ΠΡΟΪΟΝΤΟΣ

TRITTICO 150 mg επικαλυμμένα με λεπτό υμένιο δισκία παρατεταμένης αποδέσμευσης

TRITTICO 300 mg επικαλυμμένα με λεπτό υμένιο δισκία παρατεταμένης αποδέσμευσης

### 2. ΠΟΙΟΤΙΚΗ ΚΑΙ ΠΟΣΟΤΙΚΗ ΣΥΝΘΕΣΗ

TRITTICO 150 mg επικαλυμμένα με λεπτό υμένιο δισκία παρατεταμένης αποδέσμευσης. Το κάθε δισκίο περιέχει 150 mg trazodone hydrochloride που ισοδυναμεί με 136,6 mg trazodone. TRITTICO 300 mg επικαλυμμένα με λεπτό υμένιο δισκία παρατεταμένης αποδέσμευσης. Το κάθε δισκίο περιέχει 300 mg trazodone hydrochloride που ισοδυναμεί με 273,2 mg trazodone. Για πλήρη κατάλογον των εκδόσεων βλέπε παράγραφο 6.1.

### 3. ΦΑΡΜΑΚΟΤΕΧΝΙΚΗ ΜΟΡΦΗ

Τα δισκία παρατεταμένης αποδέσμευσης μπορούν να διαρραθούν σε δύο ίσα μέρη

### 4. ΚΛΙΝΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ

#### 4.1 Θεραπευτικές ενδείξεις:

Καταθλιπτικές διαταραχές ή η χρόνια άγχος

**4.2 Δοσολογία και τρόπος χορήγησης:** Το φάρμακο πρέπει να χρησιμοποιείται μόνο από ενήλικες ασθενείς. Τα δισκία μπορούν να διαρραθούν, ώστε να επιτραπεί η προοδευτική αύξηση των δόσεων. Η δόση έναρξης 150 mg/ημέρα μπορεί να αυξηθεί από 75 mg/ημέρα (μισό δισκίο των 150 mg) κάθε τρεις ημέρες (π.χ. να γίνει 225 mg/ημέρα δόση την τεταρτη ημέρα της θεραπείας) μέχρι τα 300 mg/ημέρα δόση. Σε ορισμένες περιπτώσεις η αρχική δόση μπορεί να μειωθεί στα 75 mg/ημέρα (μισό δισκίο των 150 mg) με σταδιακή αύξηση του 75 mg/ημέρα (μισό δισκίο των 150 mg) κάθε τρεις μερες μέχρι τα 300 mg/ημέρα. Τα δισκία πρέπει να λαμβάνονται με άδειο στομάχι μαζί με ένα ποτήρι νερό, σε εφάπαξ δόση το βράδυ ή πριν τη διακοπή της τροφής. Τα δισκία δεν πρέπει να σπάζονται ή να μασούνται ώστε να εξασφαλιστεί η παρατεταμένη τους αποδέσμευση.

**Ηλικιακά:** Για τους πολύ ηλικιωμένους ή αδύναμους ασθενείς, η συνιστώμενη αρχική δόση είναι 75 mg την ημέρα, χορηγούμενη σε εφάπαξ δόση τη νύκτα. Αυτή η δόση μπορεί να αυξηθεί, όπως περιγράφεται παραπάνω, κατά απο παρακολούθηση, ανάλογα με την ανοχή και την αποτελεσματικότητα. **Παιδιά:** Η τραζοδόνη δεν συνιστάται για χρήση σε παιδιά ηλικίας κάτω των 18 ετών, λόγω της ελλείψεως δεδομένων ασφαλείας.

**Ηπατική ανεπάρκεια:** Η τραζοδόνη υποκείται σε εκτενή μεταβολισμό στο ήπαρ, βλέπε παράγραφο 5.2 και έχει επίσης συσχετισθεί με ηπατοτοξικότητα, βλέπε παραγράφους 4.4 και 4.8. Επομένως, απαιτείται προσοχή κατά τη συνταγογράφηση της σε ασθενείς με ηπατική δυσλειτουργία, ιδιαίτερα σε περιπτώσεις σοβαρής ηπατικής δυσλειτουργίας. Μπορεί να εξεταστεί το ενδεχόμενο της περιοδικής παρακολούθησης της ηπατικής λειτουργίας.

**Νεφρική δυσλειτουργία:** Συνήθως δεν απαιτείται προσαρμογή της δοσολογίας, αλλά απαιτείται προσοχή κατά τη συνταγογράφηση σε ασθενείς με βραχιά μορφή νεφρική δυσλειτουργία (βλέπε επίσης παράγραφο 4.4 και 6.2).

**3.3 Αντενδείξεις:** Γνωστή υπερευαίσθησία στην τραζοδόνη και σε οποιοδήποτε από τα έκδοχα. Γενικά, το Trittico αντενδείκνυται κατά την κύηση και τη γαλουχία (βλέπε παράγραφο 4.6).

Δηλητηριώδη από οινόμητρο και από τυφνίτιδα. **05** εμφάνιση του μοκαρόδιου.

**4.4 Ειδικές προειδοποιήσεις και προφυλάξεις κατά τη χρήση:** Χρήση σε παιδιά και εφήβους κάτω των 18 ετών. Η τραζοδόνη δεν πρέπει να χρησιμοποιείται σε παιδιά και εφήβους ηλικίας κάτω των 18 ετών. Σε κλινική μελέτη σε παιδιά και εφήβους που υποβάλλονται συχνότερα σε θεραπεία με αντικαταθλιπτικά απ' ό,τι με εικονικό φάρμακο παρατηρήθηκαν αυτονόητες συμπεριφορές (απόπειρα αυτονόητες και σχεδιασμός αυτονόητες) και εθιμοκτορία (ουσιαστικά επιθετικότητα, εναντιωτική συμπεριφορά και θυμός. Επιπλέον, δεν υπάρχουν μακροχρόνια δεδομένα ασφαλείας σε παιδιά και εφήβους όσον αφορά την αύξηση, την ωρίμανση και την γνωστική και συμπεριφορική ανάπτυξη.

**ΑΥΤΟΚΤΟΝΙΑ/ ΑΥΤΟΚΤΟΝΙΕΣ ΖΗΤΗΣΕΙΣ Η ΚΛΙΝΙΚΗ ΕΠΙΠΛΕΞΙΜΗ Η** κατάσταση σχετίζεται με αυξημένο κίνδυνο αυτοκτονικών σκέψεων, αυτοτραυματισμού και αυτονόητων (επισοδία, σχετιζόμενα με αυτονόητο). Ο κίνδυνος αυτός παραμένει έως ότου επιτευχθεί σημαντική ύφεση. Καθώς μπορεί να μη σημειωθεί βελτίωση κατά τη διάρκεια των πρώτων λίγων εβδομάδων της θεραπείας ή περισσότερο, οι ασθενείς θα πρέπει να παρακολουθούνται στενά, έως ότου επιτευχθεί η βελτίωση αυτή. Κατά τη γενική κλινική εμπειρία, ο κίνδυνος αυτονόητων μπορεί να αυξηθεί κατά τα πρώιμα στάδια της ανάρρωσης. Ασθενείς με ιστορικό επισοδίων σχετιζόμενων με αυτονόητο, ή εκείνοι που παρουσιάζουν σημαντικού βαθμού αυτονόητο ιδεασμό πριν από την έναρξη της θεραπείας είναι γνωστό ότι διατρέχουν μεγαλύτερο κίνδυνο αυτονόητων σκέψεων ή αποπειρών αυτονόητων, και γι' αυτό θα πρέπει να παρακολουθούνται προσεκτικά κατά τη διάρκεια της θεραπείας. Μια μετα-ανάλυση ελεγχόμενων με εικονικό φάρμακο κλινικών δοκιμών με αντικαταθλιπτικά φάρμακα σε ενήλικες με ψυχιατρικές διαταραχές έδειξε αυξημένο κίνδυνο αυτονόητων συμπεριφορών με αντικαταθλιπτικά σε σύγκριση με το εικονικό φάρμακο σε ασθενείς ηλικίας κάτω των 25 ετών. Η φαρμακευτική αγωγή (ιδιαίτερα στην αρχή της θεραπείας και μετά από αλλαγές στη δοσολογία πρέπει να συνδυάζεται με στενή παρακολούθηση των ασθενών και ιδιαίτερα στην αρχή της χορήγησης. Οι ασθενείς (και αυτοί που φροντίζουν τους ασθενείς) θα πρέπει να είναι σε επαρκή συνάρτηση σχετικά με την ανάγκη παρακολούθησης για οποιαδήποτε κλινική επίδειξη, αυτονόητη συμπεριφορά ή σκέψεις και οποιαδήποτε ασυνήθιστες αλλαγές στην συμπεριφορά και να αναζητήσουν ιατρική συμβουλή άμεσα εάν εμφανισθούν αυτά τα συμπτώματα.

Για να ελαχιστοποιηθεί ο εν δυνάμει κίνδυνος απόπειρας αυτονόητων, ιδιαίτερα κατά την έναρξη της θεραπείας, σε κάθε περίπτωση πρέπει να συνταγογραφούνται περιορισμένες, μόνο, ποσότητες τραζοδόνης.

Σε ασθενείς με τις παρακάτω καταστάσεις συνιστάται η προσεκτική χορήγηση της δόσης και η τακτική παρακολούθηση:

- Σε ασθενείς με επιληψία, πρέπει να αποφεύγονται οι ιδιαίτερα αφιάνετες αυξήσεις ή μειώσεις της δοσολογίας
- Σε ασθενείς με ηπατική ή νεφρική δυσλειτουργία, ιδιαίτερα αν είναι σοβαρής μορφής
- Σε ασθενείς με καρδιακές ή άλλες ασταθι σπλήνη, διαταραχές της αιγμοστάσης, ή κολποκοιλιακό αποκλεισμό διαφόρων βαθμών, πρόσφατο εμφάνισμα του μοκαρόδιου
- Σε ασθενείς με υπερβρογχίτιδα
- Σε ασθενείς με διαταραχές της όρασης, όπως υπερωπία του προστάτη, αν και δεν αναμένονται προβλήματα καθώς η αντιχολινεργική δράση της τραζοδόνης είναι μόνο ήπια.
- Σε ασθενείς με οξύ γλαύκωμα στενής γωνίας, αυξημένη ενδοφθάλμια πίεση, αν και δεν αναμένονται σημαντικές αλλαγές, λόγω της ήπιας αντιχολινεργικής δράσης της τραζοδόνης.

Αν παρατηρηθεί ίκτερος σε κάποιον ασθενή, η θεραπεία με τραζοδόνη πρέπει να διακοπεί. Η χορήγηση αντικαταθλιπτικών σε ασθενείς με ψυχοφρένεια ή άλλες ψυχιατρικές διαταραχές μπορεί να οδηγήσει σε επίδειξη των συμπτωμάτων της ψυχοφρένειας. Μπορεί να ενταθούν οι παρανοητικές σκέψεις. Κατά τη διάρκεια της θεραπείας με τραζοδόνη, ο ασθενής μπορεί να μεταβεί από φάση κατάθλιψης σε φάση μανίας - η καταθλιπτική ψύχωση να μετατραπεί σε μανιακή φάση. Στην περίπτωση αυτή, η χορήγηση της τραζοδόνης πρέπει να διακοπεί.

Στην περίπτωση ταυτόχρονης χρήσης άλλων σεροτονινοειδών δρώντων ουσιών, όπως είναι τα αντικαταθλιπτικά (π.χ. τρικυκλικά αντικαταθλιπτικά, SSRIs, SNRIs, και αναστολείς της MAO) και ψευδοαλκαλίων έχουν περιγραφεί αλληλεπιδράσεις όπως σεροτονινοειδές σύνδρομο/ κακή/σθενή νευροληπτική σύνδρομο. Σε περιπτώσεις συγχρόνης χρήσης με νευροληπτικά, έχουν αναφερθεί κακή/σθενή νευροληπτική σύνδρομο με θανατηφόρο έκβαση. Το σύνδρομο αποτελεί γνωστή ανεπιθύμητη αντίδραση στα φάρμακα αυτά. Για περισσότερες πληροφορίες, βλέπε Παράγραφο 4.5 και 4.8. Δεδομένου ότι η ακοκκινοκυτταραιμία μπορεί να εκδηλωθεί κλινικά με γριπώδη συμπτώματα, πόνο του λαιμού και πυρετό, στις περιπτώσεις αυτές συνιστάται να γίνει αιματολογικός έλεγχος.

Σε ασθενείς, που λαμβάνουν τραζοδόνη, έχει αναφερθεί αντίσταση, συμπεριλαμβανομένης της ορθοστατικής υπότασης, και συχνότητα. Η ταυτόχρονη χορήγηση αντιπυρετικών φαρμάκων με την τραζοδόνη μπορεί να απαιτήσει τη μείωση της δόσης του αντιπυρετικού φαρμάκου.

Οι ηλικιωμένοι ασθενείς συχνά παρουσιάζουν μεγαλύτερη ευαισθησία στα αντικαταθλιπτικά, εκδηλώνοντας, ιδιαίτερα, ορθοστατική υπόταση και άλλες αντιχολινεργικές ενδείξεις. Μετά τη θεραπεία με τραζοδόνη, ιδιαίτερα για παρατεταμένο χρονικό διάστημα, συνιστάται η σταδιακή

μείωση της δόσης, μέχρι τη διακοπή της χορήγησης, για να ελαχιστοποιηθεί η εκδήλωση των συμπτωμάτων σεροτονινοειδούς συνδρόμου, δηλαδή ναυτία, κεφαλαλγία και αίσθημα καούρας.

Δεν υπάρχουν δεδομένα ότι η υδροχλωρική τραζοδόνη προκαλεί εθισμό. Όπως και με άλλα αντικαταθλιπτικά φάρμακα, πολύ σπάνια, με την τραζοδόνη έχουν αναφερθεί περιστατικά παράτασης του διαστήματος QT. Απαιτείται προσοχή κατά τη συνταγογράφηση της τραζοδόνης παράλληλα με φαρμακευτικά προϊόντα, τα οποία είναι γνωστό ότι παρατείνουν το διάστημα QT. Η τραζοδόνη πρέπει να χρησιμοποιείται με προσοχή σε ασθενείς με γνωστή καρδιαγγειακή νόσο συμπεριλαμβανομένων των νόσων, που σχετίζονται με παράταση του διαστήματος QT.

Ισχυροί αναστολείς του CYP3A4 μπορεί να προκαλέσουν αυξημένες των επιπέδων τραζοδόνης στον ορό. Για περισσότερες πληροφορίες, βλέπε Παράγραφο 4.5.

Όπως και με άλλα φάρμακα, με αδρεναλινική δράση, η τραζοδόνη πολύ σπάνια συσχετίζεται με πριεπισμό. Αυτός μπορεί να αντιμετωπιστεί με ενδοσπογγιακή ένεση α-αδρενεργικού παράγοντος, όπως είναι η αδρεναλίνη ή η μετοπρολόλη. Εντούτοις, υπάρχουν αναφορές επαγόμενου από την τραζοδόνη πριεπισμού, για τον οποίο χρειασθείχε χειρουργική επέμβαση σε μόνιμη σεξουαλική δυσλειτουργία. Ασθενείς, που αντιστέκονται την υποτιθέμενη αυτή ανεπιθύμητη αντίδραση πρέπει να διακόψουν τη θεραπεία με τραζοδόνη αμέσως.

**4.5 Αλληλεπιδράσεις με άλλα φαρμακευτικά προϊόντα και άλλες μορφές αλληλεπιδράσεις**  
**Γενικά:** Οι κατασταλτικές επιδράσεις των αντιψυχωσικών, υπνωτικών, κατασταλτικών, αγχωλυτικών και αντισπασμωδικών φαρμάκων μπορεί να ενταθούν. Στις περιπτώσεις αυτές, συνιστάται η μείωση της δοσολογίας.

Ο μεταβολισμός των αντικαταθλιπτικών επιταχύνεται λόγω των επιδράσεων των από το στόματος αντιπυρετικών, της φαινοϋστίνης, της καρμαζοπιδίνης και του βαρβιτουρικού επί λειτουργία του ήπατος. Ο μεταβολισμός των αντικαταθλιπτικών αναστέλλεται από τη μεπιδηίνη και ορισμένα άλλα αντιψυχωσικά.

**Αναστολείς του CYP3A4:** In vitro μελέτες μεταβολισμού στον άνθρωπο καταδεικνύουν ότι υπάρχει η δυνατότητα φαρμακευτικής αλληλεπιδράσεως όταν η τραζοδόνη χορηγείται ταυτόχρονα με ισχυρούς αναστολείς του CYP3A4, όπως η ερυθρομυκίνη, η κετοκοναζόλη, η πρακοναζόλη, η ριτοναβίρη, η νιδαβίρη και η νεφαζοδόνη. Είναι πιθανόν, ισχυροί αναστολείς του CYP3A4 να οδηγούν σε σημαντική αύξηση των συγκεντρώσεων τραζοδόνης στο πλάσμα. Σε in-vivo μελέτες σε υγιείς εθελοντές, έχει επβεβαιωθεί ότι η δόση 200 mg BID ριτοναβίρης αύξησε τα επίπεδα πλάσματος της τραζοδόνης κατά περισσότερο από δύο φορές, με αποτέλεσμα ναύα, συχνότητα και ύπνο. Εάν η τραζοδόνη χρησιμοποιείται ταυτόχρονα με ισχυρό αναστολέα του CYP3A4, πρέπει να εξετασθεί το ενδεχόμενο χορήγησης χαμηλότερης δόσης τραζοδόνης. Εντούτοις, η συγχρόνηση της τραζοδόνης και ισχυρών αναστολέων του CYP3A4 πρέπει να αποφεύγεται, όταν είναι δυνατόν.

**Καρδιαγγειακή:** Η συγχρόνηση οδηγεί σε μειωμένες συγκεντρώσεις της τραζοδόνης στο πλάσμα. Η συγχρόνηση της καρμαζοπιδίνης σε δόση 400 mg ημερησίως οδηγεί σε μείωση της συγκεντρώσεως της τραζοδόνης και του ενεργού μεταβολίτη της, το η-μυλοφουραουλιπτερίνης στο πλάσμα κατά 76% και 60%, αντίστοιχα. Οι ασθενείς πρέπει να παρακολουθούνται στενά για να διαπιστωθεί εάν απαιτείται αύξηση της δόσης της τραζοδόνης.

**Τοξικολογικά αντικαταθλιπτικά:** Η ταυτόχρονη χορήγηση πρέπει να αποφεύγεται λόγω του κινδύνου αλληλεπιδράσεως. Πρέπει να υπάρχει επαγρυπνήση για τυχόν εκδήλωση σεροτονινοειδούς συνδρόμου και καρδιαγγειακών παρενεργιών.

**Φλουοξετίνη:** Με το συνδυασμό της τραζοδόνης με τη φλουοξετίνη, έναν αναστολέα του CYP1A2/2D6, έχουν αναφερθεί σπάνια περιστατικά αυξημένων επιπέδων τραζοδόνης πλάσματος και ανεπιθύμητων ενεργειών. Ο μηχανισμός που οδηγεί στη φαρμακοκίνηση αυτή αλληλεπιδράση δεν είναι πλήρως κατανοητός. Δεν μπορούσε να αποδειχθεί το ενδεχόμενο φαρμακοδυναμικής αλληλεπιδράσεως (σεροτονινοειδούς συνδρόμου).

**Ανιστολείς της μοναμίνης οξειδάσης:** Ενότιε, έχει αναφερθεί η πιθανή αλληλεπιδράση με τους αναστολείς της μοναμίνης οξειδάσης. Αν και ορισμένα κλινικά χορηγούν και τα δύο φάρμακα ταυτόχρονα, η χρήση της τραζοδόνης ταυτόχρονα με τους αναστολείς της MAO, ή εντός δύο εβδομάδων από τη διακοπή της χορήγησης των ουσιών αυτών, δεν συνιστάται. Επίσης, δεν συνιστάται η χορήγηση αναστολέων της MAO εντός μιας εβδομάδας από τη διακοπή της θεραπείας με τραζοδόνη.

**Φαινοθειαίνες:** Σε περίπτωση ταυτόχρονης χρήσης φαινοθειαίνων, όπως η χλωροπρομαζίνη, η φλουοφαινιζίνη, ή λεβοπρομαζίνη, η φεροφαινιζίνη παρατηρήθηκε σοβαρή ορθοστατική υπόταση.

**Ανασπαστικά μυοχαλαρωτικά:** Η υδροχλωρική τραζοδόνη μπορεί να ενταχθεί σε επιδράσεις των μυοχαλαρωτικών και των πτηνικών αναισθησίων, και, στις περιπτώσεις αυτές, απαιτείται προσοχή.

**Αλκοόλ:** Η τραζοδόνη εντείνει τις κατασταλτικές επιδράσεις του αλκοόλ. Το αλκοόλ πρέπει να αποφεύγεται κατά τη διάρκεια της θεραπείας με τραζοδόνη.

**Λεβοϋστίνη:** Τα αντικαταθλιπτικά μπορούν να επιταχύνουν το μεταβολισμό της λεβοϋστίνης. Η ταυτόχρονη χρήση της τραζοδόνης με φάρμακα, τα οποία είναι γνωστό ότι παρατείνουν το διάστημα QT μπορεί να αυξήσει τον κίνδυνο καρδιακών αρρυθμιών, συμπεριλαμβανομένης της κοιλιακής ταχυκαρδίας δικης ριπιδίου. Απαιτείται προσοχή όταν τα φάρμακα αυτά συγχρόνηγονται με την τραζοδόνη.

Δεδομένου ότι η τραζοδόνη είναι είναι πολύ ασθενής αναστολέας της επαναορρολήσεως της νοραδρεναλίνης και δεν τροποποιεί την ανταπόκριση της αρτηριακής πίεσης στην τυφαινίνη, δεν είναι πιθανόν να διαταραχθεί η υποστατική δράση των παρυσίων με τη γουανεθίνη ουσιών. Εντούτοις, μελέτες σε περισσότερους από τη τραζοδόνη μπορεί να αναστέλλει τις περισσότερες από τις οξείες δράσεις της κλονιδίνης. Σε περίπτωση άλλων τύπων αντιπυρετικών φαρμάκων, πρέπει να ληφθεί υπόψη η πιθανότητα ενίσχυσης της δράσης, αν και δεν έχουν αναφερθεί κλινικές αλληλεπιδράσεις. Οι ανεπιθύμητες ενέργειες μπορεί να είναι συχνότερες όταν η τραζοδόνη συγχρόνηται με σεκασίματα, που περιέχουν Hyphenicum perforatum.

Σε ασθενείς που λαμβάνουν ταυτόχρονα τραζοδόνη και βαρφαρίνη, υπάρχουν αναφορές αλλαγών του χρόνου προθρομβίνης.

Η ταυτόχρονη χρήση με τραζοδόνη μπορεί να οδηγήσει σε αυξημένα επίπεδα διαζογίνης και φαινοϋστίνης στον ορό. Στις περιπτώσεις αυτές, συνιστάται η παρακολούθηση των επιπέδων στον ορό.

### 4.6 Κύηση και γαλουχία

**Κύηση:** Δεδομένα για περιορισμένο αριθμό (<200) εκτελεσμένων κύησης πειραμάτων δείχνουν ότι η τραζοδόνη δεν ασκεί ανεπιθύμητες ενέργειες στην κύηση ή στην υγεία του εμβρύου / το νεογνού. Μέχρι σήμερα, δεν υπάρχουν σχετικά επιδημιολογικά δεδομένα. Μελέτες που έγιναν σε πειραματόζωα δεν κατέδειξαν επιβλαβείς ενέργειες στην κύηση, στην ανάπτυξη του εμβρύου ή τη μεταγενετική ανάπτυξη σε θεραπευτικές δόσεις (βλέπε παράγραφο 5.3).

Απαιτείται προσοχή κατά τη συνταγογράφηση σε εγκύους γυναίκες. Όταν η τραζοδόνη χρησιμοποιείται μέχρι τον τοκετό, τα νεογνίτηα πρέπει να παρακολουθούνται για τυχόν εκδήλωση συμπτωμάτων συνδρόμου στέρωσης.

**Γαλουχία:** Περιορισμένα δεδομένα δείχνουν ότι η απέκκριση της τραζοδόνης στο ανθρώπινο μητρικό γάλα παρατηρείται σε χαμηλά επίπεδα, αλλά τα επίπεδα του ενεργού μεταβολίτη δεν είναι γνωστά. Λόγω της ελλείψεως δεδομένων, πρέπει να ληφθεί μια απόφαση για το αν θα συνεχισθεί/ διακοπεί ο θηλασμός ή θα ανανεωθεί/ διακοπεί η θεραπεία με τραζοδόνη, λαμβάνοντας υπόψη της ωφέλειες του θηλασμού για το παιδί και την ωφέλεια της θεραπείας με τραζοδόνη για τη γυναίκα.

**4.7 Επιδράσεις στην ικανότητα οδήγησης και χειρισμού μηχανών:** Η τραζοδόνη ασκεί ήπια έως μέτρια επίδραση στην ικανότητα οδήγησης και χειρισμού μηχανών. Επιδράται η προσοχή των ασθενών ώστε να μην οδηγούν και χειρίζονται μηχανήματα έως ότου να είναι βέβαιοι ότι δεν επηρεάζονται από την υπνηλία, την καταστολή, τη ζάλη, συγγυτική κατάσταση ή θάμη δόση.

**4.8 Ανεπιθύμητες ενέργειες:** Κατά τη διάρκεια με τραζοδόνη ή σε πρώιμο στάδιο μετά τη διακοπή της θεραπείας έχουν αναφερθεί περιστατικά αυτονόητων ιδεασμού και αυτονόητων συμπεριφορών (βλέπε Παράγραφο 4.4). Τα παρακάτω συμπτώματα, ορισμένα από τα οποία αναφέρονται συχνά σε περίπτωση κατάθλιψης, που δεν υποβάλλεται σε θεραπεία, έχουν επίσης καταγραφεί σε ασθενείς, που λαμβάνουν θεραπεία με τραζοδόνη.



Κατηγορία/Οργανικό Σύστημα MeADRA	Όχι γνωστή συχνότητα (δεν μπορεί να εκτιμηθεί με βάση τα διαθέσιμα δεδομένα)
Διαταραχές του αιμοποιητικού και του λεμφικού συστήματος	Διαταραχές του αίματος (που συμπεριλαμβάνει ανοκτικοκυτταραιμία, θρομβοπενία, ημωσφαιλία λευκοπενία και αναιμία).
Διαταραχές του ανοσοποιητικού συστήματος	Αλλεργικές αντιδράσεις.
Ενδοκρινικές διαταραχές	Σύνδρομο Απρόσφορης Έκκρισης της Αντιδιουρητικής Ορμόνης.
Διαταραχές του μεταβολισμού και της θρέψης	Υπονατριαιμία <sup>1</sup> , απώλεια βάρους, ανορεξία, αυξημένη όρεξη.
Ψυχιατρικές διαταραχές	Αυτοκτονικές ιδεασές ή αυτοκτονικές συμπεριφορές <sup>2</sup> , συλλυγική κατάσταση, αυτία, αποπροσανατολισμός, μανία, άγχος, νευρική κόπωση, διέγερση (πολύ σπάνια επιδεινωμένη σε παραληρημαία, παραληρητική ιδέα, επιθετική αντίδραση, ψευδαισθήσεις, εφίλητες, γεννησιμα ορμή μειωμένη, σύνδρομο στέρησης).
Διαταραχές του νευρικού συστήματος	Σεροτονινεργικό σύνδρομο, σπασμοί, νευροληπτικό κοκλήριξ σύνδρομο, ζάλη, λιγύρος, κεφαλαλγία, υπνηλία, ανυγμία, μειωμένη εγρήγορση, τρόμος, όραση θάβη, διαταραχή της μνήμης, μυϊκόνος, άραση της έκφρασης, παραορία, δυστονία, αλλαγή της γεύσης.
Καρδιακές διαταραχές	Καρδιακές αρρυθμίες (που περιλαμβάνουν κοιλιακή ταχυκαρδία βήκη ριτίδιου, αίσθημα παλμών, πρώιμες κοιλιακές συστολές, ζευγί εκτακτών κοιλιακών συστολών, κοιλιακή ταχυκαρδία), βραδυκαρδία, ταχυκαρδία, ανωμαλίες του ΗΚΓ (παράταση του QT)
Αγγειακές διαταραχές	Ορθοστατική υπόταση, υπέρταση, συγκοπή.
Διαταραχές του αναπνευστικού συστήματος, του θώρακα και του μεσοθωρακίου	Ρινική συμφόρηση, δύσπνοια.
Γαστρεντερικές διαταραχές	ναυτία, έμετος, έρροιστία, δυσκοιλιότητα, διάρροια, δυσπεψία, στομαχό άλγος, γαστρεντερικό, αυξημένη σιελόρροια, παραλυτικός ελάς.
Διαταραχές ήπατος - χοληφόρων	Διαταραχές της ηπατικής λειτουργίας (συμπεριλαμβανομένου κίτρου και ηπατοκυτταρικής βλάβης) <sup>3</sup> , ενδοηπατική χολάσταση.
Διαταραχές του δέρματος και του υποδόριου ιστού	Εξάνθημα, κνησμός, υπεριδρωση.
Διαταραχές του μυοσκελετικού συστήματος και του συνδετικού ιστού	Πόνος σε άκρο, οσφυαλγία, μυαλγία, αρθραλγία.
Διαταραχές των νεφρών και του ουροποιητικού	Διαταραχές της ούρησης.
Διαταραχές του αναπαραγωγικού συστήματος και του μαστού	Πριαπισμός <sup>4</sup> .
Γενικές διαταραχές και καταστάσεις της οδού χορήγησης	Αδυναμία, οίδημα, γριπώδη συμπτώματα, κόπωση, θωρακικό άλγος, πυρετός.
Παρακλινικές εξετάσεις	Αυξημένα επίπεδα ηπατικών ενζύμων.

<sup>1</sup> Σε συμπτωματικούς ασθενείς, πρέπει να παρακολουθείται το επίπεδο υγρών και ηλεκτρολυτών

<sup>2</sup> Βλέπε παράγραφο 4.4.

<sup>3</sup> Η τραζοδόνη είναι ένα κατασταλτικό αντικαταθλιπτικό και η υπνηλία, που ενίοτε παρατηρείται κατά τις πρώτες ημέρες της θεραπείας, συνήθως εξαφανίζεται κατά τη συνέχεια της θεραπείας. <sup>4</sup> Μελέτες σε πειραματόζωα έδειξαν ότι η τραζοδόνη είναι ένα λιγότερο καρδιοτοξικό φάρμακο από τα τρικυκλικά αντικαταθλιπτικά και, σύμφωνα με κλινικές μελέτες, το φάρμακο μπορεί να είναι λιγότερο πιθανόν να προκαλέσει καρδιακές αρρυθμίες στον άνθρωπο. Κλινικές μελέτες σε ασθενείς με προπύρρασσα καρδιοπάθεια δείχνουν ότι η τραζοδόνη μπορεί να είναι αρρυθμογόνο σε ορισμένους ασθενείς στο συγκεκριμένο πληθυσμό.

<sup>5</sup> Σπάνια, έχουν αναφερθεί ανεπιθύμητες ενέργειες στην ηπατική λειτουργία, ενίοτε σοβαρές. Αν παρατηρηθούν οι ενέργειες αυτές, η τραζοδόνη πρέπει να διακοπεί αμέσως.

<sup>6</sup> Βλέπε επίσης παράγραφο 4.4.

**4.9 Υπερδοσολογία:** Χαρακτηριστικά τοξικότητας: Οι συνηθέστερα αναφερόμενες αντιδράσεις στην υπερδοσολογία ήταν υπνηλία, ζάλη, ναυτία και έμετος. Σε σοβαρότερες περιπτώσεις, παρατηρήθηκαν κόπωση, ταχυκαρδία, υπόταση, υπονατριαιμία, σπασμοί και αναπνευστική ανεπάρκεια. Τα καρδιακά συμπτώματα μπορεί να περιλαμβάνουν βραδυκαρδία, παράταση του διαστήματος QT και κοιλιακή ταχυκαρδία βήκη ριτίδιου. Τα συμπτώματα μπορεί να παρατηρηθούν εντός 24 ωρών ή περισσότερο μετά την υπερδοσολογία.

Υπερδοσολογική τραζοδόνη σε συνδυασμό με άλλα αντικαταθλιπτικά μπορεί να προκαλέσουν σεροτονινεργικό σύνδρομο.

**Αντιμετώπιση:** Δεν υπάρχει ειδικό αντίδοτο στην τραζοδόνη. Το ενδεχόμενο χρήσης ενεργού άνθρακα πρέπει να εξεταστεί σε ενήλικες, που έλαβαν περισσότερα από 1 g τραζοδόνης ή σε παιδιά, που πήραν περισσότερα από 150 mg τραζοδόνης εντός 1 ώρα πριν την προσέλευση τους στο γιατρό. Εναλλακτικά, σε ενήλικες, μπορεί να εξεταστεί το ενδεχόμενο πλύσης στομάχου εντός 1 ώρας από την κατάσταση εν δυνάμει απειλητικής για τη ζωή υπερδοσολογίας.

Ο ασθενής να παρακολουθείται επί τουλάχιστον 6 ώρες μετά την κατάσταση ή 12 ώρες αν έχει ληφθεί σκευάσμα διαπυρρομίνης αποδόνησης. Να παρακολουθείται η ΑΠ, ο σφυγμός και η Κλίμακα Κώματος Γλασκώβης (Glasgow Coma Scale, GCS). Αν το επίπεδο της GCS είναι μειωμένο, να παρακολουθείται ο κορεσμός οξυγόνου. Σε συμπτωματικούς ασθενείς, απαιτείται παρακολούθηση της καρδιακής λειτουργίας.

Για τις μειωμένες συστάσεις οξυγόνου απαιτείται θεραπεία. Να ελεγχθεί τους συχνούς ή παρατεταμένους σπασμούς με ενδοφλέβια χορήγηση διαζεπάμης (0,1-0,3 mg/kg βάρους σώματος) ή λοραζεπάμης (4 mg σε ενήλικα και 0,05 mg/kg σε παιδί). Αν τα μέτρα αυτά δεν θέσουν υπό έλεγχο τις κρίσεις, μπορεί να είναι χρήσιμη η ενδοφλέβια έγχυση φανιτοπίνης. Χορηγείται οξυγόνο και διορθώστε την διαταραχή της οξεοβασικής ισορροπίας και τις μεταβολικές διαταραχές όπως απαιτείται. Σε περίπτωση υπότασης και υπερβολικής καταστολής, η θεραπεία πρέπει να είναι συμπτωματική και υποστηρικτική. Εάν επιμένει η σοβαρή υπόταση, να εξεταστεί το ενδεχόμενο να χρησιμοποιήσετε ινοτρόπα φάρμακα, π.χ., ντοπαμίνη ή δοβουταμίνη.

**5. ΦΑΡΜΑΚΟΛΟΓΙΚΕΣ ΙΔΙΟΤΗΤΕΣ**

**5.1 Φαρμακοδυναμικές ιδιότητες:** ψυχοαναληπτικά, αντικαταθλιπτικά. Κωδικός ATC: N06AX05

Η τραζοδόνη είναι ένα παράγωγο τριαζολοπιδίνης, η οποία είναι αποτελεσματική στη θεραπεία καταθλιπτικών διαταραχών, συμπεριλαμβανομένης της κατάθλιψης, που σχετίζεται με άγχος και διαταραχές του ύπνου (κωδικός ATC: N06AX05) και χαρακτηρίζεται από βραχύ χρονικό διάστημα λανθάνουσας δράσης (περίπου μισή ώρα εβδόμησας).

Η τραζοδόνη είναι ένας αναστολέας της επαναρόληψης σεροτονίνης και ανταγωνιστής των 5-HT<sub>2</sub> υποδοχέων, η ενεργοποίηση των οποίων συχνά συσχετίζεται με αυτία, άγχος, ψυχοκινητική διέγερση και αλλαγές της σεξουαλικής λειτουργίας. Αντίθετα από τα άλλα ψυχοτρόπα φάρμακα, η τραζοδόνη δεν αντενδείκνυται σε ασθενείς με γλαύκωμα και διαταραχές του ουροποιητικού συστήματος, δεν ασκεί εξοπιαστικές ενέργειες και δεν ενισχύει την αδρενεργική διαύθηση. Καθώς δεν ασκεί αντιχολινεργική δράση, η τραζοδόνη δεν ασκεί τις τυπικές δράσεις των τρικυκλικών αντικαταθλιπτικών στην καρδιακή λειτουργία.

**5.2 Φαρμακοκινητικές ιδιότητες:** Ο παρακάτω πίνακας δείχνει τις φαρμακοκινητικές ιδιότητες της τρα-

ζοδόνης παρατεταμένης αποδόνησης μετά από εφάπαξ χορήγηση των 75mg, 150mg και των 300mg, και μετά από επανειλημμένη χορήγηση των 300mg (μία φορά καθημερινά μέχρι να σταθεροποιηθεί η κατάσταση)

Η δόση των 75mg αφορά μισό δισκίο των 150mg.

	75 mg (single dose)	150 mg (single dose)	300 mg (single dose)		300 mg (repeated dose)
C <sub>max</sub> * (ng/mL)	294 (71,4)	531 (143)	1179 (583)	C <sub>max</sub> ** (ng/mL)	1812 (620)
AUC <sub>0-∞</sub> * (h·ng/mL)	8658 (2833)	16388 (5419)	30983 (12522)	AUC <sub>0-∞</sub> ** (h·ng/mL)	29131 (9931)
T <sub>max</sub> ** (h)	8,00 (2,00-30,0)	6,00 (2,00-30,0)	7,00 (2,00-14,0)	T <sub>max</sub> ** (h)	8,00 (3,00-16,0)

\* mean (standard deviation); \*\* median (range)  
C<sub>max</sub> = maximum plasma concentration; C<sub>max</sub> = max plasma concentration at steady-state; AUC<sub>0-∞</sub> = area under the curve from time 0 and extrapolated to infinity; AUC<sub>0-∞</sub> = area under the curve at steady-state; T<sub>max</sub> = time to reach to maximum concentration

*In-vitro* μελέτες σε μικροσώματα ανθρώπινου ήπατος δείχνουν ότι η τραζοδόνη μεταβολίζεται κυρίως από το κυτοχρώμα P4503A4 (CYP3A4).

Μετά την πρώτη χορήγηση, η ημι-περίοδος ζωής της τραζοδόνης παρατεταμένης αποδόνησης είναι περίπου ανάμεσα σε 10 και 15 ώρες.

**5.3 Προκλινικά δεδομένα για τον άνθρωπο**  
**Οξεία τοξικότητα:** Η LD<sub>50</sub> της από το στόμα χορηγούμενης τραζοδόνης είναι 610 mg/kg σε ποντικούς, 486 mg/kg σε αρουραίους και 560 mg/kg σε κουνέλια. Οι ανεπιθύμητες ενέργειες, που παρατηρήθηκαν ήταν καταστολή, σιελόρροια, βλεφαροπάθεια και κλονικοί σπασμοί.

**Τοξικότητα επανειλημμένων δόσεων:** Μελέτες υποχρόνιας τοξικότητας διεξήχθησαν σε αρουραίους, κουνέλια και σκύλους και χρόνιας τοξικότητας σε αρουραίους, σκύλους και πθήκους. Οι από το στόμα δόσεις, που χορηγήθηκαν κμιαίνονται από 15 έως 450 mg/kg/ημέρα σε αρουραίους, 15 έως 100 mg/kg/ημέρα σε κουνέλια, 3 έως 100 mg/kg/ημέρα σε σκύλους και 20 έως 80 mg/kg/ημέρα σε πθήκους. Σε αρουραίους, η θεραπεία προκάλεσε υπερτροφία των ηπατοκυττάρων και λείο ενδοηλιαστικό δίκτυο με επακόλουθη ηπατοεργαλία. Η ενέργεια αυτή αποτελεί αποτέλεσμα μηχανισμού αποτόνησης και δεν μπορεί να ερμηνευθεί ως παθολογικό σήμα. Επιπλέον, θανατηφόρα δόσεις επίσης προκάλεσαν ενέργειες, που ήσαν παρατηρήσιμες σε μελέτες οξείας τοξικότητας. Το σχετικό επίπεδο NOEL (Επίπεδο στο οποίο δεν Παρατηρείται Ανεπιθύμητη Ενέργεια, No Observed Adverse Effect Level) ήταν 30 mg/kg/ημέρα. Σε κουνέλια, μόνο κατασταλτικές του ΚΝΣ ενέργειες παρατηρήθηκαν με σχετική NOEL 50 mg/kg/ημέρα. Σε σκύλους, τα συμπτώματα, που παρατηρήθηκαν με την οξεία δηλητηρίαση επιδεινώθηκαν όταν χορηγήθηκαν επανειλημμένες δόσεις και η σχετική NOEL ήταν 10 mg/kg/ημέρα. Οι πθήκοι φάνηκε να παρουσιάζουν μεγαλύτερη ανθεκτικότητα από τους σκύλους, καθώς παρουσίασαν μόνο φαρμακοδυναμικές διαταραχές. Η NOEL ήταν 20 mg/kg/ημέρα.

**Αναπαραγωγική τοξικότητα.** Σε αρουραίους σε δόση 300 mg/kg/ημέρα, δεν παρατηρήθηκαν ανεπιθύμητες ενέργειες στη γονιμότητα. Μελέτες τετατογένεσης σε αρουραίους έδειξαν αυξημένες εμβρυοτόνους επιδόσεις, μόνο σε δόσεις, οι οποίες ήταν τοξικές για τον οργανισμό της μητέρας (300-450 mg/kg/ημέρα). Σε κουνέλια παρατηρήθηκαν εμβρυοτόνους ενέργειες και σπάνια περιαστικά συγγενών ανωμαλιών μόνο σε δόσεις, οι οποίες ήταν τοξικές για τη μητέρα (210-450 mg/kg/ημέρα). Ως προς την έλλειψη άμεσων επιδόσεων στο έμβρυο συνηγορούν μελέτες που αφορούν την διέλυση της τραζοδόνης από τον πλακουντικό φράγμα σε αρουραίους: μόνο μελετητές συγκεντρώσεις του φαρμάκου παρατηρήθηκαν στον εμβρυϊκό στομάχο και το αμνιοτικό υγρό. Περαιτέρω μετα-γενετικές μελέτες σε αρουραίους έδειξαν μειωμένη μόνο αύξηση του βάρους σώματος των κοιταβίων σε δόσεις, που υπερβήκαν τα 30 mg/kg/ημέρα.

**Μεταλλαξιογένεση.** *In-vitro* δοκιμασίες μεταλλαξιογένεσης (σε βακτηριακή κούτταρα, σε κούτταρα V77 κίτρινος χυμστερ, σε κούτταρα λεμφαίωμας τρωκτικών, σε χρωμοσωμικές αλλοιώσεις κυττάρων CHO, CHL/II και ανθρώπινου λεμφοκυττάρων) και *in vivo* δοκιμασίες μεταλλαξιογένεσης (μικροποηλία ποντικών και ανάλυση χρωμοσωμικής μεταρσης σε αρουραίους) δεν κατέδειξαν ενέργειες μεταλλαξιογένεσης.

**Καρδιακότητα δυνατότητα.** Μελέτες, που διεξήχθησαν σε ποντικούς και αρουραίους, δεν κατέδειξαν δυνατό κίνδυνο όγκων.

**Αντιγονιμότητα.** Η τραζοδόνη αποδόθηκε ότι δεν ασκεί αντιγονική δράση.

**Καρδιοτοξικότητα.** Οι καρδιακές ενέργειες της τραζοδόνης μελετήθηκαν σε αρουραίους, ινδικά χοιρίδια, γάτες και σκύλους. Το φάρμακο αποδόθηκε ότι δεν ασκεί σφραδόν σφραδόν καμία καρδιοτοξική δράση καθώς δεν προκαλούσε αλλαγές στα ίντρι του ΗΚΓ με δόσεις, οι οποίες δεν προκαλούν υπόταση. **Ενέργειες στις αρτηρίες.** Εφάπαξ δόσεις άνω των 20 mg/kg, οι οποίες χορηγήθηκαν ενδοπεριτοναϊκά σε θηλυκούς αρουραίους προκάλεσαν ήπια αύξηση της προκλιπίνης. Η επίδραση αυτή εξαφανίσθηκε μετά από χρόνια χορήγηση σε συνδυασμό με τροφή. **Φαρμακευτική εξέταση.** Δύο μελέτες, που διεξήχθησαν σε αρουραίους αποκάλυψαν τη δυνατότητα το φάρμακο να προκαλεί φαρμακευτική εξέταση.

**6. ΦΑΡΜΑΚΕΥΤΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ**

**6.1 Κατάλογος εκδόχων**

• ΤΡΙΠΤΙΣΟ 150 mg δισκία: Πυρίνας: Contramid granulated (pre-gelatinized modified starch), Hyprromellose, Silica Colloidal Anhydrous, Sodium Stearyl Fumarate, Επικάλυψη: Opadry II yellow (Polyvinyl Alcohol-part, hydrolyzed, Titanium Dioxide, Macrogl/Peg 3350, Talc, Iron Oxide Yellow, Iron Oxide Red)

• ΤΡΙΠΤΙΣΟ 300 mg δισκία: Πυρίνας: Contramid granulated (pre-gelatinized modified starch), Hyprromellose, Silica Colloidal Anhydrous, Sodium Stearyl Fumarate, Επικάλυψη: Opadry II pink (Polyvinyl Alcohol-part, hydrolyzed, Titanium Dioxide, Macrogl/Peg 3350, Talc, Iron Oxide Yellow, Iron Oxide Red)

**6.2 Ασυμβατότητες:** Δεν εφαρμόζονται.

**6.3 Διάρκεια ζωής:** 2 χρόνια

**6.4 Ιδιαίτερες προφυλάξεις κατά την φύλαξη του προϊόντος**

Το φαρμακευτικό αυτό προϊόν δεν απαιτεί καμία ιδιαίτερη συνθήκη φύλαξης.

**6.5 Φύση και συστατικά του περιεχτι**

ΤΡΙΠΤΙΣΟ 150 mg παρατεταμένης αποδόνησης επικαλυμμένα δισκία: PVC-PVDC/Al blister, που περιέχουν 10, 14, 20, 28, 30 δισκία το καθένα.

ΤΡΙΠΤΙΣΟ 300 mg παρατεταμένης αποδόνησης επικαλυμμένα δισκία: PVC-PVDC/Al blister, που περιέχουν 10, 14, 20, 28, 30 δισκία το καθένα.

Μπορεί να μην βγουν στην αγορά όλες οι συσκευασίες.

**6.6 Οδηγίες χρήσης / χειρισμού**

Τα αχρησιμοποίητα προϊόντα ή απόβλητα πρέπει να απορριπτούν σύμφωνα με τις τοπικές απαιτήσεις.

**7. ΚΑΤΟΧΟΣ ΤΗΣ ΑΔΕΙΑΣ ΚΥΚΛΟΦΟΡΙΑΣ**

Angelini Pharma Hellas ABEE Παραγωγής & Εμπορίας Φαρμάκων

Αχαΐας, 4 & Τροχιάς, 14564 Νέα Κηφισιά

**8. ΑΡΙΘΜΟΣ (ΑΡΙΘΜΟΙ) ΑΔΕΙΑΣ ΚΥΚΛΟΦΟΡΙΑΣ**

Τριπτιό 150 mg: 94839/20-12-2016

Τριπτιό 300 mg: 94840/20-12-2016

**9. ΗΜΕΡΟΜΗΝΙΑ ΠΡΩΤΗΣ ΕΓΚΡΙΣΗΣ / ΑΝΑΝΕΩΣΗΣ ΤΗΣ ΑΔΕΙΑΣ**

20-12-2016

**10. ΗΜΕΡΟΜΗΝΙΑ ΑΝΑΘΕΩΡΗΣΗΣ ΤΟΥ ΚΕΙΜΕΝΟΥ**

Βοηθήστε να γίνουν τα φάρμακα πιο ασφαλή και ασφαλέστερα  
Ανοητέστε ΟΛΕΣ τις ανεπιθύμητες ενέργειες για ΟΙΑ τα φάρμακα Συμψηφίζοντας την «ΚΤΙΝΗ ΚΑΡΤΑ»  
Κόβετε λοιπόν ανεπιθύμητο ενέργεια σύμφωνα με το εθνικό σύστημα αναφοράς στο Τμήμα Ανεπιθύμητων Ενέργειων του Εθνικού Οργανισμού Φαρμάκων (ΕΟΦ)  
Τηλ: 2132040280, Fax: 2108549585, με τη χρήση της Κίτρινης Κάρτας  
Βοηθήστε και στην προστασία του ΕΘΝΟΥ, www.esf.gov.gr Επιστρέψτε ή πληροφορηθείτε οποιαδήποτε ενστάσεις στον ANGLINI Pharma Ελλάς Α.Β.Ε.Ε. Τηλ: +302106929200



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Αχαΐας, 4 & Τροχιάς, 154 64 Ν. Κηφισιά,

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ICNP2019

6<sup>th</sup> Congress on  
**Neurobiology,  
Psychopharmacology  
& Treatment Guidance**

Chalkidiki, Greece

## Scientific Program

Thursday, June 27<sup>th</sup> 2019

14.30 **REGISTRATIONS**

15.00-16.30 **SYMPOSIUM**  
**NEW TECHNOLOGIES AND PSYCHIATRISTS: A RELATIONSHIP "UNDER  
CONSTRUCTION"**  
Chairpersons: **Achilleas Oikonomou** (Greece), **Antonis Karzis** (Greece)

Internet-based interventions for Alcohol Use Disorders  
**Konstantinos Rantis** (Greece)

The relationship between mental health and internet addiction in children and adolescents. Is there any association between level of physical activity and risk of problematic internet use?  
**Eirini Rera** (Greece)

rTMS Therapy: Current Status & Perspective  
**Spyros Kalimeris** (Greece)

Practicing Psychiatry in the era of social media  
**Antonis Karzis** (Greece)

16.30-17.00 **LECTURE**  
Chairperson: **Konstantinos N. Fountoulakis** (Greece)

Psychopharmacology in adolescent developing brain  
**Orestis Giotakos** (Greece)

Thursday, June 27<sup>th</sup> 201917.00-18.30 **SYMPOSIUM****THE KALEIDOSCOPIC IMAGE OF SUICIDALITY**Chairpersons: **Afzal Javed** (UK), **Konstantinos N. Fountoulakis** (Greece)*The Symposium is organized by the WPA Section on Evidence Based Psychiatry*

Free will, mental illness and suicidality

**Konstantina Papadopoulou** (Greece)

Suicide attempts

**Eleni Papadopoulou** (Greece)

Socially defined suicides (honor, self-sacrifice, group suicides)

**Chrysi Kaparounaki** (Greece)

World epidemiological data of suicide

**Danai Priscila Mousa** (Greece)

Psychopathology and risk factors for suicidality

**Mikaella Patsali** (Greece)18.30-19.00 **LECTURE**Chairperson: **Xenia Gonda** (Hungary)

Psychodermatology: where are we standing today?

**Vassiliki Karathanasi** (Greece)19.00-20.30 **SYMPOSIUM****SCHIZOPHRENIA - DIFFERENT ASPECTS OF THE SAME POINT**Chairpersons: **John Nimatoudis** (Greece), **Petros Fotiadis** (Greece)

The use of Long Acting Injectable (LAI) antipsychotics in Greece - physicians' beliefs and LAIs use in clinical practice

**Petros Fotiadis** (Greece)

Social Cognition as a candidate biomarker for schizophrenia

**Evangelos Ntouros** (Greece)

Is it possible to predict the future in first-episode psychosis?

**Anestis Ramnalis** (Greece)

From substance abuse to psychosis and vice versa

**Konstantinos Rantis** (Greece)20.30-21.00 **LECTURE**Chairperson: **Orestis Giotakos** (Greece)

Andropause and Hormonal Replacement Therapy (Hrt)

**George Touliatos** (Greece)



Friday, June 28<sup>th</sup> 2019

09.00-10.30 **SYMPOSIUM**

**PHARMACOLOGICAL TREATMENT OF PERSONALITY DISORDERS**

Chairperson: **Athanassios Douzenis** (Greece)

Effectiveness of pharmacological interventions on cluster A personality disorder.  
Is there much to expect?

**Foteini Thoma** (Greece)

Narcissistic, histrionic and antisocial personality disorder: pharmacological treatment  
**Marios Krespis** (Greece)

Pharmacological and other biological treatments in the management of borderline  
personality disorder

**Danaï Ioanna Manolopoulou** (Greece)

Symptom based biological treatment of cluster C personality disorder

**Stathis Gavanozis** (Greece)

10.30-11.00 **LECTURE**

Chairperson: **Xenia Gonda** (Hungary)

Neurological Soft Signs in healthy controls and patients with schizophrenia  
**Panagiotis Panagiotidis** (Greece)

11.00-11.30 **LECTURE**

Chairperson: **John Nimatoudis** (Greece)

Pharmacological interventions for violent behaviour

**Athanassios Douzenis** (Greece)

11.30-12.00 **Coffee Break**



**Friday, June 28<sup>th</sup> 2019**

12.00-13.00 **SYMPOSIUM**

**NEUROBIOLOGICAL AND SOCIAL ASPECTS OF SUICIDAL BEHAVIORS IN THE YOUTH**

Chairperson: **Georgios Alevizopoulos** (Greece)

Neurobiological factors contributing to suicidal behaviors in juveniles  
**Georgios Alevizopoulos** (Greece)

Completed suicide in the youth: Psycho-social implication in bereaved parents  
**Maria Karanikola** (Greece)

Illicit drug use and suicidal behavior in school students  
**Maria Nystazaki** (Greece)

13.00-13.30 **LECTURE**

Chairperson: **Emmanouil Rizos** (Greece), **Konstantinos Bonotis** (Greece)

How can we prevent dementia? Effect of medical conditions on the course of cognitive decline  
**Istvan Boksay** (USA)

13.30-14.30 **SYMPOSIUM**

**SCHIZOPHRENIA AND METABOLIC SYNDROME. THE ROLE OF INFLAMMATORY BIOMARKERS**

Chairpersons: **Emmanouil Rizos** (Greece), **Konstantinos Tsamakís** (Greece)

The role of Neurotrophins in Schizophrenia and Metabolic Syndrome  
**Emmanouil Rizos** (Greece)

Neuroinflammation in Schizophrenia: Role of cytokines. Latest data  
**Konstantinos Tsamakís** (Greece)

Schizophrenia and Metabolic Syndrome. The role of Inflammation  
**Stylianós Kypourópoulos** (Greece)

14.30-15.00 **LECTURE**

Chairperson: **Giulio Perugi** (Italy)

Circadian rhythms depression and type II diabetes mellitus: exploring the relationship using a unique model animal  
**Haim Einat** (Israel)

Friday, June 28<sup>th</sup> 2019

15.00-15.30 **LECTURE**

Chairperson: **Athanassios Douzenis** (Greece)

Manic/hypomanic and depressive switches in bipolar patients: predictors, clinical implications and the role of antidepressant and antipsychotic drugs

**Giulio Perugi** (Italy)

15.30-16.00 **LECTURE**

Chairperson: **Maria Samakouri** (Greece)

Management of Treatment Resistant Depression: A Case Discussion

**Michael Henry** (USA)

16.00-16.30 **LECTURE**

Chairperson: **Ioannis Diakogiannis** (Greece)

Adherence to therapy

**Maria Samakouri** (Greece)

16.30-17.00 **LECTURE**

Chairperson: **Dimitrios Dikeos** (Greece)

The advent of Sleep Disorders Medicine: A psychiatrist's experience

**Constantin Soldatos** (Greece)

17.00-18.30 **SYMPOSIUM**

**THE USE OF LONG TERM ANTIPSYCHOTICS TO REDUCE VIOLENT RECIDIVISM**

Chairpersons: **Athanassios Douzenis** (Greece), **Georgios Tzeferakos** (Greece)

Is There A Place For Long Term Antipsychotics After The First Psychotic Episode?

**Georgios Tzeferakos** (Greece)

Balancing personal liberties: The use of court orders to enforce long term antipsychotics

**Athanassios Douzenis** (Greece)

Preliminary results from a 2 year Long term Antipsychotic Forensic Clinic

**Panagiota Balli** (Greece), **Evangelos Thanassas** (Greece)

18.30-19.00 **Coffee Break**

Friday, June 28<sup>th</sup> 201919.00-19.30 **LECTURE**Chairperson: **Ioannis Diakogiannis** (Greece)New Treatments for Depression: Beyond Monoamine Drugs  
**Frank Tarazi** (USA)19.30-20.30 **SYMPOSIUM****NOVEL PHARMACOLOGICAL TREATMENTS FOR MENTAL DISORDERS**Chairpersons: **Charalampos Touloumis** (Greece), **Christos Tsopeles** (Greece)Lurasidone - Cariprazine for psychotic disorders  
**Charalampos Touloumis** (Greece)Escetamine for depression and anxiety disorders  
**Christos Tsopeles** (Greece), **Panagiota Papadimitriou** (Greece),  
**Angelica Gatos-Gatopoulos** (Greece)New challenges in dual diagnosis service users  
**Georgios Tzeferakos** (Greece)20.30-21.00 **LECTURE**Chairperson: **Angelos Halaris** (USA)Consciousness, free will and mental illness  
**Konstantinos N. Fountoulakis** (Greece)



Saturday, June 29<sup>th</sup> 2019

09.00-09.30 **LECTURE**

Chairperson: **Ioanna Ierodiakonou-Benou** (Greece)

Not all stressors are created equal: the divergent genetic background of the effects of distinct types of stressors in depression

**Xenia Gonda** (Hungary)

09.30-11.00 **SYMPOSIUM**

**COMPLEXITIES IN THE DIAGNOSIS AND TREATMENT OF MOOD DISORDERS AND BIPOLARITY**

Chairpersons: **Giuseppe Tavormina** (Italy), **Francesco Franza** (Italy)

Understanding the temperaments: how to avoid diagnostic errors on treating the bipolar mood disorders

**Giuseppe Tavormina** (Italy)

Dysphoria dimensions: a preliminary in-patients study to differentiate borderline personality and bipolar disorder spectrum

**Massimo Bachetti** (Italy)

Limits and chances for cognitive rehabilitation and assessment scales in clinical routines in bipolar disorders

**Francesco Franza** (Italy)

Bipolar disorder and eating disorder: the role of emotional abuse and regulation

**Patrizia Moretti** (Italy)

11.00-12.00 **SYMPOSIUM**

**SCHIZOPHRENIA: ISSUES ON DIAGNOSIS AND PSYCHOPATHOLOGY**

Chairpersons: **Venetsanos Mavreas** (Greece), **John Nimatoudis** (Greece)

Anxiety Disorders in Schizophrenia

**Petros Skapinakis** (Greece)

Sleep & circadian dysregulation in schizophrenia: Molecular aspects and clinical implications

**Agorastos Agorastos** (Greece)

The evolution of the concept of schizophrenia to the current diagnostic systems

**Venetsanos Mavreas** (Greece)



Saturday, June 29<sup>th</sup> 2019

12.00-12.30 **LECTURE**

Chairperson: **Venetsanos Mavreas** (Greece)

What can we learn from a naturalistic short and long-term study on patients suffering from schizophrenia?

**Hans-Jürgen Möller** (Germany)

12.30-14.00 **SYMPOSIUM**

**PREMENSTRUAL DYSPHORIC DISORDER AND PREMENSTRUAL SYNDROME**

Chairperson: **Daniil Aptalidis** (Bulgaria)

Prevalence and clinical picture of premenstrual syndrome and premenstrual dysphoric disorder in the Bulgarian population

**Maria Stoyanova** (Bulgaria), **Rossitza Iakimova** (Bulgaria)

Premenstrual dysphoric disorder and premenstrual syndrome: the patient perspective

**Petranka Chumpalova** (Bulgaria), **Rossitza Iakimova** (Bulgaria)

Premenstrual dysphoric disorder and premenstrual syndrome: comorbidity with depressive and panic disorder

**Daniil Aptalidis** (Bulgaria), **Rossitza Iakimova** (Bulgaria)

Treatment of premenstrual dysphoric disorder and premenstrual syndrome comorbid with depressive and panic disorder

**Milena Pandova** (Bulgaria), **Rossitza Iakimova** (Bulgaria)

14.00-15.00 **SYMPOSIUM**

**THE BROADER IMPACT OF SLEEP DISORDERS ON HEALTH AND WELLBEING: MECHANISMS AND TREATMENT APPROACHES**

Chairpersons: **Dimitrios Dikeos** (Greece), **Thomas Paparrigopoulos** (Greece)

Benefits of sleep and consequences of insomnia: Physiology and therapeutic interventions

**Dimitrios Dikeos** (Greece)

Pharmacological treatment of insomnia: From drugs to hormones to natural remedies

**Thomas Paparrigopoulos** (Greece)

Parasomnias: Is it only a night-time phenomenon?

**Mary Ntafouli** (Greece)

Saturday, June 29<sup>th</sup> 2019

15.00-15.30 **LECTURE**

Chairperson: **George Chrousos** (Greece)

The face of Social Solidarity: "Health for All"

**Eleni Sotiropoulou** (Greece)

15.30-16.00 **CINP VIDEO SESSION**

Rapid-Acting Antidepressants

**John Krystal** (USA)

16.00-16.30 **LECTURE**

Chairperson: **John Nimatoudis** (Greece)

Prognosis and improved outcomes in major depression, what's on the horizon?

**Siegfried Kasper** (Austria)

16.30-18.00 **SYMPOSIUM**

**MECHANISM OF PATHOGENESIS OF SCHIZOPHRENIA AND BIPOLAR DISORDER-  
PROINFLAMMATORY CYTOKINES AND KYNURENINE PATHWAY**

Chairpersons: **Nikolaos Venizelos** (Sweden), **Angelos Halaris** (USA)

Reversal of treatment resistance in bipolar disorder through immune system modulation

**Angelos Halaris** (USA)

Proinflammatory cytokines and kynurenine pathway in schizophrenia and bipolar disorder?

**Sophie Erhardt** (Sweden)

Proinflammatory cytokines dysregulate the neurotransmitters dopamine and serotonin by inhibit the availability of the precursor amino acids tyrosine and tryptophan

**Nikolaos Venizelos** (Sweden)

Can antipsychotic drugs attenuate IL-6 secretion from microglia via inhibition of dopamine?

**Yvonne Freund-Levi** (Sweden)

18.00-18.30 **LECTURE**

Chairperson: **Siegfried Kasper** (Austria)

Genetics and Epigenetics in Developmental Pediatrics and Psychiatry

**George Chrousos** (Greece)

18.30-19.00 **Coffee Break**



**Saturday, June 29<sup>th</sup> 2019**

19.00-20.30 **SYMPOSIUM**

**IS VITAMIN D A NEW FRONTIER IN PSYCHIATRY AND PSYCHOPHARMACOLOGY?  
CLINICAL AND BASIC STUDIES**

Chairperson: **Angelos Halaris** (USA)

Does Vitamin D3 Supplementation Improve Inflammation in Depressed Women with Diabetes?

**Sue Penckofer** (USA)

The role of Vitamin D in Depression, depressive symptoms and specific gene expression

**Maria Athanasiou** (Greece)

Vitamin D levels and the expression of COMT, MAO-A, MAO-B, and ALDH1A1 genes in PC-12 series of dopaminergic neurons

**Aglaia Pappa** (Greece)

Vitamin D supplementation and reduced symptom burden in women with estrogen receptor positive (ER+) metastatic breast cancer

**Patricia Sheean** (USA)

20.30-21.00 **LECTURE**

Chairpersons: **Hans-Jürgen Möller** (Germany),  
**Konstantinos N. Fountoulakis** (Greece)

From Aristoteles' foundations of animal morphologies to functional architectures of brains - viewed by a ΦΥΣΙΟΛΟΓΟΣ

**Bert Sakmann** (Germany)

21.00 **President's dinner & Awards Ceremony**



Sunday, June 30<sup>th</sup> 2019

09.00-11.00 **SYMPOSIUM**

**NEUROCOGNITIVE DECLINE IN OLD AGE AND DEMENTIA: ASSESSMENT AND THERAPEUTIC INTERVENTIONS**

Chairperson: **Anastasia Konsta** (Greece)

Higher-order cognitive abilities in different types of cognitive decline in aging

**Despoina Moraitou** (Greece)

Assessment of neurocognitive functioning and decline in elderly individuals across settings and cultures

**Maria Sofologi** (Greece)

Non pharmacological interventions in dementia

**Anastasia Konsta** (Greece)

Exercise and resilience to neurocognitive decline in old age

**Georgia Senikidou** (Greece)

Pharmacological treatment of neurocognitive deficits and dementias in old age: evidence-based narrative review

**Grigorios Karakatsoulis** (Greece)

11.00-12.30 **SYMPOSIUM**

**FEMALE MENTAL HEALTH - DOES IT REALLY MATTER?**

Chairperson: **Evangelia Tsapakis** (Greece)

Treatment of Psychiatric disorders during pregnancy and postpartum

**Kalliopi Diakaki** (Greece)

Endometriosis-related chronic pelvic pain and its impact on mental health

**Orestis Tsonis** (Greece)

Schizophrenia, Antipsychotics, and Breast Cancer

**Evangelia Tsapakis** (Greece)

Sex matters: Gender bias in the search for novel psychiatric drugs

**Aikaterini Chatzaki** (Greece)



**Sunday, June 30<sup>th</sup> 2019**

12.30-14.00 **SYMPOSIUM**

**SEXUALITY**

Chairpersons: **Loukas Athanasiadis** (Greece), **Anastasia Konsta** (Greece)  
*Organised by the Sexuality and Interpersonal Relationships Branch of the Hellenic Psychiatric Society*

Sexuality and Blindness  
**Soultana Georgiadou** (Greece)

Sexual Activity and the role of prolactin  
**Neoklis Eleftheriou** (Greece)

Sexual orientation: Biological factors  
**Danaï Ioanna Manolopoulou** (Greece)

Sexsomnia  
**Loukas Athanasiadis** (Greece)

14.00-15.00 **SYMPOSIUM**

**UNDERSTANDING RESISTANCE IN CLINICAL PRACTICE: MODELS OF COPING WITH RESISTANCE IN DIFFERENT CLINICAL CASES**

Chairperson: **Elena Heinz** (Greece)

Resistance in Marital Therapy  
**Vasiliki Batrakouli** (Greece)

Resistance in Depression  
**Christina Hionidou** (Greece)

Resistance in Eating Disorders -Binge Eating Disorder- Case Study  
**Christy Passalidou** (Greece)

15.00-15.30 **LECTURE**

Chairpersons: **Loukas Athanasiadis** (Greece), **Anastasia Konsta** (Greece)

Clinical and sociodemographic characteristics of adults with specific learning disabilities  
**Eleni Bonti** (Greece)



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## General Information

### Congress Venue

Athos Palace Hotel

*(Solina, Kallithea, Kassandra, Chalkidiki, Greece 630 77 Tel: +30 23740 22100, <http://www.athospalace.com>)*

### Access to Congress Venue

Chalkidiki can be reached by arriving at "Macedonia" International airport and then by car or by bus. Bus transfers will be provided for group of 30 persons and over. The hotel is located 110 km (75 minutes drive) from the airport and 120 km (85 minutes drive) from the center of Thessaloniki or by public bus transportation (<http://www.ktel-chalkidikis.gr/index1.php>)

### Official Language

English will be the official language of the Congress.

All printed material and poster presentations will be in English.

### CME Accreditation

The congress has been accredited with **24 World Psychiatric Association Educational credits** for the main Congress Program.

### Certificate of Attendance

Certificates of attendance can be received from the registration desk on Sunday June 30th 2019. Please note that a barcode system will be used and in order to obtain CME credits you must complete 60% participation of the scientific program. The congress will be accredited for Continuing Medical Education with CME credits by the World Psychiatric Association (WPA).

### Presentations

Available audiovisual equipment for all presentations will be through power point presentation. For power point presentations, your presence to the "technical reception desk" is required one hour prior to the time of your presentation in order to check the compatibility of your cd or usb stick. Use of personal computers will not be permitted.

### E-Posters

All E-posters will be presented electronically and no hardcopies will be handed. The E-posters will be available to delegates throughout the Congress in the exhibition area.

### Abstract Book

The scientific program will be available online (pdf format). The abstract book will be published as a hard copy and will be available online. The full posters will be available online (pdf format).

### Exhibition

Within the Congress area there will be an exhibition of medical equipment and pharmaceutical products.

### On-site Registration

Participants who wish to register on-site are advised to arrive early. On-site registration will be processed on a first-come, first-served basis. Priority will be given to pre-registered delegates. Depending on the number of onsite registered delegates, availability of congress bags may be limited.

### Congress Badge

Delegates are obliged to show their congress badge at the entrance of Congress Halls for their attendance time to be registered.

### Taxis

Taxis are available in front of the airport as well as the hotel entrance.

### Insurance

We cannot accept responsibility for any personal loss, accidents or damages to participants and/or accompanying persons. Participants are strongly advised to obtain personal insurance to cover any eventuality that may occur during the Congress.

### Climate

The average temperature in Chalkidiki during June is 23°C -27°C or 73°F -81°F.

### Congress Secretariat



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# PROCEEDINGS

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Thursday, June 27<sup>th</sup> 2019

15.00-16.30 **SYMPOSIUM**  
**NEW TECHNOLOGIES AND PSYCHIATRISTS: A RELATIONSHIP "UNDER CONSTRUCTION"**

Chairpersons: **Achilleas Oikonomou** (Greece), **Antonis Karzis** (Greece)

### **Internet-based interventions for Alcohol Use Disorders**

#### **Konstantinos Rantis**

*Psychiatrist, Inpatient Psychiatric Department, 424 General Military Hospital, Thessaloniki, Greece*

Nowadays, more than 2/3 of young, aged 12-25, internet users consider searching the web for information and consultation on mental health problems as helpful at first, and would be positive in having access in such information online, while some of them consult with a mental health professional, as a result of information they found in relative sites.

According to WHO, 5.1% of total population suffers from Alcohol Use Disorder (8.8% in Europe, 8.2% in America), 2.6% from Alcohol Dependence (3.7% in Europe, 4.1% in America), while 39.5% of drinkers (45.7% aged 15-19, 48.5% aged 20-24) engage in heavy episodic drinking. Furthermore, alcohol use is involved in many physical and mental health problems. However there is a treatment gap for such disorders of a 90% level, thus creating a need for better screening and intervention than existing mechanisms of action.

Internet - based screening and interventions, or interventions using smartphone apps, for Alcohol Use Disorders have been used in several countries, especially in young adults, and have been proven effective in reducing alcohol consumption. Some considerations that may rise from using internet - based interventions could be the reduced user friendliness of such applications, credibility of provided information, as well as legal and ethical dilemmas.

### **The relationship between mental health and internet addiction in children and adolescents. Is there any association between level of physical activity and risk of problematic internet use?**

#### **Eirini Rera**

*Psychologist, Greece*

The relationship between mental health and internet addiction in children and adolescents. Is there any association between level of physical activity and risk of problematic internet use? Childhood and adolescence are very important developmental stages during which many habits related to a healthy lifestyle, such as those involving physical activities (sports), are established. Nowadays, internet addiction among children and adolescents has become a major health mental problem, gaining researchers interested worldwide. The effects that long hours screen exposure may have in physical health, the positive relationship between excessive participation of children and adolescents in online gaming/ social networking sites and academic performance, depressive symptoms as well as anti-social behaviors expressed by harassment,



bullying, cyber crime and online suicides are a new research field in digital age. Physical activity may be helpful to improve adolescent mental health issues that internet addiction may have in individuals life's, as studies indicate a negative association between level of physical activity and risk of problematic internet use in adolescents. Research data show that there is no doubt about the fact that sports participation in young ages, has a wide variety of psychological and physical benefits.

## **rTMS Therapy: Current Status & Perspective**

### **Spyros Kalimeris**

*Psychiatrist, Athens, Greece*

rTMS (Repetitive Transcranial Magnetic Stimulation) is a biological treatment method for the brain-based psychiatric and neurological disorders. It provides therapeutic results by exploiting the effect of a magnetic field on the electric activity of various brain areas. The majority of current protocols involves excitatory or inhibitory stimulation of the prefrontal cortex so far. rTMS has been used the past 3 decades for the treatment of various psychiatric conditions with notable results especially on major depression. Treatment Resistant Major Depression is an official indication for the use of rTMS therapy on both sides of the Atlantic (2008 FDA approved) with an average of ~50% response rate. Other official approvals include migraine (2013) and deep TMS for OCD (2018). Furthermore past & ongoing research indicates evidence of clinical benefit for a number of conditions such as anxiety, bipolar, psychotic, central pain, addiction disorders, Parkinson's and more. Apart from its efficacy, magnetic stimulation's main advantage is its high level of safety with minimal side effects, especially as compared to psychiatric medication. Future perspective of transcranial brain stimulation appears to be bright bearing in mind the continuous progress of our neuroscientific knowledge combined with advances on the medical engineering field.

## **Practicing Psychiatry in the era of social media**

### **Antonis Karzis**

*Psychiatrist, Volos, Greece*

The use of smartphones has become almost a basic need for the modern person and being digitally connected consumes a significant part of our everyday lives. The advent of social media in their various forms presents with a lot of opportunities and benefits as well as certain pitfalls. As psychiatrists access social media to create but also consume content, many interesting questions are being raised: Is there an optimal way for a psychiatrist to utilize social media? How can they impact everyday practice? Are there certain boundaries to their use? For what purpose and to what extent should a psychiatrist use them? What about the ethical implications? In this presentation we will discuss the above and try to address some of the issues that arise from embracing this new mode of communication.

16.30-17.00 **LECTURE**

 Chairperson: **Konstantinos N. Fountoulakis** (Greece)

## **Psychopharmacology in adolescent developing brain**

**Orestis Giotakos**

*Psychiatrist, Athens, Greece*

What is currently known about the developing brain during adolescence? How these development processes may be affected by a depressive or psychotic illness? How effective are antidepressants or antipsychotics in adolescent patients? Is the human adolescent brain at developmental risk from antidepressants or antipsychotics? Whether they are depressed or not, teenagers have incomplete development of the frontal cortex and underdeveloped frontolimbic connections have been shown to have implications for emotion regulation, impulse control and capacity for foresight and planning, which may contribute to the increased risk for depression. Structurally, grey matter volume follows an inverted U-shaped developmental pattern in adolescence. Conversely, white matter continues to develop across the brain and across adolescence, particularly in the frontal regions. The onset of depression in adolescents has been associated with an increase in amygdala resting-state functional connectivity to the subgenual anterior cingulate cortex, which has been suggested to represent a heightened reactivity to emotional and social stimuli. Animal studies suggest that the SSRI fluoxetine could be ineffective or, at worst, detrimental to adolescent brain development, while the administration of fluoxetine stimulated cell proliferation in the hippocampus of adult rats, but not in adolescents. A recent meta-analysis concluded that there is very limited evidence upon which to base conclusions about the relative effectiveness of psychological interventions, antidepressant medication and a combination of these interventions in children and adolescents. In addition, Cognitive Behavioral Therapy, which was originally developed for adults, may not be as effective for adolescents with depression due to differences in cognitive control and reward sensitivity. Regarding psychosis, studies showed that adolescents are not only more susceptible to the side effects of antipsychotic medication than adults, but they are also more likely to be sensitive to the negative impact of side effects on appearance, body image, and self-esteem. A recent network meta-analysis showed that nearly all antipsychotics were more efficacious compared to placebo, the treatment effects were similar compared to findings in adult patients with schizophrenia, and that Clozapine was significantly more effective. Understanding the impact of changes in adolescent developing brain offers critical insights that might explain, not only the patterns of individual differences in developmental risk and resilience, but also the impact of pharmacotherapy in depressed or psychotic adolescents.





17.00-18.30 **SYMPOSIUM**

### **THE KALEIDOSCOPIIC IMAGE OF SUICIDALITY**

Chairpersons: **Afzal Javed** (UK), **Konstantinos N. Fountoulakis** (Greece)

*The Symposium is organized by the WPA Section on Evidence Based Psychiatry*

## **Free will, mental illness and suicidality**

### **Konstantina Papadopoulou**

*4<sup>th</sup> Year Medical Student, Aristotle University of Thessaloniki, Greece*

The issue of free will is at the heart of understanding human mind and what it means to be a conscious, thinking and responsibly acting individual. A link between freedom and mental illness is clearly present, as mental disorder is characterized by the “loss of freedom”. Depending on the specific diagnosis, mental disorders are characterized by fewer freedom degrees and more restrictions in comparison to mental health. In addition, suicidality is associated with mental illness and genetic background. Suicide has been examined from moralist, libertarian and relativist perspectives. The field of psychiatry needs to consider the complexity of suicidality and the potential for suicide made under free will or under the influence of determining factors. In this speech we shall review contributions of neuroscience, philosophy and computer science to our understanding of free will and correlate that with mental illness and suicidality.

## **Suicide attempts**

### **Eleni Papadopoulou**

*4<sup>th</sup> Year Medical Student, Aristotle University of Thessaloniki, Greece*

The aim of this presentation is to investigate in depth the various aspects surrounding suicide attempts. It is vital to define suicide attempts concretely and recognise the possible risks that predispose individuals for such an action. It has been established that socio-demographic, environmental and physical factors shape the suicide attempt rates. Light is being shed on the characteristic profile of individuals attempting suicides too. The question to be probed is as to why women are more common in attempting suicides but men more likely to die of them. The term of Gender Paradox is introduced at this point. Additionally, the differences in the choice of mode between the suicide attempters and completers is of importance to comprehend how the end result of an attempt is affected. Lastly, it is cross-examined how well linked the completed suicides and suicide attempts are to climate change and unemployment. All in all, in this speech the target is to fully fathom the particular facets of suicide attempts.

## **Socially defined suicides (honor, self-sacrifice, group suicides)**

### **Chrysi Kaparounaki**

*4<sup>th</sup> Year Medical Student, Aristotle University of Thessaloniki, Greece*

Socially defined suicides constitute an utterly important part in the issue of suicides. In the term “Socially defined” we include suicide bombings, honor suicides, self-immolation and group

suicides. The most characteristic example of suicide bombings are kamikaze aviators during World War II. Although the researches concerning suicide bombers are plenty, their Scientific authenticity is under question. Honor suicides date from ancient world (Ancient Greece, Rome, Japon, etc.) until today. A determining opponent to their progress was Christianity depending to whom suicide was thought to be a sin. In self immolations, death is a precondition for the achievement of the purpose and is caused by the perpetrator itself. Finally, group suicides have a rising appearance in time during periods of war.

## **World epidemiological data of suicide**

**Danai Priscila Mousa**

*4<sup>th</sup> Year Medical Student, Aristotle University of Thessaloniki, Greece*

Suicidality represents a major societal and health care problem; it thus should be given a high priority in many realms. Statistical data on suicides in Greece indicate various corellations with respect to the age, gender, country region, socioeconomic status of the individual, or, the method of suicide. The most recently collected information on suicides, based on Greek media and on-line news services, are presented and compared to previous studies on the same Geographical area. Completed suicides are four times more common in males than females in Greece. Suicide rates vary among the sexes and across lifetimes, the most commonly used methods are hanging, firearms and fall from a high place. The majority of suicides in Greece are related to known psychiatric problems of the autocrat. Relevant risk factors seem to be depression, substance use, and psychosis as well as anxiety, personality-, and trauma-related disorders that may significantly add to unnatural causes of death. On the other hand, very low corellation is found with unemployment or financial problems.

## **Psychopathology and risk factors for suicidality**

**Mikaella Patsali**

*5<sup>th</sup> Year Medical Student, Aristotle University of Thessaloniki, Greece*

Many different risk factors interact and cause suicidal ideation. However, the existence of a mental disorder is critical, as suicide is closely related to it. The suicide rate among alcohol dependents and drug users is higher than that of the general population. In addition, suicidality is associated with poor physical health, mainly diseases that provoke chronic pain and disability. Twin and adoption studies and genetic maps show the genetics' significance concerning suicidality. Moreover, suicidality is determined by the economic environment and the unemployment, while some occupational groups, like the medical practitioners are at increased risk. The negative stance many religions take against suicide is important as well. Nevertheless, the geographical position of each country has greater significance in its suicide rates. Clear ethnic patterns exist too. Low population density regions, isolated with bad quality health provision, have increased suicide rates. Furthermore, the change of the weather and the climate have a big impact, especially the daily amounts of sunshine. The Media, including the Internet, can cause copycat suicides (Werther effect) or a protection against them (Papageno effect), depending on



the way suicides are reported. As far as the Childhood trauma is concerned, bullying and sexual abuse could increase the risk of suicide. Last but not least, previous attempts and self-harm are the most accurate predictor of a completed suicide.

18.30-19.00 **LECTURE**

Chairperson: **Xenia Gonda** (Hungary)

## **Psychodermatology: where are we standing today?**

**Vassiliki Karathanasi**

*Oral Pathology & Medicine Specialist, Dermatology Resident, General Hospital of Athens  
"Evangelismos", Athens, Greece*

Psychodermatology addresses the interaction between "internal" mental disease and "external" dermatological lesion based on the admission of a functionally united neuro-immuno-cutaneous system (NIC) which uses the same language of mediators, cytokines and neurotransmitters. In the course of several skin diseases and psychiatric conditions NIC is destabilized so producing psychocutaneous diseases.

Primary psychiatric conditions have been variably correlated with skin lesions while surprisingly it is estimated that 30-60% of dermatological patients suffer from some type of mental disease. Nevertheless, the proposed potential underlying mechanisms still remain controversial and unclear. In the core of the pathogenetic theories of psychocutaneous disease lies an aberrant NIC functioning and signaling mainly affecting the inflammatory processes as well as a modified patient behavior provoked by mental disease. Characteristically, depression and psoriasis have been clinically and pathogenetically interconnected as they are regulated by common inflammatory cytokines such as TNF $\alpha$  and IL-6 which have also comprised therapeutic targets. Similarly, overexpression of stress-biomarkers has been described in atopic dermatitis while a total of 13% patients with skin lesions is believed to suffer from stress. Unfortunately, the majority of dermatological patients refuses to receive psychiatric treatment when advised.

Thus, it is highly probable that psychiatric disorders might directly and/or indirectly either cause or trigger skin diseases and vice versa. On the other hand, the complicated bidirectional interconnection between skin and mental pathology still remains unknown and randomized controlled trials are required in order to enlighten the underlying pathogenetic mechanism, resolve the ongoing debate, and enable appropriate targeted treatment planning.

19.00-20.30 **SYMPOSIUM**
**SCHIZOPHRENIA - DIFFERENT ASPECTS OF THE SAME POINT**

 Chairpersons: **John Nimatoudis** (Greece), **Petros Fotiadis** (Greece)

**The use of Long Acting Injectable (LAI) antipsychotics in Greece - physicians' beliefs and LAIs use in clinical practice**
**Petros Fotiadis**
*Psychiatrist, Military Community Mental Health Center, 424 General Military Hospital, Thessaloniki, Greece*

Treatment goals of patients with schizophrenia have recently been raised - improvement and maintenance of functionality is nowadays in focus, in line with relapse prevention and long term symptom control. Long acting injectable antipsychotics (LAIs), especially early in the disease course at the time when functionality is most important to be preserved, is considered to be a valid treatment option, although very often underutilized. The aim of this observational questionnaire-based study was to evaluate the % of LAIs usage in clinical practice in Greece and investigate its correlation with physicians' beliefs.

Conclusion: Despite the rather good knowledge and positive perception towards the clinical benefits of LAIs that the psychiatrists in Greece have, it seems that the use of LAIs is still low in Greece. Problems that clinicians face act as a barrier for increased usage in clinical practice and should be adequately addressed in the near future.

**Social Cognition as a candidate biomarker for schizophrenia**
**Evangelos Ntouros**
*Psychiatrist, Military Community Mental Health Center, 424 General Military Hospital, Thessaloniki, Greece*

Patients diagnosed with schizophrenia display deficits across a wide range of cognitive functions including Social Cognition (SC), a term which describes cognitive processes used to decode and encode the social world. Furthermore, in the past few years there has been an increasing effort to identify biomarkers related to mental disorders in order to improve their diagnosis and prognosis of the disease. SC could be considered as a candidate biomarker, defined as such in the wider sense of the term biomarker.

**Is it possible to predict the future in first-episode psychosis?**
**Anestis Ramnalis**
*Psychiatrist, Inpatient Psychiatric Department, 424 General Military Hospital, Thessaloniki, Greece*

The outcome of first-episode psychosis (FEP) is highly variable, ranging from early sustained recovery to antipsychotic treatment resistance from the onset of illness. For clinicians, a possibility to predict patient outcomes would be highly valuable for the selection of antipsychotic treat-



ment and in tailoring psychosocial treatments and psychoeducation. During our presentation we summarize current knowledge of prognostic markers in FEP. We present potential outcome predictors from clinical and sociodemographic factors, cognition, brain imaging, genetics, and blood-based biomarkers, and based on various and different outcomes, like remission, recovery, physical comorbidities, and suicide risk.

## From substance abuse to psychosis and vice versa

### Konstantinos Rantis

*Psychiatrist, Inpatient Psychiatric Department, 424 General Military Hospital, Thessaloniki, Greece*

Throughout the years, clinical experience and international literature have proven the relationship between several psychotropic substances of abuse and acute or chronic psychotic symptoms. As an example, one could mention the well-known to a clinician alcoholic hallucinosis in chronic alcohol abusers, paranoid ideation in cannabinoid users, or acute psychotic episodes while intoxicated with stimulants or hallucinogens.

Furthermore, patients suffering from psychosis often use psychotropic substances other than their prescribed medication. Comorbidity of psychosis and substance use disorders is high, affects patient's adherence to treatment as well as the course and prognosis of the psychotic disorder, and, not uncommonly, causes problems of differential diagnosis.

In our presentation, we will try to analyze the relationship between substance abuse and psychosis, by reporting epidemiological data, possible common mechanisms of action, as well as treatment approaches.

20.30-21.00 **LECTURE**

Chairperson: **Orestis Giotakos** (Greece)

## Andropause and Hormonal Replacement Therapy (Hrt)

### George Touliaos

*Medical Biopathologist, Greece*

Andropause is a clinical syndrome characterized by decline in hormonal status and androgens in middle aged men. It is a common disorder but often underdiagnosed and undertreated.

Diagnosis is based on the presence of sexual (erectile dysfunction, low libido), physical (sarcopenia, decreased muscle mass and strength, omental fat storage, loss of cognitive function) and psychological (depression, lack of self esteem and decreased vitality) symptoms suggestive of testosterone deficiency and persistent low serum testosterone levels.

The use of testosterone is the epitome-base of anti-aging treatment (TRT) and hormone replacement therapy for men (HRT). Besides the benefits on body composition, muscle mass, bone density, HRT improves self-confidence, depressive symptoms, energy, quality of life and cognitive function. Both laboratory assessment and clinical manifestations are necessary to verify the need for HRT.

Several different types of testosterone delivery systems exist including oily capsules, oily based



injections, transdermal gels, pellets implantation and buccal preparations of testosterone.

The physician should inform the patient the long-term benefit and the potential adverse effects of this treatment and a periodic follow up assessment (clinical, laboratory) should be performed.

The risks of testosterone replacement therapy depend upon age, life style circumstances and other medical conditions. Before starting patients on HRT, physicians must take under consideration the contraindications of the particular treatment.

The ultimate goal of HRT is to optimize both physical and mental health in male patients.

This means producing an environment where we have elevated testosterone to sufficient levels, with the body responding as if it is unaware of the exogenous administration.



Friday, June 28<sup>th</sup> 2019

09.00-10.30 SYMPOSIUM

PHARMACOLOGICAL TREATMENT OF PERSONALITY DISORDERS

Chairperson: Athanassios Douzenis (Greece)

## Effectiveness of pharmacological interventions on cluster A personality disorder. Is there much to expect?

**Foteini Thoma**

*Intern of Psychiatry, Panarcadian Hospital of Tripoli, Greece*

Cluster A personality disorders (schizoid, paranoid, schizotypal) are known as the odd and eccentric ones. Social awkwardness along with mistrust and low level of insight makes it rather difficult for the patient to address to the Mental Healthcare System and even harder to participate in clinical trials. If just getting in touch with mental healthcare professionals is difficult for the patient then pharmacological intervention is a real challenge for the clinician. Prescribing medication usually serves the cause of eliminating the consequences of symptoms (such as agitation, brief psychotic episodes, asociality or avolition), when and if they become prominent but not enough data are available on how to actually treat the disorder itself. Due to phenotypic similarity to axis I psychotic disorders and taking into consideration convincing evidence of the role of the dopamine D2 receptor type in the pathophysiology of schizophrenia, dopamine may also play a role in the pathophysiology of cluster A personality disorders. There are opposing views on the subject though, as anti-depressants, mood stabilizers or even stimulants have been used, suggesting in some cases a more relevant biological connection to Borderline Personality Disorder or developmental disorders such as autism, rather than to axis I psychotic clinical disorders.

## Narcissistic, histrionic and antisocial personality disorder: pharmacological treatment

**Marios Krespis**

*Fourth-Year Psychiatry Resident, Psychiatric Hospital of Attica, Greece*

Narcissistic, histrionic and antisocial personality disorder (PD) have a strong presence in current practice and attract special interest from both the clinical and forensic psychiatrist not least due to their dominant behavioral aspect.

Like all PDs, they are characterized by the enduring presence of their manifestations to the individual's inner experience and behavior since early adulthood, at least. Their etiology is unclear although it is generally agreed upon that early life experiences and -at least in the case of antisocial PD- genetic causes as well as cerebral pathology play a role. It is no surprise that such well-established patterns of elusive origin are challenging to treat.

Psychotherapy has been the cornerstone of PD treatment with growing evidence of its efficacy but utilizing it has proved problematic partly due to poor engagement, common in the individ-

uals concerned. Furthermore, no targeted pharmacological treatment has been approved for those types of PD and current research conclusions are mostly limited to treating comorbid conditions.

Their long-lasting and far-reaching impact combined with the lack of effective and realistically applicable treatment options bring out the need for further research into the pharmacological treatment of said PDs.

## **Pharmacological and other biological treatments in the management of borderline personality disorder**

**Danai Ioanna Manolopoulou**

*Specialty Trainee in General Psychiatry at Psychiatric Hospital of Attica, ST6, Greece*

Borderline Personality Disorder (BPD) is a clinically heterogeneous condition characterized by disturbances of impulse control, affect and interpersonal relationships. There is evidence that long term psychotherapy can be a useful form of treatment in those with BPD and it is often preferred to pharmacological treatment due to reports of the limited efficacy of drug therapy. Despite this pharmacotherapy has been recommended as an adjunctive, symptom -targeted component of treatment. Previous meta- analyses have concluded that pharmacotherapy could exert a beneficial effect on certain core traits of BPD. A number of studies have been conducted to assess the efficacy of various medications in the management of patients with BPD such as antidepressants, antipsychotics, mood stabilizers, as well as other biological agents (e.g. Omega-3 Fatty Acids, Memantine) and combination of them. Neurobiological research suggests that abnormalities in the frontolimbic networks are associated with many of the symptoms. Moreover there has been interest in the role of neuropeptide systems, Opioids, Vasopressin, Oxytocin and in the role of the epigenetic modifications following early life stressors.

## **Symptom based biological treatment of cluster C personality disorder**

**Stathis Gavanozis**

*Psychiatry Registrar, University General Hospital of Thessaloniki AHEPA, Greece*

The cluster C Personality Disorders are Avoidant, Dependent and Obsessive-Compulsive. They are present in approximately 3-9% of the general population. In general, cluster C PD are given little attention in the field of research and clinical practice. PD patients are most commonly treated with a combination of pharmacotherapy and psychotherapy. Symptomatic pharmacotherapy of PD is best organized around four empirically derived domains of symptoms: I) mood and anxiety dysregulation II) impulsivity, aggression, and behavior dyscontrol III) emotional disinterest and detachment and IV) cognitive distortions and brief reactive psychoses. I) and III) are more common among Cluster C PD. Mood instability is treated by traditional mood stabilizers, lithium, valproate, and lamotrigine. As second-line, low to moderate doses of atypical SGPs can also stabilize mood. Atypical depression does not respond so much to standard antidepressants as it does to phenelzine, a MAOI. For phenelzine non-responders, augmentation with or switching to one of the SGPs may be more effective. Biological anxiety drugs of choice are SSRIs and



GABA enhancers like pregabalin. Benzodiazepines use should not be prolonged and it should be monitored for potential abuse. Clozapine and Aripiprazole have been shown to alleviate the negative symptoms presented in symptom-domain III), but further research is needed.

10.30-11.00 **LECTURE**

Chairperson: **Xenia Gonda** (Hungary)

## Neurological Soft Signs in healthy controls and patients with schizophrenia

### Panagiotis Panagiotidis

*Scientific Associate, 3<sup>rd</sup> Psychiatric Department, Aristotle University of Thessaloniki, Greece*

Neurological abnormalities are traditionally classified as “hard signs” (impairments in basic motor, sensory, and reflex behaviors, which do not appear to be affected in schizophrenia) and “soft signs”, which refer to more complex phenomena such as abnormalities in motor control, integrative sensory function, sensorimotor integration, and cerebral laterality. Additionally, neurological soft signs (NSS) are minor motor and sensory abnormalities that are normal in the course of early development but abnormal when elicited in later life or persist beyond childhood. Soft signs also, have no definitive localizing significance but are indicative of subtle brain dysfunction. Most authors believe that they are a reflection not only of deficient integration between the sensory and motor systems, but also of dysfunctional neuronal circuits linking subcortical brain structures such as the basal ganglia, the brain stem, and the limbic system. Throughout the last four decades, studies have consistently shown that NSS are more frequently present in patients with schizophrenia than in normal subjects and non-psychotic psychiatric patients. However, the functional relevance of NSS remains unclear and their specificity has often been challenged, even though there is indication for a relative specificity with regard to diagnosis, or symptomatology. We will present some conclusions concerning NSS in a group of healthy controls and patients with schizophrenia.

11.00-11.30 **LECTURE**

Chairperson: **John Nimatoudis** (Greece)

## Pharmacological interventions for violent behaviour

### Athanassios Douzenis

*Professor in Psychiatry Forensic Psychiatry, National and Kapodistrian University Medical School, 2<sup>nd</sup> Department of Psychiatry, Attikon University Hospital, Athens, Greece*

Violence is a frequent occurrence in the world and has mainly social and ecological origins and consequences. Interpersonal and intimate partner violence is sometimes associated with personality disordered individuals whilst a small percentage of violence is associated with the emergence or the relapse of a Serious Mental illness (SMI).

This review will focus on the pharmacological interventions to reduce acute and immediate threat of violence and its containment. Some pharmacological agents have been used in clinical

cal settings with reported efficacy. Antipsychotic and benzodiazepines as well as antidepressant medications have been used although randomised well conducted clinical trials are scarce. The findings will be discussed

12.00-13.00 **SYMPOSIUM**  
**NEUROBIOLOGICAL AND SOCIAL ASPECTS OF SUICIDAL BEHAVIORS**  
**IN THE YOUTH**  
 Chairperson: **Georgios Alevizopoulos** (Greece)

### **Neurobiological factors contributing to suicidal behaviors in juveniles**

**Georgios Alevizopoulos**

*University Psychiatric Clinic "Aghioi Anargyroi" Hospital, NKUA, Greece*

Aggression and self-directed hostility are complex and heterogeneous. Recent research finds that aggression either as a self-directed or towards others behavior, shares common neurobiological mechanisms. Therefore, it is essential to identify subtypes or classes of aggression, and subordinate factors (eg, impulsivity, callousness). A longstanding system for codifying aggression has been the impulsive/instrumental dichotomy: the former seeing as a spontaneous response to some kind of provocation; and the latter as a premeditated action aiming to a pain relief. From a clinical point of view, aggression is the combination of a negative affect and impulsivity. Neurobiological studies, have focused to the impulsive variant of self-directed hostility. Nevertheless, impulsive or instrumental aggression occur simultaneously in many suicidal and para-suicidal behaviors. For example, aggression can occur in a sudden and unplanned manner as a reaction to an inner perception of provocation or in a purposeful manner, in order to restore an undervalued self-esteem. The last forty years a number of neurobiological factors have been suggested to contribute to both impulsive and instrumental suicidal behaviors with some of them having robust evidence and others weak. In this presentation we shall explore some of the pivotal biological factors that are present to suicidal youngsters regardless the impulsive or instrumental manner of their behavior.

### **Completed suicide in the youth: Psycho-social implication in bereaved parents**

**Maria Karanikola**

*Cyprus University of Technology, School of Health Sciences, Department of Nursing - Limassol, Cyprus*

There is evidence on the experience of adverse psycho-social phenomena in individuals, associated with the death of their family members due to suicide. However, there is only scant data regarding understanding of this phenomenon in parents of those who completed a suicide. Based on a qualitative study design, we tried to shed some light on the living experience of parents whose offspring died by suicide. Our results reveal that suicide is experienced as a sudden, unexpected, disastrous and traumatic event for all family members. At the same time, effective adaptation and coping seems to entail a dynamic, incessant process characterised by a worldview





transformation, giving growth to personal development, empowerment and self-motivation in bereaved parents. Additionally, the core need of bereaved parents seems to involve a constant effort for protection; some parents need to protect the memory of their child against the social stigma of suicide, while others need to protect their dignity against the public stereotype of being ineffective parents. Also, evident is parents' need to protect the rest family members, particularly the survived children, from dysfunctional psycho-social experiences linked with the suicide event. Further qualitative studies, with special focus on the experience of fathers whose offspring completed suicide are proposed. Interventions aiming to reduce the social stigma associated with those completing suicide and further alleviate suffering from bereaved parents are also suggested.

## Illicit drug use and suicidal behavior in school students

**Maria Nystazaki**

*University Psychiatric Clinic "Aghioi Anargyroi" Hospital, NKUA, Greece*

A systematic review in PubMed, CINAHL, PsychINFO, and Scopus was performed. Identified articles were published between 2007 and 2018. Twenty empirical studies confirmed the association between IUS and suicidality, strongly differentiated between males and females, highlighting the importance of gender-specific mediating factors. Mental health nurses need to document gender factors, frequency, and motivation of IUS when screening adolescents experiencing suicidal behavior and IUS. The research synthesis demonstrated that suicide attempts were more than seven times higher in male current cannabis users compared with non-users, even when controlled for anxiety and depressive symptoms. This score was 16 times higher in female current cannabis users. The same pattern was noted in relation to suicide ideation, which was three times higher in male current cannabis users compared with non-users, while it was almost double that is, seven times higher, in female current users compared with female non-users. Although previous data show that males are more likely to use cannabis compared with females, the aforementioned stronger association between cannabis use and suicide attempts/ideation in females compared with male users may indicate that female school students are more vulnerable to the adverse effects of cannabis use on suicidal behavior, or that female school students use cannabis as a self-regulatory coping strategy against suicidality more frequently than males.

13.00-13.30 **LECTURE**

Chairperson: **Emmanouil Rizos** (Greece), **Konstantinos Bonotis** (Greece)

## How can we prevent dementia? Effect of medical conditions on the course of cognitive decline

**Istvan Boksay**

*Clinical Professor of Psychiatry/Retired New York University (NYU), USA*

Patients with mild to moderate dementia progress to end stage dementia faster if they have

more medical conditions (MCs) at their baseline evaluation than those who have less MCs. Other recent studies have noted that cognitive function of elderly people with subjective cognitive impairment (SCI) is five times more likely to further decline than those without SCI. Our aim was to determine 1) whether the prevalence of medical comorbidities contribute to more rapid decline in cognitive functioning and 2) whether the prevalence of medical conditions and the use of medications are different in patients with and without SCI. Our preliminary evaluation shows that medical conditions markedly influence the decline of cognitive functioning even in the elderly with normal baseline cognitive function and elderly with SCI have significantly more MCs and take more medications than those without SCI.

13.30-14.30 **SYMPOSIUM**  
**SCHIZOPHRENIA AND METABOLIC SYNDROME. THE ROLE OF INFLAMMATORY BIOMARKERS**  
 Chairpersons: **Emmanouil Rizos** (Greece), **Konstantinos Tsamakis** (Greece)

### **The role of Neurotrophins in Schizophrenia and Metabolic Syndrome**

#### **Emmanouil Rizos**

*National & Kapodistrian University of Athens, Medical School, 2nd Department of Psychiatry, University General Hospital "ATTIKON", Athens, Greece*

The brain-derived neurotrophic factor (BDNF) is a member of the neurotrophic family that promotes the development, regeneration, sustaining and maintenance of neuron function in the central nervous system. It seems that BDNF modulates neurotransmitter synthesis, metabolism and neuronal activity and is also involved in the development of dopaminergic-related systems, and the mesolimbic dopamine systems which are implicated with schizophrenic pathophysiology. BDNF is an anti-inflammatory cytokine factor which mediates the apoptotic activity of pro-inflammatory cytokines in the brain as a result of different genetic and epigenetic (environmental) factors and therefore reduces the inflammatory levels of the brain. Besides, abnormal BDNF signaling can influence neuronal differentiation and synaptic function leading to altered brain development and functioning. Neurodevelopmental abnormalities and a dysregulated dopamine system, have been implicated in the pathophysiology of schizophrenia. In specific, decreased serum BDNF levels have been reported in neuroleptic free patients with schizophrenia relative to healthy controls, and also in chronic patients with schizophrenia on antipsychotics. Increased BDNF levels however have been reported in chronic medicated patients. BDNF levels have also been associated with the severity of psychotic symptoms of the patients. Therefore, BDNF signaling is implicated to crucial brain functions as a part of homeostatic activity and also may be a marker of abnormal neurodevelopment and neurotransmission in schizophrenia.



## Neuroinflammation in Schizophrenia: Role of cytokines. Latest data

### Konstantinos Tsamakís

*2<sup>nd</sup> Department of Psychiatry, National and Kapodistrian University of Athens, Medical School, "ATTIKON" General Hospital of Athens, Athens, Greece*

Inflammation in the central nervous system is closely related to neurodegeneration. Clinical studies, including neuroimaging, peripheral biomarkers and randomized control trials, have suggested the presence of neuroinflammation as a major mechanism in schizophrenia.

Neuroinflammation is associated with white matter pathology in people with schizophrenia, and may contribute to structural and functional disconnectivity, even at the first episode of psychosis.

Neuroinflammation is a complex process involving both the peripheral circulation and the Central Nervous System (CNS). Stressors including early-life adversity, psychosocial stress, and infection appear to prime microglia toward a pro-inflammatory phenotype. Subsequent inflammatory challenges then drive an exaggerated neuroinflammatory response involving the upregulation of pro-inflammatory mediators that is associated with CNS dysfunction. More specifically, the activation of microglial cells, leads to the release of pro-inflammatory cytokines and activates apoptotic signalling.

Cytokines are key regulators of inflammation. Uncontrolled activity of pro-inflammatory cytokines and microglia can induce schizophrenia in tandem with genetic vulnerability and glutamatergic neurotransmitters, especially given evidence of cytokine-related decreases in total grey matter.

Inflammation may play a role in the accelerated physical aging reported in schizophrenia. For example, higher TNF- $\alpha$  and IL-6 levels in schizophrenia patients have been associated with depression, physical comorbidity, and mental well-being.

Several pharmacologic inhibitors of pro-inflammatory cytokines including TNF- $\alpha$  and IL-1 $\beta$  show good clinical efficacy in terms of ameliorating neuroinflammatory processes

Conclusion: Elevated pro-inflammatory cytokines may be particularly involved in schizophrenia etiology. Cytokines could be used as state markers when it comes to prognosis and outcome in schizophrenia and trait markers regarding efficacy and side effects of antipsychotic medication.

## Schizophrenia and Metabolic Syndrome. The role of Inflammation

### Stylianós Kypourópoulos

*2<sup>nd</sup> Department of Psychiatry, National and Kapodistrian University of Athens, Medical School, "ATTIKON" General Hospital of Athens, Athens, Greece*

Metabolic syndrome (MetS) is a cluster of factors that increases the risk of cardiovascular disease, one of the leading causes of mortality in patients with schizophrenia. Incidence rates of MetS are significantly higher in patients with schizophrenia compared to the general population.

Because of this association, research has focused on identification of metabolic and inflammatory biomarkers, so as to focus on the patients at greatest risk of metabolic syndrome. For example, it has been shown that male patients with schizophrenia with MetS had higher serum

brain-derived neurotrophic factor (BDNF) levels than those without.

Several metabolic biomarkers have also been described. Increased levels of alanine aminotransferase (ALT) have been identified as a biomarker for MetS; even mild ALT elevations within the normal range, can be used as a predictor of the MetS risk in male schizophrenic patients.

Furthermore, it has been demonstrated that antipsychotic drug treatment in people with First Episode of Psychosis (FEP) caused imbalance in metabolic biomarkers (C-peptide, insulin, leptin, adiponectin and resistin) and increased BMI. These findings provide insight into antipsychotic-induced MetS and refer to problems in insulin processing already present in the early stage of the chronic psychotic disorder.

Leptin and Adiponectin are adipokines which have opposing roles in the development of insulin resistance and MetS. Lower levels of adiponectin are associated with higher risk of metabolic syndrome in patients taking atypical antipsychotics.

Despite several areas of biomarker research into schizophrenia-related metabolic syndrome, translation into the clinical setting is still lacking, and further studies are needed to bridge this gap.

14.30-15.00 **LECTURE**

Chairperson: **Giulio Perugi** (Italy)

### **Circadian rhythms depression and type II diabetes mellitus: exploring the relationship using a unique model animal**

**Haim Einat**

*Professor, School of Behavioral Sciences, Tel Aviv-Yaffo Academic College, Israel*

**Background:** There is a well known comorbidity between depression and type II diabetes mellitus (T2DM). The biological mechanisms for this comorbidity is not clear but both depression and T2DM are strongly linked with circadian rhythms disturbances suggesting that maladaptive circadian rhythms can be the underlying cause for both T2DM and depression. The fat sand rat (*Psammomys obesus*) is a diurnal rodent in nature with unstable daily activity patterns in laboratory conditions. Fat sand rats develop T2DM in laboratory conditions. Additionally, we have previously demonstrated that relatively small circadian disturbances in the fat sand rat result in a depression- and anxiety-like behavioral phenotype. We therefore suggest that the fat sand rat is an advantageous model animal to explore relationship between circadian rhythms, diabetes and depression. We examine these relationships by following the development of diabetes and depression in fat sand rats maintained in different settings.

**Methods:** fat sand rats were maintained in natural, laboratory, or short photoperiod settings, glucose levels were monitored and behavioral tests were administered. Brains, livers and kidney were analyzed for *Per2* expression.

**Results:** Animals in laboratory conditions develop more T2DM and depression-like behaviors compared with animals maintained in natural conditions. Short photoperiods accelerate the development of both pathologies. Some differences are detected in the expression of *Per2*.

**Conclusions:** We suggest that disturbed circadian rhythms disrupt the internal temporal order and metabolic pathways controlled by feeding and the circadian system, resulting in the development of T2DM and depressive-like behavior.



15.00-15.30 **LECTURE**

Chairperson: **Athanassios Douzenis** (Greece)

## **Manic/hypomanic and depressive switches in bipolar patients: predictors, clinical implications and the role of antidepressant and antipsychotic drugs**

**Giulio Perugi**

*Department of Experimental and Clinic Medicine, Section of Psychiatry, University of Pisa, Italy*

Bipolar Disorder (BD) is a chronic illness characterised by recurrent manic and depressive episodes, multiple medical and psychiatric comorbidities, significant functional impairment and high rates of suicide. A significant proportion of patients with BD can show switches from depression to mania or vice versa. The switch phenomenon is characterized by a sudden transition from a mood episode to another episode of the opposite polarity; this particular feature distinguishes BD from all other psychiatric disorders and is related with a poor long-term outcome (1). In the last 30 years, switching from depression to mania has been a widely studied issue that originated a great debate on the possible trigger role of antidepressant drugs, particularly when utilized in monotherapy (2). On the contrary, the switch from mania to depression has been poorly investigated, and only few studies explored factors that may be associated with an increased risk of this particular phenomenon (3). Several demographic, psychopathological and pharmacological variables predicted the switch from mania to depression, such as age, severity of symptoms at baseline, a course characterized by depressive predominant polarity and treatment with a combination of both FGAs and SGAs. The study of predictors and clinical impact of the switch phenomenon is very relevant for long-term outcome of BD and should be considered for choosing appropriate treatment strategies.

### REFERENCES

1. Maj M, Pirozzi R, Magliano L, Bartoli L. The prognostic significance of “switching” in patients with bipolar disorder: a 10-year prospective follow-up study. *Am J Psychiatry*. 2002.
2. Viktorin A, Lichtenstein P, Thase ME, Larsson H, Lundholm C, Magnusson PKE, et al. The risk of switch to mania in patients with bipolar disorder during treatment with an antidepressant alone and in combination with a mood stabilizer. *Am J Psychiatry*. 2014.
3. Vieta E, Angst J, Reed C, Bertsch J, Haro JM. Predictors of switching from mania to depression in a large observational study across Europe (EMBLEM). *J Affect Disord*. 2009.

15.30-16.00 **LECTURE**

Chairperson: **Maria Samakouri** (Greece)

## **Management of Treatment Resistant Depression: A Case Discussion**

**Michael Henry**

*Director Somatic Therapies, Medical Director Dauten Family Center for Bipolar Treatment Innovation Massachusetts General Hospital, USA*

This talk will review the recent advances in transcranial magnetic stimulation (rTMS), ketamine,



esketamine, and electroconvulsive therapy (ECT) and then discuss their clinical application by leading a clinical case discussion.

Transcranial magnetic stimulation has emerged as a potent treatment for depression that is resistant to pharmacology and psychotherapy. Recent advances including theta burst TMS and multiple theta burst TMS will be reviewed. The history of the use of ketamine for treatment resistant depression and the available clinical dataset supporting its use in severely affectively ill and suicidal patients will be reviewed. The differences between S-ketamine and R-ketamine and the rationale for using each agent as an antidepressant and the successor to racemic ketamine will be presented. The available clinical data for each agent will be discussed. Similarly, advances in the practice of ECT, including ultra-brief pulse width and anesthetic options for severely ill individuals will be presented. Lastly, a clinical case will be presented and discussion of clinical management with active audience participation will be led by the presenter.

16.00-16.30 **LECTURE**  
 Chairperson: **Ioannis Diakogiannis** (Greece)

### **Adherence to therapy**

**Maria Samakouri**

*Professor of Psychiatry, Medical School, Democritus University of Thrace, Greece*

According to World Health Organization project on treatment adherence (WHO, 2003), adherence is referred to "the extent to which a person's behaviour- taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider".

Poor adherence to medication treatment is considered to contribute to higher morbidity, mortality and health care costs. Multiannual research on adherence has shown that in all disorders, both somatic and mental, requiring long-term treatment, mean adherence with medication is limited and varies around 50%, depending on the disease. Although many methods are available to evaluate adherence, its measurement is challenging in research and clinical practice as well. Poor adherence is thought to be correlated with five sets of interacting factors (socioeconomic, and related to health system, therapy, disease & the patient).

This lecture deals with the issue of long-term adherence to drug therapy among individuals suffering from mental disorders. Risk factors of non-adherence along with evidence - based interventions to address this problem are to be discussed.

16.30-17.00 **LECTURE**Chairperson: **Dimitrios Dikeos** (Greece)

## The advent of Sleep Disorders Medicine: A psychiatrist's experience

**Constantin Soldatos***Emeritus Professor of Psychiatry, University of Athens, Greece*

It was only in the late 1960's that neuroscientists in collaboration with psychiatrists found out that brain activity during sleep goes through certain discrete states which are being registered in the polysomnogram (PSG). Then, it was ascertained that dreaming takes place during the stage of rapid eye movements (REM), which occurs periodically every about 90 minutes during the night. In-between REM sleep periods, the stages of light sleep (stages 1 and 2) and those of deep sleep (stages 3 and 4) namely slow wave sleep (SWS) occur. It has been recently documented that SWS mainly serves for energy restoration processes in the brain and for depotentiation of certain key neuronal circuits, while REM relates to review and selective storage of recently acquired memories and it contributes to potentiation of certain neuronal circuits in order to solidify "useful memory traces".

Starting in the 1970s, neurologists and psychiatrists utilized the PSG in studying thoroughly sleep disorders as well as the impact of various physical and psychiatric disorders on sleep architecture. From the 1980s on, otorhinolarygologists, pulmonologists, psychologists and pharmacologists joined neurologists and psychiatrists to form a large multidisciplinary group of Sleep Disorders Specialists. With the advent of Sleep Disorders Medicine (SDM) its nosology extended gradually to include: Insomnia, Hypersomnia, Narcolepsy, Parasomnias (nightmares, sleep walking / sleep terrors, REM behavior disorder, nocturnal myoclonus), Circadian Rhythm Disorders and Sleep Apnea. Consequently, clinicians specializing in SDM need to acquire broad skills in adequately dealing with this multifaceted medical field. A major challenge for SDM specialists is to be able to deal with their patients' psychosocial needs; thus, they should closely collaborate with psychiatrists, psychologists and social workers in effectively approaching their patients, as well as their patients' families and employers.

17.00-18.30 **SYMPOSIUM****THE USE OF LONG TERM ANTIPSYCHOTICS TO REDUCE VIOLENT RECIDIVISM**Chairpersons: **Athanasios Douzenis** (Greece), **Georgios Tzeferakos** (Greece)

## Is there a place for long term antipsychotics after the first psychotic episode?

**Georgios Tzeferakos***Head of OKANA Substitution Unit, Research Associate of the Forensic Psychiatry Unit,  
2<sup>nd</sup> Department of Psychiatry Attikon University Hospital, Athens, Greece*

First psychotic episode (FEP) patients present a major clinical challenge due to their unique clinical characteristics: they appear to have higher suicide and homicide rates, have higher mortality rates and lower medication adherence. Bearing in mind that DUP (Duration of Untreated Psychosis) is inversely related to the clinical course and that each consecutive psychotic episode

has a detrimental effect on the overall functioning of our patients, the need for improving medication adherence to FEP patients is paramount. A major tool for improving medication adherence in this unique group of patients is Long Acting Antipsychotic agents.

### **Balancing personal liberties: The use of court orders to enforce long term antipsychotics**

**Athanassios Douzenis**

*Professor in Psychiatry Forensic Psychiatry National and Kapodistrian University Medical School, 2<sup>nd</sup> Department of Psychiatry Attikon University Hospital, Athens, Greece*

Involuntary treatment in Psychiatry is a controversial issue that sometimes people can feel very passionate about. This stems from the issues of compliance to medication treatment and insight that in some psychiatric disorders is lacking. In some countries involuntary treatment is enforced in the community and there is considerable experience on its benefits and limitations. After reviewing their experience, this presentation will examine the limited application of community enforced treatment by court orders that are recently used for discharged from prison mentally ill and drug addicted individuals. The development of newer long acting antipsychotic medication offers exciting opportunities and also poses new ethical dilemmas regarding the patient's consent which will be reviewed and their application will be discussed.

### **Preliminary results from a 2 year Long term Antipsychotic Forensic Clinic**

**Panagiota Balli<sup>1</sup>, Evangelos Thanassas<sup>2</sup>**

*<sup>1</sup>Psychologist MSc, Forensic Psychiatric Unit, 2<sup>nd</sup> Department of Psychiatry, University of Athens, Attikon Hospital, Athens, Greece*

*<sup>2</sup>Msc, Psychiatrist in Adult Psychiatry, «Dromokaitio», Psychiatric Hospital of Athens, Athens, Greece*

According to systematic reviews, approximately the range of 40% - 60% of the schizophrenic patients are considered to be partially or completely non-compliant to the antipsychotic medical treatment with oral use. The safe providing of antipsychotic medical treatment reduces violent behavior significantly, the number of the incidents, and the violent actions of the psychiatric patients.

The First Generation injectable antipsychotic medicine of Long Action (LAIs) or else, "Depots", were developed in the 1960 and they were specifically aiming to improve the therapeutic compliance of patients who were suffering from Chronic Schizophrenic Psychosis and thus they were aiming to reduce the relapses.

The LAIs are internationally provided with a different frequency.

The theoretical suggestions that support the use of LAIs to violent patients were being supported by empirical evidence such as prospects and retrospective studies, analysis, metaanalysis etc. In our presentation we will announce the preliminary results of the two year depot clinical operation of the Forensic Psychiatry Clinic at the Attikon hospital.



19.00-19.30 **LECTURE**

Chairperson: **Ioannis Diakogiannis** (Greece)

## **New Treatments for Depression: Beyond Monoamine Drugs**

**Frank Tarazi**

*Department of Psychiatry and Neurology, Harvard Medical School and McLean Hospital, Boston, MA, USA*

Major depressive disorders (MDD) are one of the most common mental disorders worldwide. MDD patients suffer from depressed mood, diminished interest, changes in body weight, insomnia, and are likely to have increased rates of disability, poorer prognosis, and more suicide attempts. Pharmacological treatments of MDD include monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), serotonin/norepinephrine reuptake inhibitors (SNRIs), norepinephrine/dopamine reuptake inhibitors (NDRIs), and serotonin antagonist-reuptake inhibitors (SARIs). All these medications alter monoamine neurotransmission in the brain. These medications have brought relative improvement in MDD symptoms, and are typically associated with adverse effects including nausea, sexual dysfunction, somnolence, fatigue, and weight-gain. All of these adverse events prompt the search for novel agents with improved onset, efficacy, and long-term safety and tolerability.

The new pharmacological treatments for MDD have expanded beyond targeting monoamine systems in the brain. The glutamate system represented by the NMDA receptor has constituted an interesting target for developing new drugs, evidenced by the ability of the non-competitive NMDA receptor antagonist ketamine to exert potent and sustained antidepressant activity with remarkably fast onset of action in MDD patients. Esketamine, an isomer of ketamine, became the first FDA-approved non-monoaminergic drug for treatment of MDD. Rapastinel, a partial agonist at the glycine site associated with NMDA receptor showed promising results in Phase II clinical trials, though Phase III failed to replicate these findings. Modulating GABAergic neurotransmission appears to exert beneficial therapeutic benefits in treatment of MDD, evidenced by the ability of the allosteric GABA<sub>A</sub> modulators, brexnanolone and SAGE-217, to significantly improve symptoms of MDD and post-partum depression (PPD). The opioid system has also gained attention in treatment of MDD, and ALKS-5461 (buprenorphine/samidorphan) provided preliminary therapeutic benefits as an adjunctive treatment of MDD. Targeting non-monoaminergic systems appear to provide new drugs with novel mechanisms of actions and superior clinical efficacy for improved treatment of MDD.

19.30-20.30 **SYMPOSIUM**  
**NOVEL PHARMACOLOGICAL TREATMENTS FOR MENTAL DISORDERS**  
 Chairpersons: **Charalampos Touloumis** (Greece), **Christos Tsopelas** (Greece)

## **Lurasidone - Cariprazine for psychotic disorders**

### **Charalampos Touloumis**

*Psychiatrist, Deputy Clinic Director in the 10<sup>th</sup> Psychiatric Department, Psychiatric Hospital of Athens, Greece*

Treating psychiatric disorders such as bipolar depression and schizophrenia, we know that there are a lot of unmet needs (negative symptoms, cognitive dysfunction, low rates of compliance in maintenance treatment for schizophrenia, and, high suicide rates, need for polytherapy, risk for switch to mania, low rates for functional recovery, and difficulties in differentiation from unipolar depression for bipolar depression).

Two recently approved drugs in the treatment of these aforementioned diseases are Cariprazine & Lurasidone. Cariprazine was launched in the United States in 2015 for 2 indications: schizophrenia and the acute treatment of manic or mixed episodes associated with bipolar I disorder, both in adults. In terms of binding, cariprazine has very high binding affinities to dopamine D3 (0.085 nM), dopamine D2L (0.49 nM), serotonin 5-HT2B (0.58 nM), and dopamine D2S (0.69 nM) receptors, and high binding affinity to serotonin 5-HT1A (2.6 nM) receptors. Cariprazine forms 2 major metabolites, desmethyl cariprazine and didesmethyl cariprazine, that have in vitro receptor binding profiles similar to the parent drug. This latter metabolite, didesmethyl cariprazine, has a half-life of 1 to 3 weeks, and is the active moiety responsible for the majority of cariprazine's effect when in steady state. Thus, following discontinuation of cariprazine, the decline in plasma concentrations of active drug will be slow. The starting dose for cariprazine for schizophrenia, 1.5 mg/d, can be therapeutic. The dosage can be increased to 3 mg/d on Day 2. Depending upon clinical response and tolerability, further dose adjustments can be made in 1.5-mg or 3-mg increments to a maximum dose of 6 mg/d.

Lurasidone is a second-generation antipsychotic agent that initially received regulatory approval for the treatment of adults with schizophrenia in the USA in 2010. Similar to most other second-generation AP agents, lurasidone is a full antagonist at dopamine D2 and serotonin 5-HT2A receptors, with binding affinities  $K_i=1\text{nM}$  and  $K_i = 0.5\text{ nM}$ , respectively. In addition, lurasidone is distinguished by its high affinity for serotonin 5-HT7 receptors ( $K_i = 0.5\text{ nM}$ ; comparable with dopamine D2 and 5-HT2A receptors) and by its partial agonist activity at 5-HT1A receptors ( $K_i = 6.4\text{ nM}$ ).<sup>7</sup> The serotonin 5-HT7 receptor is a target of interest that may be associated with the potential for both pro-cognitive and antidepressant effects.



## Escetamine for depression and anxiety disorders

**Christos Tsopeles<sup>1</sup>, Panagiota Papadimitriou<sup>2</sup>, Angelica Gatos-Gatopoulos<sup>3</sup>**

<sup>1</sup>*Consultant Psychiatrist in Adult Psychiatry, Psychiatric Hospital of Attica, Athens, Greece*

<sup>2</sup>*Resident in Adult General Psychiatry, Greece*

<sup>3</sup>*Psychiatry Resident, Psychiatry Hospital of Attika, Greece*

Treatment resistance is a difficult fact that clinical psychiatrists and other mental health professionals face in about 30% of the mental health services' users. Only 60-70% of patients respond to currently available treatments. Only approximately 30% experience remission of symptoms. There is increasing evidence that patients require individualized treatment plans (pharmaco- and psychotherapy). In this quest novel treatments and holistic approach is the way to move forward. Among 800,000 people commit suicide every year, and even many more people attempt suicide [1]. The World Health Organization has estimated that 78% of suicide attempts occur in low- and middle-income countries. In 2015 suicide was the second leading cause of death amongst 15-29-year-old young adults globally [2]. Depression affects 10-15% of the population annually. Only 60-70% of patients respond to currently available treatments. Only approximately 30% experience remission of depressive symptoms. (3) There is increasing evidence that patients require individualized treatment plans (pharmaco- and psychotherapy). New antidepressant drugs such as Esketamine and evidence based approach for the personalized care of service users with treatment resistant depression and/or prominent suicidal ideation -suicide attempts.

1. World Health Organization (WHO). Suicide; WHO: Geneva, Switzerland, 2018.
2. World Health Organization (WHO). Suicide Data; WHO: Geneva, Switzerland, 2017.
3. Al-Harbi KS. Patient Prefer Adherence. 2012;6:369-88.

## New challenges in dual diagnosis service users

**Georgios Tzeferakos**

*Head of OKANA Substitution Unit, Research Associate of the Forensic Psychiatry Unit, 2<sup>nd</sup> Department of Psychiatry Attikon University Hospital, Athens, Greece*

Dual Diagnosis is a term used for patients suffering from a serious mental illness and a substance use disorder. These patients present a huge clinical challenge for the therapeutic team responsible for their care. Differential diagnosis between primary psychosis and substance induced psychosis is quite often very difficult. Medication adherence, already a problematic issue for psychiatric patients, is extremely low in patients with active substance use. Often these patients are characterized by impulsivity, aggression, high suicide and homicide rates and involvement with the legal - justice system. There are worldwide different therapeutic approaches for treating these patients with the integrated model being the most widely accepted.



20.30-21.00 **LECTURE**  
 Chairperson: **Angelos Halaris (USA)**

### **Consciousness, free will and mental illness**

**Konstantinos N. Fountoulakis**

*Professor of Psychiatry, Aristotle University of Thessaloniki, AHEPA University Hospital, Thessaloniki, Greece*

While the brain-mind and the free-will problems are at the focus of philosophical but also scientific discussions since centuries, psychiatry faces an additional third problem, that of the nature of mental illness and its relationship to the first two problems. While philosophical thinking was clearly in favor of a dualistic approach, that is brain and mind are separate. Starting with Descartes and until the middle 20th century the dualistic approach was dominant even amongst prominent psychiatrists and psychologists. However, in the recent decades philosophy was obliged to conform with contemporary neurobiological findings. The biggest scientific question concerning the brain-mind relationship came from the concept of free will. Until recently, both nature and its laws were considered to have a deterministic character. In this frame, free will could not exist simply because past events would fully determine future events and there remains no space for unpredictable or creative alternatives. A reverse problem also existed: if mind (or soul) is completely separate from the brain, how could they operate in harmony? This led to the development of a number of loose theories with an intrusion of a metaphysical element in science. The dualistic approach was further strengthened by the early informatics technology on the basis of Turing machines and was strongly embraced by modern cultural movements including the 'new age'. However, our current understanding of the complexity of nature and its laws as highly likely to be a probabilistic rather than a deterministic system and additionally the theoretical development of non-Turing machines which give probabilistic answers to very complex problems on the basis of previous complex feed, not with plain data but with blocks of informations, solutions and their relationship to known outcomes provides a plausible answer to how the brain and the mind could be one and the same. In this frame, free will reflects the repertoire of available actions as a response to environmental stimuli, in addition to the ability of the consciousness to choose among them with a balanced utilization of resources and mechanisms, that is by both emotions and analytical thinking and the utilization of anchoring and adjustment biases. Accordingly, mental disorder could be conceptualized as a restriction of free will, either because the response repertoire is limited or the decision mechanisms of consciousness are malfunctioning.



Saturday, June 29<sup>th</sup> 2019

09.00-09.30 LECTURE

Chairperson: **Ioanna Ierodiakonou-Benou** (Greece)

## **Not all stressors are created equal: the divergent genetic background of the effects of distinct types of stressors in depression**

**Xenia Gonda**

*Department of Psychiatry and Psychotherapy, Semmelweis University, Budapest, Hungary  
MTA-SE Neuropsychopharmacology and Neurochemistry Research Group, Hungarian Academy of Sciences, Semmelweis University, Budapest, Hungary, NAP-2-SE New Antidepressant Target Research Group, Hungarian Brain Research Program, Semmelweis University, Budapest, Hungary*

In spite of the ever-increasing interest in genetic mechanisms of depression, findings in candidate gene association studies have generally not been replicated and not detected in genome-wide association studies. Results from a recent study investigating the variation in multiple genes belonging to different pathways previously implicated in the neurobiology of depression found that none influenced depressive phenotype in the absence of exposure to recent stress, and while the effect of certain genes increased with increasing stress exposure, other variants showed the greatest relevance for depression under moderate stress. Other studies, specifically in case of genes including the NOS1, 5-HTTLPR, GABRA6 or CNR1 indicated that specific genetic variants mediate the effects of only certain, but not all types of stressors in the development of depression, and that depending on the type of stress a given genetic variant may contribute to different phenotypical manifestations such as depression or anxiety. These results suggest that the effect of the majority of genes involved in depression may be manifested only under certain environmental settings, and different types of stressors can exert their effects via divergent genetic and ultimately neurochemical pathways. Consequentially, different types of stressors should be analysed separately in gene-environment interaction studies of depression. The presentation will review the role of the above mentioned genes in the development of depression in interaction with different types of stressors. Besides their possible clinical and pharmacological implications, these findings suggest that the environmental context of psychiatric symptoms, disorders and relevant genes should be specified in a more detailed and multidimensional manner in order to be able to better predict, prevent and treat affective illnesses and to pinpoint new psychopharmacological targets.

Xenia Gonda is recipient of the Janos Bolyai Research Fellowship Program of the Hungarian Academy of Sciences and is supported by the ÚNKP-18-4-SE-33 grant of the New National Excellence Program of the Ministry of Human Capacities.

09.30-11.00 **SYMPOSIUM**  
**COMPLEXITIES IN THE DIAGNOSIS AND TREATMENT OF MOOD DISORDERS AND BIPOLARITY**  
 Chairpersons: **Giuseppe Tavormina** (Italy), **Francesco Franza** (Italy)

### **Understanding the temperaments: how to avoid diagnostic errors on treating the bipolar mood disorders**

**Giuseppe Tavormina**

*President of "Psychiatric Studies Center" (Cen.Stu.Psi. - [www.censtupsi.org](http://www.censtupsi.org)), Provaglio d'Iseo (BS), Italy*

**Background** - The temperament is a key factor when assessing a patient within the bipolar spectrum. The temperaments are conditions in their own right within the bipolar spectrum, since they are 'soft' forms of bipolar condition within the spectrum: they can develop over time into a more clear bipolar condition, and hence are important in early diagnosis. Every patient with BSD has already presented in their personal history of illness subclinical evidence of one of the temperaments: depressive temperament, hyperthymic temperament and cyclothymic-irritable temperament; inside the cyclothymic temperament we can find the so called "softly-unstable temperament" (a "soft cyclothymic temperament"),

**Methods** - Ten consecutive new out-patients with the diagnosis of mood disorders, visited in my office in the first two months of the year 2018, have been included in this observational study, with the aim to show how the correct evaluation of the temperament of the patients with mood disorders enables the psychiatrist to make an early diagnosis of bipolar disorder and at the same time, consequent to this, to prescribe appropriate treatment (mood-stabilisers, with eventual antidepressant) to these patients. The "G.T. Mixed States Rating Scales" was administered on the day of the "first visit" of the patient, on easier making a diagnosis of mixed states (and focusing on the symptoms of "mixture"; Tavormina et al, 2017); the level of uneasiness of the patients has been assessed by administering the GAS scale on the day of their "first visit", and also after four months to evaluate the level of the improvement of the quality of mood.

**Results** - Interesting results have been obtained with this observational study: the diagnostic approach of identifying the temperaments of the patients alongside their history of illness enabled an early diagnosis of bipolarity and the prescription of a correct treatment with a mood regulator; the utilization of the rating scale "GT-MSRS", administered to the patients on the day of the "first visit", helped and speeded this up.

**Conclusions** - Bipolar disorders are very often diagnosed late (approximately 25 year late, on average, from the beginning of the illness), in part because the temperaments of the patients have not been identified early. It is very important to focus on the temperaments during the clinical interview, in order to be effective in the early diagnosis of mood instability (Tavormina, 2018).



## Dysphoria dimensions: a preliminary in-patients study to differentiate borderline personality and bipolar disorder spectrum

**Massimo Bachetti**

*Division of Psychiatry, Department of Medicine, University of Perugia, Italy*

**Background** - Differentiating Borderline Personality Disorder (BPD) from Bipolar Disorder (BD) represents a very difficult challenge for clinicians. Dysphoria could be a key to differentiate these disorders. We currently define dysphoria as a complex and disorganized emotional state with proteiform phenomenology, characterized by a multitude of symptoms. Among them: irritability, discontent, interpersonal resentment and surrender prevail. These dimensions can be detected using the Neapen Dysphoria Scale - Italian version (NDS-I). Dysphoria role in BPD has been highlighted by the recent theorization of the Interpersonal Dysphoria Model, according to which dysphoria could represent the “psychopathological organizer” of the BPD. Likewise, dysphoria role in BD has not yet been established. This is considered simply as an aspect of the symptomatology characterizing BD, in particular mixed states. The phenomenological analysis of the dimensional spectrum of dysphoria within BPD and DB could provide a valuable aid in the differential diagnosis between BPD and BD.

**Aims** - The aim of this paper is to understand whether the dimensional spectrum that composes dysphoria differs between Borderline Personality Disorder (BPD) and Bipolar Disorder Spectrum (BD) through an observational comparative study.

**Methods** - In this study, 65 adult patients, males and females between the ages of 18 and 65, were enrolled from the Psychiatric Service of the Santa Maria della Misericordia Hospital in Perugia (PG), Italy, from January 1<sup>st</sup> 2018 to January 1<sup>th</sup> 2019. We have formed 2 groups. A BPD group composed of 34 patients and a BD group composed of 31 patients. Patients comorbid with BD and BPD have been excluded from the study. After a preliminary assessment to exclude organic and psychiatric comorbidity, and after at least 72 h from hospitalization, we administered them the Neapen Dysphoria Scale - Italian Version (NDS-I), a specific dimensional test for dysphoria. Starting from the dataset, with the aid of the statistical program SPSS 20, we have obtained graphs showing the comparison between disorders groups selected and NDS-I total score and subscales (irritability, discontent, interpersonal resentment, surrender). Finally, a comparison was made between the means of each group for total scores and for each subscale considered into the NDS-I test. We made it using the Mann-Whitney U test, a nonparametric test with 2 independent samples, by setting a significance level  $\alpha = 0.05$ .

**Conclusions** - This study allowed us to explore and analyze dysphoria dimensions expressions in BPD and BD. Despite the small sample analyzed, the results show a different dimensional expression of the dysphoria between the two disorders. This difference seems to be more quantitative rather than qualitative. Further studies with a larger sample are needed to confirm these results.

## **Limits and chances for cognitive rehabilitation and assessment scales in clinical routines in bipolar disorders**

**Francesco Franza**

*Psychiatric Rehabilitation Centre "Villa dei Pini", Avellino, Italy*

Cognitive deficits are a central and enduring feature of some psychiatric disorders such as schizophrenia, bipolar disorder (BD) and major depressive disorder (MDD). Cognitive deficits are qualitatively similar in schizophrenia and bipolar and unipolar depression. However, the severity of impairment differs among these disorders, with the most severe deficits seen in patients with schizophrenia, followed by BD, and the least severe deficits noted in individuals with MDD. They have a significant impact on the social functioning, on the response to rehabilitation programs and on psychotic symptomatology. However, many clinicians do not have adequate knowledge and interest in assessing cognitive deficits in psychiatric patients. These deficits are crucial and key symptoms, which can lead to impairment of quality of life, worsening of symptoms of disorders and difficulties in social, family and work relationships. Another limitation to the assessment of cognitive deficits is the poor manoeuvrability and practicality of the main cognitive assessment tools. Because there are no appropriate pharmacological approaches, new techniques have been developed to improve cognitive abilities in these patients. The most important techniques concern cognitive remediation (CR). In this presentation we summarize also the main techniques of cognitive remediation.

## **Bipolar disorder and eating disorder: the role of emotional abuse and regulation**

**Patrizia Moretti**

*Division of Psychiatry, Department of Medicine, University of Perugia, Italy*

**Introduction** - Emotion Dysregulation (ED) can be defined as compromising the ability to regulate and/or tolerate negative emotional states. It is widely documented that ED is implicated in the development and maintenance of a range of clinical conditions, including Eating Disorders (EDs)<sup>1</sup>. Individuals with EDs have extensive disabilities in all domains of emotion regulation<sup>2</sup>. Among the factors that favor and precipitate the ED there is child maltreatment: it represents a non-specific risk factor for EDs and is associated with a greater risk of development of all mental illnesses<sup>3</sup>.

**Aim** - To analyze if there is a link between child maltreatment, ED and EDs, then proceed to a comparison between patients with DCA and a control group in order to assess whether there are differences between the two groups.

**Materials and methods** - Participants were 29 subjects with EDs, in particular Binge Eating Disorder and Eating Disorder not otherwise specified, and 24 healthy controls. The Childhood Trauma Questionnaire (CTQ-SF), the Difficulties in Emotion Regulation Scale (DERS) and the Binge Eating Disorder (BES) were used to assess child maltreatment, ED and EDs respectively.

**Results** - Statistical analysis revealed that there is a strong relationship between results of BES and the Goals subscale of the DERS in subjects affected by EDs, and this data results from the use of Pearson's coefficient (Graph 1). No relationship emerged in the control group (Chart 2). No relationship emerged between BES and CTQ-SF in both groups.

**Discussion and conclusions** - Findings agree with the current theoretical models and provide



initial support for a model in which ED precipitates and contributes to the development of EDs. Future studies are necessary in order to evaluate more strongly the correlation found and to evaluate the role of other relationships with child maltreatment.

11.00-12.00 **SYMPOSIUM**

**SCHIZOPHRENIA: ISSUES ON DIAGNOSIS AND PSYCHOPATHOLOGY**

Chairpersons: **Venetsanos Mavreas** (Greece), **John Nimatoudis** (Greece)

## **Anxiety Disorders in Schizophrenia**

### **Petros Skapinakis**

*Professor of Psychiatry, University of Ioannina School of Medicine, Greece*

The aim of the current presentation is to review the epidemiology, clinical significance and management of anxiety disorders comorbid with schizophrenia. Older views considered anxiety as a minor secondary symptom of psychosis that are expected to remit after successful antipsychotic treatment. Large epidemiological studies, however, have shown a more complex relationship of anxiety disorders and schizophrenia. It is now well accepted that most anxiety disorders are significantly more common in patients with schizophrenia compared to the general population. There are several explanations of this comorbidity, including common etiological risk factors (genetic, biological, psychosocial). During the presentation I will discuss the differential diagnosis and practical management of the main anxiety disorders comorbid with schizophrenia, including social anxiety, panic disorder, PTSD and obsessive-compulsive disorder.

## **Sleep & circadian dysregulation in schizophrenia: Molecular aspects and clinical implications**

### **Agorastos Agorastos**

*Assistant Professor of Psychiatry, Aristotle University of Thessaloniki, Greece, Senior Physician, 2<sup>nd</sup> University Department of Psychiatry, Psychiatric Hospital of Thessaloniki, Greece*

The human circadian system is an integrative system of complicated circadian hierarchy which enables the temporal organization and coordination of physiological processes and rhythmic changes to promote homeostasis and environmental adaptation. Chronic circadian disruption may gradually change the fundamental properties of brain systems regulating neuroendocrine, immune and autonomic stress systems and may play a central role in maladaptive stress regulation and the development of mental disorders. Accordingly, impaired circadian rhythmicity and particularly sleep disturbances, are perhaps the most common presenting complaints in psychiatric patients, are often associated with substantial personal distress, pronounced impairment of daytime functioning, reduced quality of life, and aggravation of the comorbid clinical conditions. Schizophrenia is associated up to 80% with aberrant sleep-wake cycles and insomnia presented as phase-advance/delay, sleep onset insomnia, maintenance insomnia, poor sleep consolidation, excessive sleep, highly irregular and fragmented sleep epochs, reduced slow wave sleep and shortened REM sleep latency with frequent sleep onset REM periods. Sleep



disorders in schizophrenia are associated with acute disease severity and worse prognoses, while positive symptoms may be related to distortions in time perception. Altered melatonin and cortisol profiles, a common marker of endogenous circadian rhythmicity, have also been shown in schizophrenia, suggesting an altered phase angle between the sleep-wake cycle and melatonin profile, while schizophrenic patients also show smaller pineal gland volumes than healthy controls or patients with affective disorders. In the last decade, studies reporting clock gene polymorphisms or altered clock gene regulation in schizophrenia have offered an additional molecular background for the previous findings in schizophrenia. Circadian disruption in schizophrenia could be partly related to a presumed hyperactivity of the dopaminergic system and dysfunction of the GABAergic system, both associated with core features of schizophrenia and with signaling in sleep and wake promoting brain regions. Chronobiological treatment implications for schizophrenia are discussed.

## **The evolution of the concept of schizophrenia to the current diagnostic systems**

### **Venetsanos Mavreas**

*Professor Emeritus, Department of Psychiatry, Faculty of Medicine, School of Health Sciences, University of Ioannina, Greece*

The various phenomenological pictures of psychotic disorders described firstly in the 19th century, were unified by Kraepelin under the rubric of dementia praecox later named schizophrenia by Bleuler. Initial descriptions emerged were influenced by the then prevalent idea that structural alterations of the brain were their cause. Kraepelin's dementia praecox, separated from manic-depressive psychosis, was according to him of organic origin, leading to dementia in the majority of cases. The contribution of exogenous factors was largely underestimated, and descriptions until the middle of the 20th century were based on symptomatic picture and course, mainly as described by Kraepelin. After the WWII, psychoanalytic theory undermined symptomatic descriptions of schizophrenia, this influence being evident in DSM-I and DSM-II. However, initial descriptions of schizophrenic disorders as defined by Kraepelin, Jaspers and others continued to be in use in everyday clinical practice, enriched by the definition of first-rank symptoms by Schneider in 1959. The psychopharmacological revolution in the 50's and the lack of reliability and validity of psychiatric diagnosis together with the scientific philosophical theory of "logical empiricism", led to the development initially of Feigner's criteria and RDC, leading finally to DSM-III, DSM-III-R, DSM-IV and in 2013 DSM 5. This is the rise of the so-called "Neo-Kraepelinian" revolution in psychiatric classification with the establishment of operational criteria for psychiatric diagnosis. Unfortunately, this led to the reification in everyday clinical practice of psychiatric syndromes to the level of diseases. Meanwhile, ICD-10 remained more conservative proposing only symptomatic descriptions without operationalizing criteria for diagnosis. The initial hope that DSM diagnoses would be replaced by diagnoses of psychiatric diseases with progress in the area of biologic sciences was replaced by skepticism, as validity of psychiatric diagnoses, especially referring to schizophrenia still remains elusive. This is evident by the introduction of RDOCs. In the ICD-11, schizophrenia symptoms have largely remained unchanged from the ICD-10, though the importance of Schneiderian first-rank symptoms has been de-emphasized. The most significant change is the elimination of all subtypes of schizophrenia, and the introduction of dimensional descriptors.



12.00-12.30 **LECTURE**

Chairperson: **Venetsanos Mavreas** (Greece)

## **What can we learn from a naturalistic short and long-term study on patients suffering from schizophrenia?**

**Hans-Jürgen Möller**

*Emeritus Professor of Psychiatry, Department of Psychiatry, Ludwig-Maximilians-University München, Munich, Germany*

General result: At discharge from inpatient treatment 59 % of patients were in symptomatic remission (Andreasen criteria), at 2-year follow-up 64%. An instability of the course could be observed: several patients with remission switched to non-remission and vice versa in the 2 follow-up years.

63% of patients suffered from a relapse in the 2-year follow-up period, most of them had to be hospitalized. Patients achieving remission at discharge had a much lower risk of relapse. Patients receiving treatment with atypical/second generation antipsychotics as well as those treated with depot neuroleptics were found to have the lowest risk of relapse.

In comparison to a comparable sample of MDD inpatients, the discharge results of the schizophrenia sample was, based on a CGI-definition of remission, less favourable.

Early improvement during inpatient treatment predominantly with anti-psychotics, and to a lesser degree short DUP, were the most important predictors of remission at discharge. Remission at discharge was highly associated with remission after 1 and 2 years.

A subgroup of patients received in addition to maintenance therapy with antipsychotics a specially adapted cognitive therapy over one year. This combined treatment demonstrated very good results: no major relapse.

A small group of those patients with no relapse after one year were randomized to either continue the antipsychotic treatment for another year or to Placebo. Placebo was associated with a high number of relapses, in contrast to the positive outcome of the continued antipsychotic maintenance therapy.

12.30-14.00 **SYMPOSIUM**

**PREMENSTRUAL DYSPHORIC DISORDER AND PREMENSTRUAL SYNDROME**

Chairperson: **Daniil Aptalidis** (Bulgaria)

## **Prevalence and clinical picture of premenstrual syndrome and premenstrual dysphoric disorder in the Bulgarian population**

**Maria Stoyanova, Rossitza Iakimova**

*University Hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum", Sofia, Bulgaria*

Introduction: Premenstrual syndrome (PMS) and its more severe form Premenstrual dysphoric disorder (PMDD) is a highly prevalent psychiatric condition but there seems to be ethnic and cultural variances in its distribution.

**Aims:** To explore the prevalence of PMS/PMDD and its typical clinical features in the Bulgarian population.

**Materials and methods:** Three hundreds and five randomly recruited women with no psychiatric history filled in a self-evaluation questionnaire based on DSM-IV tapping on different symptoms of PMS. The prevalence of the disorder was calculated.

**Results:** 32.1% of the tested women suffered PMS and 3.3% were diagnosed with PMDD. The leading symptoms in the sample were irritability, fatigue and changes in appetite, depressed mood, mood swings, and anxiety, and abdominal bloating, breast tension and tenderness. Most of the symptoms were moderately severe. Mild and moderate cases of PMS were near equally distributed and more frequent than severe ones.

**Conclusion:** PMS is a common condition which is usually mildly expressed but severe cases are not an exception. The clinical picture is dominated by almost equally distributed psychological and somatic symptoms.

**Keywords:** premenstrual syndrome, premenstrual dysphoric disorder, prevalence, clinical picture

### **Premenstrual dysphoric disorder and premenstrual syndrome: the patient perspective**

**Petranka Chumpalova<sup>1</sup>, Rossitza Iakimova<sup>2</sup>**

*<sup>1</sup>Resident of Child Psychiatry, Bulgaria*

*<sup>2</sup>University Hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum", Sofia, Bulgaria*

Three hundred and five gynaecologically and mentally healthy women were screened for premenstrual syndrome (PMS) and inquired about their willingness for help-seeking and attitudes towards treatment. As it turns out women are overall poorly informed about the clinical manifestation of PMS and the available therapeutic possibilities, have been neither consulted nor have they received any targeted treatment. Just over half of them are inclined to seek expert help and take medications, whereby with ageing their share rises. Our results are in line with the literature and point to the need for targeted efforts to educate women on the problems of PMS.

**Key words:** PMS, help-seeking behavior, treatment attitude

### **Premenstrual dysphoric disorder and premenstrual syndrome: comorbidity with depressive and panic disorder**

**Daniil Aptalidis, Rossitza Iakimova**

*University Hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum", Sofia, Bulgaria*

**Introduction:** According to the literature the presence of comorbid psychiatric disorder modifies the clinical picture of PMS.

**Objectives:** To examine the clinical picture of PMS, PMS comorbid with Major depressive disorder (PMS/MDD) or Panic disorder (PMS/PD) and to evaluate the influence of the comorbidity on the severity of the syndrome.



**Methods:** We examined 30 women with PMS and a current episode of PD, 31 women with PMS and a current episode of MDD and 98 women with PMS with no psychiatric history. All patients were evaluated with the Premenstrual symptoms screening tool (PSST) and MINI.

**Results:** The most common symptoms of PMS comorbid with PD were irritability and changes in appetite whereas in patients with PMS comorbid with MDD - mood swings and anxiety. In the three groups, the leading somatic symptoms were anxiety, breast tension and abdominal bloating. Somatic and psychological symptoms were almost equally distributed among women with PMS without any comorbidity. Somatic symptoms were more common in patients with PMS with PD whereas in patients with MDD the psychological ones prevailed. In the PD subgroup, PMS was most commonly severe.

**Conclusions:** Our results support the notion that the clinical picture of PMS varies depending on the comorbid disorder.

**Key words:** PMS, PMDD, comorbidity, depression, panic disorder

## **Treatment of premenstrual dysphoric disorder and premenstrual syndrome comorbid with depressive and panic disorder**

**Milena Pandova, Rossitza Iakimova**

*University Hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum", Sofia, Bulgaria*

**Introduction:** Premenstrual syndrome (PMS) is a common gender specific disorder that causes significant distress of women all over the world. Its ethology is still not fully understood but different treatment options exist. Psychotherapy and changes in lifestyle, hormonal therapy are all tried with a varying success but the mainstay of treatment remain the selective serotonin re-uptake inhibitors (SSRIs). **Objectives:** This study examined the efficacy of SSRIs in patients with PMS co-morbid with major depressive disorder (MDD) or panic disorder (PD). **Methods:** 31 women with current episode of MDD and 30 with PD and PMS were treated with SSRIs for six months. The symptoms of PMS were examined with the Premenstrual Symptoms Screening Tool (PSST) before initiation of treatment, at month 3 and 6 and the results were compared by means of McNemar Test. **Results:** According to our results SSRIs alleviate the prevalence and severity of the gross majority of PMS symptoms as well as the severity of PMS itself. This improvement is most obvious in the beginning of treatment but continuous in a significant scale till month six especially in the case of comorbidity with PD. **Conclusion:** SSRIs are effective treatment option not only for "pure" PMS but also when comorbidity with MDD or PD are simultaneously present.

**Keywords:** PMS; co-morbidity; treatment

14.00-15.00 **SYMPOSIUM**
**THE BROADER IMPACT OF SLEEP DISORDERS ON HEALTH AND WELLBEING: MECHANISMS AND TREATMENT APPROACHES**

 Chairpersons: **Dimitrios Dikeos** (Greece), **Thomas Paparrigopoulos** (Greece)

**Benefits of sleep and consequences of insomnia: Physiology and therapeutic interventions**
**Dimitrios Dikeos**

*Professor of Psychiatry, 1<sup>st</sup> Department of Psychiatry of Athens University Medical School, Athens, Greece, Director of the Sleep Research Unit of Athens University, Eginition Hospital, Greece*

Sleep has a vital effect on brain functions and many body systems. There are specific functions which are related to particular sleep stages, while the whole of sleep is associated with neuro-protection, somatic and neural cell restoration and the operation of the immune system.

Irregular sleep patterns can be the result of environmental factors, lifestyle and various disorders. Insomnia is the most common sleep disorder. About 1/3 of the general population suffer at any point of their lives from difficulty to initiate or maintain sleep. In cross-sectional and short-time longitudinal studies chronic insomnia has been associated with a poor quality of health, not only in obvious domains such as vitality and energy/motivation, but also in other mental, social, and somatic functions such as work performance, cognitive functioning, emotion regulation, diabetes, cardiovascular disease and overall mortality.

Regarding insomnia treatment, hypnotic drugs are generally prescribed to patients with insomnia, but there is also a need for parallel implementation of sleep hygiene measures and psychotherapeutic interventions, especially when insomnia is unrelenting.

**Pharmacological treatment of insomnia: From drugs to hormones to natural remedies**
**Thomas Paparrigopoulos**

*Athens University Medical School, 1<sup>st</sup> Dept. of Psychiatry, Eginition Hospital, Athens, Greece*

Chronic insomnia is a major public health concern affecting approximately 10% of the general population. Also, various surveys show that 10-48% of the population report poor sleep or sleep dissatisfaction. Consequently, treatment of insomnia is of paramount importance for well-being. Due to its multifaceted nature, treatment should address several biopsychosocial issues and an all-inclusive approach is mandatory. Pharmacological therapies of insomnia are extensively used and have either been approved or are used 'off label' for this specific use, because they effectively ameliorate several sleep parameters (reduce time to fall asleep, reduce time awake after sleep onset, increase total sleep time). For optimal management of patients, clinicians should be aware of the diverse pharmacological properties of the agents used, their indications, and their risk profile as well. Sleep promoting agents fall into several different categories: benzodiazepines, non-benzodiazepines (Z-drugs), melatonin receptor agonists, selective histamine H1 receptor antagonists, orexin receptor antagonists, antidepressants, antipsychotics, anticonvulsants, and  $\alpha$ 1-adrenergic blockers. Moreover, OTC medications are frequently used



to self-medicate for insomnia, including antihistamines, melatonin, L-tryptophan, and various herbal formulations and combinations, including valerian root, passion flower, California poppy, chamomile, etc. Evidence regarding efficacy and safety of these treatments will be discussed.

## Parasomnias: Is it only a night-time phenomenon?

**Mary Ntafouli**

*Clinical Sleep Researcher, Sleep Research Unit, Athens University, Eginition Hospital, Athens, Greece*

Parasomnias (greek “para”, meaning alongside of, and latin word “sommus”) are defined as unpleasant or undesirable physical events or experiences that occur predominantly or exclusively during the sleep or during arousals from sleep. Parasomnia is the consequence of dissociation between wakefulness, NREM or REM sleep with behaviours characteristic of one state succeeds the other and are classified according to the state they predominantly occur in: a) rapid eye movement (REM)-related parasomnias, b) non-REM (NREM)-related parasomnias and c) other parasomnias.

Even though parasomnias are considered as sleep-related phenomena, we have some indications of the literature that they have impact on daytime function. Specifically, RBD is a REM parasomnia and often an early sign of a synucleinopathy. Apathy and depression are increased in patients with RBD. Furthermore, patients with Sleepwalking a NREM parasomnia, tend to manifest stress and anxiety.

On the basis of that, we will conduct a prospective observational study on Daytime profile of Parasomnia patients. The primary objective of the study is to evaluate the 24h performance (sleep, circadian, neuropsychological) of patients with parasomnias and secondary objective is to compare the above 24h profile of parasomnia`s patients with this of healthy controls.

15.00-15.30 **LECTURE**

Chairperson: **George Chrousos** (Greece)

## The face of Social Solidarity: "Health for All"

**Eleni Sotiropoulou**

*President of volunteer program of "Health for All", Greece*

In a period of profound economic crisis, unemployment and social exclusion, the shift to methods and practices focused on the citizen, substantiated by research and international knowledge and corresponding to the preferences, desires and needs of the patients, is as imperative as ever.

In addition, the harmonious and effective function of multicultural societies, as is today the Greek society due to the large wave of incoming refugees and immigrants, are directly linked to the state's readiness to ensure the equal treatment and protection of the members of all cultural groups, to provide equal opportunities and access to education, health and the labor market and to encourage them to participate actively in the economic, social and cultural life



of the land.

The aim of the "Health for All" Action Plan is to increase the complementarity of relevant actions in the context of social solidarity, by ensuring all the necessary synergies with relevant bodies, by respecting the intercultural diversity, the views, preferences and desires of the recipients of the actions for vulnerable population groups, and also by maximizing the effectiveness of the interventions concerned, to the benefit of those in need.

These vulnerable population groups (the Roma, the residents of the highlands of Thrace/ Pomaks, the underprivileged, the prisoners, the refugees) face cumulative problems of integration into the social and economic fabric of the country, as well as access to health and social care services. Any interventions aimed at removing these problems and at the equal participation of these groups of people should be focused on informing, assessing their health needs, medical care, rehabilitation and support, as well as on orienting them towards the health system's services and social care.

It is well known that in modern societies, the phenomenon of social exclusion and marginalization threatens very large sections of the population. At the heart of this threat are, inter alia, the above-mentioned social groups. The rapid pace of social change as well as the economic crisis makes these population groups particularly vulnerable.

This particular project presents widespread social benefits at a low cost: it lies at the core of prevention policies, addresses the medical-social issue and saves resources for the Health and Social Care System, resources that, in another case, would have to be spent in multiple sums, in order to pay for hospitalization.

Within the framework of the action an integrated program of Primary Health Care is developed, which includes:

- Clinical pediatric examination, vaccinations and dental check-up for children, Gynecological examination: mammography - Pap test, adult clinical examination (pathological - endocrinological - cardiological examination, using a portable ultrasound machine for echocardiography).
- Recording of incidents that require immediate secondary care - their forwarding to Health Units.
- Creation of a computer database, recording info and vaccinations on a computer health card.
- Creation of a computer database for scientific data, based on the open data principle.

It is supported by a mobile gynecological unit, with a built-in mammogram, and transvaginal ultrasound

The program is under the auspices of

- The UNESCO chair for adolescent medicine and health
- The National & Kapodistrian University of Athens and its dean Mr. A. Dimopoulos, who participates in the Central Scientific Committee of the program

Support is also provided by:

- The Ministry of Health
- The Ministry of Labor, Social Insurance and Social Solidarity
- The Central Health Council (KESY)
- The National Committee on Vaccination
- The Scientific bodies



## 15.30-16.00 CINP VIDEO SESSION

### Rapid-Acting Antidepressants

#### John Krystal

*Robert L. McNeil, Jr., Professor of Translational Research, Professor of Psychiatry, Neuroscience, and Psychology, Chair, Department of Psychiatry, Yale University School of Medicine, USA*

This presentation briefly reviews the rationale for studies that led to the identification of the rapid antidepressant effects of ketamine. It then describes some of the features of ketamine and esketamine treatment for treatment-resistant mood disorders and emerging neurobiological mechanisms that appear to underlie its distinctive rapid efficacy. Ketamine and esketamine are antagonists of the NMDA subtype of glutamate receptor. Depression appears to be associated with reductions in cortical synaptic density that reduce the functional connectivity of brain regions involved in mood regulation. By blocking NMDA receptors, these drugs transiently perturb the balance of excitation and inhibition, resulting in a brief period of glutamate release. In turn, this results in a cascade of neural processes that trigger the restoration of synaptic structural and functional connectivity associated with the amelioration of depression. Studies of ketamine suggest that it may have distinctive effectiveness in reducing suicidal ideation. Studies of esketamine conducted by Janssen Pharmaceuticals also provide evidence of robust protection against the relapse of depression symptoms once clinical response has been attained. The elucidation of mechanisms through which ketamine works has suggested that other neural mechanisms might also be targeted to produce rapid improvement in depression. Thus, ketamine may be the first of a new class of rapid-acting antidepressant medications that target a common “family” of neural mechanisms.

## 16.00-16.30 LECTURE

Chairperson: **John Nimatoudis** (Greece)

### Prognosis and improved outcomes in major depression, what’s on the horizon?

#### Siegfried Kasper

*Professor and Chair, Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria*

The group of patients which has failed to respond to two or more adequate antidepressant trials has been termed as treatment-resistant depression (TRD). However, this term is misleading, since there are now promising approaches available for this group of patients. This lecture aims to evaluate the current status in the field of TRD and reflects the main findings available in the literature, as f.i. obtained by the European group for studies of resistant depression (GSRD). One potential way of improving treatment of TRD is through the use of predictive biomarkers, most likely including genetic parameters in combination with clinical variables. The advent of new treatments may also help by focusing on neurotransmitters other than serotonin, e.g. the glutamatergic system with esketamine demonstrating efficacy data in TRD as well as in depressed patients with suicidality. Furthermore, pharmacological strategies such as the use of a combination therapy with lithium, atypical antipsychotics and other pharmacological agents

can improve outcomes, and techniques such as deep brain stimulation and vagus nerve stimulation have shown promising results. The consistent advances in the pharmacotherapy of mood disorders in the last decade are now further expanded with compounds, like esketamine as well as brexanolol exerting a rapid onset of action.

16.30-18.00 **SYMPOSIUM**  
**MECHANISM OF PATHOGENESIS OF SCHIZOPHRENIA AND BIPOLAR DISORDER-PROINFLAMMATORY CYTOKINES AND KYNURENINE PATHWAY**  
 Chairpersons: **Nikolaos Venizelos** (Sweden), **Angelos Halaris** (USA)

### **Reversal of treatment resistance in bipolar disorder through immune system modulation**

**Angelos Halaris**

*Department of Psychiatry, Loyola University Chicago Stritch School of Medicine, Maywood, IL, USA*

**Background:** Immune system dysregulation in bipolar disorder (BD) has been documented in many studies and is believed to be accountable, at least in part, for treatment resistance, recurrence and chronicity. We hypothesized that modulation of the inflammatory response by co-administration of the COX-2 inhibitor, celecoxib, would reverse treatment resistance.

**Methods:** This was a randomized, double-blind, two-arm, placebo-controlled study with wash-out and a 1-week placebo run-in. Subjects were randomized into two arms: escitalopram (ESC) + placebo (PBO) or ESC + celecoxib (CBX) and treated for 8 weeks. Biomarkers of inflammation were measured and correlated with symptom severity and treatment outcome. Drug levels were measured. Fifty five subjects completed the study.

**Results:** Modulation of the inflammatory response reversed TRD and produced a statistically significantly better and earlier antidepressant and antianxiety response on ESC + CBX. Remissions were significantly higher on the ESC + CBX. The following pro-inflammatory cytokines were significantly higher in BD compared to HC subjects: IL1 $\beta$ , IL2, IL4, IL8, TNF $\alpha$  and CRP. Remitters on ESC + CBX showed significant (P=0.008) decrease in IL1 $\beta$  and hsCRP (P = 0.003). CRP and IL1 $\beta$  correlated with treatment response in the ESC + CBX group only.

**Conclusion:** COX-2 inhibition reverses treatment resistance with augmented response. CRP and IL1 $\beta$  may be diagnostically useful biomarkers for BPD. With CBX treatment, CRP decreased significantly compared to placebo, indicating that inflammation is significantly reduced in CBX-treated patients and likely responsible for enhanced treatment outcome. IL1 $\beta$  may reflect peripherally neuroinflammation and account for disease progression. IL1 $\beta$  may be a prime target for future therapy.

**References:**

1. Akhondzadeh S, Jafari S, Raisi F, Nasehi AA, Ghoreishi A, Salehi B, et al (2009). Clinical trial of adjunctive celecoxib treatment in patients with major depression: a double blind and placebo controlled trial. *Depress Anxiety* 26(7): 607-611.
2. Akhondzadeh S, Tabatabaee M, Amini H, Ahmadi Abhari SA, Abbasi SH, Behnam B (2007). Celecoxib as adjunctive therapy in schizophrenia: a double-blind, randomized and placebo-controlled trial. *Schizophr Res* 90(1-3): 179-185.
3. A. Halaris, N. Alvi, E. Meresh and A. Sharma (2014). Inflammation control reverses treatment-resistance in bipolar depression. *Neurology, Psychiatry and Brain Research* 20: 12-13.



## **Proinflammatory cytokines and kynurenine pathway in schizophrenia and bipolar disorder?**

**Sophie Erhardt**

*Department of Physiology and Pharmacology (FYFA), Karolinska Institutet, Stockholm, Sweden*

The essential amino acid tryptophan is degraded primarily by the kynurenine pathway, a cascade of enzymatic steps leading to the generation of several neuroactive compounds. Of those, kynurenic acid, being an antagonist at N-methyl-D-aspartate (NMDA) and alpha7 nicotinic receptors, has gained much attention in research related to schizophrenia and bipolar disorder. In this presentation, data showing elevated kynurenic acid concentration in patients with schizophrenia and how kynurenic acid controls dopaminergic, cholinergic, glutamatergic and GABAergic neurotransmission will be discussed. We will show that elevated brain levels of kynurenic acid relates to psychotic symptoms and cognitive impairments and furthermore, how the kynurenine pathway is highly inducible by immune activation. Another mechanism accounting for the abnormally high central kynurenine and kynurenic acid levels seen in schizophrenia, i.e. reduced expression and activity of the enzyme kynurenine 3-monooxygenase (KMO), hereby shunting the synthesis of kynurenine towards kynurenic acid, will be discussed. Indeed, expression and enzyme activity of KMO is reduced in schizophrenia and bipolar disorder.

Pre-clinical results suggest that reduced synthesis of kynurenic acid by inhibition of kynurenine aminotransferase (KAT) II is a novel target for psychosis and may improve cognitive performance in schizophrenia. Here, we show that blockade of KAT II also decreases rat midbrain dopamine firing.

## **Proinflammatory cytokines dysregulate the neurotransmitters dopamine and serotonin by inhibit the availability of the precursor amino acids tyrosine and tryptophan**

**Nikolaos Venizelos**

*Experimental Neuropsychiatry, School of Medical Sciences, Örebro University, Örebro, Sweden*

Psychiatric diseases such as schizophrenia, bipolar disorder (BD) and major depressive disorder (MDD) are chronic diseases that seriously affect daily function and quality of life. Proinflammatory cytokines and oxidative stress have been implicated in the pathophysiology of schizophrenia, BD and MDD.

In addition, considerable correlations have been suggested in several studies between elevated levels of proinflammatory cytokines and these diseases. Despite these facts, proinflammatory cytokines role in the pathogenesis of neuropsychiatric disorders is still not fully understood. The aim of this presentation is to provide evidence and explore the role of proinflammatory cytokines and oxidative stress in the pathogenesis of major neuropsychiatric disorders.

Fibroblasts obtained from healthy controls were pre-treated with proinflammatory cytokines (IL-1 $\beta$ , IFN- $\gamma$ , IL-6, TNF- $\alpha$ ) or exposed to oxidative stress and then the uptake of 14C-tyrosine and 3H-tryptophan was analyzed and compared to untreated controls.

Proinflammatory cytokines and oxidative stress were decreased the uptake of tyrosine up to 47%, respective 33%. The uptake of tryptophan were decreased up to 21%, when the fibroblasts

were pre-treated with IL-1 $\beta$ , IL-6 individually and in combination with TNF- $\alpha$  and IFN- $\gamma$ . However, no significant of tryptophan uptake were noted when fibroblasts were pre-treated with TNF- $\alpha$  and IFN- $\gamma$ .

Pro-inflammatory cytokines and oxidative stress affect the transport of precursor tyrosine and tryptophan, which consequently may limit the availability of these important precursor in the brain, and cause imbalance in the central signaling systems. The dopamine and serotonin systems are powerful regulators of various aspects of cognitive functions, and changes in the dopaminergic and serotonergic systems may lead, among other things, to the deterioration of cognitive control of behavior in patients with schizophrenia, bipolar disorders, and related CNS diseases. Measured biomarkers may allow etiology based stratification of major psychiatric disorders, thereby assisting a more precise diagnosis and personalized medicine.

### **Can antipsychotic drugs attenuate IL-6 secretion from microglia via inhibition of dopamine?**

**Yvonne Freund-Levi**

*Associate Professor, Senior researcher (lector) at Dept. of Clinical Medicine School of Health and Medical Sciences Örebro University Sweden*

Antipsychotic drugs are commonly used for a variety of neuropsychiatric disorders e.g. psychotic disorders, mood disorders and neuropsychiatric symptoms in dementia (NPSD). Their mechanism of action is thought to be by modulation of neurotransmitters activity in the brain, mainly dopamine. Yet, it has been suggested that antipsychotic drugs may also exert anti-inflammatory properties. The aim of this study was to examine whether the neurotransmitters modulating effect of antipsychotic drugs attenuates the inflammatory response of microglia cells.

Levels of Interleukin 6 (IL-6) were measured following activation of microglia cultures with LPS and treatment with antipsychotic drugs (Risperidone, Haloperidol or Clozapine), neurotransmitters (dopamine, serotonin, and acetylcholine) or with a combination of dopamine and either Haloperidol or Clozapine.

Haloperidol and Clozapine decreased IL-6 secretion by microglia where treated with a concentration of 10-5M. Interestingly, dopamine at a concentration of 1 $\mu$ M increased IL-6 secretion by the microglia cells while a concentration of 100  $\mu$ M of dopamine decreased it. The combination of dopamine (from 0.001  $\mu$ M to 100  $\mu$ M) with either Haloperidol (10-5M or 10-8M) or Clozapine (10-5M or 10-7M) attenuated IL-6 secretion in a bell-shaped curve with a peak at 1  $\mu$ M. High concentration of both Haloperidol and Clozapine decreased IL-6 secretion, while the low concentrations somewhat increased IL-6 levels.

Our findings further support the anti-inflammatory properties of antipsychotic drugs and suggest that this phenomenon is mediated via the inhibition of dopaminergic activity in microglia cells. In addition, the bell-shaped curve of IL-6 secretion by microglia might suggest an "optimal zone" of operation for these cells that is mediated by dopamine.



18.00-18.30 **LECTURE**

Chairperson: **Siegfried Kasper** (Austria)

## Genetics and Epigenetics in Developmental Pediatrics and Psychiatry

### George Chrousos

*1<sup>st</sup> Department of Pediatrics and UNESCO Chair on Adolescent Health Care, National and Kapodistrian University of Athens, Athens, Greece*

Chronic stress, associated with impaired function of the Stress System, contributes to the development of behavioral and somatic pathologies. By definition, stress is a state of disturbance of the complex dynamic equilibrium, that all living organisms must maintain, and is subserved by the Stress System comprised by the Hypothalamic-pituitary-adrenal Axis and the Arousal/Sympathetic/Parasympathetic Nervous Systems. The stress system functions in a baseline circadian fashion and on demand in response to stress and interacts with other systems of the organism to regulate a variety of behavioral, endocrine, metabolic, cardiovascular and immune functions. The experience of chronic perceived or real uncontrollable intense stress may lead to a prolonged state of disturbed, harmful homeostasis or cacostasis, that may result in several behavioral and somatic disorders, including, respectively, anxiety, depression, psychosomatic disorders and substance abuse, and obesity/ metabolic syndrome and their comorbidities, cardiovascular disease and osteoporosis, as well as impaired reproductive and immune functions. Autoimmune and inflammatory nosologies, hypofertility and increased susceptibility to certain infections and cancers are also associated with chronic stress. Developing children and adolescents are particularly vulnerable to the effects of chronic stress. Both behavioral and biologic pathways are involved in the connection between chronic stress and obesity/metabolic syndrome. Emotional “comfort” eating, lack of sleep, impulsive behaviors and selection of specific foods often characterize stressed individuals. In addition to specific behaviors, dysregulation of the stress system through disturbed secretion of CRH, cortisol and the catecholamines, in concert with concurrently elevated insulin concentrations, leads to development of central obesity, insulin resistance and the metabolic syndrome. In children, chronic alterations in stress system activity may have additional effects on cognitive and emotional development, timing of puberty, and final stature. Obese children and adolescents are frequently entangled in a vicious cycle between distress impairing self-image and distorted self-image maintaining and worsening distress.

1. Chrousos, G.P. (2009) Stress and Disorders of the Stress System. *Nat. Rev. Endocrinol.* 5: 374-381
2. Zannas AS, Chrousos GP Epigenetic programming by stress and glucocorticoids along the human lifespan. *Mol Psychiatry.* 2017 May;22(5):640-646. doi: 10.1038/mp.2017.35. Epub 2017 Mar 14.
3. Gassen NC, Chrousos GP, Binder EB, Zannas AS. Life stress, glucocorticoid signaling, and the aging epigenome: Implications for aging-related diseases. *Neurosci Biobehav Rev.* 2017 Mar; 74(Pt B):356-365. doi: 10.1016/j.neubiorev.2016.06.003. Epub 2016 Jun 23. Review.



19.00-20.30 **SYMPOSIUM**  
**IS VITAMIN D A NEW FRONTIER IN PSYCHIATRY AND PSYCHOPHARMACOLOGY?**  
**CLINICAL AND BASIC STUDIES**  
 Chairperson: **Angelos Halaris (USA)**

### **Does vitamin D3 supplementation improve inflammation in depressed women with diabetes?**

**Sue Penckofer**

*PhD, Professor, School of Nursing, Loyola University Chicago, USA*

Women with diabetes are at greatest risk for cardiovascular disease. Depression has been identified as a risk factor for cardiovascular disease. Almost 25% of women with type 2 diabetes (T2DM) have depression. The Cytokine Theory of Depression hypothesizes that inflammation plays a significant role in the pathophysiology of depression (1-3). Research has shown that persons with depression have lower levels of vitamin D (4). We conducted a pilot study of women who all received vitamin D2 supplementation (50,000 IU weekly for six months) and noted an improvement in mood (5). We recently completed a clinical trial of women with T2DM who had significant depressive symptoms (n= 129) and were randomized to vitamin D3 supplementation (50,000 or 5,000 IU weekly for six months). Our findings indicated that both groups had an improvement in depressive symptoms with no difference between doses. This presentation will address the impact of vitamin D3 supplements on the C-reactive protein (CRP) blood levels. Such information may help to provide information regarding a potential mechanism of action in depression improvement.

Funding: National Institute of Health, National Institute of Nursing Research (NR 103906)

#### References

1. Smith RS. The macrophage theory of depression. *Med Hypotheses* 1991; 35: 298-306.
2. Capuron & Dantzer, Cytokines and depression: the need for a new paradigm. *Brain, Behavior, and Immunity* 2003; 17 (Suppl. 1) S119-S124.
3. Dantzer R, JC O'Connor, GG Freund, RW Johnson, KW Kelley. From inflammation to sickness and depression: when the immune system subjugates the brain, *Nature Reviews Neuroscience* 2008; 9: 46-56.
4. Penckofer S, Kouba J, Byrn M, Ferrans, C. Vitamin D and depression: Where is all the sunshine? *Issues in Mental Health Nursing* 2010; 31, 385-393.
5. Penckofer S, Byrn M, Adams W, Emanuele, MA, Mumby P, Kouba J, Wallis, D. Vitamin D supplementation improves mood in women with type 2 diabetes. *J Diabetes Res*, 2017: 8232863. Published online 2017 Sep 7. doi: 10.1155/2017/8232863.

### **The role of Vitamin D in Depression, depressive symptoms and specific gene expression**

**Maria Athanasiou**

*Self-Employed Psychiatrist, Alexandroupolis, Evros, Greece*

Depression is a common psychiatric disorder that affects 11.23% of the population. However, the rates of depression vary greatly by geographic location, age, and sex, as well as other fac-



tors. It is a disabling disorder, and the search for optimal treatment for depression is ongoing. During the last decade there has been a strong interest regarding the role that vitamin D as measured in plasma levels can play in depression. There are also studies that suggest the use of vitamin D supplementation either by mouth or through light therapy as an add on therapy can be beneficial for the treatment of depression. Most of the studies though, especially reviews, are inconclusive and it seems too early for any firm conclusions to be drawn. On the other hand, most of the study designs view Vitamin D as a drug and not as a natural agent that is in short supply in certain individuals that experience depressive symptoms. Further- more studies most of the time have assessed depression as a whole syndrome and do not focus on specific depressive symptoms, such as fatigue or apathy which may be more closely associated with Vitamin D deficiency. The expression of genes like catechol-O-methyltransferase (COMT), monoamine oxidase - A, monoamine oxidase-B (MAO-A and MAO-B) that affect the metabolism of dopamine but also norepinephrine and serotonin, is associated with depression and specific depressive symptoms and correlates to a degree with Vitamin D plasma levels. This presentation will offer the clinician a better understanding of the way that deficiency of Vitamin D can affect mood and also the way that Vitamin D supplementation can contribute to the alleviation of several depressive symptoms.

#### References

1. Botella Romero, F., Alfaro Martínez, J. J., Luna López, V., & Galicia Martín, I. (2012). Enteral nutrition in neurological Patients; is there enough vitamin D Content in commonly used formulas? *Nutrición hospitalaria*, 27(2), 341-348.
2. Colman I, Naicker K, Zeng Y, et al. Predictors of long-term prognosis of depression. *CMAJ*. 2011; 183:1969-1976.
3. Li, G., Mbuagbaw, L., Samaan, Z., Falavigna, M., Zhang, S., Adachi, J. D., ... & Thabane, L. (2014). Efficacy of vitamin D supplementation in depression in adults: a systematic review. *The Journal of Clinical Endocrinology & Metabolism*, 99(3), 757-767.
4. Martín-Merino E, Ruigómez A, Johansson S, et al. Study of a cohort of patients newly diagnosed with depression in general practice: prevalence, incidence, comorbidity, and treatment patterns. *Prim Care Companion J Clin Psychiatry*. 2010;12: PCC.08m00764.
5. Milaneschi, Y., Shardell, M., Corsi, A. M., Vazzana, R., Bandinelli, S., Guralnik, J. M., & Ferrucci, L. (2010). Serum 25-hydroxyvitamin D and depressive symptoms in older women and men. *The Journal of Clinical Endocrinology & Metabolism*, 95(7), 3225-3233.
6. Sicras-Mainar A, Maurino J, Cordero L, et al. Assessment of pharmacological strategies for management of major depressive disorder and their costs after an inadequate response to first-line antidepressant treatment in primary care. *Ann Gen Psychiatry*. 2012; 11:22.
7. Veerman JL, Dowrick C, Ayuso-Mateos JL, et al. Population prevalence of depression and mean Beck Depression Inventory score. *Br J Psychiatry*. 2009; 195:516-519.
8. Von Berens, Å., Fielding, R. A., Gustafsson, T., Kirn, D., Laussen, J., Nydahl, M., ... & Koochek, A. (2018). Effect of exercise and nutritional supplementation on health-related quality of life and mood in older adults: the VIVE2 randomized controlled trial. *BMC geriatrics*, 18(1), 286.
9. Zhang, L., Wang, S., Zhu, Y., & Yang, T. (2018). Vitamin D3 as adjunctive therapy in the treatment of depression in tuberculosis patients: a short-term pilot randomized double-blind controlled study. *Neuropsychiatric disease and treatment*, 14, 3103.

## **Vitamin D levels and the expression of COMT, MAO-A, MAO-B, and ALDH1A1 genes in PC-12 series of dopaminergic neurons**

**Aglaia Pappa**

*Associate Professor of Molecular Physiology, Democritus University of Thrace, Greece*

The purpose of the experiments that we will describe was to test the effect that various Vitamin D concentrations can have in the expression of catechol-O-methyltransferase (COMT), monoamine oxidase-A, monoamine oxidase-B (MAO-A and MAO-B) and aldehyde dehydrogenase 1 family member A1 (ALDH1A1) genes in PC-12 cell series. The level of differentiation of these cells was also observed for the same concentrations of vitamin D.

PC-12 cells are dopaminergic cells and they were tested for Vitamin D concentrations that ranged from 5mM to 200mM of 25-OH vitamin D. These concentrations mimic the effects that of complete absence of vitamin D up to significant overdosing of vitamin D and of course the effect that normal plasma concentration of vitamin D can have.

The results of these experiments are presented in detail along with the exact procedure and the materials that were used to enable other researchers to duplicate our experiment and thereby compare their findings with ours.

## **Vitamin D supplementation and reduced symptom burden in women with estrogen receptor positive (ER+) metastatic breast cancer**

**Patricia Sheean**

*Loyola University Chicago, USA*

Thirty percent of women diagnosed with metastatic breast cancer (MBC) now survive over 5 years (vs. just 4% in 2000), reflecting a growing community of cancer survivors.<sup>1</sup> While obesity is considered causally related to breast cancer (BC), BC treatment is associated with adverse body composition changes, specifically gains in adipose tissue and decreases in lean mass (LM; also known as sarcopenia).<sup>2</sup> Excess adiposity contributes to inflammation and low levels of LM are associated with chemotherapy toxicities, all of which worsen symptom burden and reduce quality of life (QOL).<sup>3-5</sup> We conducted a Phase 1, high dose (50,000 IUs weekly x 8 weeks ) vitamin D supplementation trial in clinically stable women with ER+ MBC to assess its safety and associations with decreased treatment side-effects (n=10.) Serum 25(OH)D increased by 32 ng/dl and reductions in bone pain (p=0.047) and fatigue (p=0.09), but not inflammation, were found. We exploited computed tomography images conducted for clinical purposes to examine body composition in all the women screened for the study (n=41). No differences were observed when we stratified by sarcopenia or myosteatosis. However, women with obesity (BMI ≥ 30.0 kg/m<sup>2</sup>) had significantly higher levels of visceral, subcutaneous and total abdominal obesity (all values p <0.0001) and serum biomarkers of inflammation (p values <0.06), yet lower multi-dimensional QOL (p=0.02) compared to women without obesity. Future studies should consider the potential interplay between body composition and inflammation on relevant outcomes.

Funding: Marcella Niehoff School of Nursing and the American Dietetic Association Foundation



20.30-21.00 **LECTURE**

Chairpersons: **Hans-Jürgen Möller** (Germany),  
**Konstantinos N. Fountoulakis** (Greece)

## **From Aristoteles' foundations of animal morphologies to functional architectures of brains - viewed by a ΦΥΣΙΟΛΟΓΟΣ**

**Bert Sakmann**

*Head of Emeritus Research Group "Columns in silico" MPI of Neurobiology, Martinsried, Nobel Laureate in Physiology or Medicine 1991, Germany*

ΑΡΙΣΤΟΤΕΛΗΣ was considered by his contemporaries as a philosopher who belonged to the group of ΦΥΣΙΟΛΟΓΟΙ - those who thought about Nature. Some of these were empiricists using methods still used today, i.e. mainly morphological observations, their categorization, and deducing mechanisms from them. Aristoteles thus laid, through his observations on marine animals on the island of Lesbos, the foundations of Zoology (1). Another of his main ambitions was to localize the soul, ΨΥΧΗ, a group of behaviours that nowadays are referred to as higher brain functions. His observations led him to suggest that the soul is located mainly in the heart. Later the Greek philosopher and doctor Galenos of Pergamon localized the soul in the brain ventricles, containing a ΠΝΕΥΜΑ that is transmitted via nerves to the periphery. This view remained dominant until English doctors Harvey and Willis located different higher brain functions/mind & soul to specific parts of the brain, thereby laying the basis of Neuropsychiatry. Modern investigations of mind/brain states began with Cajal's Neuron doctrine and the discovery by Berger of electrical waves recorded from brains in different states. New recording methods of neuronal activity in living brains enable physiologists to assign specific neuron circuits to certain mind/brain states, e.g. during decision making or in epilepsy. An example of the analysis of a cortical neuron network for decision making is illustrated here. It suggests that for the mechanistic understanding of even simple neuron circuits, the properties of the arborizations (ΔΕΝΔΡΙΤΕΣ) of the component neurons are essential. They can detect temporal coincidence of multiple inputs to a neuronal circuit, as observed during decision making (2). Thus, addressing the mechanisms of even very simple aspects of mind/soul/brain relations require subcellular resolution of morphologies and functions of the neuronal circuits involved.

1. Leroi, A.C. (2014) *The Lagoon: How Aristotle Invented Science*. Bloomsbury Publishing, London.
2. Sakmann, B. (2017) From single cells & single columns to cortical networks: dendritic excitability, coincidence detection and synaptic transmission in brain slices and brains. *Exp Physiol.*, 102, 489-521. DOI: 10.1113/EP085776

Sunday, June 30<sup>th</sup> 2019

09.00-11.00 **SYMPOSIUM**  
**NEUROCOGNITIVE DECLINE IN OLD AGE AND DEMENTIA: ASSESSMENT AND THERAPEUTIC INTERVENTIONS**  
 Chairperson: **Anastasia Konsta** (Greece)

### **Higher-order cognitive abilities in different types of cognitive decline in aging**

**Despoina Moraitou**

*School of Psychology, Aristotle University of Thessaloniki, Greece*

On the basis of existing research in older adults, the degree of the interconnection of cognitive control, that is, the higher-order cognitive processes regulating goal-directed behavior, and Theory of the Mind (ToM), as a set of competencies required to represent the cognitive and affective states of the self and others, is not clear. The aim of the series of empirical studies to be presented was to examine whether and to what extent this relationship exists, as well as whether it is differentiated into healthy older adults, older adults with risk factors for cardiovascular disease development, MCI patients and patients diagnosed with different types of dementia. Participants in all studies were given tests assessing inhibitory control, set shifting, and planning, to measure cognitive control. A test of the ability to distinguish between sincerity, simple and paradoxical sarcasm was given for the measurement of ToM. The ability to recognize emotions was also measured. The results of these studies have shown that both the level of cognitive control and ToM, and the status of their relationships are significantly different, depending on the type of pathology that causes the cognitive decline.

### **Assessment of neurocognitive functioning and decline in elderly individuals across settings and cultures**

**Maria Sofologi**

*Cognitive Psychologist, Greece*

Population aging has led to an increase in the prevalence of age-related health problems, such as cognitive decline, which have attracted the interest of the scientific community. Cognitive decline is a fact which affects a growing number of elderly people regardless of their place of residence. Impairments of cognitive functions in older adults has a variety of possible causes, including medication side effects, metabolic and/or endocrine derangements, delirium due to intercurrent illness, depression, and dementia, with Alzheimer's dementia being most common. As our population grows older, the issue of screening for dementia and cognitive impairment is becoming increasingly important. The basic purpose of cognitive screening tests is to indicate likelihood of genuine cognitive impairment, inferred from the relationship of the patient's score to reference norms. This presentation laid emphasis on a detailed analysis on what the non-pharmaceutical interventions, like cognitive assessment instruments can provide in the scientific community. Research findings have indicated that cognitive assessment instruments as well as cognitively-stimulating activity may help to protect against cognitive decline in later life. Keywords: elderly people, cognitive decline, assessment instruments, non-pharmaceutical interventions.



## Non pharmacological interventions in dementia

### Anastasia Konsta

*Assistant Professor of Psychiatry and Psychogeriatrics, 1<sup>st</sup> Psychiatric Department, Aristotle University of Thessaloniki, "Papageorgiou" General Hospital, Greece*

A number of common non-cognitive symptoms is associated with dementia. Agitation, aggression, mood disorders, psychosis, sexual disinhibition, eating disorders and abnormal vocalisations are grouped together under the term 'behavioural and psychological symptoms of dementia' (BPSD) and are common reasons for institutionalization for elderly dementia patients. Non pharmacological interventions are pursued for BPSD more often nowadays. These approaches include and multisensory therapies such as music therapy, aromatherapy, art therapy, behavioral therapy, reality orientation and validation therapy, tailored activities, as well as physical exercises and have shown promising results for the management of BPSD. Although many non-pharmacological treatments have reported benefits, there is a need for further reliable and valid data before the efficacy of these approaches is more widely accepted. The aim of this talk is to summarize the main non pharmacological interventions for BPSD in the treatment of patients with dementia.

## Exercise and resilience to neurocognitive decline in old age

### Georgia Senikidou

*Psychologist and sports coach, Thessaloniki, Greece*

Old age is a developmental stage from which no one can escape.

In this presentation, the changes brought by aging in the neuroscientific functions of elderly people, are highlighted. In particular, aging is accompanied by a complex pattern of changes in behavior and cognitive abilities, including memory capacity. The contribution of exercise is of the utmost importance, since it is the best medicine against all the negative aspects of aging. Exercise has beneficial effects, as it can affect brain biomarkers in a way that protects people, by preventing or postponing the onset of dementia.

Even in individuals who are at risk of developing Alzheimer's disease earlier, exercise can be an inhibiting factor.

In addition, exercise contributes to strengthening mental resilience. By the term mental resilience, we define the person's ability to overcome adversity, stressful situations, crises, and continue to develop as a person. A difficult condition is also aging, where body faces changes and brain loses its original functionality. However, through exercise, the elderly can give life in their years and years in their lives, since the body and the brain will be in harmony whilst the body produces the required biochemical substances.

Finally, the importance of the harmony between exercise and spirituality is visible from ancient times, where ancient Greeks narrated the phrase "healthy mind in a healthy body". Also, the Latins continued to emulate, using the phrase "mens sana in corpore sano" ("healthy mind in a healthy body").

## Pharmacological treatment of neurocognitive deficits and dementias in old age: evidence-based narrative review

**Grigorios Karakatsoulis**

*Psychiatrist-Psychotherapist, Consultant in Adult General Psychiatry, 3<sup>rd</sup> Psychiatry Department, AHEPA Hospital, Aristotle University of Thessaloniki, Greece*

Neurocognitive deficits in the elderly often manifest as "mild cognitive impairment" (MCI). MCI suggests that mental capacity is inferior to that expected for an individual of the same age. Mild cognitive impairment affects 10-25% of those aged over 70 years old. In addition, it is known that 5% of people over 65 years old suffer from dementia, with more common type the Alzheimer's disease (AD). Treatment of neurocognitive deficits both in MCI and dementia in old age is a pharmacological challenge. In the 1960s began the era of nootropic drugs (or cognitive enhancers), and piracetam was the first drug of this class to be introduced to therapeutics in 1971. Since then clinical studies that have been developed have provided a better understanding of the aetiology of cognitive decline and in recent years, agents other than nootropics have been studied. Such agents are drugs targeting AMPA and NMDA glutamate receptors, new tadalafil derivatives, vinpocetine and new non-hepatotoxic derivatives of tacrine. At the same time, there are many recent relevant studies in animals investigating the action of 2-bromotergeride, D-cycloserine, BDNF, resveratrol, sulforaphane, methylthionium chloride, nicotine and docosahexaenoic acid. The cholinesterase inhibitors donepezil, rivastigmine and galantamine, and the NMDA antagonist memantine, the well-known and approved pharmacological treatment of Alzheimer's dementia, are also used in clinical practice in individuals having as main symptom the impairment of memory. However, these factors are not recommended as the main treatment for both MCI and non-Alzheimer's dementia as there is no clear indication of their efficacy in these situations. Other agents such as caffeine, nicotine, SSRIs and trazodone appear to be effective in the treatment of neurocognitive deficits at least in frontotemporal dementia. Despite ongoing studies, there is no strong evidence of benefit for any of the above pharmacological agents, and no one is currently approved for the prevention or treatment of neurocognitive deficits in the elderly.

11.00-12.30 **SYMPOSIUM**

**FEMALE MENTAL HEALTH - DOES IT REALLY MATTER?**

Chairperson: **Evangelia Tsapakis** (Greece)

## Treatment of Psychiatric disorders during pregnancy and postpartum

**Kalliopi Diakaki**

*"Agios Charalambos" Mental Health Clinic, in Heraklion, Crete, Greece*

While psychiatric disorders are common health problems affecting women during pregnancy and the postpartum period, their pharmacological management raises concerns due to the risk of congenital abnormalities. Moreover, higher birthrate among women with affective or psychotic disorders has provided increased clinical interest in the management of pregnant women who have mental illness. Providing appropriate treatment during these periods is of cardinal





importance for both the mother and the child, as mental disorders have been associated with complications of pregnancy, delivery and the post-partum period. Taking all these into consideration, evidence-based pharmacotherapy is crucial for this patient population. Here, a review of the available literature regarding psychopharmacology during pregnancy and postpartum period is presented, along with the guidelines currently used in this population.

## **Endometriosis-related chronic pelvic pain and its impact on mental health**

### **Orestis Tsonis**

*PhD candidate in Obstetrics and Gynecology, Senior Registrar in Obstetrics and Gynecology, Department of Obstetrics and Gynecology, Faculty of Medicine, School of Health Sciences, University of Ioannina, Ioannina, Greece*

Endometriosis - related chronic pelvic pain is the major component of the disease that affects quality of life of women of reproductive age. This presentation summarizes current evidence upon pathophysiology and impact on mental health. It seems that endometriosis - related chronic pelvic pain is the end-result of chronic stress on the central nervous system, this being the consequence of chronic pelvic inflammation. Mental health issues can follow as a result of CNS derangement and further aggravate pain perception and therefore quality of life. Further properly designed studies are needed in order to elucidate the interplay between mental disorders and endometriosis-related chronic pelvic pain.

## **Schizophrenia, Antipsychotics, and Breast Cancer**

### **Evangelia Tsapakis**

*Visiting Research Associate, Institute of Psychiatry, King's College London, Harvard Medical School, Boston, MA, Director Private Mental health Unit, Heraklion, Crete, Greece*

Men and women differ with regards to prevalence, symptoms, and responses to treatment of several psychiatric disorders, including schizophrenia, and genetic studies suggest significant sex-specific pathways in schizophrenia between men and women. Here, the current evidence on sex-related factors interacting with disease onset, symptoms, and response to antipsychotic treatment as well as sex dependent factors based on the hormonal and sex chromosome hypotheses of schizophrenia will be outlined. Interestingly, breast cancer is probably more common in females with schizophrenia than in the general population, and increasing experimental and epidemiological data have alerted researchers to the influence of prolactin in mammary carcinogenesis. The possible relationship between antipsychotic-induced hyperprolactinemia and breast cancer risk in female patients with schizophrenia will also be discussed.

## Sex matters: Gender bias in the search for novel psychiatric drugs

**Aikaterini Chatzaki**

*Professor of Pharmacology, Medical School of the Democritus University of Thrace, Greece*

Gender is a crucial driver of disease prevalence, presentation, prognosis and drug response in a number of brain and mental diseases. Until now however, the implications of sex differences in drug development remain mostly neglected. Decades of preclinical studies using mostly, or exclusively, one-sex (male) experimental models has created a knowledge void that unfortunately migrated into clinical studies. Drugs reach the market with safety and efficacy profiles optimized for men only, resulting often in unexpected side effects in the female population in real-world application. Despite gradual recognition from regulatory agents that the use of sex/gender as crucial variables will lead to more successful drug discovery and clinical outcomes, women are still underrepresented in trials. Augmenting research results show that the in depth characterization of sex differences in mental disorders should lead target discovery, drug testing and precision medicine.

12.30-14.00 **SYMPOSIUM**

### **SEXUALITY**

Chairpersons: **Loukas Athanasiadis** (Greece), **Anastasia Konsta** (Greece)

*Organised by the Sexuality and Interpersonal Relationships Branch  
of the Hellenic Psychiatric Society*

## Sexuality and Blindness

**Soultana Georgiadou**

*Psychologist, Research Associate, 3<sup>rd</sup> Psychiatric Department, University Hospital AHEPA, Thessaloniki, Greece*

Research on sexual behavior and on several aspects of sexuality of people with visual impairment or blindness (VlorB) is still in its initial steps. In the past, people with VlorB were considered to be asexual, inactive and unable to have sexual relationships, since their desire for sexual activity was seen as inappropriate. However people with VlorB have the right and should have satisfying intimate relationships.

People with VlorB face plenty of difficulties in their private life in order to find and maintain a sexual relationship. They may fell in love, date and have sexual activity, however they can still approach a slightly smaller number of sexual partners compared to the non-VlorB individuals, due to several issues such as stigmatization, common beauty standards, negative body image, lack of self-esteem and sexual self-confidence, feeling of inferiority and overprotective parents. People with VlorB often choose to approach potential sexual partners who are also VlorB. Inner values, emotional and psychological maturity and acceptance are vital for these people.

Sex education, offered both by the educational system and family environment, and public awareness campaigns are expected to improve the sexual life of people with VlorB.



## Sexual Activity and the role of prolactin

**Neoklis Eleftheriou**

*Private Psychiatrist/CAT Therapist, Samos, Greece*

Prolactin is closely related to sexual function. Elevated prolactin levels are often found during the investigation of drug-related sexual dysfunction as PRL suppress the hypothalamic-pituitary-gonadal axis and has a role in desire and orgasm phase, although hyperprolactinaemia is often superficially asymptomatic. Note that prolactin can also be raised because of stress, pregnancy, lactation, seizures, renal impairment, prolactinoma and other medical conditions (samples should be taken early in the morning and stress should be minimised during venepuncture).

In pituitary, dopamine inhibits PRL release, serotonin excites PRL release. With all drugs, the degree of prolactin elevation is probably dose related. Effective strategies to manage prolactin-related sexual dysfunction are initial choice of a drug unlikely to elevate PRL (aripiprazole, quetiapine, mirtazapine, bupropion etc), switching to a different medication, and adding an antidote to reverse SD (aripiprazole 1-10mg, dopamine agonists, alprostadil, phosphodiesterase inhibitors, speony-glycyrrhiza decoction, metformin etc). Appropriate interventions should be determined on a clinical case-by-case basis. For most patients with symptomatic hyperprolactinaemia, switching is the first choice. If PRL is high but the patient is not symptomatic, the clinical implications of the test results should be discussed with the patient to continue or not the drug. Treatment depends more on symptoms and long term risk than on measured plasma levels. General health factors must always be considered (age, osteoporosis, history of hormone-dependent breast cancer).

In order to treat patient, not only prolactin related sexual dysfunction, we should also have in mind other factors of drug related sexual dysfunction ( $\alpha 1$  blockage, 5HT<sub>2A</sub>-5HT<sub>2A</sub> agonism, Ach, drowsiness, diabetes, obesity).

The exact role of prolactin remains controversial.

## Sexual orientation: Biological factors

**Danai Ioanna Manolopoulou**

*Specialty Trainee in General Psychiatry at Psychiatric Hospital of Attica, ST6, Greece*

It is broadly accepted that sexual orientation is mostly, if not exclusively, determined during childhood by education and social interactions. However there is a large number of studies indicating that prenatal and postnatal biological factors play a critical role in organizing this essential aspect of human sexuality. Sexual orientation can be considered a sexually differentiated trait. In animals a large number of sexually differentiated features are organized during the prenatal and early postnatal life, as a result of an interaction between endocrine, genetic and epigenetic mechanisms. Converging evidence indicates that the three types of mechanism (hormonal, genetic and epigenetic) are implicated, to some degree at least, in the control of human sexual orientation. In many studies significant modifications of the embryonic endocrine environment are associated with changes in the incidence of homosexual orientation. Multiple epidemiological, twin studies and family lineage studies leave no doubt about the existence of genetic controls on sexual orientation. Furthermore the so - called Fraternal birth order (FBO)

effect suggests an immunological mechanism related to sexual orientation. How and whether these biological factors interact with postnatal social factors remain to be determined.

## **Sexsomnia**

### **Loukas Athanasiadis**

*Associate Professor in Psychiatry-Psychosexuality, Aristotle University of Thessaloniki, Greece*

There are normal nocturnal sexual behaviors which occur during rapid eye movement (REM) sleep (e.g. nocturnal penile tumescence). Sexsomnia-also known as sleep sex and somnambulistic sexual behavior - is a rare form of parasomnia that occurs in non rapid eye movement (NREM) sleep.

Symptoms of sexsomnia may include masturbation, fondling, intercourse or even sexual assault and rape. In some cases a medical diagnosis of sexsomnia has been used as a criminal defense in court for alleged violent sexual behavior. The individual-usually a young male- is unaware of his actions and often has no recollection of the sexual activity. The disorder may cause stress and shame and may play a detrimental role on the relationship.

The use of video-polysomnography (vPSG) and Electroencephalogram (EEG) may provide additional information.

Factors that have been associated with sexsomnia include, sleep disturbances, sleep deprivation and drug and alcohol misuse. Risk factors include OSA (Obstructive Sleep Apnea), epilepsy, coexisting sleep disorders and medications such as zolpidem and pramipexole.

Lifestyle changes, CPAP, Mandibular Advancement Device (MAD) clonazepam, fluoxetine, carbamazepine and other approaches have been used in treatment. More research is needed in order to clarify the poorly understood diagnostic, clinical and therapeutic aspects of sexsomnia.

14.00-15.00 **SYMPOSIUM**  
**UNDERSTANDING RESISTANCE IN CLINICAL PRACTICE: MODELS OF COPING WITH RESISTANCE IN DIFFERENT CLINICAL CASES**  
 Chairperson: **Elena Heinz** (Greece)

## **Resistance in Marital Therapy**

### **Vasiliki Batrakouli**

*MSc. Psychologist-Psychotherapist, Greek Association of Behavioural Research, Branch of Macedonia, Institute of Psychosocial Development, Larissa, Greece*

Resistance in couple therapy appears to be a complicated and multifactorial phenomenon with multiple dynamics, since it is not only related to each client separately, but also to the couple's system as a whole entity. It is a challenge for the therapist who needs to deal with resistances emerging from individual needs for defensive behavior as well as the systemic patterns such as co-dependency or the need to balance the system. The main aims of this presentation are to discuss: a) the reasons for couple's resistance b) the major motives of resistance in couples, c) the role of the therapeutic relationship to the therapeutic change and d) the types of interven-



tion which are based on the cognitive and systemic model. An illustrative case study is provided.  
Keywords: resistance, couple therapy, therapeutic change, therapeutic relationship

## Resistance in Depression

### Christina Hionidou

*PhD, Psychologist, CBT Psychotherapist, Greece*

Chronically depressed individuals often present a reluctance to change and to investigate new approaches in dealing with their problems.

Robert Leahy proposed an 'investment model' of depression and the relevant resistance in therapy, focusing on 'risk aversion' cognitive patterns which characterize decision making processes and behavior. According to that, depressives utilize 3 strategies in limiting change: commitment to stability, commitment to negativity and management of expectations. The overvaluation of loss, the discounting of possible gain and the negative information search serve the goal of avoiding future loss and pain. Hidden specific tactics may be used for this self inhibition and self-handicapping, and subsequently increase resistance.

The above theoretical approach will be discussed with examples from clinical practice, along with proposals dealing with resistance.

## Resistance in Eating Disorders -Binge Eating Disorder- Case Study

### Christy Passalidou

*Psychologist, MSc, Certified Cognitive Behavioral Therapist, Certified Advanced Schema Therapist, Trainer and Supervisor, Greece*

Binge Eating Disorder was specified as a distinct disorder in DSM-V in order to be separated from simple binge eating leading to obesity and to underline the numerous accompanying psychological and pathological. It is one of the notorious Eating Disorders considered to be treatment resistant. Research indicates treatment in Eating Disorders is in fact long term, full of resistance to change and with frequent relapses (Klump et al, 2009).

The need for a more complex and comprehensive therapeutic model in order to address the thoughts, behaviors, feelings and moreover the personality features found in patients with eating disorders has led to the practical combination of CBT-E and Schema Therapy and its application in the treatment of Binge Eating Disorder.

A case study is presented. It includes a detailed analysis of the different stages of the therapeutic intervention (self-regulation techniques, psychoeducation, case conceptualization, cognitive reconstructing, experiential techniques, behavioral change and relapse prevention) along with clinical examples. Emphasis is placed upon case conceptualization is Schema Terms and the use of experiential techniques in order to achieve a stronger therapeutic alliance and a greater motive to change.

Key-words: Binge Eating Disorder, resistance to change, case study, Schema Therapy

15.00-15.30 **LECTURE**

 Chairpersons: **Loukas Athanasiadis** (Greece), **Anastasia Konsta** (Greece)

## **Clinical and sociodemographic characteristics of adults with specific learning disabilities**

**Eleni Bonti**

*Assistant Professor (Area of specialization: Specific Learning Difficulties), 1<sup>st</sup> Psychiatric Clinic, Medical School, Aristotle University of Thessaloniki, "Papageorgiou" General Hospital of Thessaloniki, Greece*

The current presentation summarizes the key findings of 3 studies carried out between 2012-2018, which attempted to investigate and describe the clinical, socio-demographic, academic and other characteristics of adults with Specific Learning Difficulties (SLD). The overall sample consisted of approximately 400 adults, who were assessed and diagnosed by the State certified Learning Difficulties diagnostic department of the 1st Psychiatric Clinic, located at "Papageorgiou" General Hospital of Thessaloniki. The main reasons why adults with SLD were considered as a "rare" population of major scientific interest were the following: First, there is no formal up to date information about the prevalence of SLD among adults nor there is an adult-specific definition for SLD, internationally. Second, there is a very limited number of studies that investigate both academic and/or other life areas of this population, worldwide. Third, even less is known about the reasons adults choose to refer for learning assessment. Fourth, especially in Greece, there is an extremely limited number of state certified diagnostic centers for the learning assessment of adults with possible SLD. Finally, it is clear that the impact of SLD on adulthood can be extremely complicated. The most important findings of all three studies, lead to the following conclusions:

Since the majority of the participants mentioned academic issues regarding different types of exams as the main referral reason for learning assessment, it becomes obvious that postsecondary education service systems should provide more appropriate study guidance to young adult students with SLD and should assist them to better cope with the challenge of academic tasks and exams, as well as with several life challenges. In addition, the need for timely information of parents and educators around the complex nature, diagnosis and intervention policies of SLD, seems an important issue, as well. The fact that the vast majority of the sample was diagnosed with difficulties in at least two learning areas (ex. Reading and Writing skills) verifies the complex nature of SLD and totally agrees with the new APA DSM-5 new diagnostic criteria. Moreover, the various interpersonal characteristics, the comorbidity issues and the different developmental backgrounds observed in the clinical, academic, personal, social, occupational profiles of the participants, highlight the enormous heterogeneity and the continuum that characterizes the SLD nature during adulthood. These findings strongly indicate that the diagnostic procedure, especially during the adult years should include a clinical synthesis of developmental, medical, academic, family and other reports, that will provide a better overall 'picture' of the learning difficulty's history and development, as well as of its impact in the person's functionality in all life aspects. Concluding, future research should be directed towards the development of a more comprehensive diagnostic system, with valid assessment tools, that will take into account the developmental challenges and milestones in a series of domains of the adult functioning matrix provide a matrix, in order to assist this 'vulnerable' population with their lifetime struggles.



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**E-POSTERS**

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**P01 Are verbal memory functions different in elders with high and low scores in the Daily Spiritual Experience Scale?**

Vaitsa Giannouli<sup>1</sup>, Konstantinos Giannoulis<sup>2</sup>

<sup>1</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

<sup>2</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

**Background:** The concept of spirituality has not been investigated so far in neuropsychological studies. The aim of this preliminary study is to explore whether self-reports in a questionnaire measuring the personal experience of spirituality can influence verbal memory performance in older adults.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with high score-above the median in the Daily Spiritual Experience Scale and those below that score. The Greek translation of the Daily Spiritual Experience Scale which consists of 16 questions concerning how an individual experiences in daily life the existence of God, was administered before a number of tests measuring verbal memory, such as word list learning (number of words on immediate and delayed recall), story learning (number of words on immediate and delayed recall).

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding the above neuropsychological tests.

**Conclusions:** Scores in the Daily Spiritual Experience Scale do not differentiate older adults verbal memory performance. Future research should further investigate the possible influence of other factors in verbal memory performance.



## P02 Are verbal memory functions different in elders with high and low scores in the Systems of Belief Inventory (SBI-15R)?

Konstantinos Giannoulis<sup>1</sup>, Vaitsa Giannouli<sup>2</sup>

<sup>1</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

<sup>2</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

**Background:** The concept of religiousness has not been investigated so far in neuropsychological studies. The aim of this preliminary study is to explore whether self-reports in a questionnaire measuring the personal experience of religiousness can influence verbal memory performance in older adults.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with a high total score-above the median- in the Systems of Belief Inventory (SBI-15R) and those below that score. The Greek translation of the Systems of Belief Inventory (SBI-15R) which consists of 15 questions regarding religiousness and spirituality, was administered before a number of tests measuring verbal memory, such as word list learning (number of words on immediate and delayed recall), story learning (number of words on immediate and delayed recall).

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding the above neuropsychological tests.

**Conclusions:** Systems of Belief Inventory (SBI-15R) scores, which consists of 15 questions regarding religiousness and spirituality, do not differentiate older adults verbal memory performance. Future research should further investigate the possible influence of other factors in verbal memory performance.

**P03 Religiousness: Does it differentiate elders performance in attention tasks?**

Vaitsa Giannouli<sup>1</sup>, Konstantinos Giannoulis<sup>2</sup>

<sup>1</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

<sup>2</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

**Background:** The association between religiousness and depressive symptoms is a well-investigated topic. The aim of this preliminary study focuses on a little investigated question: whether self-reports in a questionnaire measuring the personal experience of religiousness can influence attention in older adults.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with high score-above the median- in the Systems of Belief Inventory (SBI-15R) and those below that score. The Greek translation of the Systems of Belief Inventory (SBI-15R) which consists of 15 questions regarding religiousness and spirituality, was administered before a number of tests measuring attention such as the Trail Making Test-Part A (TMT-A) time to completion, the Digit Span (WAIS-III) greatest forward span, the Ruff 2 & 7 Selective Attention Test automatic detection speed (ADS) and controlled search speed (CSS).

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding the above neuropsychological tests measuring attention.

**Conclusions:** The Systems of Belief Inventory (SBI-15R) does not differentiate older adults attention performance. Future research should further investigate the possible influence of other factors in attention performance.



## P04 Spirituality and attention tasks: Exploring the relationship

Konstantinos Giannoulis<sup>1</sup>, [Vaitsa Giannouli](#)<sup>2</sup>

<sup>1</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

<sup>2</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

**Background:** So far a plethora of studies provide insight into the links between spirituality, subjective well-being, and personality integration. The aim of this preliminary study focuses on a little investigated question: whether there is a relationship between self-reports in a questionnaire measuring the personal experience of spirituality and attention performance in older adults.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with a high score-above the median- in the Daily Spiritual Experience Scale and those below that score. The Greek translation of the Daily Spiritual Experience Scale which consists of 16 questions concerning how an individual experiences in daily life the existence of God, was administered before a number of tests measuring attention, such as the Trail Making Test-Part A (TMT-A) time to completion, the Digit Span (WAIS-III) greatest forward span, the Ruff 2 & 7 Selective Attention Test automatic detection speed (ADS) and controlled search speed (CSS).

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding the above neuropsychological tests measuring attention.

**Conclusions:** The Daily Spiritual Experience Scale does not differentiate older adults attention performance. Future research should further investigate the possible influence of other factors in attention performance.

**P05 Does visual perception and visual memory performance differ in elders scoring high in the Daily Spiritual Experience Scale?**

Vaitsa Giannouli<sup>1</sup>, Konstantinos Giannoulis<sup>2</sup>

<sup>1</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

<sup>2</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

**Background:** The investigation of spiritual factors in healthcare is clearly warranted and clinically relevant. The aim of this preliminary study is to explore whether self-reports in a questionnaire measuring the personal experience of spirituality can influence visual memory performance in older adults.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with high score-above the median in the Daily Spiritual Experience Scale and those below that score. The Greek translation of the Daily Spiritual Experience Scale which consists of 16 questions concerning how an individual experiences in daily life the existence of God, was administered before a number of tests measuring visual perception (copy condition) and memory (Rey-Osterrieth Complex Figure Test-number of correct components on immediate and delayed recall trials and recognition-true positive responses).

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding the above neuropsychological tests.

**Conclusions:** The Daily Spiritual Experience Scale does not differentiate older adults visual memory performance. Future research should further investigate the possible influence of other factors in visual memory performance.

## P06 Are visual memory functions different in elders with high and low scores in the Systems of Belief Inventory (SBI-15R)?

Konstantinos Giannoulis<sup>1</sup>, [Vaitsa Giannouli](#)<sup>2</sup>

<sup>1</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

<sup>2</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

**Background:** Individuals beliefs and goals are often pervasively influenced by dimensions of their religiousness, but we still know little regarding the influence of religiousness on specific aspects of religion. Thus, the aim of this preliminary study is to explore whether self-reports in a questionnaire measuring the personal experience of religiousness can influence visual memory performance in older adults.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with a high total score-above the median- in the Systems of Belief Inventory (SBI-15R) and those below that score. The Greek translation of the Systems of Belief Inventory (SBI-15R) which consists of 15 questions regarding religiousness and spirituality, was administered before a number of tests measuring visual perception (copy condition) and memory [Rey-Osterrieth Complex Figure Test (Osterrieth, 1944) (number of correct components on immediate and delayed recall trials and recognition-true positive responses)].

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding the above neuropsychological tests.

**Conclusions:** The Systems of Belief Inventory (SBI-15R) scores do not differentiate older adults visual memory performance. Future research should further investigate the possible influence of other factors in visual memory performance.

**P07 Mini-Mental State Examination, Systems of Belief Inventory (SBI-15R) and Daily Spiritual Experience Scale: Is there a relationship?**

Konstantinos Giannoulis<sup>1</sup>, [Vaitsa Giannouli](#)<sup>2</sup>

<sup>1</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

<sup>2</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

**Background:** The present study examined the relationship between spirituality, religiousness, and global cognitive function.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Depressive symptoms of the participants were assessed with the 15-item Geriatric Depression Scale. GDS-15 revealed no depressive symptomatology (GDS-15 mean score = 0.50). The participants were divided into two groups: those with a high total score-above the median- in the Systems of Belief Inventory (SBI-15R) and those below that score. Two questionnaires were administered: the Systems of Belief Inventory (SBI-15R) which consists of 15 questions regarding religiousness, as well as the Daily Spiritual Experience Scale which consists of 16 questions concerning how an individual experiences in daily life the existence of God. These two questionnaires were both administered before Mini-Mental State Examination, a widely used tool which measures global cognitive function.

**Results:** Results indicated that there was no statistically significant difference between the two groups regarding MMSE total score.

**Conclusions:** The Systems of Belief Inventory (SBI-15R) and Daily Spiritual Experience Scale do not differentiate older adults performance on the MMSE. Future research should further investigate the possible influence of other factors on MMSE.





## P08 Can listening to Mozart or Bach influence self-reports of religiousness in older adults?

Vaitsa Giannouli<sup>1</sup>, Konstantinos Giannoulis<sup>2</sup>

<sup>1</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

<sup>2</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

**Background:** Although a plethora of studies examine psychological variables, such as personality and self-reports of perceived religiousness, so far we know little about music and its impact on these self-beliefs. The aim in undertaking this study was to investigate the influence of classical music on self-reports of religiousness.

**Materials and methods:** Thirty volunteers from Northern Greece (15 men and 15 women, mean age = 75.58 years, SD = 7.50, range 61-90, and mean years of education = 13 years), without formal diagnosis of psychiatric or other neurological disorders, participated in the study. They participated in all 3 ten-minute conditions of the experiment which were Allegro con spirito K.448-Mozart, St Matthew Passion opening chorus-Bach, and ten minutes of silence without any recorded acoustic stimulus. The individuals were randomly separated in six groups. The examination material was the Greek translation of the Systems of Belief Inventory (SBI-15R) which consists of 15 questions regarding religiousness and spirituality. This questionnaire was administered three times after each condition.

**Results:** Results indicated that the majority of the participants did not show any increase or decrease in their responses regarding the SBI-15R. Also, no statistically significant difference was found between the three conditions associated with listening to the excerpt written by Bach and to the silence condition.

**Conclusions:** The current results indicate that classical music as well as brief silence do not influence the scores of SBI-15R. Future research should further examine if other music genres and lengthier interventions can have an effect on self-reports related to religiousness and spirituality.

**P09 Can listening to Mozart or Bach influence self-reports of spirituality in older adults?**

Vaitsa Giannouli<sup>1</sup>, Konstantinos Giannoulis<sup>2</sup>

<sup>1</sup>Bulgarian Academy of Sciences, Sofia, Bulgaria

<sup>2</sup>School of Theology, Aristotle University of Thessaloniki, Thessaloniki, Greece

**Background:** Although a plethora of studies examine psychological variables, such as personality and self-reports of perceived spirituality, so far we know little about music and its impact on these self-beliefs. The aim in undertaking this study was to investigate the influence of classical music on self-reports of spirituality.

**Materials and methods:** Thirty volunteers from Northern Greece (15 men and 15 women, mean age = 75.58 years, SD = 7.50, range 61-90, and mean years of education = 13 years), without formal diagnosis of psychiatric or other neurological disorders, participated in the study. They participated in all 3 ten-minute conditions of the experiment which were Allegro con spirito K.448-Mozart, St Matthew Passion opening chorus-Bach, and ten minutes of silence without any recorded acoustic stimulus. The individuals were randomly separated in six groups. The examination material was the Greek translation of the Daily Spiritual Experience Scale which consists of 16 questions concerning how an individual experiences in daily life the existence of God. This questionnaire was administered three times after each condition.

**Results:** Results indicated that the majority of the participants did not show any increase or decrease in their responses regarding the Daily Spiritual Experience Scale. Also, no statistically significant difference was found between the three conditions associated with listening to the excerpt written by Bach and to the silence condition.

**Conclusions:** The current results indicate that classical music as well as brief silence do not influence the scores of the Daily Spiritual Experience Scale. Future research should further examine if other music genres and lengthier interventions can have an effect on self-reports related to spirituality.



## P10 Line bisection performance of normal older adults

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**Background:** Asymmetry in spatial attention is a well documented finding in cross-cultural studies of general population. The aim of this study is to examine whether sex and dominance of one hand over the other-handedness can affect the line-bisection performance in healthy older adults.

**Materials and methods:** Forty healthy older adults from Northern Greece (27 female; 22 right-handers/non-converted left-handers, and 18 left-handers) participated voluntarily in this research. Their mean age was 58.50 years (SD = 11.52), level of education 16.37 years (SD = 5.60). Two groups were formed according to their hand preference. The two groups had no differences regarding their demographics. The manual line bisection task was used for examining the lateralization of visual spatial attention. This task requires that the individual indicates the center of horizontal lines with a pencil.

**Results:** The results revealed that both the right-handers group and the left-handers group demonstrated right pseudoneglect.

**Conclusions:** This study revealed that handedness and sex had no significant influence on bisection performance. Future research should further investigate other factors other the two abovementioned in relation to line bisection performance.

**P11 Can spirituality influence what we verbally attend to and remember?**

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**Background:** Biases that are the criteria set by observers for making a particular response have been investigated so far only in forensic experiments. The aim of this study is to investigate if spirituality can influence what we attend to and remember when examined with verbal material.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). Participants completed The Royal Free Interview for Religious and Spiritual Beliefs, as well as word recall and recognition tasks assessing memory for positive, negative, neutral, and religious words.

**Results:** Results indicated that spirituality does not appear to be related to memory bias. Nevertheless, words with either neutral, positive, negative, or religious connotations are recalled and recognized at different rates depending on scores in The Royal Free Interview for Religious and Spiritual Beliefs.

**Conclusions:** The above findings need to be investigated not only in larger samples of older adults, but also in groups of older adults suffering by different diseases such as dementias.



## P12 Can induced positive emotions influence spirituality and religiousness?

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**Background:** This study was designed to investigate whether positive events and emotions (presented as videos) can increase, even short-term, self-reports of religiousness and spirituality.

**Materials and methods:** Thirty healthy older adults (15 female) participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82). All participants were exposed to a neutral video and to videos eliciting positive emotions including humor, appreciation of nature, and wonder at childbirth. All four videos were presented in a counter-balanced order. Participants after each of the conditions completed the Greek translation of the Daily Spiritual Experience Scale which consists of 16 questions concerning how an individual experiences in daily life the existence of God, the Greek translation of the Systems of Belief Inventory (SBI-15R) which consists of 15 questions regarding religiousness and spirituality, as well as The Royal Free Interview for Religious and Spiritual Beliefs.

**Results:** Results indicated that religiousness was to some extent affected by the positive emotions elicited, and spirituality was higher among participants who were exposed to the videos eliciting self-transcendent emotions (appreciation of nature and wonder at childbirth) but not among those exposed to humor.

**Conclusions:** The findings of this study confirm previous findings of other researchers in the field. Future research should include not only larger samples of older adults, but also groups of older adults as well as younger adults suffering by different diseases.

**P13 Perseverative behavior and music tasks in older adults**

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**Background:** The aim of this research is to investigate whether the perseverative last step in an addition task (Brugger & Gardner, 1994) is possible in healthy older adults who have and who have not a systematic music education.

**Materials and methods:** Thirty older adults (15 female) with no diagnosis of cognitive and/or memory deficits participated voluntarily in this research. Their mean age was 75.58 years (SD = 7.50, range 61-90), level of education 15.47 years (SD = 3.82), n = 12 with advanced and certified music education. Two music tasks were used. More specifically, the first task consisted of 7 meters of descending morphologically similar patterns of notes and demanded the forecast for the eighth meter, while the second task demanded the sixth meter of a more complex ascending and descending 5 meter music pattern.

**Results:** Results indicated for the majority of older adults and for all three tasks, regardless of the given instructions degree of creativity in responses, a strong unjustified imitative continuation of the way that participants previously internally responded to the tasks, in the form of an inappropriate maintenance of thought.

**Conclusions:** Perseveration regarding music stimuli should be further investigated with new tasks and in larger samples.

## P14 Alcohol use and religiousness in Greek older adults

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**Background:** Previous studies support that religiousness is associated with lower levels of substance use among adolescents. This study was designed to investigate the relationship between religiousness and alcohol use in older adults living in Greece.

**Materials and methods:** Two hundred and twenty seven healthy older adults (Mage =72.23, SDage =6.57; Meducation = 7.81, SDeducation = 3.93) from two cities, an urban center in Southern Greece and a less urbanized city in Northern Greece, participated in this study voluntarily. All participants were asked to complete a demographics questionnaire, the self-reported Royal Free Interview for Spiritual and Religious Beliefs, and to report their drinking habits (frequency of use, quantity etc.) during the last year.

**Results:** Results indicated that higher religiousness/spirituality scores are associated with lower rates of alcohol use.

**Conclusions:** Although future studies using longitudinal designs are needed reporting the patterns of drinking habits in time, the findings of this study confirm previous findings of other researchers concerning adults from different European countries. Future research should include not only larger samples of older adults, but also groups of older adults as well as younger adults suffering by different diseases.



**P15 Influence of religiousness on smoking: The case of Greek older adults**

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**Background:** Previous studies support that religiousness is associated with lower levels of substance use. This study assessed the role of religion in cigarette smoking in Greek older adults.

**Materials and methods:** Two hundred and twenty seven healthy older adults (Mage =72.23, SDage =6.57; Meducation = 7.81, SDeducation = 3.93) from two cities, an urban center in Southern Greece and a less urbanized city in Northern Greece, participated in this study. All participants were asked to complete a demographics questionnaire, the self-reported Royal Free Interview for Spiritual and Religious Beliefs, and to report their cigarette smoking habits (frequency of use, number of cigarettes etc.) during the last year.

**Results:** Results indicated that higher religiousness/spirituality scores are associated with lower rates of cigarette smoking and even with no smoking initiation.

**Conclusions:** Although further studies are needed in order to establish religiousness as a protective factor against smoking, the findings of this study confirm previous findings of other researchers concerning adults from different European countries. Future research should include not only larger samples of older adults, but also groups of older adults as well as younger adults suffering by different diseases.

## P16 Exercise habits and religiousness in Greek older adults

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**Background:** Although activity levels tend to progressively decline with increasing age, previous studies indicate that religiousness is related to a healthier lifestyle. This study was designed to investigate the relationship between religiousness and exercise habits in older adults living in Greece.

**Materials and methods:** Two hundred and twenty seven healthy older adults (Mage =72.23, SDage =6.57; Meducation = 7.81, SDeducation = 3.93) from two cities, an urban center in Southern Greece and a less urbanized city in Northern Greece, participated in this study. All participants were asked to complete a demographics questionnaire, the self-reported Royal Free Interview for Spiritual and Religious Beliefs, and to report their exercise habits (frequency, intensity, type of exercise) during the last year.

**Results:** Results indicated that higher religiousness/spirituality scores are associated with more frequent and more intense physical exercise, taking mainly the form of aerobic exercise.

**Conclusions:** Although future studies using longitudinal designs are needed reporting the patterns of exercise habits in time, the findings of this study confirm previous findings of other researchers concerning adults from different European countries. Future research should include not only larger samples of older adults, but also groups of older adults as well as younger adults suffering by different diseases.

**P17 Colour and music genres associations in normal older adults**

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**Background:** Colour and music associations as well as colour and words associations have been examined mainly in synesthetes. The aim of this research is to focus on non-synesthetes of old age and the examination of possible relations between the names of music genres (presented as words) and specific colours.

**Materials and methods:** Forty healthy older adults from Northern Greece (27 females) participated voluntarily in this research. Their mean age was 58.50 years (SD = 11.52), level of education 16.37 years (SD = 5.60). A subjective test was created using a computer-based environment through which participants were able to see on a screen the names of various music genres and select a colour from a palette.

**Results:** The results revealed that there are no systematic selection of specific colours for specific music genres.

**Conclusions:** This study revealed that colour-music words associations are not found in healthy older adults, possibly due to issues related to previous experience and exposure to stimuli. Future research should further investigate in more detail colour-music-language associations.

## **P18 Pet ownership, depression and religiousness in Greek older adults**

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**Background:** Previous studies support that association with pets appears to temper some of the psychological stress found in older age adults suffering from health problems (e.g. dementias or other diseases). This study was designed to investigate the relationship between religiousness, depression and pet ownership in older adults living in Greece.

**Materials and methods:** Two hundred and twenty seven healthy older adults (Mage =72.23, SDage =6.57; Meducation = 7.81, SDeducation = 3.93) from two cities, an urban center in Southern Greece and a less urbanized city in Northern Greece, participated in this study voluntarily. All participants were asked to complete a demographics questionnaire, the self-reported Royal Free Interview for Spiritual and Religious Beliefs, the Geriatric Depression Scale (GDS), and to report ownership of a pet (type of animal, time of ownership etc.).

**Results:** Results indicated that higher religiousness/spirituality scores are associated with lower reports of depression in GDS and statements of having a pet at home.

**Conclusions:** The findings of this study confirm previous findings of other researchers concerning adults from different European countries. Future research should include not only larger samples of older adults, but also groups of older adults as well as younger adults suffering by different diseases.

**P19 Origins of evidence-based medicine: nineteenth-century developments in medical education in England, Scotland and Ireland**

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**Background:** Trinity College Dublin was founded in 1592 by Elizabeth I of England. However, a medical school only emerged in the Dublin college following the appointment of the first professor of anatomy at the University of Cambridge in 1707. By 1813, Trinity began a process of appointing dynamic professors of medicine who had trained in Leiden, Padua, and Edinburgh. Emphasis was now placed on the utilization of the most recent research. Regular autopsies were conducted, pathology and midwifery were introduced, bedside clinical teaching was initiated, chemical experimentation was conducted, and English, rather than Latin, was used in the final medical examinations. However, science did not achieve its central position within medicine without resistance. Trinity was unhappy that medicine was not book-based, like Greek and Latin. The remote, disreputable location of the medical school on the campus, together with the building of a wall separating the school from the rest of the college, symbolized an antagonism towards the medical school that lasted until 1875.

**Data sources:** Manuscripts and Archives Research Library, Trinity College Dublin; Manuscripts and Early Printed Books Department, Trinity College Dublin; Irish Architectural Archive; Irish National Archive; Library of the Royal College of Physicians in Ireland; the Medical College Library, St. Bartholomew's Hospital, London. Electronic databases will also be searched including the Lind Library, The Cochrane Library, Medline, and also Embase, using Google, Google Scholar, and AltaVista search engines.

**Contribution:** Contribution: This project will identify how medical education became increasingly informed by science. The study, part of a wider analysis of the history of evidence-based medicine, will have a number of key foci. Firstly, this project will aim to identify the significant impact of English, Scottish and Continental medicine on the Dublin school; secondly, to assess the important educational innovations introduced from 1813; thirdly, to explore the resistance of Trinity College to the medical school's emphasis on anatomical dissection, experimental chemistry, and bedside clinical teaching; and finally, to analyse the varied reasons behind the eventual acceptance of the medical school and its scientific ethos, in 1875, by the college.

**Acknowledgements:** Wolfson College, University of Cambridge

**References:**

1. References: Bynum, W. F., *Science and the practice of medicine in the nineteenth century* (Cambridge, Cambridge University Press, 1994). Coakley, D., *Medicine in Trinity College Dublin* (Dublin, Trinity College Dublin, 2014). Underwood, E. *Boerhaave's men at Leyden and after* (Edinburgh, Edinburgh University Press, 1977).



## P20 Coping, quality of life, burnout, secondary trauma and mental disorders among firefighters

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**Background:** Firefighting is considered as one of the most stressful professions. The stress factors firefighters are exposed to are numerous. Continuous exposure to stressful and traumatic events during the execution of a task has been shown to have negative effects on firefighter's health. These experiences can lead to physical complaints, mental disorders such as depression, alcohol and substance abuse and Post-Traumatic Stress Disorder. It appears that a correlation between physical injuries and mental illnesses exists, since firefighters who were injured during their duty had a 15% probability of suffering from depression compared to 1.5% of those that had not been wounded. Aim of the present study is to examine if coping strategies, secondary trauma, burnout and quality of life affects the mental health of Greek firefighters.

**Materials and methods:** To investigate the above, four questionnaires were used, the brief-COPE, the WHOQoL-BREF, the ProQoL and the GHQ-28, which were completed by 86 (N = 86) Greek professional firefighters.

**Results:** About 12.8% of the firefighters who participated in the study were in distress or had already developed a mental disorder. Statistical analysis showed significant correlations between the risk of developing psychopathology and specific coping strategies. Moreover mental health was strongly correlated with Quality of Life ( $r = .416$ ), Burnout ( $r = .670$ ) and Secondary Trauma ( $r = .560$ ). In addition, hierarchical regression analysis revealed that burnout, quality of life and coping strategies are predictors for the development of mental disorders.

**Conclusions:** The study results indicate poor quality of life, specific coping strategies, burnout and the exposure to secondary trauma favor the development of a mental disorder. Fire Brigades should develop mental health promotion programs in order to help firefighters build psychological resilience and cope successfully with stress.

### References:

1. Boxer A, Wild D. (1993), "Psychological distress and alcohol use among fire fighters". *Scand J Work Environ Health* 1993;19:121-5
2. Folkman, S., Lazarus, R. S, Dunkel - Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992-1003.
3. Lambert, J. Benight, C., Harrison, E. Cieslak, R. (2012) "The Firefighter Coping Self-Efficacy Scale: measure development and validation", *Anxiety, Stress, & Coping, An International Journal*, 25:1, 79-91, DOI: 10.1080/10615806.2011.567328
4. Pfefferbaum et al (2002), "The Impact of the 1995 Oklahoma City Bombing on the Partners of Firefighters", *Journal of Urban Health: Bulletin of the New York Academy of Medicine* Vol. 79, No. 3, September 2002 The New York Academy of Medicine

## P21 Coping from a positive psychology perspective

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**Background:** Positive emotions are being increasingly recognized as an important agent in well-being. The occurrence of positive emotions amid adversity may provide the necessary psychological rest to help buffer against stress, replenish, and restore further coping efforts, while coping strategies that lead to a favorable resolution generate positive emotions. It appears that there is a strong relation between positive emotions and coping strategies. The purpose of this article is the review of the trends of research that examine coping strategies in the context of positive psychology and examine how they affect each other.

**Materials and methods:** The following electronic databases were searched: Pubmed, Scopus and Psycinfo. The search terms were: (positive emotions AND coping) and (positive psychology AND coping). The studies were first selected on the basis of their title and abstract. Only studies that were published from 2010 to 2015 were included. On screening, articles were excluded if they were (a) book reviews, commentaries, literature reviews, or editorials; (b) not explicitly related to positive emotions and coping in any of the content; (c) not available in full text despite several attempts at procurement; (d) not giving enough information about the method and/or the statistical analysis and (e) not in English. Next, for all articles included in the review, titles, abstracts, and keywords were closely examined and a systematic coding scheme was used to capture key information. Further, an in-depth content analysis of the hypotheses, methods, sample characteristics, analyses, results, and discussions of each study was conducted.

**Results:** Twenty nine studies with a total number of 5128 participants met the inclusion criteria. Research seems to be mainly about diseases and psychopathology, while other significant fields of study such as work-related stress and positive emotion coping strategies are examined.

**Conclusions:** Positive emotions and coping strategies are two close connected and interdependent concepts. Experiencing positive emotions leads to more successful coping strategies, while successful coping generates positive emotions and builds psychological resources which help to develop psychological resilience.

### References:

1. Carver, C.S. & Connor-Smith, J. (2010) Personality and coping. *Annual Review of Psychology*, 61, 679-704
2. Folkman, S. (2013), *Stress, coping and hope* in Carr, B., Steel, J., *Psychological aspects of cancer*, DOI 10.1007/978-1-4614-4866-2\_7, New York, Springer Science+Business Media, LLC,
3. Folkman, S. (1997). Positive psychological states and coping with severe stress. *Social Science and Medicine*, 45, 1207-1221. doi:10.1016/S0277-9536(97)00040-3
4. Fredrickson, B.L., (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society of London. series B, Biological Sciences* 359, 1367-1378



## P22 Synthesis of interventions in schizophrenic disorders

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**Background:** Schizophrenia on one hand is believed to be a biologically based disease; therefore the emphasis is placed on the use of medications. On the other hand, the needs of individuals with schizophrenia vary and pertain to many aspects of the social sphere.

**Materials and methods:** The aim of the study is to overview published reviews that treat Synthesis Of Interventions, both psychopharmacological and psychosocial, in Schizophrenic Disorders.

**Results:** In recent years, progress has been made in both psychopharmacological and psychosocial treatments of schizophrenia, leading to more efficient coping with the disease.

Antipsychotic drugs are an important protective factor against relapse.

However, the percentage of individuals consenting to treatment with medication is relatively low, as is the percentage of patients remaining in the treatment program.

It seems also that relapses are connected with stress another factor that supports psychological care in schizophrenia.

While pharmacotherapy remains the most important factor for the treatment, it appears that additional benefits are gained if somatic and psychosocial approaches are combined.

Psychosocial approaches strengthen the vulnerable individual and the social support systems that protect the individual from environmental stress.

**Conclusions:** Authors suggest that every person with a schizophrenic disorder should be provided with a combination of:

1. Optimal dose of antipsychotics;
2. Strategies to educate himself and his carers to cope with environmental stresses more effectively;
3. Cognitive behavioural strategies to enhance work social goals and reduce residual symptoms, and;
4. Assertive home based management to help prevent and resolve major social needs and crises, including recurrent episodes of symptoms.

There are several authors who suggest a combination of therapeutic interventions in schizophrenia.

### References:

1. Μ. Μαδιανός: Η μηλιά κάτω από το μήλο. Αθήνα 1999. Εκδ. ΕΛΛΗΝΙΚΑ ΓΡΑΜΜΑΤΑ. 2) Madianos M.: How effective are psychotherapies for schizophrenia. In Maj M, Sartorius N. (ed): Schizophrenia. New York 1999, John Wiley. 226-228.
2. Magliano L, Fiorillo A, Fadden G, Gair F, Economou M, et al Effectiveness of a psychoeducational intervention for families of patients with schizophrenia: preliminary results of a study founded by the European Commission. World Psychiatry Febr 2005; 4(1): 45-49.



3. Falloon IR, Montero I, Sungur M, Mastroeni A, Malm U, Economou M, Grawe R. Implementation of evidence-based treatment for schizophrenic disorders: two-year outcome of an international field trial of optimal treatment. *World Psychiatry* 2004; 3(2): 104-109.
4. Dickerson FB, Lehnan A.F. Evidence - based psychotherapy for schizophrenia. *J. Nerv. Ment. Dis.* 2006;194(1): 3-9.

### **P23 Verbal and tactile memory in blind and sighted individuals**

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**Background:** We examine verbal and tactile memory on sighted individuals and those with visual impairment. Moreover it was investigated if the test performances were affected by factors such as the years of Braille reading, how often they read Braille and if they are active readers now.

**Materials and methods:** Totally 64 individuals participated, 24 participants with visual impairment from the Center for Education and Rehabilitation for the Blind in Thessaloniki and 22 sighted individuals of Thessaloniki municipality participated. Tests examining both verbal memory and tactile memory were given. Additionally, a more complete evaluation of cognitive functions required the attention, working memory, vocabulary and verbal fluency to be tested.

**Results:** The results corresponding to verbal memory tests between the two examining groups were almost equal without any important statistical significance. The performances of individuals with visual impairment were slightly better though. It was verified that factors such as sex did not affect the results. Concerning the use of Braille there was not remarkable statistical significance. Exemption constitutes only the number of years that Braille was used by people. Precisely the number of years of Braille reading was a determining factor for better performance for late story recall (this is related only to group of people with visual impairment).

**Conclusions:** Despite the fact that people with visual impairment had better satisfactory performance at all trials (both verbal and tactile memory) compared with healthy ones, the differences had important statistical significance only in tactile memory trials. The better tactile experience of people with visual impairment could probably be the reason that explains the above findings.

#### **References:**

1. A Gurtubay-Antolin, A Rodríguez-Fornells: Neurophysiological evidence for enhanced tactile acuity in early blindness in some but not all haptic tasks. *NeuroImage* 2017, 162: 23-31.
2. WJ Ma, M Husain, PM Bays: Changing concepts of working memory. *Nature neuroscience* 2014, 17(3): 347.



## P24 Neuropsychological and neurolinguistic profile in Aicardi Syndrome: a case study

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**Background:** This research is related to a patient with Aicardi syndrome. The main target of this study was to investigate the neuropsychological and neurolinguistic profile of patient.

**Materials and methods:** The patient is 23 years old and right-hand. She completed 12 years of education in the technical field. The intelligence scale (WAIS-IV-GR) and a broad array of neuropsychological tests were completed, examining the following cognitive domains: verbal and visual memory, visual-perception, executive functions and Theory of Mind. The following tools were given for language function: verbal fluency test, decision lexical test, orthographic test for adolescents and adults and the perfective past tense in Greek child language. Moreover, recording of speech for five minutes was tested.

**Results:** According to the results, the patients' intelligence classified into the spectrum of mild cognitive disability. The majority of patients' performances in the neuropsychological trials range in the low normal spectrum, while the verbal functions and the Theory of Mind were found to be impaired. The results show that the AS patient had difficulties in language skills and especially in orthography and verbal fluency. The results in perfect past tense in Greek were not impaired.

**Conclusions:** The current study of a patient with corpus callosum agenesis in the context of Aicardi syndrome demonstrated a poor mental performance. However, it was observed an ameliorated performance in particular cognitive domains, but with a pronounced impairment in linguistic competence, and with signs of paroxysm. A further exploration and analysis of patient brain structure would contribute to a better and deeper understanding and interpretation of above-mentioned findings.

### References:

1. KG Zaarour, El Traboulsi: Aicardi Syndrome (AIC). A Compendium of Inherited Disorders and the Eye 2017, Oxford: University Press.
2. S Jain, N Dinesh: A rare manifestation of specific learning disability in a child with Aicardi syndrome. Acta Oto-Laryngologica Case Reports 2016, 1(1): 17-23.

**P25 Writing disorder (dysgraphia) comorbides with attention deficit hyperactivity disorder (ADHD)**

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**Background:** Dysgraphia is a dimension of writing disorder with different manifestations per person and it rates higher in males than in females students. Dysgraphia appears to co-exist in people with Attention Deficit/ Hyperactivity Disorder (ADHD) and consists of the absence of myomotor actions and the difficulty of recalling and imprinting the characters (letters or numbers) in writing.

**Materials and methods:** The present review examines the research findings from 23 empirical studies, which are related to writing disorder in student population with attention deficit hyperactivity disorder (ADHD). The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

**Results:** The main features of dysgraphia are: lack of punctuation, many erasures, absence of gaps, difficulty in tracking the writing line, incomplete words, failure to observe the margins, letter inversion, poor copying of letters and numbers, inappropriate font size and shape, confusion of capitals and lowercase letters, unequal lines.

**Conclusions:** Writing disorder (dysgraphia) seems to affect the general academic level of person and his psychology. Writing disorder can be improved mainly by appropriate educational interventions.

**References:**

1. SD Mayes, SL Calhoun: Learning, attention, writing, and processing speed in typical children and children with ADHD, autism, anxiety, depression, and oppositional-defiant disorder. *Child Neuropsychology* 2007, 13(6): 469-493.
2. SD Mayes, SS Frye, RP Breaux, SL Calhoun: Diagnostic, Demographic, and Neurocognitive Correlates of Dysgraphia in Students with ADHD, Autism, Learning Disabilities, and Neurotypical Development. *Journal of Developmental and Physical Disabilities* 2018, 1-19.



## P26 Autism disorder: neuropsychological and developmental assessment

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**Background:** Autism disorder is a neurodevelopmental disorder with plenty of manifestations. Autism is characterized by deficits in social communication and interaction, verbal communication and stereotyped repetitive behaviors. The prevalence of this disorder is approximately 1% of population.

**Materials and methods:** The present review examines the research findings from 35 empirical studies, which are related to neuropsychological and developmental tests and interventions. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

**Results:** A variety of neuropsychological and developmental tests are available for assessment for autism disorder. The Vineland Social Maturity Scale and Adaptive Behavior Scale, the Sensory Profile Test and the Diagnostic Interview for Social and Communication Disorders (DISCO) are suitable for developmental assessment. The most appropriate neuropsychological tests for assessment are: the Derbyshire Language Scheme, the Test of Pragmatic Language, the Tower of London test, the Cambridge Neuropsychological Test Automated Battery, the Stroop Test and the Wisconsin test. The most effective interventions for autism disorder are: the SPELL program, the TEACCH program, the PECS program, the MAKATON program and the STAR program.

**Conclusions:** Recent data have shown that a personalized intervention program which fits to the needs of the patient can help individuals to be more functional in their daily life.

### References:

1. C Kasari, S Peterson: Interventions addressing social impairment in autism. *Current Psychiatry Reports* 2012, 14 (6): 713-725.
2. D Preston, M Carter: Review of the Efficacy of the Picture Exchange Communication System Intervention. *Journal of Autism and Developmental Disorders* 2009, 39: 1471-1486.

**P27 Method of suicide attempt and aggression in patients with recent suicide attempt**

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**Background:** The selection of method of suicide attempt is related with a number of factors, such as accessibility to particular means, awareness of how lethal a suicide method is, suicidal intent as well as cultural factors. The purpose of this study was to investigate the relationship between the method of suicidal attempt and aggression in patients hospitalized in a psychiatric clinic after a recent suicide attempt.

**Materials and methods:** A total of 226 patients with recent suicide attempt were included in the study. Especially, 158 patients used non violent methods (72,8% women) while 68 patients (54,4% women) used violent methods of suicide attempt. All patients completed the Buss & Perry Aggression Scale that assesses overall aggression, physical aggression, verbal aggression, anger and hostility.

**Results:** Patients who used non violent methods of suicide attempt did not differ statistically significantly from patients who used violent methods as regards to aggression and its dimensions. Furthermore, the association between suicide attempt method and aggression was explored separately within male and female patients and it was also found non statistically significant.

**Conclusions:** These findings indicate that the method of suicide attempt (violent, non violent) was not associated with overall aggression, physical aggression, verbal aggression, anger and hostility in a sample of patients hospitalized in a psychiatric clinic after a recent suicide attempt.



## P28 Sociodemographic and psychopathological characteristics of patients with multiple attempts

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**Background:** Suicidal behavior is a complex public health problem of global dimension, involving multiple factors - biological, psychological and social. A previous suicide attempt is considered to be the strongest predictor of a future attempt, as well as of completed suicide. This study aimed to review and highlight the characteristics of the population with multiple attempts.

**Materials and methods:** Research was carried out on online databases (PubMed and PsychINFO) with the following key words: repeated suicide attempts, single attempts, multiple attempts, suicide reattempters, suicide ideation, suicide attempts, suicidal behavior.

**Results:** Repeated attempts (two or more in patient's history) associate with female gender, younger age, lower level of education and unemployment. Also, current psychopathology and diagnosed mental disorders were found to strongly associate with multiple attempts. Multiple attempters are more likely to have more severe psychopathological symptoms (i.e. depressive) than patients with a single attempt. Personality disorder; mainly borderline, drug and alcohol abuse as well as more hospitalizations and family history of suicide are frequent in patients with multiple attempts.

**Conclusions:** Awareness of the characteristics of patients who repeat suicide attempts allows early detection of those with higher risk. More personalized interventions involving especially patients with recurrent suicidal behavior could be included in strategies to prevent suicide.

## **P29 Greek version of Connor and Davidson Resilience scale: translation and psychometric properties**

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**Background:** Resilience has been studied extensively in the recent literature. There are many definitions of resilience, depending on the theoretical context. According to American Psychological Association, resilience can be defined as an adaptation process after difficulties, trauma or major threats. Lastly, resilience research focuses more on processes that promote mental health. In the context of research and clinical interest, some scales of resilience measurement have been designed. The Connor & Davidson Resilience Scale (CDRISC25) is a self-rated, 25-items scale. The items reflect notions that have an established correlation with resilience, such as control, commitment, self-efficacy, stress perception as a challenge, secure relationships, the development of goals-making strategies, adaptability, patience and spirituality. The scale has been translated in many languages and has shown adequate psychometric properties, compared to other resilience scales. The aim of this study was to evaluate the psychometric properties of CDRISC25 (reliability, validity) in a Greek population.

**Materials and methods:** Greek translation of CD-RISC was performed according to the scientific standards for this procedure, in close collaboration with the creators of the original scale. Internal consistency, test-retest reliability and convergent validity were measured. Factors were extracted by using exploratory factor analysis (EFA).

Participants (546 adult subjects)  
 244 controls and 302 psychiatric patients

### Materials

1. CDRISC25 (greek version)
2. General Health Questionnaire (GHQ)
3. World Health Organization Quality of Life (WHOQOL) questionnaire
4. Perceived Stress Scale (PSS)
5. Global Assessment of Functioning Scale (GAF)

**Results:** The scale showed excellent internal consistency (Cronbach's  $\alpha=0.925$ ), as well as test retest reliability (ICCC=0.925). CD-RISC scores were positively correlated to GAF and WHOQOL scores, while being negatively correlated to PSS and GHQ scores, establishing adequate convergent validity. The EFA led to a 4-factor model, explaining 53.65% of the variance

**Conclusions:** Greek version of CD-RISC is a reliable and valid measure of resilience and can be used for clinical and research aims in the Greek population.



## References:

1. Tsigkaropoulou, E., Douzenis, A., Tsitias, N., Ferentinos, P., Liappas, I., & Michopoulos, I. (2018). Greek Version of the Connor-Davidson Resilience Scale: Psychometric Properties in a Sample of 546 Subjects. *In Vivo*, 32(6), 1629-1634. doi: 10.21873/invivo.11424
2. Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety*, 18(2), 76-82. doi: 10.1002/da.10113

## P30 Profile of suicide completers in the medical-surgical setting

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**Background:** Severe medical/surgical morbidity increases risk of completed suicide mainly due to a coexistent depressive disorder. Completed suicides in non-psychiatric wards of General Hospitals (GH), albeit rare, could have a deep impact in such settings. We aimed to shed light on the characteristics of a 25-year sample of similar completers based on material from the Piraeus Department of Forensic Medicine (PDFM). No such study has ever before been performed in Greece.

**Materials and methods:** PDFM covers Piraeus Greater Area, the islands of Kythira, Cyclades and, occasionally, Samos and Ikaria (population ~700,000 inhabitants). Data was collected from the victims’ forensic records for the years 1992-2016.

**Results:** During the aforementioned period 19 individuals died by suicide in non-psychiatric wards of GH; 17 men (89.5%), 2 women (10.5%), mean age 62.7 years (range 30-86, standard deviation 14.1). Greeks were 17 (89.5%). Toxicological tests were available for 17 cases: 2 (11.8%) were under psychiatric medications and 2 (11.8%) had consumed alcohol prior to their death. Jumping from a height was, by far, the most prevalent method (17cases/89.5%). Most suicides took place within the months of June, September and November (4each/21%). In 3 cases the victim was already hospitalized due to a previous attempt. In 4 cases there was a medical history of cancer, in 2 one of congestive heart failure and in 1 case one of a stroke (no reliable information regarding medical/surgical morbidity was provided for the remaining cases).

**Conclusions:** Based on our findings, a deficit regarding the prompt diagnosis and effective treatment of psychiatric disorders in elderly males hospitalized for severe medical/surgical illnesses in non-psychiatric wards of GH seems probable. Continuous education of non-psychiatric health staff of GH on psychiatric phenomenology, provided by the Consultation-Liaison teams, could be invaluable and may help to raise awareness of this delicate subject.



### **P31 Profile of suicide victims from a 25-year sample from Greece**

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**Background:** The study of completed suicides based on the victims’ forensic records provides information difficult to uncover otherwise. Examples are psychiatric medication intake, alcohol and illicit drug use and particularities regarding the circumstances of the suicidal act itself.

**Materials and methods:** We collected data from the archival material at the Piraeus Department of Forensic Medicine (PDFM) for the period 1992-2016 (25 years). PDFM covers a large area, comprising Piraeus Greater Area, the islands of Kythira, Cyclades and, occasionally, Samos and Ikaria, amounting to a population of roughly 700,000 inhabitants.

**Results:** For the period we studied 1178 suicides took place in the area under study: 75.8% were males, 24.2% females, mean age 49.8 years (range 12-93, standard deviation 18.5). The overwhelming majority were Greeks (87.2%). Toxicological tests were available for 1124 cases. According to them, 17.9% were receiving psychiatric medication(s), most commonly benzodiazepines (11.9%), followed by antidepressants (7.3%), antipsychotics (2.2%) and mood-stabilizing anticonvulsants (1.3%). Illicit drug intake: 4.2% opioids, 2.2% cannabis, 0.4% cocaine. Alcohol was used by 21.5% of the cases. The majority of the victims committed suicide at home (52.2%) whilst 30.7% outdoors. The vast majority died at the place of suicide (87.5%). Most frequent suicide methods: hanging (31.9%), jumping from a height (28%), drowning (17.2%) and shooting by a firearm (11%). Most suicides took place within the months of June and May (9.8% each); the least in December (6%). Our results were based on a sample from a predominately urban area and should not be necessarily considered representative of the entire country.

**Conclusions:** Our findings seem to imply either an under-diagnosis of severe psychiatric disorders in the community or their possible under-treatment or, finally, a lack of compliance with the suggested treatment by some patients that will eventually die by suicide.



### P32 Gender differences in a 25-year sample of suicide completers from Greece

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**Background:** Male and female suicide completers present different characteristics both in their socio-demographic parameters and regarding the parameters of the act itself. We aimed to study these differences focusing on a sample of suicide victims from the Piraeus Department of Forensic Medicine (PDFM) for an extensive time period (25 years).

**Materials and methods:** Information was gathered from the victims’ forensic records at the PDFM for the years 1992-2016. The area covered includes Piraeus Greater Area, the islands of Kythira, Cyclades, occasionally Samos and Ikaria (population ~700,000 individuals).

**Results:** During the period we studied we recorded 1178 suicides (75.8% males, 24.2% females). Toxicological tests were available for 1124 of them. There were no significant differences regarding age, nationality, psychiatric medication intake (antidepressants, antipsychotics, mood-stabilizing antiepileptics, benzodiazepines), opioid, cocaine or alcohol use. A marginal difference was found regarding cannabis ( $p=0.06$  in “favor” of men). Differences regarding place of suicide (males much more often committed suicide in workplaces, hospitals or prisons), place of death (men more often died at the place of suicide) and suicide method (women less often chose hanging or shooting by a firearm and more commonly jumping from a height and medication overdose) were statistically significant ( $p<0.001$ ). Our study was carried out in a large -primarily urban- area and its findings are not necessarily representative of the entire country.

**Conclusions:** Male and female suicide completers seem to be more similar than different regarding the characteristics we searched. Nonetheless, men appear more “flexible” regarding suicide place’s choice and appear to die by more violent -hence further lethal- methods (hanging, shooting by a firearm) that also need some preparation in advance. It follows that it could possibly exist a “window” of opportunity for preventing a number of male suicides (e.g. through gun control).

**P33 Age at onset and visual memory function in Bipolar Disorder**

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**Background:** Neuropsychological deficits in Bipolar Disorder (BD) have been examined in relation to various clinical factors (such as duration of illness and number of episodes).

**Objectives:** However, the effect of age at onset on cognition has been scarcely studied despite its clinical relevance.

**Aims:** The aim of our study was to investigate whether age at onset affects visual memory in patients with BD.

**Materials and methods:** Cognitive performance of 60 bipolar-I patients and 30 healthy controls was evaluated by using CANTAB battery tasks targeting spatial memory (SRM) and paired associative learning (PAL). Multiple linear regression analyses were performed for memory function tasks based on age at onset with age, gender and education as covariates.

**Results:** Bipolar patients showed statistically significant worse performance in PAL compared to healthy controls ( $p=0.001$ ) whereas no statistically significant difference was observed for SRM. Moreover, among patients a statistically significant association was found ( $p=0.006$ ) between age at onset and performance in PAL. Specifically, after correcting for confounders (age, gender, education) an earlier age of illness onset was correlated with more errors committed in PAL.

**Conclusions:** The present study is one of the few studies that have examined the effect of age at onset on memory function in BD. Early onset BD has been associated with greater genetic load and poorer prognosis and our findings indicate that it may also be associated with worse memory function as assessed with PAL. Age at onset might help identify bipolar patients at a greater risk for memory/learning impairment.



### P34 The effect of HPA axis functioning on visual memory in Bipolar Disorder

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**Background:** Bipolar Disorder (BD) is frequently associated with cognitive deficits that have been related to various clinical characteristics of the disorder. Moreover, many bipolar patients show altered HPA axis function such as hypercortisolemia and DST non-suppression.

**Objectives:** However, few studies have examined the effect of HPA axis function on cognition in BD.

**Aims:** The aim of our study was to investigate the performance of bipolar patients in cognitive tasks targeting visual memory within the framework of the HPA axis hyperactivity model.

**Materials and methods:** Cognitive performance of 60 bipolar-I patients and 30 healthy controls was evaluated with CANTAB battery tasks targeting spatial memory (SRM) and paired associative learning (PAL). Moreover, basal cortisol levels were measured and the Dexamethasone Suppression Test (DST) was administered. Multiple linear regression analyses were performed with age, gender and education as covariates.

**Results:** Bipolar patients showed significantly poorer performance in paired associative learning (PAL) than controls. Moreover, among patients a statistically significant association was found ( $p=0.029$ ) between basal cortisol and performance in PAL. Specifically, after correcting for confounders higher levels of basal cortisol were correlated with more errors committed in PAL.

**Conclusions:** The present study is one of few studies that have examined the effect of HPA axis function and cortisol on neurocognitive function in BD. Our findings provide evidence on the relation of cortisol with visuo-spatial associative memory in BD. Moreover, they suggest that hypercortisolemia in the long-term may result in hippocampal toxicity, possibly leading to altered visual memory function in BD.

**P35 Bullying behaviors among Greek adolescents: A prevalence and gender-age correlates cross-sectional study**

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**Background:** Bullying among adolescents is a common- worldwide- serious phenomenon affecting the well-being and functioning of both victims and perpetrators. Numerous studies have investigated the frequency of bullying related behaviors, as well as their associations with adolescents' demographic characteristics, and mental-physical health problems. The aim of this cross-sectional study was to identify the prevalence of bullying behaviors and their (gender-age) correlates among a Greek adolescent students sample.

**Materials and methods:** The sample consisted of 1934 adolescents attending the second grade of 45 High Schools and Senior High Schools of the Greater Athens Metropolitan Area. Participants' bullying involvement (as victim, perpetrator, or both victim and perpetrator) was examined by two double questions, evaluating the occurrence and the type (verbal, physical, relational, mixed) of bullying. Basic demographic information (including gender and age) was also collected.

**Results:** 18.4% of participants were involved during the last year in bullying related behaviors, 11.0% of them as a victim, 5.0% as a perpetrator, and 2.4% both as a victim and perpetrator. Verbal bullying was the most common type within all bullying- involved groups, while verbal and physical bullying was the most common mixed one type. Furthermore, compared to girls, boys were more like to be perpetrators, and both victims and perpetrators. With respect to age, participants' (older) age was correlated with bullying others behavior.

**Conclusions:** Bullying is a common, quite prevalent problem, also amongst the adolescents in Greece. Several points deserve attention, the most important of which include focusing to the school based preventive intervention, taking into account both victims and perpetrators.



### P36 The role of religion and spirituality in caregiving of children with neurological diseases: A systematic review

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**Background:** The aim in undertaking this study was to investigate the already published literature regarding the role of religion and spirituality in caregiving of children with neurological diseases and to examine whether higher spirituality/religiousness in parents and/or children is related to better physical and psychological health of children and parents.

**Materials and methods:** A literature review through systematic searches in PubMed, PsycINFO, Google Scholar and Cochrane was conducted, including qualitative, quantitative, peer- and non-peer-reviewed studies. A quality evaluation of studies was implemented and all studies reporting parents' and children's religion and spirituality measurements were included.

**Results:** Results indicated that although there is a number of published articles in Protestant countries (mainly USA), there are no studies in Greek Orthodox samples as well as Catholic. Measures (mainly self-report questionnaires) administered to parents show that there is a tendency for higher scores of spirituality co-existing with better outcomes in children's psychological measurements as well as parents overall health. Of course, all of the above-mentioned studies are correlational and there is a lack of studies measuring religiousness/spirituality in children with neurological diseases.

**Conclusions:** The above findings are based on scarce literature, and thus future research should include and measure factors such as religion and spirituality of children, parents and "important others", in a more direct and systematic way.

### P37 Clozapine treatment in Anti-Social Personality Disorder

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**Background:** Clozapine is an atypical antipsychotic with a wide-range receptor profile used in treatment-resistant schizophrenia.(1) It is widely known of its anti-aggressive effects particularly among schizophrenia patients(2). There is limited data on its effectiveness in reducing the clinical severity of Anti Social Personality Disorder(ASPD). ASPD is defined in DSM-5 and characterized by a long term pattern of disregard for or violation of the rights of others.(3) The criteria for ASPD require that the individual have conduct problems evident by the age of 15. The most widely accepted pathogenesis is dopamine and serotonin dysregulation.(4) Through acting on these systems, clozapine might reduce the aggressive behavior, anger and violence.

**Materials and methods:** We present a case of a 25-year old male diagnosed with ASPD according to DSM-5 effectively treated with clozapine. The patient was examined by several psychiatrists and his medical records were reviewed. He was admitted to our High Security psychiatric department for 9 months. His violent and aggressive behavior started at the age of 8. During his school years he had multiple fights with fellow students without apparent reason. Later, he started abusing drugs and alcohol and got involved in multiple crimes.

**Results:** During the first three months of his hospitalization the patient was disobedient, violent and aggressive towards other patients. After therapy with clozapine was started with a dose up to 300 mg/d the levels of aggression, violence and impulsive behavior were reduced. The patient started to adhere to the department rules and participated in psychotherapy groups. In the next 6 months only one incident was reported due to self-protection.

**Conclusions:** This case demonstrates the benefits of clozapine on the symptoms of ASPD, especially impulsive behavior and anger. However, more research is needed.

#### References:

1. Fakra E, Azorin J Clozapine for the treatment of schizophrenia. *Expert Opin Pharmacother.* 2012; 13(3): 1923-1935.
2. Buckley P, Bartell J, Donenwirth K, et al. Violence and schizophrenia: clozapine as a specific antiaggressive agent. *Bull Am Acad Psychiatry Law.* 1995; 23(4): 607-61
3. American Psychiatric Association, 2013. *Diagnostic and Statistical Manual of Mental Disorders*, fifth ed. American Psychiatric Publishing, Washington, DC, pp. 659
4. Moore TM, Scarpa A, Raine A (2002). “A meta-analysis of serotonin metabolite 5-HIAA and antisocial behavior”. *Aggressive Behavior.* 28 (4): 299-316.



### P38 Searching for predictive validity in animal models and tests for mania-like behavior

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**Background:** Animal models are critical for the study of disease mechanisms and the screening of potential treatments. Specific behavioral tests are needed to examine the model in the context of disease and treatment. Only a few such tests are offered to evaluate mania-like behavior in laboratory rodents. One frequently used test is amphetamine-induced hyperactivity (AIH) representing the increased locomotion associated with mania. Another relevant test is the sweet solution preference (SSP) that models changes in reward-seeking behavior and is used in the context of both mania and depression.

The benefit from using animal models for disease is dependent on their validity and one critical aspect for screening models is predictive (or pharmacological) validity that is based in part on the expectation that a good model will respond to established drugs used to treat patients. Lithium is the prototypic mood stabilizer and it can therefore be expected that models for mania-like behavior will respond to chronic lithium treatment. Yet, previous data regarding the effects of lithium in the AIH and the SSP are not clear and most data come from studies using acute lithium administration that is not relevant to the therapeutic regimen in patients.

**Aims:** The current study was designed to explore the effects of chronic lithium in the AIH and SSP.

**Materials and methods:** AIH: We tested the interaction between chronic oral administration of lithium and amphetamine in ICR (CD-1<sup>®</sup>) mice and in black Swiss mice. We conducted 5 experiments. Four experiments where chronic lithium was followed by an acute injection of amphetamine and one experiment where chronic amphetamine was combined with chronic lithium. Activity was measured in an open field using a videotracking system.

SSP: We performed 3 experiments: (1) Female and male black Swiss mice with chronic lithium injections; (2) male black Swiss mice with chronic lithium in food; (3) male ICR mice with chronic lithium in food. Mice received a bottle of 1% saccharine solution on top of their regular food and water for 48 hours. Weights of water and saccharine solution bottles were taken at the start of the experiment and every 24 hours thereafter. SSP was computed as the ratio of saccharine solution consumption from total liquid consumption.

**Statistics:** Data were analyzed using analysis of variance followed by post-hoc tests. Statistical significance was accepted at levels of  $p \leq 0.05$ .

**Results:** AIH: Amphetamine administration resulted in hyperactivity (experiments 1-4) but lithium had no effects on AIH. Chronic amphetamine (experiment 5) resulted in sensitization with no effects of lithium.

SSP: Lithium reduced SSP in all experiments. Females showed higher SSP than males but the effects of lithium were similar in both sexes. There was a significant correlation between SSP of mice in the first and second day of testing.

**Conclusions:** The results cast doubt on the utilization of the AIH as a screening model for novel mood stabilizers. In contrast, the effects of lithium in the SSP are significant in both strains of mice and both sexes suggesting that the SSP is a valid test for mania-like behavior.



**P39 External validity of the tail suspension test supported by meta-analysis of studies using imipramine**

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**Background:** Animal models are frequently utilized in the study of neuropsychiatric diseases including affective disorders. One problem area of animal models of neuropsychiatric disorders is unclear reproducibility. Low reproducibility rates are a general problem in research and a recent study suggests that within life sciences the cumulative prevalence of irreproducible preclinical studies exceeds 50% of published results[1]. One aspect of reproducibility is external validity or generalizability. External validity can be evaluated by systemic replications or by comparing effects in tests that are hypothesized to model similar states or traits [2]. Alternatively, external validity can also be evaluated using systemic reviews and meta-analyses of available data, a standard practice in clinical research that is neglected in animal models research.

**Aim:** considering the critical importance of animal models, our long-term goal is to use different methods to examine reproducibility of standard models for neuropsychopharmacology. We have recently performed a large meta-analysis of the forced swim test where the results indicated strong quantitative validity but questionable validity to explore hierarchy between treatments[3]. The present study uses similar methods to perform a systematic review and meta-analysis of the effects of the prototypic antidepressants imipramine and fluoxetine in the tail suspension test (TST).

**Materials and methods:** A comprehensive search of the literature identified papers that examined the effects of imipramine or fluoxetine in the TST. Effect sizes were estimated using Cohen's *d* and effect size homogeneity was evaluated by the *Q* statistic. Differences between strains were assessed using analysis of variance. Relationship between doses and effect sizes were computed using Pearson's correlation.

**Results:** We identified 101 experiments that met inclusion criteria for imipramine and 63 experiments for fluoxetine. For imipramine we found a significant effect of the drug across doses with a dose/response relationship only in a protocol scoring 4/6 min of the test but not in the protocol scoring 6/6 min of the test. Additionally, we found no interaction between mice strain and imipramine in the test. For fluoxetine we found (1) a general effect of the drug across studies, (2) a significant dose/response relationship for both 4/6 and 6/6 protocols, (3) effect sizes were lower in NMRI mice compared with Swiss and C57bl/6 mice.

**Conclusions:** These findings offer important support for the external validity of the TST, showing (1) an established antidepressant-like effect, (2) dose response relationship within frequently used mice strains. Moreover, the results suggest that at least for imipramine there is an advantage in using the 4/6 min protocol and a disadvantage in using the NMRI strain.



## References:

1. Freedman, L.P., I.M. Cockburn, and T.S. Simcoe, The Economics of Reproducibility in Pre-clinical Research.PLoS Biol., 2015. 13(6): p. e1002165. doi: 10.1371/journal.pbio.1002165. eCollection 2015 Jun
2. van der Staay, F.J., S.S. Arndt, and R.E. Nordquist, Evaluation of animal models of neurobehavioral disorders.Behav Brain Funct., 2009. 5: p. 11.
3. Kara, N.Z., Y. Stukalin, and H. Einat, Revisiting the validity of the mouse forced swim test: Systematic review and meta-analysis of the effects of prototypic antidepressants.Neurosci-Biobehav Rev., 2018. 84:1-11.(doi): p. 10.1016/j.neubiorev.2017.11.003. Epub 2017 Nov 9.

**P40 Record of clinics and epidemiological data of hospitalized patients during the year 2018 in 3rd psychiatric clinic of AUTH AXEPA Hospital Deferens in diagnosis of ICD - 10**

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**Background:** In 2018 Psychiatric Clinic of AXEPA were hospitalized 319 patients the exit diagnosis is at the standards of ICD -10

**Purpose:** The purpose of this assignment is the study of clinical- epidemiological characteristics according to the diagnosis of patients who were hospitalized in 2018.

**Materials and methods:** It was studied the total of hospitalized patients CN-319 as (it was) recorded in the files of the clinic. The parameters that were examined, were the gender, the age nursing status as well as the exit diagnosis for ICD-10

**Results:** The exit diagnosis with the highest number of people as for the gender according to ICD- 10 was: F20 - F2 (schizophrenia, schizotypia disorder delusional disorders), for men (n= 73, 44,8%) and for women ( n= 52, 33,3%). A main characteristic is that the percentage of patients who exit on their own without a final diagnosis, due to on in completed clinical- laboratory control , is for men ( n=17, 10,4%) and for woman( n= 14, 9%. The exit diagnosis as for the age show that younger patients are categorized in diagnosis, F50 -F59 (n=4%), F20 - F29 (n=124), while older people are in diagnosis F00-F09 (n=16) or moved (n=8). Patients with involuntary hospital treatment are usually discharged from hospital with diagnosis F-20 F29 (n=65%, 58%) and F60-69(n=16, 14, 3%), while patients with voluntary hospital treatment are usually discharge from hospital with diagnosis F30-39(n=64, 30, 9%) and F20-F29 (n=59, 28, 5%)

**Conclusions:** Patients, who were discharged from hospital with diagnosis F20-F29, were usually men, younger and were hospitalized with involuntary hospital treatment. These who received diagnosis F30-F39 were voluntary hospitalized and were at medium and order age, while order received diagnosis F00-F09 or are moved.



## P41 Mental representations and cognitive penetrability: searching the limits of mental partitioning

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**Background:** Visual mental images play an important role in thinking, but there is no agreement among cognitive scientists as to what are the kinds of symbols that the mind processes. Does thought consist of mental representations in the form of conditionals of the predicate calculus, that is, rules of the 'if...then...' type, or do we form mental models of the outside world which bear an analogical relation to the real world like those of a photograph to the item photographed? The basic aim of the present study is to contribute to the ongoing work on mental representations by extending the research to an unexplored area both in the Greek and the international scene, that of mental partitioning. Our attempt was to find a solution to the problem generated by the Kosslyn - Pylyshyn controversy as to whether the language of thought which is considered as basis to any mental activity is of analogue nature (it makes use of mental imagery) or whether it is exclusively of digital nature like language.

**Materials and methods:** The batteries of tests administered were of spatial perception and mental partition tasks which were designed on the basis of previous research. Our sample consisted of 498 participants of whom the 234 were male (N=234) and the 264 were female (N=264). For the statistical processing of our data we employed reliability analysis, descriptive analysis and ANOVA in order to investigate the differences between scores in spatial perception, mental partitioning tasks and the independent variables.

**Results:** According to our results we detected significant peculiarities in the cognitive performance of the participants in the tasks of mental partitioning, and especially so in the tasks involving the mental partitioning of the Moebius strip, indicating certain limitations inherent in human thinking. The participants exhibited a marked tendency of cognitive bias formed by former experience which kept them from adopting alternative and more effective ways of providing solutions to the tasks proposed. The results of our research lead to the conclusion that the task of mental partitioning of mental or even externally presented representations of a simple yet novel real object is carried out in verbal rather than visual form of representation.

**Conclusions:** In partitioning the Moebius strip our participants see what they 'know' and not what is in front of them. The position we are led to adopt is closer to that of Pylyshyn (2002, 2003), who maintained that visual mental imagery depends on abstract form of thought and on previous knowledge, specifically it rests on previous abstract propositional thought and knowledge rather than on concrete perceptual processes like the ones proposed by Kosslyn and Shepard. (Pylyshyn, 2002, 2003).

**P42 Correlation of performances on patients with schizophrenia and bipolar disorder in brief neuropsychological assessments (fab-mmse)**

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**Background:** Everyday clinical practice demands the application of brief neuropsychological tests for the evaluation of psychiatric patients' cognitive functions. Two of the common assessments that are given as part of a complete battery for the evaluation of patients' cognitive deficits, are FAB (frontal assessment battery). Frontal assessment battery (FAB) is a brief test for the evaluation of executive functions which consists of six sub-tests that investigate different capacities correlated with frontal lobes and MMSE (mini mental state examination).

**Purpose:** the current research investigates and compares the performances of two patient groups (schizophrenics and people with bipolar disorder I) in two tests of neuropsychological assessment. Also evaluates the clinical usefulness of FAB in the recognition of executive dysfunction on these two groups.

**Materials and methods:** The research included 18 normothymic patients diagnosed with bipolar disorder and 18 patients with schizophrenia who were hospitalized in the 3rd Psychiatric Department in 2017.

FAB and MMSE were administered in both groups and the scores were correlated to gender and age. SPSS v. 19 was used for the statistical analysis. In the categorical variables Chi-square tests were applied and in order to investigate the correlation on the scores between FAB and MMSE Spearman correlations were applied.

**Results:** The total score in FAB was significant higher in the group with bipolar disorder I, in comparison to the group with schizophrenics. Negative correlation was observed between scores in FAB and age for both groups, whilst there were no significant differences in the scores of MMSE between the two groups.

**Conclusions:** Patients with schizophrenia have low scores in FAB which gives valuable information about the executive function and constitutes a basic brief neuropsychological assessment and it should be included in the battery of psychometric assessments for this group of psychiatric patients.



### **P43 Clinical and epidemiological data recording of inpatients with involuntary hospital admission in the 3rd psychiatric department of Ahepa university general hospital of Thessaloniki during the years 2016 and 2017**

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**Background:** The 3rd Psychiatric Department of AHEPA Hospital has been treating involuntary patients since the second semester of 2010.

**OBJECTIVE:** The purpose of this study is to investigate the clinico-epidemiological profile of patients who were admitted to the hospital involuntarily during the years 2016 and 2017.

**Materials and methods:** A total of 214 (N=214) involuntary patients were studied. The parameters used were gender, age and ICD-10 discharge diagnosis.

**Results:** There were 102 involuntary admissions in 2016, whereas the number rose to 112 in 2017. Of the total number of patients in 2016, 64 were male (62,7%) and 38 were female (37,3%). In 2017, they were 65 (58%) and 47 (42%), respectively. There seems to be no considerable statistical difference regarding gender (chi-square,  $p=0,573$ ), or mean age (Mann-Whitney test,  $p=0,814$ ) between the two years. In 2016 the median age was 40 years, contrary to 42 years in 2017, with interquartile range (IQR) of 19 and 20, respectively, seeing as it does not have a normal distribution. The most frequent ICD-10 discharge diagnoses both in 2016 and 2017 were: F20-F29 (schizophrenia, schizotypal and delusional disorders), F60-F69 (disorders of adult personality and behavior) and F30-F39 (mood affective disorders).

**Conclusions:** The study revealed that the difference in respect to gender or age between the years 2016 and 2017 has barely any impact on a statistical level. There is no considerable difference regarding the frequency of discharge diagnoses between the two years.

**P44 Registration of clinical and epidemiological data of hospitalized patients in the year 2016 in the 3<sup>rd</sup> department of psychiatry auth, Ahepa hospital: differences on sex and definitive diagnosis**

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**Background:** In the year 2016, 318 patients were hospitalized in the AHEPA Department of Psychiatry. Of these, 151 (47.4%) were males and 167 (52.6%) were females.

**PURPOSE:** The purpose of this report is to study the clinico-epidemiological characteristics over the sex of the patients treated in 2016.

**Materials and methods:** All hospitalized patients (N=318) were studied, as registered in the clinical record. The parameters examined are sex, age, hospitalization status and final diagnosis according to ICD-10.

**Results:** In terms of age, there is statistically significant difference between the sexes (Mann-Whitney test,  $p = 0.019$ ). The median age of men was 43 years, while women were 41 years of age, with interquartile range 21 for men and 21 for women, as they did not have a normal distribution. The most frequent definitive diagnoses according to ICD-10 through sex perspective: F20-F29 (schizophrenia, schizotypic disorder, delusional disorders) for males ( $n = 75, 43.9%$ ) and for females ( $n = 56, 33.7%$ ), F30-F39 (mood disorders) for men ( $n = 25, 31.3%$ ) and women ( $n = 57, 36.1%$ ), F60-F69 (disorders of personality and behavior) for males ( $n = 21, 10.9%$ ) and females ( $n = 14, 6.8%$ ).

**Conclusions:** The number of men hospitalized in the year 2016 was about the same as that of women. Men diagnosed with F20- F29 (schizophrenia, schizotypic disorder, delusional disorders) were more than women, whereas women diagnosed with F30-F39 (mood disorders) were more than men with a corresponding diagnosis.



## **P45 Registration of clinical and epidemiological data of hospitalized patients in the year 2018 in the 3rd department of psychiatry auth, Ahepa hospital: differences on sex**

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**Background:** In the year 2018, 319 patients were hospitalized in the AHEPA Department of Psychiatry. Male patients were 163 (51.1%) and females were 156 (48.9%).

**PURPOSE:** The purpose of this report is to study the clinico-epidemiological characteristics over the sex of the patients treated in 2018.

**Materials and methods:** All hospitalized patients (N=319) were studied, as registered in the clinical record. The parameters examined are sex, age, hospitalization status and ICD-10 final diagnosis.

**Results:** In terms of age, there is statistically significant difference between the sexes (Mann-Whitney test,  $p=0.019$ ). The median age of men was 40 years, while women were 45 years of age, with interquartile range 21 for men and 21 for women, as they did not have a normal distribution. Voluntary hospitalizations were for males ( $n=98$ , 60.1%) and females ( $n=109$ , 69.9%). Involuntary hospitalizations were for males ( $n=65$ , 39.1%) and for females ( $n=47$ , 30.1%). There is no statistically significant difference in sex status (chi-square,  $p=0.088$ ). The most frequent definitive diagnoses according to ICD-10 through sex perspective: F20-F29 (schizophrenia, schizotypic disorder, delusional disorders) for males ( $n=73$ , 44.8%) and for females ( $n=51$ , 32.7%), F30-F39 (mood disorders) for men ( $n=23$ , 30.7%) and females ( $n=52$ , 33.3%), F60-F69 (disorders of personality and behavior) for males ( $n=18$ , 11%) and females ( $n=9$ , 5.8%). It is noteworthy that the proportion of patients who voluntarily left without a definitive diagnosis due to non-completion of clinical and laboratory testing is for men ( $n=17$ , 10.4%) and for women ( $n=14.9%$ ).

**Conclusions:** Although the number of men hospitalized in the year 2018 was about the same as that of women, there is a statistically significant difference in age. There is no statistically significant difference in sex status. In addition, men diagnosed with F20-F29 (schizophrenia, schizotypic disorder, delusional disorders) were more than women, whereas women diagnosed with F30-F39 (mood disorders) were more than men with a corresponding diagnosis.



**P46 Why patient does not receive their medicines**

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**Background:** Keeping medication is a major problem for people with chronic conditions such as diabetes, hypertension, rheumatoid arthritis. For major psychiatric illnesses such as schizophrenia and bipolar disorder are also problematic considering that relapse rates are too high. **Aim:** The presentation of basic reasons why patients with mental illness do not receive their medication.

**Materials and methods:** Review of international literature.

**Results:** The most important reasons why patients with mental illness do not adhere to medication are:

- There is no insight. The person does not recognize that he is suffering.
- Freaks of major psychiatric illnesses with alcohol and other substance use disorders.
- Difficulty creating a good therapeutic relationship with mental health professionals.
- Adverse drug reactions (weight gain, sexual dysfunction, extrapyramidal symptoms).
- Duration and complexity of treatment.
- Concerns about dependence on medication.
- The stigma associated with taking medication.
- The cost of treatment and the possible lack of access to medicines.
- Local empathy.
- Lack of support.

**Conclusions:** There are many reasons why patients with major psychiatric illnesses do not keep medication to a satisfactory degree. These reasons have to do with the patient as well as with the mental health professional, but also with the nature of these mental illnesses.

## **P47 The improvement of the therapeutic environment of patients with mental disease using practice-based practices**

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**Background:** To support patients with mental illness in order to cope with appropriate symptom control and to apply preventative measures against their relapse, evidence-based practices are very important interventions during their hospitalization. It is now necessary and even necessary for mental health nurses to follow a nursing care plan and then to implement their nursing activities

**Purpose:** To improve the therapeutic environment for patients with mental illness by using evidence-based practices.

**Materials and methods:** Online keyword research: therapeutic environment, mental illness, mental health nurse, evidence-based practices, international search portals (Pub Med, Google Scholar, Medline).

**Results:** Cessation-based nursing interventions lead to favorable results in the following areas: reduction of patient restraint rates, 1: 1 observation time, increasing patient satisfaction, reducing incidents of violent behavior and injury to staff and patients. Mental health nurses are now more aware and receptive to the application of cessation-based practices. Long-term changes in psychiatric nursing culture towards a more therapeutic environment can be brought about by the application of cessation-based practices.

**Conclusions:** Nursing interventions based on evidence-based clinical practices are multiple and include psycho-training of staff, establishment of a therapeutic relationship, introduction of patients into quiet chambers, staff participation in teams, careful review of all episodes of patient restraint, introduction degradation techniques, the use of 1: 1 monitoring results and the evaluation of all the structures of the clinic.

**P48 Neuropsychological clinical tests for assessing the attention of patients with mild traumatic brain injuries**

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**Background:** Any damage leads to epidermal trauma, or brain injury, is called traumatic brain injury (TBI) . Classification of TBI includes bleeding, vascular lesions and cranial nerve injuries. Traumatic brain injuries (TBI) are often serious incidents that also have an impact on cognitive functions of the human brain. Attention is a basic function directly linked to learning and information processing. It is a cognitive process that helps the person get prepared and alert for getting stimuli<sup>1</sup> .Its function is often described as the set of cognitive states, processes and situations that are related to the way the human body receives the stimuli and the initiation of the processes of their treatment <sup>2</sup>.Attention deficits are a frequent consequence of a TBI. Purpose: To investigate and record the attention deficit observed in mild-moderate TBI, as well as the use of neuropsychological assumptions to assess relevant deficits.

**Materials and methods:** Search the pubmed and googlescholar databases. Criteria for search were studies, surveys and literature reviews on the assessment of attention deficit disparities in TBI.

**Results:** Twenty-seven (27) surveys and research studies on cognitive deficits following a TBI were identified.

**Conclusions:** There is no defined standard for assessing patient attention deficits that often fall short of clinical testing, specific neuropsychological tests complement the diagnostic procedure for assessing cognitive deficits of patients with mild / moderate TBI.



## P49 Chronic traumatic encephalopathy and Alzheimer disease

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**Background:** Chronic Traumatic Encephalopathy is known as a severe neurodegenerative condition leading to premature dementia who have received mild to moderate head injuries (athletes contacting sports). Related epidemiological studies associate Alzheimer's dementia and prognostic cognitive deficits in adulthood with athletic head injuries that occurred during childhood, adolescence, or early adulthood.

**Aim:** A structured bibliographic review was conducted to assess the relationship between chronic traumatic encephalopathy and Alzheimer's dementia manifested in later life. Exploring this relationship was the question we are trying to answer.

**Materials and methods:** The bibliography was searched using the Pubmed and Googlescholar databases using the keywords "brain injury," "punch-drunk," "dementia of boxers", "Alzheimer's dementia". The study was limited to the English text and included studies on the two diseases.

**Results:** Initial search for bibliography resulted in 34 related articles that included the relevant keywords. A careful analysis led us to 16 articles published in peer-reviewed journals which we felt fit to draw conclusions.

**Conclusions:** Evidence suggests that there may be a correlation between recurrent cranial injuries leading to chronic traumatic encephalopathy and Alzheimer's dementia, but there is insufficient evidence to answer the research question. We conclude that further research in this direction should be carried out and that a strict standard set of diagnostic criteria, neurological and psychiatric testing, as well as specialized neuropsychological testing, should be carried out with a record of the cognitive deficits over time.

## **P50 Neuropsychological deficits and interventions in fetal alcohol spectrum disorders**

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**Background:** Fetal Alcohol Spectrum Disorder (FASD) is an umbrella term describing the range of effects occurring as a result of maternal alcohol consumption during pregnancy. FASD includes severe cognitive and neurological deficits that can be very different in their expression and severity.

**Materials and methods:** The current review summarizes data from 23 empirical studies in order to elucidate the cognitive characteristics of children affected by prenatal alcohol exposure and potential effective behavioral interventions. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

**Results:** A wide range of cognitive and behavioral deficits has been reported in FASD. Notable deficits are observed in IQ scoring, attention, executive functions, processing speed, problem solving, working memory, inhibition, shifting, planning, verbal memory and learning. General intelligence appears to fall within the borderline/low average range. Interventions used successfully include programs targeting: a) specific skills, such as social skills, safety skills, mathematic and literacy skills; b) cognitive functions, such as working memory, executive functions and self-regulation ; c) parents attitudes and behavior in order to improve childrens behavioral difficulties (e.g. the Families Moving Forward program).

**Conclusions:** The most notable problem seems to be the coping with everyday life, as a result of other contributable dysfunctions. Although it is hard to establish a typical, distinct profile, the early identification of neuropsychological deficits in FADS can lead to more effective interventions. Nevertheless, interventions targeting executive functions, attention, and self-regulation strategies are considered as the most effective.

### **References:**

1. D Kingdon, C Cardoso, JJ McGrath: Executive function deficits in fetal alcohol spectrum disorders and attention-deficit/ hyperactivity disorder: A meta analysis. *Journal of Child Psychology and Psychiatry* 2016, 57(2): 116-131.
2. C Rasmussen, S Tamana, L Baugh, G Andrew, S Tough, L Zwaigenbaum: Neuropsychological impairments on the NEPSY-II among children with FASD. *Child Neuropsychology* 2013, 19(4): 337-349.



## P51 Factors affecting quality of life in epilepsy

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**Background:** Quality of life is a multidimensional construct comprising components, such as physical and psychological health (including both cognitive and emotional functioning), level of independence, social relationships, and personal beliefs, all within the context of the persons environment. The most frequent method to measure the quality of life is questionnaires, either self reports or family, friends, teachers, caregivers reports.

**Materials and methods:** The present review examines the research findings from 39 empirical studies, which examined the quality of life in patients with epilepsy. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

**Results:** Factors affecting quality of life in epileptic patients include epilepsy-related difficulties, comorbid mental disorders (mainly depression, anxiety and sleep disorders), cognitive deficits, perceived stigma, and driving prohibition. Not only has depression a rate of about 23-35%, but a higher suicide rate has also been observed, comparing with general population. In children and adolescents, family factors, such as parents and families high levels of anxiety, fears and concerns, seem to play an important part in quality of life of minors.

**Conclusions:** An important proportion of patients with epilepsy seems to experience poor quality of life as a function of various factors. Perhaps, the most important are depression and the side effects of antiepileptic treatment. The impact is also being extended to their social environment. Thus, patients quality of life should be assessed in the context of a routine medical examination and / or a neuropsychological assessment.

### References:

1. H Azuma, T Akechi: Effects of psychosocial functioning, depression, seizure frequency, and employment on quality of life in patients with epilepsy. *Epilepsy & Behavior* 2014, 41: 18-20.
2. A Jacoby, D Snape, S Lane, GA Baker: Self-reported anxiety and sleep problems in people with epilepsy and their association with quality of life. *Epilepsy & Behavior* 2015, 43: 149-158.
3. YP Wu, K Follansbee-Jun, J Rausch, A Modi: Parent and family stress factors predict health-related quality in pediatric patients with new-onset epilepsy. *Epilepsia* 2014, 55(6): 866-877.

**P52 Outcome of language and visuospatial skills 20 years after left functional hemispherectomy: a case study**

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**Background:** Functional hemispherectomy is widely used in drug-resistant epilepsy to reduce the number of seizures. Despite the fact that this procedure has been used for about 30 years, patients outcome has not been studied thoroughly. Although the majority of relevant studies focus on seizure outcome, several researchers have mentioned a variety of cognitive deficits, including language, memory and visuospatial functions, ranging from severe impairment to normal cognition.

**Materials and methods:** In the present study, the main purpose was to investigate the cognitive outcome of a female patient (K. P.), who underwent left functional hemispherectomy at the age of 4 months in order to reduce seizures in the context of extended cortical dysplasia, 20 years after the surgery. A range of neuropsychological tests were administered, including WAIS-IV-GR, GVLIT, Taylor Complex Figure Test, coping of three simple figures, Verbal Fluency Test, BDAE-SF, and Greek intonation test.

**Results:** The results indicated that K. P. has severe impairments on all functions assessed, including oral and written language, reading, verbal and visuospatial memory, visuospatial and visuoperceptive skills. Namely, she scored  $<-4$  SD on all tests. Her Full-Scale IQ score was classified in the extremely low range (IQ $<55$ ).

**Conclusions:** All in all, K. P. experiences a wide variety of difficulties, indicating that, in spite of a long recovery period, the right hemisphere might not be able to take over successfully either typically right-hemisphere or typically left-hemisphere cognitive functions. The high risk of cognitive deficits, as well as inadequate development of compensatory strategies should be considered before undertaking this surgical procedure. Severe cognitive deficits and intellectual disability can have a negative impact on the patients and the family life.

**References:**

1. C Bulteau, I Jambaqué, C Chiron, S Rodrigo, G Dorfmueller, O Dulac, M Noulhiane: Language plasticity after hemispherotomy of the dominant hemisphere in 3 patients: Implication of non-linguistic networks. *Epilepsy & Behavior* 2017, 69(4): 86-94.
2. SM Lew, JL Koop, WM Mueller, AE Matthews, JC Mallonee: Fifty consecutive hemispherectomies: outcomes, evolution of technique, complications, and lessons learned. *Neurosurgery* 2014, 74(2):182-195.
3. MM Schooneveld, KP Braun, PC Rijen, O Nieuwenhuizen, A Jennekens-Schinkel: The spectrum of long-term cognitive and functional outcome after hemispherectomy in childhood. *European Journal of Paediatric Neurology*, 2016 20(3): 376-384.



## P53 Neuropsychological and neurolinguistic assessment: a case study in primary progressive aphasia

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**Background:** The purpose of this case study was to evaluate the neuropsychological and neuro-linguistics skills of a patient with primary progressive aphasia.

**Materials and methods:** The patient who participated was a man 87 years old and right-hand-ed. He lives in Thessaloniki. He completed six grades school and he was a worker, driver and gar-dener. The last three years his functionality started to decline with obvious deficits in language skills. According to his family his memory function was efficient. His current medication is: Lasix, Euthyrox, Plavix, Xozal and Lecalcif. The following tests were given: MMSE, test of repetition words and sentences, test of oral comprehension, test of object naming and examination of spontaneous speech and automatic rows.

**Results:** The patient was not able to complete the MMSE because anxiety issues. He was totally oriented in time and space. Moreover, he was able to execute even when the instructions were in complex form. The main deficits were observed in language function. The speech was not fluent with many pauses. The order of the words was incorrect. Nevertheless, the semantic knowledge and object naming were efficient. The comprehensive of oral speech was slightly impaired as he had some difficulties to follow complex instructions. The repetition of sentences was declined and phonological errors were observed. Difficulties were occurred in the patients prosody and joint too.

**Conclusions:** The patients performance indicates that he completes the criteria for primary pro-gressive aphasia and more specific for non-fluent subtype. Hence his other cognitive abilities are not impaired in the last two years.

### References:

1. JE Peelle, V Troiani, J Gee, P Moore, C McMillan, L Vesely, M Grossman: Sentence com-prehension and voxel-based morphometry in progressive nonfluent aphasia, semantic de-mentia, and nonaphasic frontotemporal dementia. *Journal of Neurolinguistics* 2008, 21(5): 418-432.
2. S Ash, C McMillan, D Gunawardena, B Avants, B Morgan, A Khan, M Grossman: Speech er-rors in progressive non-fluent aphasia. *Brain and language* 2010, 113(1): 13-20.
3. S Ash, P Moore, L Vesely, D Gunawardena, C McMillan, C Anderson, M Grossman: Non-flu-ent speech in frontotemporal lobar degeneration. *Journal of Neurolinguistics* 2009, 22(4): 370-383.



**P54 Executive functions in stroke patients and healthy individuals**

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**Background:** Stroke patients mostly present deficits in executive functions and these deficits are dependent on the side which the stroke has occurred on (left or right stroke). Despite the impairment which occurs in executive functions, in some cases implicit memory and learning are not impaired. The present study examined the differences in executive functions in stroke patients and healthy individuals.

**Materials and methods:** Totally 74 subjects participated in this research. Participants were divided into three groups. More precisely, the control group was consisted of 39 participants, 19 subjects were in left stroke patients group and 16 subjects were in right stroke patients group. The following neuropsychological tests were given to the patients: the verbal fluency test (semantic and phonological condition), the design fluency test, the digit span test, short history of episodic memory test and the Hebb block test.

**Results:** The results shown that the left stroke patients succeeded significantly lower scores in verbal fluency test and short history of episodic memory test whereas the performance of the right stroke patients in design fluency test was remarkably impaired. Implicit memory and learning were not deficient for none of groups.

**Conclusions:** To sum up, the left hemisphere is responsible for verbal tasks whereas the right hemisphere is responsible for abstract thinking and creativity. Sometimes implicit memory and learning are not deficient even in patients who had a stroke.

**References:**

1. LA Boyd, BM Quaney, PS Pohl, CJ Winstein: Learning implicitly effects of task and severity after stroke. *Neurorehabil Neural Repair* 2007.
2. JD Henry, JR Crawford: A meta-analytic review of verbal fluency performance following focal cortical lesions. *Neuropsychology* 2004, 18(2): 284-295.



**P55 I care for my brain - [www.icareformybrain.org](http://www.icareformybrain.org): A campaign which demands a warning sign indicating the presence of psychoactive substances on any product we buy**

Orestis Giotakos

The npo obrela ([www.obrela.gr](http://www.obrela.gr))

**Background:** People use psychoactive substances for many different reasons, such as, for pleasure, because friends and family use them, because they like the taste, to relieve tension and relax, to be part of a religious or social ceremony, because they are lonely, to relieve boredom or for pain relief.

**Materials and methods:** According to the World Health Organization (Department of Mental Health and Substance Abuse, Management of Substance Abuse Team), psychoactive substances are substances that, when taken in or administered into one's system, affect mental processes, e.g. cognition or affect. This term and its equivalent, psychotropic drug, are the most neutral and descriptive term for the whole class of substances, licit and illicit, of interest to drug policy. Psychoactive does not necessarily imply dependence-producing, and in common parlance, the term is often left unstated, as in drug use or substance abuse.

**Results:** The term psychoactive substances comprises both legal and illegal substances. It is known that exposure to a psychoactive substance can cause changes in the structure and functioning of neurons. Health information labels are an inexpensive tool that provides direct information on the risks associated with legal or illegal consumption. Product labeling is the main component of a comprehensive public health strategy to reduce psychoactive substances-related harm. Labeling provides a unique opportunity for governments to disseminate health promotion messages at the points of sale and consumption.

**Conclusions:** The campaign named I care for my brain, [www.icareformybrain.org](http://www.icareformybrain.org), demands a unique warning sign which tells us about the presence of psychoactive substances on any product we buy.

**P56 Rethinking the similarities between dysmyelination diseases and psychosis**

Orestis Giotakos

The npo obrela ([www.obrela.gr](http://www.obrela.gr))

**Background:** Several studies indicate the association between psychotic disorders and autoimmune disease, and the immunogenetic contribution in psychosis is largely dominated by the major histocompatibility complex genetic diversity. In addition, demyelinating diseases, like multiple sclerosis, are characterized by a large array of invading immune cells that degrade the myelin sheath, the myelin producing oligodendrocytes and the nerve itself.

**Materials and methods:** The pathophysiologies of multiple sclerosis and schizophrenia show some similarities. Multiple sclerosis is characterized by a large array of invading immune cells that attack and degrade the myelin sheath, the myelin producing oligodendrocytes and the nerve itself. On the other hand, schizophrenia has been proposed to be a dysconnectivity syndrome, and numerous lines of evidence implicate myelin and oligodendrocyte function as critical processes that could affect neuronal connectivity.

**Results:** Myelin and oligodendrocyte dysfunction affect neuronal connectivity, which has been implicated as a central abnormality in schizophrenia, resulting in prediction errors and dysconnectivity. We may suggest that dysmyelination-induced delays in information processing can produce phenocopies of psychosis similar to schizophrenia.

**Conclusions:** Rethinking the clinical and pathophysiological similarities between de- or dysmyelination diseases and psychosis, we may consider that the dysconnectivity syndrome of psychosis represents the phenomenological and behavioral result of a multiple-faces dysmyelination disorder, which is based on a lifelong immunogenetic dysregulation process.

**References:**

1. Griffa A, Baumann PS, Klauser P, Mullier E, et al. Brain connectivity alterations in early psychosis: from clinical to neuroimaging staging. *Translational Psychiatry*, 2019, 9, Article number: 62 doi.org/10.1038/s41398-019-0392-y
2. Crocker CE & Tibbo PG. Confused Connections? Targeting White Matter to Address Treatment Resistant Schizophrenia. *Front. Pharmacol.*, 2018 doi.org/10.3389/fphar.2018.01172
3. Giotakos O. Poor insight in psychosis and meta-representation models, *Dialogues in Clinical Neuroscience & Mental Health* 2018, 1:12-24. DOI: <https://doi.org/10.26386/obrela.v1i1.5>



## P57 Factors influencing relapse in schizophrenia

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**Background:** Recurrence of mental patients is a major problem for mental health professionals and the “revolving door” phenomenon is characteristic in this context. About 15% of people with schizophrenia are reintroduced due to relapse. This has negative consequences for both patients and their families, as well as for the mental health service and the economy of the country. **OBJECTIVE:** The presentation of factors influencing relapse in schizophrenia.

**Materials and methods:** Review of the international literature.

**Results:** Individual and environmental factors have emerged from the study of the literature. Mentioned individual factors:

- Medication non-adherence (undesirable effects of drugs, negligence, beliefs about treatment, cost, lack of supervision).
- History of previous hospitalizations.
- Use of substances (alcohol, cannabis), which increases the severity of symptoms (hallucinations, thought disorders).
- Depressed mood. Mentioned environmental factors:
  - Poor family support, which affects the course and relapse of schizophrenia.
  - Stressful events. Patients with schizophrenia are more sensitive to both external events (separation, miscarriage, death, unemployment) and internal (depressed mood).

**Conclusions:** - Many factors have been identified that concern both the patient himself and his environment. - Non-compliance with medication is the leading factor affecting the relapse of schizophrenia. - In order to intervene appropriately, it is necessary to strengthen the therapeutic relationship with the patients so they can express their needs and concerns. - Psychoeducation of patients at regular intervals. This will help in the early detection of relapse factors and determining ways to improve patient behavior.

### **P58 The approach of the agitated patient in the general hospital**

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**Background:** The approach of the agitated patient in the general hospital is a difficult issue that causes confusion and intense fear among nursing staff, and is associated with a range of psychiatric, primarily, and pathological problems. Objective: The presentation of general rules for approaching the agitated patient in the general hospital.

**Materials and methods:** Review of international literature.

**Results:** Some general rules, which can help to safeguard security and possibly the de-escalation of the situation, include. Some general rules, which can help to safeguard security and possibly de-escalate the situation, include: -The nurse evaluates the fear he feels. The devaluation or denial of fear may be particularly risky. There is a need for dispassionate treatment because nurse's fear and insecurity becomes perceived by the agitated patient, resulting in losing control. - Undertaking the mentoring and drafting of a plan by someone in order to coordinate their actions. The opposite may increase patient's confusion and escalate the intensity of the condition.

- Maintaining a safe distance from the agitated patient.
- Providing an easy escape for the patient. Despite the escalation of the problem they usually look for a way to solve it.
- Providing clear, rather than general, instructions to the patient.
- Prepared team to help, if needed, in drugs administration or patient's protective bed rest.

#### **Conclusions:**

The approach of agitated patient in the general hospital is a demanding situation that can lead to physical and psychological injuries to both nursing staff and patients. It is based on the friendly and "empathetic" attitude, the stability, the sense of security that must be transferred to the patient, as well as the realism. Compliance with the above rules can help in managing such incidents.



## P59 The improvement of the therapeutic environment of patients with mental disease using evidence-based practice

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**Background:** The evidence-based practices are very important interventions during hospitalization in order to support patients with mental disease by addressing proper control of their symptoms and taking preventive measures to avoid their relapse. There is now an urgent need for mental health nurses to follow a nursing care plan and then implement their nursing process. Objective: Improving the therapeutic environment of patients with mental disease by using evidence-based practices.

**Materials and methods:** Online survey with keywords: therapeutic environment, mental disease, mental health nurse, evidence-based practices, through international search portals (Pub Med, Google Scholar, Medline).

**Results:** The nursing interventions based on evidence lead to favorable results in the following areas: reduction of patients' restraint rates, reduction of time spent on observation 1:1, increased patient satisfaction, fewer incidents of violent behavior and injuries to staff and patients. Mental health nurses are now more aware and receptive to the application of evidence-based practices. Long-term changes to psychiatric nursing culture towards a more therapeutic environment can result from the application of evidence-based practices

**Conclusions:** The nursing interventions based on evidence-based clinical practices are multiple and include psychoeducation of staff, establishing a therapeutic relationship, placing patients in "quiet" rooms, staff participation in teams, careful review of all episodes that a patient had been restrained, use of de-escalation techniques, use of monitoring results 1:1 and evaluation of all clinical structures.

**P60 Matrix Metalloproteinase-9 in Treatment Resistant Bipolar Depression-A Biomarker for Anxiety?**

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**Background:** Matrix metalloproteinase 9 (MMP9) is a protease that is upregulated in proinflammatory states. MMP9 plays a role in the restructuring of the extracellular matrix and adhesion molecules, thus increasing the permeability of the blood brain barrier and potentially having an impact on the milieu of the CNS. A growing body of evidence supports the role of inflammation in the pathophysiology of Bipolar Disorder. Several studies have shown elevated levels of pro-inflammatory cytokines in bipolar patients in comparison to healthy controls.

**Materials and methods:** In this study, we sought to treat treatment resistant bipolar depressed patients, with escitalopram in combination with celecoxib. This was a 10-week, randomized, double-blind, two-arm, placebo-controlled study. Plasma samples collected from 24 bipolar patients as well as 20 healthy controls at baseline were sent out for analysis for MMP9 levels.

**Results:** Baseline MMP9 levels in the BD sample (n=25) were significantly higher than among the healthy controls (n=20), with  $P = 0.0438$ . At baseline, MMP9 values for bipolar patients were higher than HC with a mean of  $44.19 \pm 12.21$  and  $14.11 \pm 5.314$ , respectively. Standard deviation was 61.07 for BD patients and 23.76 for HC. There was a significant correlation between MMP9 and anxiety and suicidality. Statistical analysis was performed with unpaired t test via Graphpad software.

**Conclusions:** Our results showing an elevated level of MMP9 in the plasma of BD patients in comparison to healthy controls is in line with the growing body of evidence suggesting a role of neuroinflammation in the pathogenesis of BD. Further analysis will be directed towards investigating the levels of MMP9 after treatment.



## P61 Herpes Simplex Virus -1 Seropositivity in Treatment Resistant Bipolar Depression

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**Background:** Exposure to viruses, such as mumps, rubella, poliomyelitis, cytomegalovirus and herpes simplex viruses have been proposed as risk factors for the development of psychiatric disorders and may contribute to cognitive impairment. Reduced cognitive performance was correlated with HSV-1 seropositivity in patients with BD, while cognitive impairment has been associated with a pro-inflammatory state and inflammation as a possible factor in treatment resistance.

**Materials and methods:** Treatment resistant Bipolar Depressed (BD) patients were treated with Escitalopram (ESC) in combination with Celecoxib (CBX) or placebo. Blood samples were analyzed at baseline and 8-weeks for seropositivity and levels of IgG class antibodies to HSV-1. This was a 10-week, randomized, double-blind, two-arm, placebo-controlled study.

**Results:** Non-responders to CBX and ESC combination had significantly higher levels of IgG antibodies to HSV-1 (3.26; n=4) at baseline compared to responders (1.38; n=20) ( $p<0.005$ ). Furthermore, in the CBX arm of the study, out of 24 patients, 16 achieved remission and had HSV-1 IgG antibody levels of 1.10, 8 did not achieve remission and had HSV-1 IgG antibody levels of 2.27 ( $P<0.10$ )

**Conclusions:** Our results showed significantly elevated levels of IgG antibodies to HSV-1 at baseline in non-responders to CBX and ESC in comparison to responders. Anti-inflammatory treatment may reduce IgG levels but a longer observation interval must be tested. These findings suggest that there may be involvement of HSV-1 in the etiopathology of treatment resistant BD. Future research should be designed to elucidate associations between infective agents, such as HSV-1, pro-inflammatory states, and severe psychiatric illnesses.



**P62 Monocyte Chemoattractant Protein (MCP-1) in Treatment Resistant Bipolar Depression: Effects of Antiinflammatory Treatment**

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**Background:** Neuroinflammation appears to play key roles in the pathophysiology of bipolar depression (BDD). Many patients diagnosed with stress-related mood disorders have altered levels of inflammatory mediators such as monocyte chemoattractant protein-1 (MCP-1, AKA CCL2). This is the first study to analyze MCP-1 levels in bipolar disorder patients treated with the cyclooxygenase-2 inhibitor, celecoxib (CBX).

**Materials and methods:** In this randomized, double-blind, two-arm, placebo-controlled study, 47 patients with BDD received either escitalopram + CBX, or escitalopram + placebo. Plasma MCP-1 levels were measured at 3 times points, and in a healthy control (HC) group, using the Randox<sup>®</sup> HighSensitivity Array assay. Depression severity was quantified using the Hamilton Depression Scale (HAMD-17).

**Results:** The CBX group had significantly lower HAMD-17 scores vs. placebo at weeks 4 ( $P=0.026$ ) and 8 ( $P=0.002$ ). MCP-1 levels were not significantly different in BDD vs. HC subjects at baseline, nor in CBX vs. placebo groups at week 8. Week 8 HAMD-17 scores and MCP-1 levels were significantly negatively correlated in non-responders ( $P=0.050$ ). Non-responders had significantly lower MCP-1 levels vs. responders at weeks 4 ( $P=0.049$ ) and 8 ( $P=0.014$ ). MCP-1 was significantly positively correlated with pro-inflammatory analytes in the PBO group and with anti-inflammatory analytes in the CBX group.

**Conclusions:** SSRI + CBX combination treatment is more effective than SSRI + placebo in reversing treatment resistance and augmenting antidepressant response. Baseline plasma MCP-1 levels are unlikely to be altered in BDD patients. Elevated MCP-1 may indicate a better response to CBX + SSRI treatment of BDD patients, lending support for a pleomorphic inflammatory role of MCP-1.



### P63 Quinolinic Acid Dysregulation in Treatment Resistant Bipolar Depression

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**Background:** Treatment-resistance is high in bipolar disorder and is associated with a pro-inflammatory state and diversion of tryptophan toward the kynurenine pathway. The chronic subthreshold proinflammatory status in bipolar patients, especially in those whose treatment-resistance is associated with dysregulation of tryptophan metabolism favoring kynurenine pathway intermediates, may interfere with antidepressant drug effectiveness. Therefore, we hypothesized that a non-steroidal anti-inflammatory agent, celecoxib, that selectively inhibits COX-2, should attenuate or even reverse the pro-inflammatory status and thereby normalize kynurenine pathway intermediates and improve treatment outcome. We focused on quinolinic acid (QA) as the neurotoxic metabolite of the kynurenine pathway and determined whether its blood levels would differ from healthy controls and might predict treatment response.

**Materials and methods:** This was a randomized, double-blind, two-arm, placebo-controlled study. Subjects who met study criteria were randomized to receive escitalopram + celecoxib, or escitalopram + placebo. Inflammation biomarkers and kynurenine pathway intermediates were determined at baseline and weeks 4 and 8.

**Results:** Patients receiving celecoxib were 4.13 times likelier to respond and 14.34 times likelier to experience remission. All patients had significantly lower QA at baseline compared to healthy controls ( $p < .0001$ ). QA did not change significantly over time ( $p = .28$ ), but a downtrend was noted. Responders had marginally lower QA (Mean = 50.73) than nonresponders (Mean = 70.98). Factors that might have led to low QA include prior psychoactive agent exposure, related to treatment resistance.

**Conclusions:** Although QA did not significantly change, symptom reduction and remission occurred more frequently in the celecoxib group, demonstrating the beneficial effect of inflammation modulation.

**P64 Tumor Necrosis Factor Alpha in Major Depressive Disorder: Effects of Anti-Depressant Treatments**

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**Background:** The comorbid, bidirectional relationship between mood disorders and immune system dysfunction is well documented. Many investigative efforts have sought to identify and validate a reliable biomarker for depression. This study examined TNF- $\alpha$ 's role as a potential biomarker in depression and the effect of short-term monotherapy with Escitalopram or Quetiapine on serum TNF- $\alpha$ .

**Materials and methods:** Depressed patients (N=33) and age-matched healthy controls (N=25) with Major Depressive Disorder, first or recurrent episode, with an index episode of at least one month received 12 weeks of monotherapy with Escitalopram or Quetiapine and were compared to the healthy controls. Psychiatric and physiological parameters, TNF- $\alpha$ , HAMD, HAMA, and PSS-14 were measured at baseline, and at weeks 8 and 12.

**Results:** Depressed patients demonstrated significantly higher average baseline levels of TNF- $\alpha$  (6.25, SD=11.19,  $p < 0.05$ ) than healthy controls at baseline (2.19, SD=2.54). Higher baseline levels of TNF- $\alpha$  were not associated with poorer treatment response with Escitalopram or Quetiapine. Although TNF- $\alpha$  tended to decrease after 12-week monotherapy with Escitalopram or Quetiapine, the treatment did not lead to statistically significant different TNF- $\alpha$  levels from that of baseline.

**Conclusions:** Although it is well documented that depression is accompanied by a proinflammatory state assessed peripherally, our findings on TNF- $\alpha$  as a possible biomarker for depression are not in agreement with other findings in the literature. Future investigations involving larger numbers of subjects are warranted into TNF- $\alpha$  and long-term antidepressant use, as well as adjuvant uses of anti-TNF- $\alpha$  and anti-inflammatory drugs in the treatment of MDD



## P65 The Tryptophan and Kynurenine Pathway in Treatment Resistant Bipolar Depression - Effects of Inflammation Modulation

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**Background:** Expanded pharmacologic armamentarium is needed for treatment refractory bipolar depression (TRBDD). We previously demonstrated the safety and efficacy of adjunctive inflammatory modulation using the cyclooxygenase-2 (COX2) inhibitor, Celecoxib, for TRBDD (clinical paper in preparation). In this molecular profiling study, we explored the kynurenine pathway (KP) to enable further characterization of the metabolomic endophenotype of TRBDD and the mechanism underlying treatment response to CBX augmentation.

**Materials and methods:** This was a randomized, double-blind, placebo-controlled study. Subjects who met study criteria were randomized to receive either escitalopram + CBX or escitalopram + placebo. Inflammation biomarkers and KP metabolites were measured in plasma at baseline and week 8.

**Results:** TRBDD subjects receiving the celecoxib combination showed significantly improved response and higher remission rate. Compared to healthy controls, TRBDD patients revealed high baseline tryptophan, low Kyn/tryptophan, normal 3HK/Kyn, low KynA/3-HK, and low PIC/QUIN. By week 8, treatment responders exhibited tryptophan depletion without a concomitant change in Kyn/tryptophan.

**Conclusions:** CBX augmentation is safe and effective for treatment-resistant bipolar depression. TRBDD patients exhibit high tryptophan, normal Kyn/tryptophan ratio, decreased neuroprotective markers, but no increase in neurotoxic markers. KP-independent tryptophan depletion may represent a therapeutic biomarker for CBX augmentation in TRBDD.

**P66 Migraine Comorbidity Reduces Probability of Lithium Response in Bipolar Disorder**

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**Background:** Migraine is a common comorbidity among individuals with bipolar disorder (BD). Previous studies suggest that these patients have distinctive clinical features, often more debilitating. We aimed to investigate the clinical characteristics and lithium treatment response rates of patients with BD type 1 (BD1) and comorbid migraine from the Pharmacogenomics of Bipolar Disorder (PGBD) study sample, to strengthen the preexisting hypothesis of a clinically distinct BD-migraine phenotype.

**Materials and methods:** 335 BD1 patients were included from the PGBD Study, a prospective study of lithium response variables. Individuals with comorbid migraine (n= 83) were compared to those without migraine (n= 252) by t-tests and chi-square tests. A Bonferroni correction for multiple comparisons was performed.

**Results:** Bipolar patients with comorbid migraine differed significantly from patients without migraine with regards to several important clinical features including increased disability, affective chronicity, anxiety, younger age at onset, rapid cycling, mixed episodes, and previous suicide attempts. This is consistent with previous findings on the topic. A novel finding was that the migraine group was less likely to achieve stabilization on lithium monotherapy and to remain stable during the 2 year follow up. Correcting by Bonferroni ( $p \leq 0.001$ ), the following BD-migraine characteristics remained: increased number of childhood life events; greater disability; more baseline anxiety and irritability; earlier onset of BD; chronic affective symptoms; previous suicide attempt.

**Conclusions:** BD1 patients with comorbid migraine may represent a more homogenous group with a complex disease course and poorer response to lithium treatment. Other pharmacological treatments should be prioritized in these patients.

## **P67 Involuntary Admissions in Alexandroupolis Department of Psychiatry**

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The involuntary hospitalization of people with mental health problems in psychiatric care units is nowadays a common practice but at the same time is a subject to serious criticism and controversy. Forcing someone to be treated affects his/hers dignity as a social subject and multiplies the already experiencing stigma. More over these practices force the mental health professionals to take a more authoritarian role affecting their therapeutic alliance with the patients.

Despite the controversial and problematic nature of involuntary hospitalizations and despite the international recommendations to limit them, in Greece the percentages are multiples of the average of the European ones, which are less than 10%.

In 2018 in the Psychiatric Department of the University General Hospital of Alexandroupolis the percentage of involuntary admissions did not exceed the 25% of the total number of hospitalizations. 19.4% and 25.8% of those who were involuntarily examined, were voluntarily hospitalized and withdrew respectively.

Alexandroupolis Psychiatric Department runs according to the principles of Social Psychiatry and offers community service also. This way of operating in the community seems to have positively affected the number of involuntary hospitalizations. The aforementioned percentages are higher than those of several European countries, but they are smaller than the current prevalence in the wide mental health sector in Greece, which is more than 50% of the total admissions.

Focusing on better planning of community-based psychiatric services could be a potential alternative to involuntary hospitalization.

**P68 The role of pharmacogenetic profile in the prognosis of Psychiatric Patients after their discharge in a General Hospital**

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In the present study, a sample of 103 patients was selected using random sampling between 2009 and 2013. For the above patients, their genome was tested in relation to the expression of the following proteins (enzymes, receptors): CYP2D6, CYP3A5, CYP1A2, CYP2C19, 5HT2CR, 5HTTLPR.

After statistical analysis of the data, the most important finding was for psychotic patients in whom their pharmacogenetic profile was fully matched with their antipsychotic treatment of their discharge ticket, they remained in the community more time than those in whom the treatment was not fully matched with their pharmacogenetic profile (980,57 versus 629,12 days, respectively), ( $p = ,051$ ).

According to the present study, there are indications that psychotic patients whose antipsychotic treatment matches their pharmacogenetic profile are likely to have a better course of the disease. No similar evidence is emerging regarding the use of other treatments in patients suffering from other mental illnesses.

The present study indicates that pharmacogenetic control is likely to have a place in everyday clinical practice, mainly regarding antipsychotic treatment, by improving the clinical efficacy of medical decisions. There is not enough evidence to establish itself as a routine check regarding the clinical efficacy of treatment in general for all cases of mental illness.



## P69 Pharmacogenetic study of gene polymorphism in psychotic inpatients

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The aim of this study was to analyse the pharmacogenetic profile of Psychotic, mainly schizohrenic Inpatients in comparison with the pharmacogenetic profile of the general population.

A number of the 57 psychiatric psychotic inpatients, 35 male and 22 female, out of them 39 were suffering from schizophrenia and the rest from other psychotic disorders. All of them were analyzed for their genom and the and the polymorphism gene expresion of the following enzymes: CYP2D6, CYP3A5, CYP1A2.

Blood samples were taken from the patients. Genomic DNA was isolated by using Gentra Pura-gene Blood Kit by Qiagen company. In order to define gene polymorphism, Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP), method, was used.

The study of gene polymorphism of CYP2D6, CYP3A5, CYP1A2 enzymes in the patients sample found no significant statistical diference in polymorphism between the sample and the general population and thus it can not be linked with the etiology of psychotic symptoms. However CYP1A2 enzyme was statistically significant decreased in patients sample in comparison with the general population in Greece. This decrease can be linked with rased melatonin levels that can affect indirectly through MT1 and MT2 melatonin receptors dopamine levels by decreasing them. This finding can be used as indication for more thorough studies regarding the corralation between melatonin and psychosis.



**P70 Comparison between the study the use of inhaled loxapine and routinely used interventions in agitated patients. The experience in Alexandroupolis Psychiatric Departement**

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This is a presentation of the experience in the use of Loxapine in Alexandroupolis Psychiatric word.

A sample of 18 agitated patients saffering from Schizophrenia, other psychosis or bipolar disorder were studied. In order for them to participate in the study they were evaluated with PANSS-EC scale in P4, P7, G4, G8, G14 items if they scored more than 15 they participated in the study. Half of them radomly selected were part of Group L that were administered inhaled Loxapine once and the other half were part of Group TAU that were treated as usual.

All patients were also evaluated using PANSS-EC adn CGI-severity at baseline and with PANSS-EC and CGI-global improvement and CGI efficacy index at 10, 30 and 120 minutes after Dose 1. Adverse events were recorded at baseline, 2 and 6 hours. PANSS-EC score after 10 minutes was used as the primary outcome.

Our main conclusions were that Loxapine was efective within the first 10 minutes after its administration. Its effectiveness was peacking after 30 minutes and was stable after that. Ad on medication was used in one occasion.

Confusion was the main sideeffect and was aslo apparent in the first 30 minutes, sedation was aslo observed often within the first 2 hours after the administration. No patients experienced respiratory problems.

It can be argued that inhaled Loxapine is a credible alternative to treatment as usual practices in handling agitated psychiatric inpatients.



## **P71 Vitamin D Supplementation for the treatment of depression in Psychiatric Private Practice**

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During the last decade there is a strong interest regarding the effect that vitamin D plasma levels can have in depression. There are also studies that suggest the use of vitamin D supplementation either by mouth or through light therapy as an add on therapy for depression.

Influenced by this evidence, during the winter season of 2019, we used Vitamin D3 supplementation mainly as an add-on therapy for the treatment of patients suffering from depression in our private practice.

A small sample of six patients was treated. All of them were womenCaucasian with Vitamin D insufficiency. An oral dose ranging between 2000 and 4000 UI of Vitamin D3 per day was administered. One of them was treated with Vitamin D3 as monotherapy while in the rest, Vitamin D3 was used as an add-on therapy. Vitamin 25(OH) D levels were measured regularly.

A significant improvement in depressive symptoms, that was correlated time wise at least with the increased of Vitamin D blood levels, was observed. This is in accordance with patients' satisfaction, which do not consider Vitamin D as another 'Psychiatric drug'.

Although results are quite preliminary, there is a strong feeling, that Vitamin D supplementation is effective in treating certain depressive symptoms. Of course much further study is needed for any firm conclusions.

## **P72 Language testing during awake brain surgery**

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**Background:** Awake brain surgery takes place in case of brain tumors or drug-resistant epilepsy when tissue resected is too close to brain areas that control vision, language, memory and movement. As soon as the neuroanesthesiologist stops the sedation, a particular function is tested, and intraoperative electrical stimulation is held in order to ensure that brain tissue removed will not cause significant loss of function.

**Materials and methods:** The present review examines the research findings from 17 empirical studies, which examined the effectiveness of different types of language testing in the context of awake surgery. The following inclusion criteria were used: a) publications only in peer-reviewed journals, b) original articles should be written in English, c) provision of sufficient statistical and methodological information in order to allow replication.

**Results:** Despite the variety in testing, object- and action- naming, automated speech tasks, and spontaneous speech assessments are most frequently used. Reading and comprehension tests, and verb generation are occasionally used. However, the introduction of tasks related to verbs is considered as significant. The use of verbal fluency tests is questionable because of low ecological validity. Other tests proposed include: grammar-focused tests, tests for metaphorical uses of language and affective prosody.

**Conclusions:** The golden rule for language testing during IES is object naming, spontaneous speech, and automated speech. Nevertheless, an individualized approach should be used along with preoperative neuropsychological assessment, because other cognitive deficits may interfere to language impairments. Moreover, bilingual and multilingual patients should be assessed for every language most frequently spoken.

### **References:**

1. DE Witte, D Satoer, E Robert, H Colle, S Verheyen,, E Visch-Brink, P Mariën: The dutch linguistic intraoperative protocol: A valid linguistic approach to awake surgery. *Brain & Language* 2015, 140: 35-48.
2. A Rofes, G Spena, A Miozzo, MM Fontanella, G Miceli: Advantages and disadvantages of intraoperative language tasks in awake surgery: A three-task approach for prefrontal tumors. *Journal of Neurosurgical Sciences* 2015, 59(4): 337-349.

### **P73 Work Engagement and Burnout In Healthcare Professionals: Associations with Cognitive And Emotional Empathy**

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**Background:** A wide range of healthcare professionals in their course of their professional life are prone to experience burnout. It has been reported eg that 25-60% of actively employed medical doctors suffer from burnout.

**Materials and methods:** Healthcare staff (n=85) participated in the study. Empathy was measured using the IRI and experimentally using the Eyes Test, burnout was measured using the OLBI and work engagement using the UWES.

**Results:** Cognitive empathy was negatively correlated with disengagement and empathic concern was positively correlated with burnout and disengagement . Cognitive empathy / theory of mind was positively correlated with work engagement.

**Conclusions:** Empathy is associated in a complex manner with burnout and work engagement in this sample.

#### **References:**

1. Davis, M. H. (1980) JSAS Catalog of Selected Documents in Psychology, 10, 85.
2. Baron-Cohen, S., et al (2001). Child Psychol. 42 (2), 241-251.
3. Demerouti, E et al (2010). J. of Occup. Health Psychology, 15 (3), 209-222
4. Schaufeli, W. B., & Bakker, A. B. (2003). UWES - Utrecht Work Engagement Scale: Test Manual. Utrecht, The Netherlands: Department of Psychology, Utrecht University.

**P74 Burnout, Secondary Trauma and Work Engagement in Greek Asylum Caseworkers**

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**Background:** Asylum caseworkers are prone to experience burnout and secondary trauma. The aim of this study was to measure dimensions of burnout, compassion satisfaction and secondary traumatization and work engagement in a sample of caseworkers employed at the Greek Ministry of Migration Asylum Service.

**Materials and methods:** All asylum caseworkers employed at the Greek Asylum Service were approached and asked to complete a series of questionnaires. Burnout, compassion satisfaction and secondary traumatization were measured using the Professional Quality of Life Measurement Tool (PROQOL-5) and work engagement using the Utrecht Work Engagement Scale (UWES).

**Results:** 60 caseworkers (n=14 male, n=45 female) responded to the survey (response rate=58.8%). In the sample, low levels of compassion satisfaction and high levels of secondary traumatization and burnout were documented. Work Engagement was negatively correlated with burnout and compassion satisfaction was positively correlated with work engagement. Younger workers and workers with law and behavioural sciences degrees show higher levels of work engagement.

**Conclusions:** Asylum caseworkers employed at the Greek Asylum service show high levels of burnout and secondary traumatization. Work engagement is higher in younger workers.

**References:**

1. Schaufeli WB, Bakker AB (2003) UWES-Utrecht Work Engagement Scale: Test Manual. Utrecht, Utrecht University.
2. Stamm, BH (2009). The Professional Quality of Life Measurement Tool. Retrieved from: [www.proqol.org](http://www.proqol.org)



## P75 Processing speed and attention capacity in schizophrenia

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**Background:** People with schizophrenia have deficits in attention and processing speed which are evident in the neuropsychological assessment of the cognitive abilities of patients. The severity and breadth of these impairments vary across patients. Such cognitive deficits are also observed in people with brain lesions and injuries and therefore the view prevails that schizophrenia is a brain disease. **PURPOSE:** The aim of the present study was to examine the cognitive processes of attention and the processing speed of patients with schizophrenia. The research was based on the hypothesis that schizophrenics will not experience particular fluctuations in specific deficits, and that independent gender, age, and educational level variables will not differentiate performance in specific neuropsychological tests that are used to evaluate specific cognitive processes (attention and psychomotor speed).

**Materials and methods:** Weighed neuropsychological tests were administered to 30 schizophrenic patients to assess abilities of alternate and selective attention and psychomotor speed. The scores of the participants were collected and for all the analyzes the SPSS 19.0 statistical analysis software was used. The regularity of the distribution of all variables in the total sample was tested by the Shapiro-Wilk assay (due to the small number of the sample). Comparisons of independent categorical variables (gender, age and level of education) were performed with  $\chi^2$  contingency coefficient. Comparisons between male and female patients in all trials were performed with t-test for independent specimens, since they met the criteria for regularity of distribution. The comparison between patients according to the training step was performed with one-way ANOVA. Finally, the correlation between age and patient performance in the test was done using the Pearson  $r$  correlation coefficient. The statistical significance criterion for all tests was set at the level  $p = 0.05$ .

**Results:** The findings of the research support the existence of basic deficits in the executive control of attention in patients with schizophrenia, also the performance of the patients in the two parameters of attention is correlated with each other. Among the men and women with schizophrenia, which were the sample of the research, there appears to be no statistically significant difference in both performance at attention and psychomotor speed that are low.

**P76 The profile of patients who attempted suicide before their admission to 3rd Department of Psychiatry of AHEPA University Hospital for the period 2013-2014**

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The main aim of the study was to investigate the baseline profile of the 46 patients (N = 46) who attempted suicide before their admission to the 3rd Department of Psychiatry of AHEPA University Hospital between 2013 and 2014. The main variables were gender, age, level of education, family and occupational status, but also the mean of the attempt, the number of previous suicide attempts, and the diagnosis with which they received discharged after their hospitalization at the Third Department of Psychiatry of Aristotle University of Thessaloniki. The statistical control indicator  $\chi^2$  was used and results showed that the profile of these patients was predominantly between 56-65 years of age, with a history of previous suicide attempts, single, unemployed, with a depressive episode diagnosis (F32, 39.1%) and diagnosis of recurrent depressive disorder (F33, 15.2%). The main instruments chosen to try to put an end to their lives were the pharmaceutical attempt (52.2%) and the drops (26.1%). Most of the findings of the study are in the same direction as the results of an extensive longitudinal study on suicide and suicide attempts for the period 2000 to 2013 (Fountoulakis et al., 2015).



## **P77 Psychological needs for exercise and symptoms of anxiety in clinically diagnosed major depressed outpatients**

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**Background:** Exercise shows large antidepressant effects (Morres et al., 2019), but depressed patients may often drop out from exercise on prescription programs due to various psychosocial correlates including increased anxiety. The satisfaction of psychological needs for exercise, i.e., autonomy, competence and relatedness (Ryan & Deci, 2017) could tackle anxiety; thus this study examined the relationships between psychological needs satisfaction and anxiety in depressed outpatients.

**Materials and methods:** Participants were 206 depressed outpatients (aged 18-65 years) with clinical diagnosis of major depression and no suicide ideation. Psychometrics included the Beck Depression Inventory-II (BDI-II), the Hospital Anxiety Subscale (HAS), and the Satisfaction of Psychological Needs for exercise.

**Results:** Participants showed moderate depression (Mean= 21.36, Standard Deviation= 10.85) and anxiety (Mean= 11.17, Standard Deviation= 5.25). Regression analysis showed that need satisfaction could significantly predict anxiety,  $F(1, 205) = 14.36$ ,  $p < .001$ , with autonomy ( $b = -.27$ ,  $p < .001$ ) and competence ( $b = -.16$ ,  $p < .05$ ) being significant predictors. The model explained 35% of anxiety variance.

**Conclusions:** Autonomy and competence referring, respectively, to the perceptions of choices and effectiveness in exercise predicted reduced anxiety. Accordingly, autonomy and competence satisfaction via optimal exercise options and challenges could be associated with ameliorated anxiety and, in turn, with lower dropouts among depressed outpatients.

### **References:**

1. Morres, I.D., Hatzigeorgiadis, A. et al. (2019). Aerobic exercise for adult patients with major depressive disorder in mental health services: A systematic review and meta-analysis. *Depression and Anxiety*, 36(1), 39-53.
2. Ryan, R., & Deci, E. (2017). *Self-determination: Psychological Needs, Motivation, Development, Wellness*. New York: Guilford Publishing.



**P78 Association between serum levels of glutamate and neurotrophic factors and response to clozapine treatment.**

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**Background:** Clozapine is the only available therapy for about 30% of schizophrenia patients otherwise refractory to antipsychotics. Unfortunately, the mechanism of action of the drug is still unknown and there are no biomarkers that can predict a positive response to clozapine. We aimed to examine serum neurotrophins and glutamate levels as putative biomarkers for clozapine response based on the hypothesized mode-of-action of the compound

**Materials and methods:** Blood samples of 89 chronic schizophrenia patients maintained on clozapine were analyzed in a cross-sectional design. Serum brain derived neurotrophic factor (BDNF), vascular endothelial growth factor (VEGF), neurotrophic growth factor (NGF), glial derived neurotrophic factor (GDNF) and glutamate were determined. Differences between responders and non-responders to clozapine and correlation between clinical and biological measures were analyzed. Our sample consisted of 54 (61%) responders and 35 (39%) non-responders

**Results:** Responders had higher mean BDNF levels than non-responders (2066±814 vs. 1668±820pg/ml,  $p<0.05$ . respectively) and higher serum glutamate levels (1.61±2.2 vs. 0.66±0.9pg/ml, respectively,  $p<0.05$ ). Furthermore, there was a significant correlation between serum glutamate levels and positive symptoms among the clozapine-responder group ( $\rho=0.47$ ,  $p<0.005$ ). High serum levels of BDNF and glutamate were associated with response to clozapine, while glutamate levels correlated with the psychosis severity in clozapine responders only.

**Conclusions:** Large-scale, prospective longitudinal studies are needed to support these findings and the assumption that serum glutamate and BDNF can discriminate between clozapine responders and non-responders

**References:**

1. Kane JM. Treatment-resistant schizMethod : zophrenic patients. J Clin Psychiatry 1996;57 Suppl 9:35-40
2. Suzuki T, Remington G, Mulsant BH et al. Treatment resistant schizophrenia and response to antipsychotics: a review. Schizophr Res 2011;133(1-3):54-62
3. Meltzer HY. Treatment-resistant schizophrenia--the role of clozapine. Curr Med Res Opin 1997;14(1):1-20

## P79 A case of doping-induced mania: Sports psychiatry

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**Background:** Doping is defined as the evidence of the use of substances or methods that have the potential to increase athletic performance, cause unnecessary health risks, or violate the spirit of sportsmanship, found in body samples of athletes (1). Anabolic steroids are classified as S1 in WADA's list of prohibited substances (1). Increased anger, aggression, psychosis, hypomania, and depression have been reported with the use of anabolic steroids (2).

**Materials and methods:** The patient was a 25-year-old male athlete (boxer). He had injected one dose of anabolic steroid before a competition. After doping, the patient developed symptoms of overtalking, insomnia, increased libido, increased energy, decreased appetite, paranoia, feelings of superiority to other athletes, and rapid thoughts. The patient experienced these symptoms for about 20 days before presenting to our clinic. MR and routine tests performed to exclude the disorders according to neurological examination and general medical condition were normal. The patient's diagnosis was accepted as "doping-induced mania".

**Results:** Doping use among athletes is gradually increasing (3).

**Conclusions:** These substances carry serious short-term and long-term risks regarding mental health. Therefore, psychoeducation given to athletes holds great importance in terms of preventive mental health

**Acknowledgements:** The authors thank

### References:

1. <https://www.wada-ama.org>
2. Risperidone Treatment in a Steroid-Induced Psychosis Case; Düşünen Adam The Journal of Psychiatry and Neurological Sciences 2011;24:80-84 DOI: 10.5350/DAJPN2011240111
3. Doping Types of Athletics Sportsmen and Determination of the Opinions About Anti-Doping Konuralp Medical Journal 2017;9(3):250-256

**P80 Use of Memantine on Pervasive Developmental Disorders - Case series**

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**Background:** Memantine is an N-methyl-D-aspartate (NMDA)receptor antagonist. It is used to reduce abnormal activation of glutamate neurotransmission. Memantine is used in Alzheimer's disease improving cognitive function. Impulsivity and compulsivity characterize many psychiatric disorders. These behaviors may be caused in a problem in cortical circuits.

**Materials and methods:** There is the hypothesis that impulsivity can be triggered by the ventralstriatum and compulsivity by the dorsal striatum and a different area of prefrontal cortex probably suppresses these behaviors. Memantine has good efficacy and tolerability therefore is increasingly being studied in a variety of non-dementia psychiatric disorders.

**Results:** Case 1: Patient with pervasive developmental disorder with multiple hospitalizations in psychiatric clinics due to serious domestic violence and impulsive behavior. Impulsive aggression and affective instability were present. Violence incidences were controlled with 10mg of aripiprazole and 20mg of memantine. Case 2: Patient with Asperger syndrome, with compulsive buying demands witch lead progressively to impulsive aggressive behavior. The behavior was controlled with 4mg of risperidone and 10mg of memantine .Case3: Patient with autism and comorbid psychosis, non-responder to medications, multiple hospitalizations due to serious domestic violence. Violence incidences were significantly reduced with the adjunction of 10mg of memantine to the anti psychotic treatment.

**Conclusions:** Significant improvement of Violence incidences observed, with good tolerability, indicating that there may be a potential for an adjunctive treatment strategy for pervasive developmental disorders. Further research is needed.



## P81 What we do wrong? Depression in dementia.

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**Background:** Alzheimer disease (AD) is the most common type of dementia. The memory loss and the cognitive decline usually starts slowly and worsen overtime. As a neurodegenerative affects people over 65-70 years old, and only rarely onset begins earlier of the fifth decade of life. Depression is a symptom of dementia or it's often met as a prodromal stage of AD.

**Materials and methods:** Herein we present a case of a 58-year-old man who got the diagnosis of depression instead of AD. A 58-year-old man, owner of a security company referred to a psychiatry due to "forgetfulness" and behavioural changes. His wife mentioned that he became anxious with sleep disturbances and also jealous. He admitted to have difficulties in many daily activities. He was diagnosed with depression and got a prescription for SSRIs. The next ten months he deteriorated and he was almost unable to work, to drive home alone, to pay the bills or to remember his appointments. The neurological examination with Mini Mental test and MoCa test, the CFS examination and brain MRI established the diagnosis of AD, excluding other causes of dementia. Cholinesterase inhibitors were prescribed.

**Results:** This case although the patient's family remarked the memory decline the physician overlooked it and didn't include it in the differential diagnosis of dementia.

**Conclusions:** Dementia has an insidious onset and psychiatric disorders, like depression, are apart of dementia's spectrum. Physicians should keep a high level of suspicion of AD to figure out if psychiatric symptoms are part of dementia or are isolated disorders.

**P82 When Doctor's arrogance overlaps patient will.**

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**Background:** Terminally ill, with advanced cancer, patients experience a lot of distress, as a result of their disease and preparatory grief. We present a case of a 53-year-old woman , that was transferred to the Psychiatric Department of the General Hospital of Corfu through a Public Prosecutor's request, with a refusal of nutrition.

**Materials and methods:** The patient`s assessment did not present any major psychopathology, oraprevious psychiatric history. Mini Mental State Evaluation(MMSE) test was performed in which she scored 30. She was referred to the Internal Medicine Department.

**Results:** The laboratory tests and the imaging assessments revealed a primary tumor of the left lung with esophageal and pericardial infiltrations, as well as two metastatic tumors of cerebellum. During the patient's admission, we were asked to assess her condition many times, due to her refusal for further painful examinations and treatment by the doctors. She did not present any major psychopathology, or cognitive impairments. She wished to be discharged and die at home.

**Conclusions:** As psychiatrists, it is crucial to distinguish symptoms of grief and depression in terminally ill patients, in order to make the correct intervention. As doctors, however , we must ask ourselves , where lies the fine line between arrogance and respect to another human being's will?



### P83 New view to the rehabilitation of patients with addictions

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**Background:** Since its founding in 1948, WHO's mandate has been to achieve "the enjoyment of the highest attainable level of health as the fundamental right of every person", which defines health as "a state of complete physical, mental and social well-being, and not just the absence of illness or weakness" [3]. To monitor the achievement of this goal, WHO regularly updates the International Classification of Diseases (ICD) as a universal reference system for registering mortality and morbidity [4]. In its latest version, ICD 11, a description will be given both of a biomedical nature and of the effects of a health disorder [1].

**Materials and methods:** The assessment of the impact of the disease differs from rehabilitation and medical points of view. From a medical point of view and a disease point of view, the performance of patients after a disease, disability and health are primarily considered as the effects and consequences of the disease or impairment. Medical interventions are aimed at the disease process and the ultimate goal of these interventions is to prevent consequences for a person. Both function and health must be measured in order to evaluate the outcomes of intervention that are meaningful to the patient [2]

**Results:** If you ask an ordinary person who is not directly related to medicine and ask what rehabilitation he associates with, then most likely, in response, we can get "physical education after a stroke", "work therapy for the mentally ill" (this also includes ). Speaking about rehabilitation in narcology, most often we mean either occupational therapy or work with psychologists and psychotherapists.

According to the "traditional" model of rehabilitation in narcology, in order for a patient to undergo a rehabilitation course, it is necessary "to undergo a detoxification course in the narcology department" and only after that (most often after 10-14 days of treatment in the narcology department, side by side with patients who are just enter the department who have a negative attitude towards the treatment, or with patients who have already undergone rehabilitation and have failed, therefore they are treated negatively) the patient has the right to go to treatment at the rehabilitation department, where psychologists and psychotherapists will start working with him.

However, let us turn to the concept of "rehabilitation", which says that "Rehabilitation is the coordinated application of medical, social, pedagogical and professional measures in order to prepare (or retrain) an individual for optimum performance" [5]. The key point in this definition is that rehabilitation should be handled not only by a doctor, but also by other specialists (a social work specialist, a specialist in psychology, a professional retraining specialist), or in other words is a complex process that involving specialists from different areas, with the ultimate goal - recovery. Thus, according to the result, the patient should have a comfortable, not only psychological, but also social and professional environment, which he can apply to himself.

Why do patients need rehabilitation?

First, there is a real benefit from the rehabilitation process, aimed at improving functional ability and participation. Secondly, short-term improvements in treatment are lost until long-term support is available, or in other words, those who undergo rehabilitation are less likely to be hospitalized again. It is no secret that patients who have gone through rehabilitation departments have a better chance of remission.

If you analyze a person's activity, it consists of what is filled with his daily activities. With the disease, with the exacerbation of the disease, firstly, the patient is deprived of the characteristic and familiar to him activities, often leads to violations and restrictions, which in turn can initiate the development of any concomitant diseases. You can remember any patient who does not have functional problems, but we hospitalize him and there may be many somatic diseases (pneumonia, post-toxic polyneuropathy, etc.). As an example, a patient with chronic alcoholism after suffering alcohol delirium acquires post-encephalopathy, toxic polyneuropathy, he is bed-ridden, he may have muscle atrophy, bedsores, pneumonia. What do we do with the patient? We walk, we carry out medical physical culture, massage, we use vasodilating agents, etc. In the hospital in the intensive care unit, later in the regular ward, the patient is treated to return to his usual activities, and this in turn is a rehabilitation technique and can lead not only to improve health, but also to re-regeneration of symptoms of both somatic and mental disorders. Thus, we return activity to a person, and activity is what our life consists of.

**Conclusions:** Thus, we conclude that rehabilitation is a long and consistent process that should start from the first signs of a disease or complication and continue until a person achieves a certain role in society in accordance with his aspirations and / or desire.

**References:**

1. Selb M, Kohler F, Robinson Nicol MM, Riberto M, Stucki G, Kennedy C, et al. ICD-11: a comprehensive picture of health, an update on the ICD-ICF joint use initiative. *J Rehabil Med.* 2015 Jan;47(1):2-8
2. Stucki G, Ewert T, Cieza A. Value and application of the ICF in rehabilitation medicine. *Disabil Rehabil* 2002;24:932-8.
3. WHO. Constitution of the World Health Organisation. [Internet]. 2006. Available from: [http://www.who.int/governance/eb/who\\_constitution\\_en.pdf](http://www.who.int/governance/eb/who_constitution_en.pdf)
4. WHO. World Health Organisation International Classification of Diseases. Version 10. 1992.

## P84 Psychopathological factors in relation to the occurrence of dental phobia

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**Background:** To investigate dental phobia and its probable relations with current mental disorders and symptoms of psychological distress, in order to identify patients who are particularly vulnerable to it.

**Materials and methods:** The sample consisted of 164 dental patients who had a scheduled appointment with the dentist or were examined as urgent cases in an outpatient hospital facility in Thessaloniki. The questionnaire included the Modified Dental Anxiety Scale (MDAS), the Brief Standard Self-Rating for Phobic Patients, and the Symptom Checklist-90-Revised (SCL-90-R). Statistical analysis was conducted with the use of Statistical Package for Social Sciences (SPSS) v. 20.

**Results:** 7.9% of the sample was classified as dental phobic, while 14.6% had a high level of anxiety during the dental examination. The highest levels of anxiety regarding the visit to the dentist were statistically significantly and positively associated with higher rates of agoraphobia ( $p=0,009$ ), social phobia ( $p=0,005$ ), blood-injury phobia ( $p<0,001$ ), somatization ( $p=0,039$ ) and phobic anxiety ( $p=0,004$ ). Logistic regression analysis showed that individuals without blood-injury phobia were 88% less likely to present dental phobia.

**Conclusions:** Patients with a high level of dental anxiety are more prone to have a high level of comorbid phobias, specifically agoraphobia, social phobia, blood-injury phobia and other psychiatric disorders and symptoms such as somatization and phobic anxiety. Cooperation between dentists and mental health professionals is of great importance, especially in cases of patients with psychological co-morbidity.



**P85 Prenatal androgens' effects on impulsiveness in bipolar disorder**

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**Background:** The purpose of this study was to examine whether prenatal androgens' exposure affects impulsiveness in people with bipolar disorder (PWBD). Androgens play a crucial role during brain development; prenatal androgens' exposure is estimated using the second to fourth (2D:4D) digit ratio. Impulsiveness is defined "as a predisposition toward rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individual or to others". Studies have shown that the presence of a mood disorder is correlated with a significant level of impulsiveness.

**Materials and methods:** The sample consisted of 42 men, 30-50 y.o., with bipolar disorder (ICD-10 & DSM-5), in normothymia. Participants completed: Young Mania Rating Scale (YMRS) and Barratt Impulsiveness Scale (BIS-11). We measured 2D:4D using Digital Vernier Calipers. Participants were divided into three subgroups, according to their 2D:4D. Comparisons were made amongst those with ratio <0.94 and those with ratio >0.96.

**Results:** Overall, lower 2D:4D ratio to participants, which indicates high levels of prenatal testosterone exposure, was associated with higher BIS scores, especially in the two sub-traits of impulsiveness; Motor Impulsiveness, and Attentional Impulsiveness. The subgroup with 2D:4D <0.94 had BIS total=73.64, whereas the subgroup with 2D:4D >0.96 had BIS total=66.73 (statistically significant difference).

**Conclusions:** It appears that prenatal androgens' exposure plays a substantial role in the impulsiveness of PWBD. More specifically, higher exposure to androgens predicts higher impulsiveness. This positive relationship leads to the question of whether a person is capable of modulating their behavior to fit the demands of a given environment or not.



## P86 Dog Therapy and Mental Disorders: A review

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**Background:** Following the attempted use of dogs for the reintegration and socialization of veteran soldiers, several studies have demonstrated the effectiveness of animal engagement on the mental and physical health of humans.

**Materials and methods:** The present project, through a comprehensive review of 32 articles, focused on five quantitative surveys (2015-2017), which relate only to the canine assisted therapy or activities to patients with psychological or psychiatric disorders.

**Results:** Dogs, as well as any other animals used in the interventions, were of different ages, sexes and breeds, but they were well trained and veterinary tested, accompanied by mental health specialists trained in the area.

**Conclusions:** The results not only confirm the improvement in patient function, but also highlight the significant need to adopt new and innovative approaches to people with mental disorders, as medicines not only do not cure, but also create significant side effects.

**P87 Diagnoses and recommended treatments of those referring to the Military Community Mental Health Center of 424 General Military Hospital in 2018**

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**Background:** Military Community Mental Health Centers are relatively new formed institutions in Greek Army forces dedicated to the service of veterans, families of staff and civilians.

**Materials and methods:** A descriptive epidemiologic study was performed using intake data from our Military Community Mental Health Center (MCMHC). We started using a digital recording system since the beginning of the year which allows us the processing of our data in order to improve the quality of our services.

**Results:** During 2018 307 patients were referred to MCMHC but only 226 of them took the diagnostic evaluation (88 men and 138 women) since 81 didn't show up to the scheduled appointment. Most of the patients received diagnoses of anxiety and depressive symptomatology (44%), a significant part of which received diagnoses concerning the psychotic spectrum (Schizophrenia, schizoaffective disorder and delusional disorder (25%), another part was diagnosed with emotional disturbances such as Bipolar disorder. As far as the proposed therapies is concerned, the largest proportion of recommendations were about psychotherapy or counseling meetings (78%).

**Conclusions:** MCMHC receives a significant number of requests and the diagnoses of the patients are mainly related to anxiety and depressive disorders as expected in a Department that operates to a large extent in terms of Community Mental Health Center.



## **P88 Epidemiological features of those referring to the Military Community Mental Health Center of 424 General Military Hospital in 2018**

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Military Community Mental Health Center (MCMHC), 424 General Military Hospital, Thessaloniki, Greece

**Background:** Military Community Mental Health Centers are relatively new formed institutions in Greek Army forces dedicated to the service of veterans, families of staff and civilians.

**Materials and methods:** A descriptive epidemiologic study was performed using intake data from our Military Community Mental Health Center (MCMHC). We started using a digital recording system since the beginning of the year which allows us the processing of our data in order to improve the quality of our services.

**Results:** During 2018 307 patients were referred to MCMHC but only 226 of them took the diagnostic evaluation (88 men and 138 women). Mean duration of waiting between the initial contact and the first appointment were 18.2 days for those who finally came and 34.4 for those that didn't show up. 74% of the patients evaluated were military personnel or family members when 26% were civilians. A significant percentage of those referred were residing in the Prefecture of Thessaloniki (81%), while there were requests or referrals from adjacent Prefectures. Initial requests related mainly to the diagnostic assessment (71%) but also to other special services of the MCMHC such as parent counseling and the use of the service for long-acting antipsychotics (depot clinic).

**Conclusions:** MCMHC receives a significant number of requests for help and duration of waiting between the initial contact and first appointment may discourage people from coming to our Center.

**P89 How close are we to the feminization of cognitive abilities?**

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**Background:** Digit ratio, especially 2D:4D, is a potential proxy marker for prenatal androgen exposure, associated with cognition. There is strong evidence that there are gender differences in digit ratio and cognition. The objective is to examine if brain changes across generations due to environmental factors, and whether gender differences in cognition are moderated.

**Materials and methods:** 93 women and 89 men, have been divided into three age groups: 20-30 (31 women-32 men), 40-50 (32 women-29 men), 70-80 (30 women -28 men). The sample had similar educational level (>9 y.o.), MMSE score >25, and MoCA score > 26. We measured the 2D:4D ratio using Digital Vernier Calipers. Participants carried out the Verbal Fluency Test and Rey Auditory Verbal Learning Test (RAVLT).

**Results:** Statistically significant differences were found in men's 2D:4D ratio between the three subgroups (0.966, 0.949, 0.919). No statistically significant differences were found among women (0.981, 0.978, 0.984.). In RAVLT statistically significant differences were found only in the subgroup 70-80 (W: 46.0- M: 35.0). Women outperformed men in verbal memory, phonemic VF and switching. Men outperformed women in clustering. The most prevalent differences between genders, in digit ratio and cognition, have been found in the 70-80 y.o. groups. Gender differences had a moderating tendency mainly among the 1st age group, showing a negative relationship regarding differences between genders.

**Conclusions:** It seems that, through generations, men are exposed to less androgens, leading to the diminishment of differences between genders. Environmental factors are continuously interacting making it challenging to investigate their effect to the feminization of the brain.



## P90 A cross cultural comparison of general hospital specialist attitudes toward psychiatry

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**Background:** Psychiatric comorbidities are common in physical illness and significantly affect health outcomes. Non-psychiatric specialist attitudes toward consultation-liaison psychiatry (CLP) services in general hospitals are important as they influence referral patterns and thus quality of care. Culture is likely to play a role, but international comparisons are lacking.

**Materials and methods:** A cross-sectional study was conducted in New Zealand, China, Sri Lanka, Russia, Israel, Brazil and Netherlands. A target sample size of 100 per country (total 700) was established. Data were collected by anonymous, self-administered questionnaires to senior medical staff of various disciplines working in general hospital settings. The data collection tool was adapted from a previously validated questionnaire, the DACC-MH Scale.

**Results:** Significant differences were observed among various subgroups. For example, in the Chinese sample (n=110) female doctors were more likely than males to express concern about emotional care and psychological assessment of patients; surgeons were more likely than others to confine themselves to physical assessment. In Sri Lanka (n=95), more surgeons (90%) than physicians (44%) would seek psychiatric input in managing delirium.

**Conclusions:** Results generally indicate positive attitudes toward psychiatry among hospital specialists. However differences were apparent between practice settings and countries, suggesting the importance of cultural influences. Significant subgroup differences are also observed in relation to gender and specialty. These findings lay a foundation for future studies to explore these associations further and thereby help to formulate an agenda to address unmet psychological/psychiatric need in general hospitals.

**Acknowledgements:** We thank local study coordinators in China, Netherlands, Sri Lanka, Israel, Brazil, and Russia for their efficient contribution to data collection. Two national studies have been published (below).

### References:

1. Thombs BD, et al. The Doctors' Attitudes Toward Collaborative Care for Mental Health (DACC-MH) Scale. *Can J Psychiatry* 2010;55:264-267.
2. Wang J, et al. Chinese non-psychiatric hospital doctors' attitudes toward management of psychological/psychiatric problems. *BMC Health Services Research* 2017;17:576
3. Nauta K, et al. Attitudes of general hospital consultants towards psychosocial and psychiatric problems in Netherlands. *Psychology, Health & Medicine* 2019;24:4

**P91 Symptoms of psychosis on a patient with Systemic Lupus Erythematosus (SLE)**

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**Background:** Psychiatric symptoms occur in 60% of patients diagnosed with SLE, with Lupus psychosis being a rare manifestation. The difficulty in the case we present, is the differential diagnosis between Lupus psychosis and comorbidity of SLE and psychosis.

**Materials and methods:** A 17-year-old woman was involuntarily hospitalized to the psychiatric department displaying symptoms of psychosis for the first time in her life. She was diagnosed with SLE 10 months before and she was under hydroxychloroquin. Antipsychotics were administered alongside with methylprednisolone. The MRI showed no abnormalities. Three weeks later, the patient showed very little improvement concerning the flow of thought, but the delusional thoughts and the lack of insight insisted.

**Results:** The discharge diagnosis was Acute and Transient Psychotic Disorder, due to the fact that the symptoms did not retreat shortly after, despite the administration of antipsychotics and corticosteroids. After 2 months of hospitalization, some negative symptoms persisted. The patient had a regular psychiatric and psychological follow-up and her parents joined a pilot intervention program. Five months later, the fact that the negative symptoms persist, supports the diagnosis of Schizophreniform disorder .

**Conclusions:** The bibliography referring to Lupus psychosis, suggests some indications that can contribute to the diagnostic thinking of the clinician. In the case of comorbidity an early exclusion of Lupus psychosis is necessary for the patient to be able to receive the appropriate treatment.

**Acknowledgements:** Department of Psychiatry, General Hospital of Athens Sismanogleio-A. Fleming

**References:**

1. John G. Hanly MD et al, Qiuju Li PhD et al, Li Su PhD et al, Murray B. Urowitz MD et al, Caroline Gordon MD et al, Sang-Cheol Bae MD PhD et al, Juanita Romero-Diaz MD MSc et al, Jorge Sanchez-Guerrero MD MSc et al, Sasha Bernatsky MD PhD et al, Ann E. Clarke MD MSc et al, Daniel J Wallace MD et al, David A. Isenberg MD et al. (2018 Oct 30). Psychosis in Systemic Lupus Erythematosus: Results From an International Inception Cohort Study. *Arthritis & Rheumatology* published by Wiley Periodicals, Inc. on behalf of American College of Rheumatology (2018), from Wiley online library <https://onlinelibrary.wiley.com/doi/full/10.1002/art.40764>
2. Hélène Jeltsch-David and Sylviane Muller. (2014 Sep 9). Neuropsychiatric systemic lupus erythematosus: pathogenesis and biomarkers. *Nature Reviews Neurology* volume10 (2014) pages579-596, from <https://www.nature.com/articles/nrneuro.2014.148>
3. Andrew Sommerlad, John Duncan, Michael P T Lunn and Jacqueline Foong . (2015 Mar 5). Neuropsychiatric systemic lupus erythematosus: a diagnostic challenge. *BMJ case reports* (2015), from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4369033/>



## P92 Mindfulness Based Interventions in Multiple Sclerosis: A Systematic Review

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**Background:** A substantial body of literature suggests that Mindfulness Based Interventions (MBIs) can be effective in managing a broad range of physical and mental health problems. Multiple Sclerosis (MS) is a severe demyelinating disease of the brain and spinal cord which can adversely affect QoL, psychological and somatic well-being. The aim of this study was to review the evidence of the usefulness of MBIs in MS.

**Materials and methods:** A literature search was conducted in PubMed, Scopus & Web of Science, and included studies published between 2000- 2018. Inclusion criteria (SPIO/PICO model) for the selected studies were as follows: (1) Clinical trial (randomized & non-randomized) (2) Adult patients >18 years old with multiple sclerosis (3) Mindfulness Based Intervention (4) Psychological, QoL, fatigue as outcomes (5) written in English.

**Results:** 12 studies were included in the review. The total number of patients with MS in all 12 studies was n=751 QoL: 5 studies investigated the effectiveness of MBIs in QoL of patients with MS. In all studies QoL in the intervention group compared to the control group showed statistically significant improvement. Fatigue: 5 studies investigated the effects of MBIs on the level of fatigue experienced by patients. In all studies a reduction in fatigue post-intervention was noted in the active compared to the control groups, however this was statistically significant in n=2 studies. Psychological Symptoms: 9 studies investigated the effect of MBIs on depressive symptoms and statistically significant effects were found in 2 studies. 11 studies investigated the effect of MBIs in anxiety/ stress symptoms and statistically significant results were found in 7 studies.

**Conclusions:** Mindfulness-based interventions have beneficial effects on patients with MS. Positive post-intervention effects on QoL and perhaps anxiety are more reliably replicated across studies, however effects on depression and fatigue are less robust. These results should be treated with caution, due to the small sample sizes in individual studies, the use of self-report tools and the small number of studies comparing MBIs with other psychotherapeutic approaches. More research needs to be carried out on larger samples to ensure that the results can be generalized in all patients with MS.

### References:

1. Miller SA, Forrest JL. J Evidence-Based Dental Pract. 2001 Oct;1(2):136-41.
2. Methley et al BMC Health Serv Res. 2014; 14: 579



**P93 The possible role of the blood-brain barrier functions in major depressive disorder**

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**Background:** Major depression is one of the most common mental illnesses in the world. As reported by previous studies, inflammatory molecules could play significant role in the development of depression. These findings are supported by the fact that in some cases anti-inflammatory drugs and cytokine inhibitors reduced the severity of depression symptoms. The inflammatory molecules can appear in the central nervous system only after crossing the blood-brain barrier which can lead to the development of depression. These findings urged us to review studies about two molecules of the blood-brain barrier, claudin-5 and MDR1 in relation to depression and antidepressant treatment.

**Materials and methods:** We reviewed currently available literature about the two molecules.

**Results:** Claudin-5, an important component of the tight junction structure, was reduced after chronic stress exposure in mice, in parallel with interleukin-6 accumulation in the central nervous system and the manifestation of depression symptoms in mice. P-glycoprotein (MDR1) was previously associated with the antidepressant treatment. This ABC-transporter protein has major role in eliminating the antidepressant agents, hindering their effects. After peripheral inflammation the amount of P-glycoprotein in the BBB is increased, which might explain why patients with inflammation-induced depression cannot show adequate response to currently known antidepressants.

**Conclusions:** Blood-brain barrier proteins, claudin-5 and P-glycoprotein, could play major role in the manifestation and treatment of depressive symptoms. By examining these proteins further, important novel aspects of the pathophysiology could be revealed.

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## P94 Pharmacogenetic significance of cytochrome P450 enzyme polymorphisms in the metabolism of antidepressants

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**Background:** The cytochrome P450 enzyme-family encodes hepatic heme-proteins responsible for the first phase drug metabolism. Several polymorphisms have been detected, which can lead to altered metabolism rate and drug plasma concentration. During antidepressant treatment, the isoenzymes CYP2D6, CYP2C19, CYP3A4, CYP3A5, CYP1A2 and CYP2C9 may have an impact on the therapeutic response. The activity of the enzymes (metabolizer status) can usually be categorized as poor (PM), intermediate (IM), extensive (EM) and ultrarapid metabolizers (UM).

**Materials and methods:** We have reviewed the literature investigating polymorphisms within the CYP450 family in relation to reactions to antidepressant treatments and extracted relevant result.

**Results:** Researchers investigated antidepressant response and the activity of CYP2D6 and CYP2C19 enzymes, during paroxetine, (es)citalopram, and mirtazapine therapy. Paroxetine was less effective in patients with EM status of CYP2D6, while (es)citalopram were more effective in patients with IM status of CYP2D6 and CYP2C19 enzymes. Increased function of the CYP2D6 enzyme showed a decrease in response to mirtazapine therapy.

**Conclusions:** Based on this review, the polymorphisms affecting the cytochrome P450 enzymes have a significant effect on the outcome of antidepressant therapy. Therefore, pharmacogenetics-mediated individual drug therapy can be a great step forward in avoiding possible side effects and enhancing the therapeutic efficacy.

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**P95 Motor impairments in young children with Autism Spectrum Disorders**

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**Background:** Autism Spectrum Disorders (ASD) represent a variable neurodevelopmental disorder that ranks among the most serious disorder of the children mental development. It is a multisystem neurodevelopmental disorder characterized by deficits in communication skills and highly repetitive and restricted behaviors and interests (1). Recent studies indicate that motor impairments may be the first sign of atypical development in ASD and likely contribute to abnormalities in social communication, as children with ASD often present basic motor impairments in balance, gait, coordination, fine and motor skills (2, 3, 4, 5). However, measurement of motor function in ASD has lagged behind other behavioral phenotyping. The aim of the present study was to examine the motor function of young children with ASD, aged 4 to 6 years old, in comparison to two groups of age-matched intellectually disabled (ID) and typically developing (TD) children.

**Materials and methods:** 60 children (20 with ASD, 20 with ID and 20 TD) aged 4 to 6 years old (M=4.7, SD = .48) participated in the study. The three groups were pair-matched for age and gender. ASD and ID groups were also matched according their nonverbal IQ, using the Wechsler Non Verbal Scale of Ability (6). All children met the criteria of DSM- V and were diagnosed with Autism Spectrum Disorder (ASD) or Intellectual Disability (ID) by Public Committees. The motor skills of the participants were assessed using the Movement Assessment Battery for Children (MABC) (7). The MABC is a clinical assessment used to determine the extent of impairment in fine and gross motor skills. The MABC consists of eight subtests that evaluate three components of motor proficiency: manual dexterity, ball skills, and static and dynamic balance.

**Results:** Participants with ASD showed significantly lower level of motor skills when compared to TD and ID children. More specifically, children with ASD received lower scores than the TD children and children with ID in tests that examine manual dexterity ( $F= 73.69, p < .001$ ), ball skills ( $F= 51.37, p < .001$ ) and balance ( $F= 141.28, p < .001$ ). Additionally, 95 % of children with ASD had significant motor impairments according the Total Impairment Score of the MABC Battery.

**Conclusions:** The findings revealed that motor impairments were a common clinical feature of pre-schoolers with ASD. Compared to TD and children with ID, participants with ASD had difficulties in all aspects of motor function (ball skills/ gross motor, manual dexterity/ fine motor and balance skills/ balance). In general, ASD group showed higher percentage of motor dysfunction in total scores. Our findings, align with previous studies which support a general motor impairment of children with ASD. These findings could contribute to a better understanding of the specific and subtle motor impairments in ASD. Additionally, they can serve as markers of early diagnosis, clinical stratification, and treatment targets.



## References:

1. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Arlington, VA: American Psychiatric Association.
2. Hirata, S., Nakai, A., Okuzumi, H., Kitajima, Y., Hosobuchi, T., Kokobun, M. (2015). Motor skills and social impairments in children with autism spectrum disorders: a pilot study using the Japanese version of the developmental coordination disorder questionnaire. *Sage Open*, 1-7
3. Kaur, M., Srinivasan, S. M., Bhat, A. N. (2018). Comparing motor performance, praxis coordination, and interpersonal synchrony between children with and without autism spectrum disorder (ASD). *Research in Developmental Disabilities*, 72, 79-95.
4. McPhillips, M., Finlay, J., Bejerot, S., Hanley, M. (2014). Motor deficits in children with autism spectrum disorder: A cross-syndrome study. *Autism Research*, 7, 664-676
5. Wilson, R., Enticott, P. & Rinehart, N. (2018). Motor development and delay: advances in assessment of motor skills in autism spectrum disorders. *Current Opinion in Neurology*, 31, 134-139. doi: 10.1097/WCO.0000000000000541.
6. Wechsler, D. & Naglieri, J. (2006). *Wechsler Non Verbal Scale of Ability*. San Antonio, TX: Harcourt Assessment.
7. Henderson, S. E., & Sugden, D. A. (1992). *Movement Assessment Battery for Children*. London: Psychological Corporation.

## P96 Evidence of cerebellar dysfunction in preschool children diagnosed with Autism Spectrum Disorders

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**Background:** Autism Spectrum Disorders (ASD) are behaviorally defined developmental disorders with neurological basis that includes cellular and structural abnormalities in a variety brain regions. Cerebellar dysfunction is evident in several developmental disorders, including ASD (1). Cerebellum has been high lightened as the «key» region, due to the relatively frequency of cerebellar abnormalities that have been found in individuals with ASD (2). The aim of the present study was to evaluate at a behavioral level the cerebellar function of preschool children with ASD, in comparison to two groups of age-matched intellectually disabled (ID) and typically developing (TD) children.

**Materials and methods:** 60 children (20 with ASD, 20 with ID and 20 TD) aged 4 to 6 years old ( $M=4.7$ ,  $SD = .48$ ) participated in the study. The three groups were pair-matched for age and gender. ASD and ID groups were also matched according their nonverbal IQ, using the Wechsler Non Verbal Scale of Ability. All children met the criteria of DSM- V and were diagnosed with Autism Spectrum Disorder (ASD) or Intellectual Disability (ID) by Public Committees. Participants cerebellar function was tested using 7 clinical tests (3), which evaluated fine motor skills, balance and gross motor skills of a child.

**Results:** Children with ASD in our sample performed significantly lower in 6 out of 7 cerebellar tests compared to TD children and children with ID [ $F(2,57)=202.99$ ,  $p < .005$ ]. When we separated the tests according the examining motor skill (gross motor, fine motor, balance), analysis revealed statistical significant differences between the scores of the three groups, with the ASD group having the lower performance [ $F(2,57)=169.91$ ,  $p < .001$ ].

**Conclusions:** Our findings showed that cerebellar-dependent motor behaviors are compromised in preschool children diagnosed with ASD. Our findings, are consistent with previous studies which support a general cerebellar dysfunction in children with ASD (4), indicating that these impairments can emerge and be detected as early as preschool years.

### References:

1. Stoodley, C.J. (2016). The Cerebellum and Neurodevelopmental Disorders *Cerebellum*, 15, 34. <https://doi.org/10.1007/s12311-015-0715-3>
2. Mosconi, W. M., Wang, Z., Schmitt, M. L., Tsai, P., Sweeney, J. A. (2015). The role of cerebellar circuitry alterations in the pathophysiology of autism spectrum disorders. *Frontiers in Neuroscience*, 9, 296. DOI: 10.3389/fnins.2015.00296
3. Dow, R., & Moruzzi, G. (1958). *The physiology and pathology of the cerebellum*. Minneapolis: University of Minnesota Press.
4. Vlachos, F., Tsiftzi, F., & Agapitou, P. (2007). Evidence of cerebellar dysfunction in low-functioning children with autism. *Cognition Brain Behavior*, 11, 507-517.



## P97 Examination of rs282114 within the GABRR1 gene and its involvement in current depressive symptoms

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**Background:** The WHO estimates that 300 million people globally suffer from depression, with rising numbers. Recent studies have shown an association in a gene polymorphism, encoding the alpha 6 subunit of the GABA-A receptor GABRA6, with current depressive-/anxiety symptoms when exposed to recent negative life events. Another gene-environment interaction study (GxE) found GABRR1 to interact with parenting and impact depression in adolescents. In order to better understand the role of the GABAergic system in depression, we conducted a candidate gene study using an intronic variant of the GABRR1 gene.

**Materials and methods:** We ran linear regression analysis with PLINK on the NEWMOOD cohort (New Molecules in Mood Disorders, LSHM-CT-2004-503474). Equations contained sex, age and principal components as covariates, while target variable was current depressive symptom score measured by the Brief Symptom Inventory (BSI-DEP, depressive plus additional items). We investigated the rs282114 polymorphism within the GABRR1 gene.

**Results:** The intronic rs282114 had significant positive association ( $p = 0.0107$ ,  $\beta = 0.0855$ ) with current depressive symptoms, proving an involvement in the development of depressive symptoms.

**Conclusions:** The significant correlation supports the role of GABRR1 being involved in depression. However, the functional role needs to be explored further.

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### References:

1. World Health Organization. Depression. 2018 [cited 2018 22 March]; Available from: <http://www.who.int/en/news-room/fact-sheets/detail/depression>
2. Gonda et al. (2017) A new stress sensor and risk factor for suicide: the T allele of the functional genetic variant in the GABRA6 gene. *Scientific Reports*, 7, 12887.
3. Van Assche et al. (2017) Gene-based interaction analysis shows GABAergic genes interacting with parenting in adolescent depressive symptoms. *Journal of Child Psychology and Psychiatry*, 58, 1301-1309.

**P98 SORCS3 implicated in GWAS analyses shows association with lifetime depression in independent population**

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**Background:** 102 variants and 269 genes have been implicated in association with different depression phenotypes in a recent large genome-wide association study (GWAS). It was sortilin-related VPS10-domain containing receptor 3 (SORCS3) and neuronal growth regulator 1 (NEGR1) that showed the highest significance [1]. The aim of our study was to replicate results concerning these two genes in an independent general population at an SNP level in association with lifetime depression.

**Materials and methods:** 1820 European participants from Budapest and Manchester assessed for lifetime depression based on self-report were genotyped for SORCS3 and NEGR1. CoreExom PsychChip by Illumina was used to carry out genotyping. The positioning of variants on the genome was based on GRCh37/hg19. Imputation of SNPs included two phases. To determine haplotype information SHAPEIT was used, while imputation itself was conducted with the help of IMPUTE2. With gene boundaries extended by 10 kilobase pairs at both sides the process yielded 8590 SNPs within the two genes. Logistic regressions were run in additive, dominant and recessive models with lifetime depression as the binary outcome variable, with population, gender and age as covariates. Identified SNPs then went through clumping. Only clumps' top SNPs were interpreted, in case of which all of the appropriate quality control parameters were fulfilled.

**Results:** Following the clumping process none of the investigated SNPs in the NEGR1 gene showed significant association with lifetime depression. In case of the SORCS3 gene two SNPs, rs11599236 and rs3896224 were found to be significant protective factors against depression in two independent clumps.



**Conclusions:** Our results in the independent general population NewMood database are in harmony with previous findings concerning the SORCS3 gene, where both rs11599236 and rs3896224 were reported to have a protective effect in case of depression [2]. On the other hand, the association of NEGR1 on SNP level with lifetime depression has not been confirmed.

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#### References:

1. DM Howard, MJ Adams, TK Clarke, JD Haferty, J Gibson, M Shirali, JRI Coleman, SP Hage-naars, J Ward, EM Wigmore et al.: Genome-wide meta-analysis of depression identifies 102 independent variants and highlights the importance of the prefrontal brain regions. *Nature Neuroscience* 2019, 22(3): 343-352
2. DM Howard, MJ Adams, M Shiraly, TK Clarke, RE Marioni, G Davies, JRI Coleman, C Alloza, X Shen, MC Barbu et al.: Genome-wide association study of depression phenotypes in UK Biobank identifies variants in excitatory synaptic pathways. *Nature Communications* 2018, 9(1): 1470



### P99 Overview on the genetic background of the Reinforcement Sensitivity Theory

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**Background:** Reinforcement sensitivity theory [1] is based on Gray's biopsychological theory of personality on individual differences in sensitivity to punishment/reward and the underlying motivations of human behaviour. Gray hypothesized three brain systems: Behavioural Approach/Activation System (BAS) with appetitive motivation, Behavioural Inhibition System (BIS) with aversive motivation and the Fight-Flight-Freeze System (FFFS) with distinct neuroanatomical and neurochemical background.

**Materials and methods:** Several genes both within and beyond the dopaminergic system have been implicated in reward sensitivity to be connected to dopaminergic neurotransmission suggesting a role for variation in dopaminergic genes.

**Results:** The Val158Met single nucleotide polymorphism (SNP) of the COMT gene is associated with reduced Catechol-O-methyltransferase activity and reduced dopamine metabolism, which in Met carriers leads to higher activation of BAS [2] with higher scores on the BAS Fun seeking scale of Carver and White's BIS/BAS scales and reduced possibility to experience anxiety related disorders, which may also be related to increased dopamine level.

Genetic variation in the DRD2 gene, specifically the Taq1 A SNP is associated with decreased D2 receptor expression in the nucleus accumbens and has also been associated with higher BAS Reward responsiveness.

Apart from the dopaminergic system, the A118G SNP of OPRM1 encoding  $\mu$ -opioid receptors was associated with lower receptor expression in nucleus accumbens, leading to unstable frontal regulation, limited control and higher reward responsiveness [3].

The Val66Met polymorphism of the BDNF gene has been reported to be connected to BIS activity, with the Met66Met genotype associated with higher anxiety in mice. In human studies Met carriers exhibit lower novelty seeking and higher harm avoidance.

The s variant of the 5-HTTLPR gene was found to be associated with decreased serotonin transporter expression and has also been implicated in association with BIS. In s carriers aversive stimuli leads to sustained increase in synaptic serotonin levels, leading to both higher anxiety and BIS scores [4].

**Conclusions:** Both twin studies and several researches indicate the genetic base of the Reinforcement Sensitivity Theory, and genetic variation in several neurochemical systems appear to play a role in influencing individual differences in these systems. Given the role of reinforcement sensitivity and BIS/BAS activation in psychological symptoms and psychiatric disorders,



understanding their genetic and neurochemical background could pinpoint targets for pharmacological intervention.

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### References:

1. JA Gray: A critique of Eysenck's theory of personality. *A model for personality* 1981, 246-276
2. JC Dreher, P Kohn, B Kolachana, DR Weinberger, KF Berman: Variation in dopamine genes influences responsivity of the human reward system. *Proc Natl Acad Sci USA* 2009, 106(2): 617-22
3. LA Ray, KE Courtney, KE Hutchison, J MacKillop, A Galvan, DG Ghahremani: Initial Evidence that Oprm1 Genotype Moderates Ventral and Dorsal Striatum Functional Connectivity During Alcohol Cues. *Alcohol Clin Exp Res* 2014, 38(1): 78-89
4. MA Whisman, ED Richardson, A Smolen: Behavioral inhibition and tri-allelic genotyping of the serotonin transporter promoter (5-HTTLPR) polymorphism. *Journal of Research on Personality* 2011, 45: 706-709

**P100 Evaluation of oxidative stress status in schizophrenia patients subjected to antipsychotic drug treatment**

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**Background:** Schizophrenia is a chronic disabling psychiatric disorder which affects about 1% of the population worldwide. Oxidative stress refers to an imbalance of free radicals, such as reactive oxygen species (ROS) and the brain is considered particularly vulnerable to oxidative injury due to high oxygen utilization (1). Oxidative stress appears to be pronounced in treatment with antipsychotic drugs, suggesting that antipsychotic treatment may contribute to the oxidative imbalance (2,3). The purpose of this study was to clarify the ambiguity raised in preliminary reports regarding the efficacy of antipsychotic drug administration in terms of redox homeostasis.

**Materials and methods:** The oxidative stress markers as malondialdehyde (MDA), lipid hydroperoxide (LHP), protein carbonyl (PCO), the advanced protein oxidation products (AOPP), total thiol (T-SH), protein thiol (P-SH), non-protein thiol (NP-SH) were analyzed in serum samples of 44 schizophrenia patients obtained within 1 week of hospitalization and following antipsychotic drug treatment. All patients had been receiving treatment with antipsychotic medication for four or six weeks: 37 patients took atypical antipsychotics and the other 7 took typical antipsychotics.

**Results:** Our current results show that systemic oxidative biomarkers in schizophrenia patients after treatment with antipsychotic drugs imply an recruited redox homeostasis which may be considered as a reliable viewpoint in terms of their effects. The levels of the biochemical biomarkers were also found to be compatible with the PANSS results as better scores were seen after treatment.

**Conclusions:** Alleviating the systemic oxidative stress status in schizophrenia and the possible avenues of new treatment strategies using antioxidant molecules should be taken into consideration as adjunctive therapy in schizophrenia.

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**References:**

1. Pandya CD, Howell KR, Pillai A. Antioxidants as potential therapeutics for neuropsychiatric disorders. *Progress in Neuro-Psychopharmacology & Biological Psychiatry* 2013;46:214-223.
2. Yao JK, Keshavan MS. Antioxidants, redox signaling, and pathophysiology in schizophrenia: an integrative view. *Antioxid Redox Signal* 2011;15(7):2011-35.
3. Leucht S, Tardy M, Komossa K, Heres S, Kissling W, Salanti G, Davis JM. Antipsychotic drugs versus placebo for relapse prevention in schizophrenia: A systematic review and meta-analysis. *Lancet*. 2012;379:2063-2071.



## P101 Clozapine initiation in primary health care units, in patients with Parkinson Disease

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**Background:** Parkinson's Disease is a neurodegenerative disorder characterized by tremor, rigidity, and bradykinesia, affecting 1-2% of the general population and 1% of the population above 60 years. Regional loss of striatal dopamine is believed to account for akinesia and rigidity, while degeneration of heterogenous neurons can cause psychiatric symptoms. The treatment of PD with L-Dopa can also affect the mental equilibrium, sometimes leading to psychotic manifestations. Atypical antipsychotics have been used in resolving PD psychosis, however only low-dose clozapine has a recommendation for this purpose. What is more it has been suggested that it can also ameliorate dyskinesias.

**Materials and methods:** Clozapine is a medication with severe adverse effects, up-titrated only in hospitalized patients. This means that a portion of the PD population who could benefit from clozapine treatment and face difficulties in reaching a hospital regularly are deprived of the optimal health care, with that contributing to a poorer outcome. For the facilitation of the patients, we tried to find a more suitable solution for them, one that is accompanied by an even better quality of life and a corresponding cost effectiveness. In order to achieve that, we implemented a pilot project of clozapine up-titration in Primary Health Care (PHC) units of Corfu District.

**Results:** PHC units, being more accessible, are already involved in prescribing medicine for PD patients and monitoring for their well-being with blood tests, ECGs, etc. General practitioners can conduct all the tests required and identify pathological results and possible side-effects of the drug in patients receiving clozapine.

**Conclusions:** The forementioned project is feasible to be put in motion in other districts as well with a beneficial effect on PD patients' lives. In this regard, we are in the middle of developing a protocol concerning clozapine up-titration in PHC units.

**P102 A Scale for Aggressive and Violent Behaviour - General Hospital of Corfu**

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**Background:** In everyday practice, mental health professionals are often called to deal with cases of agitated and aggressive patients. When verbal methods fail, treatment options include the use of either benzodiazepines or antipsychotics or a combination of both drug categories p.o or even in injectable forms.

**Materials and methods:** The need of a scale that would estimate possible agitation and aggressivity of patients has always been crucial for clinicians, in order to avoid the abovementioned demeanors.

**Results:** We present you our scale used by mental health practitioners in Corfu General Hospital to assess aggressivity, which has been adjusted to the needs of the psychiatric clinic's closed department.

**Conclusions:** Our scale appears to have high sensitivity regarding the identification of prospective aggressive behavior. Also, it is characterized by its user-friendliness and thus it is possible that it can be used by nurses and other health care providers, apart from psychiatrists, facilitating the provision of their service as well.



### P103 Clozapine Induced Myocarditis - Case series

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**Background:** Clozapine is an atypical neuroleptic with multiple binding affinities. However, concern for life-threatening adverse effects has restricted its use to cases of treatment-resistant schizophrenia. One of these perilous side effects, is clozapine-associated myocarditis, with an incidence of 3%. Due to the risk of myocarditis and other side effects (neutropenia, agranulocytosis), careful monitoring is applied in many countries before and after the initiation of the drug.

**Materials and methods:** We present the cases of two patients who presented signs or symptoms of myocarditis while up titrating clozapine. Frequent heart monitoring, including heart enzymes tests weekly for the first month, was applied during up-titration of clozapine and meticulous tests were performed after indications of heart disease emerged, including echocardiogram as well as heart MRI.

**Results:** Because of the frequent monitoring applied we managed to become aware of the problem, withdraw the drug and outface the acute phase of myocarditis promptly, that leading to a full recovery from the patients' part, not leaving them with permanent heart issues. In both cases we suspected clozapine associated myocarditis due to elevated body temperature and troponin levels and subsequently we conducted echocardiogram and heart MRI, to certify the myocarditis.

**Conclusions:** It seems that careful monitoring from clinicians' part, including an echocardiogram of reference before up-titration and heart enzyme tests weekly for the first month, can be effective in avoiding residual heart issues in patients with clozapine-associated myocarditis. This could abrogate the fear that many mental health practitioners share, concerning the peril of myocarditis caused by clozapine.

#### **P104 Anxiety correlation with Tension Type Headache**

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**Background:** TTH is the most common type of headache with severe socioeconomic impact and identification of the associated factors may be an important public health issue. We tried to determine the psychiatric comorbidity with Infrequent episodic tension-type headache (ieTTH) in patients on impulsively visits on ER.

**Materials and methods:** We studied 34 ieTTH patients that met the diagnostic criteria of the Headache Classification Committee of the International Headache Society. Recruitment was made from Emergency Room of General Hospital of Corfu that had come to request help for pain. Inclusion criteria were adult patient, presence of ieTTH pain, not known psychiatric condition or use of SSRIs. The method that was used to analyze the facts was Hamilton Depression Rating Scale (HAM-D), Hamilton Anxiety Rating Scale (HAM-A), and a psychiatric interview to determine psychiatric diagnosis according International Classification of Diseases - 10 (ICD-10).

**Results:** Overall, 85.3%(n = 29) were female, mean age = 34.6 years, mean HAM-A score = 14.5 (n=6 <7), mean HAM-D score = 9.4 (n=24 <7), 73,5% (n=25) complained about pain in two more systems it was significantly higher in TTH group. Generalized anxiety disorder is the most common psychiatric comorbidity 44,1% (n = 15).

**Conclusions:** International literature indicates that depression in Chronic TTH patients is the major psychiatric disorder, however that seems to be inaccurate in ieTTH patients where anxiety and stress levels seems to be more important. Further research is needed with a bigger sample so that we can make safe conclusions and properly modify the treatment of the acute phase at the ER.

## P105 Amputated limbs painful sensations management

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**Background:** The ability to feel pain in a limb or limbs that no longer exist is named phantom limb member pain (FLP). PLP occurs at 60-65% of amputees without a first line treatment and in most cases is recognized as neuropathetic pain. N-methyl-D-aspartate (NMDA) receptors are involved in pain signalling and neuroplasticity. Studies show that antagonism of NMDA receptors might be helpful at FLP

**Materials and methods:** We tried from 2017 to 2019, 10 mg of Memantine divided in two doses at 36 patients aged 27-72 (mean age 58.3), 27 male and 9 female, who had an amputation without any interventions in their analgesic treatment. NRS scale was used for evaluation. Out of 36 patients, 16 were amputated less than 3 months (NRS 7.1), 7 between 3 and 6 months (NRS 7.8) and the rest of the 13 patients more than 6 months (NRS 7.2)

**Results:** There was strong correlation that was observed between pain diminution and time of amputation. From the first group of patients, 13 show pain diminution even from the first days of treatment. All patients of the first group show improvement after the first month (NRS - 4.4), at six months, 10 patients stopped complaining of pain and all the analgesic medications were reduced. Patients of the second group show light improvement (NRS -1.9) and the 3rd group was statistically unchanged (NRS -0.3)

**Conclusions:** The current evidence regarding the use of Memantine for chronic pain is limited and uncertain. However, due to the different pathophysiology of PLP, memantine might be a useful adjunction. Further research is needed.



**P106 The biopsychosocial model of suicide risk factors among soldiers suffering from mental disorders who attempt suicide**

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**Background:** Prediction and prevention of suicide are prominent problems in the field of military psychiatry. While the soldiers always had a lower suicide rate compared to the general population, the accuracy of the suicide prediction model's is near 0. This paper proposes applying the biopsychosocial model used in psychiatry in the field of Suicidology to achieve a higher accuracy rate of the suicidal behavior assessment.

**Materials and methods:** During this study, we observed 230 military personnel with psychiatric disorders and suicidal behavior (aged  $19,3 \pm 2,5$ ), divided into three groups: suicide attempters ( $n=76$ ), suicide ideations ( $n=78$ ), soldiers with mental disorders without suicidal behavior ( $n=76$ ) and 114 (aged  $20,3 \pm 0,8$ ) healthy controls.

**Results:** The main determinants of suicide attempt are previous (before the service) suicide attempts 15,8% ( $p < 0,05$ ) and suicides or attempts among relatives 39,5 % ( $p < 0,05$ ). The main social characteristics of attempters were addictive behavior 14,5% and pathological influence of social media 10,5% ( $p < 0,05$ ). There was a significant correlation between impulsiveness, social introversion and suicide attempts. Results of Heart Rate Variability measurement did not show any differences among patient groups. At the same time, they all had a low level of parasympathetic activity, characterized by a decrease in the high-frequency band and an increase in the low-frequency band and high-stress index compared to HC.

**Conclusions:** Overall, using a comprehensive assessment by applying the biopsychosocial model could increase the percent of earlier detection of suicidal behavior among military personnel.

## **P107 The effectiveness of cognitive-behavioral group therapy, tolerance of emotional distress training and acceptance and commitment therapy on craving, excitement regulation, self-coherence and temptation intensity among women with drug dependency**

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**Background:** Cognitive behavioral group therapy (CBGT) was used as an treatment for drug dependency disorder. However, a substantial number of patients remain symptomatic and response rates are low. Researchers have advocated better matching of treatments to individuals as one approach towards improving therapy outcomes, which in turn has motivated the search for alternative treatment approaches. Acceptance and commitment therapy (ACT) tolerance of emotional distress training (TEDT), which emphasizes personal values and cognitive flexibility, offers two such alternative. The current study compares CBGT,ACT and TEDT for craving, excitement regulation, self-coherence and temptation intensity. The purpose of current study was to compare the effectiveness of CBGT, ACT and TEDT on craving, excitement regulation, self-coherence and temptation intensity among women with drug dependency in Kerman. In this research, semi-experimental method was used.

**Materials and methods:** The statistical population of this study included all Kerman drug addicted women (123). Sampling method was simple randomize. Sixty women were assigned to three experimental groups. The first group participated in 8 sessions of ACT, the second group participated in 12 sessions of CBGT, and the third group participated in 12 sessions of TEDT. Before and after treatment, the subjects responded to the Hendris crave (2002), Shot Emotional Conflict (1998) and the Beck Temptation (1993) questionnaires. The data were analyzed using one way analysis of variance.

**Results:** The results showed that CBGT, tolerance of emotional distress TEDT and ACT had the most effect on reducing addiction to craving and temptation intensity, enhancing excitement regulation and self-coherence, respectively.

**Conclusions:** In sum, this study adds to the small but growing body of evidence indicating that CBGT,ACT and TEDT perform well for the effect of craving, excitement regulation, self-coherence and temptation intensity. This study also replicated a moderator finding from a previous comparison of CBGT,ACT and TEDT, showing that drug dependents respond more favorably to CBGT. Implications for clinical practice and future research are discussed.

### **References:**

1. AC Butler, JE Chapman, EM Forman, AT Beck: The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review* 2006,26:17-31
2. MG Craske, SL Rauch, R Ursano, J Prenoveau, DS Pine, RE Zinbarg: What is an anxiety disorder? *Depression and Anxiety* 2009,26:1066-1085
3. MG Craske, MB Stein, G Sullivan, C Sherbourne, A Bystritsky, RD Rose, P Roy-Byrne: Disorder-specific impact of coordinated anxiety learning and management treatment for anxiety disorders in primary care. *Archives of General Psychiatry* 2011,68(4):378-387
4. EC Odgaard, RL Fowler: Confidence intervals for effect sizes: Compliance and clinical significance in the Journal of Consulting and Clinical Psychology. *Journal of Consulting and Clinical Psychology* 2010,78(3):287-297

**P108 Age specific clinical features of premenstrual dysphoric disorder and premenstrual syndrome**

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**Background:** Approximately 20-40% of women in fertile age suffer premenstrual syndrome (PMS) and 2-8% of them premenstrual dysphoric disorder (PMDD)(1). Within the Balkan region there are available data only from Greece for the distribution of PMS.(25,7%)(2). With age the syndrome gets more severe (3,4).

**Objectives:** To examine and compare the clinical picture and its severity in women below and over 35 years.

**Materials and methods:** We examined 98 mentally and gynecologically healthy women with PMS/PMDD. They were divided into two groups depending on age: 76 women below 35 years and 22 women over 35 years. All participants were evaluated with the Premenstrual symptoms screening tool (PSST).

**Results:** Among younger women, the most common psychological symptoms were irritability (92.1%), change in appetite (78.9%) and fatigue (77.6%) whereas the most prevalent somatic complaints were breast tension (85.5%), abdominal bloating (84.2%) and weight gain (50.0%). With the advance of age among the psychological symptoms anxiety, fatigue, sweet craving (86.4%) and sleep changes were most commonly encountered whereas among the somatic ones - headache (95.5%), abdominal bloating (86.4%) and breast tension (68.2%) predominate. The psychological and somatic symptoms are almost equally represented and do not differ between groups. In both groups the leading proportion of patients suffer mild PMS but with age moderate and severe cases increase in number.

**Conclusions:** It seems that the process of aging is related to symptoms deterioration and the proportion of PMDD increases.

**References:**

1. Walsh, P. Michael, S. O'Brien, T. Backstroem et al. (2016) Fourth consensus of the International Society for Premenstrual Disorders (ISPMDD): auditable standards for diagnosis and management of premenstrual disorder, Arch Womens Ment Health, 19, 953-958
2. Karaoulanis SE., Mouzas OD, Rizoulis AA, Angelopoulos NV (2010) Prevalence of premenstrual syndrome and premenstrual dysphoric disorder in greek nursery students. European Psychiatry , Volume 25 , 1, 1394
3. Khodjaeva N., F. Khaydarova (2013) Prevalence of premenstrual syndrome among women of child-bearing age with regular menstrual cycle, Medical and Health Science Journal, 14(3), 144-149.
4. Raval C.M., B.N. Panchal, D.S. Tiwari, A.U. Vala, R.B. Bhatt (2016) Prevalence of premenstrual syndrome and premenstrual dysphoric disorder among college students of Bhavnagar, Gujarat, Indian J Psychiatry, 58(2), 164-170.



## **P109 Comparison the academic self-efficacy, perceived control, self-perception and critical thinking among undergraduate students female in technical, art and humanitarian field**

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**Background:** The idea of self-efficacy refers to peoples beliefs in their capabilities to produce certain effects and to learn or perform behaviors at designated levels. Self-perception has the most powerful influence on the status of self-efficacy, on the other hand, Critical thinking serve as a source of self-efficacy through Perceived control. The purpose of this study was to compare the academic self-efficacy, perceived control, self-perception and critical thinking among undergraduate students female in technical, art and humanitarian field of study in Kerman.

**Materials and methods:** The method of this research was comparative causal. The statistical population of this study consisted of all female students studying in arts, humanitarian and technical field of study in the Kerman Azad University included 1200 students. The sampling method was purposeful. The sample size was 75subjects. Three groups from the technical, arts and humanitarian field of study were selected. The subjects responded to Ritexs critical thinking (2003) Morgan and Jones academic self-efficacy (1999) Schustrom self-perception (2000) and Wolvern Conner and Skinner precived evaluation(2010) questionnaires. T-test was used to analyze the data.

**Results:** The results showed that in arts, humanitarian and technical field of study students, had higher academic self-efficacy, perceived control, self perception, and critical thinking, respectively.

**Conclusions:** A major contribution of the present study was demonstrating the important roles of self-efficacy, perceived control, self-perception and critical thinking in art undergraduate students academic success. Concerning corresponding institutional support and future research, the results suggested distinguishing incoming from advanced undergraduate students in various field of study.

### **References:**

1. JL Brown: Developing a freshman orientation survey to improve student retention within a college. Coll. Stud. Journal 2012: 46, 834-851
2. LM Daniels, RP Perry, RH Stupnisky, TL Stewart, N Newall, EG Nancy, et al: The longitudinal effects of achievement goals and perceived control on university student achievement. Eur. J. Psychol. Educ 2014: 29, 175-194
3. M Dresel, R Grassinger : Changes in achievement motivation among University Freshmen. J. Educ. Train. Stud 2013:1, 159-173
4. J Ranellucci, NC Hall, T Goetz T: Achievement goals, emotions, learning, and performance: a process model. Motiv. Sci 2015: 1, 98-120

**P110 Relationship between psychological wealth, positive excitement and organizational commitment with job performance**

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**Background:** As the role of psychological health in job performance has received renewed interest over the past decade. However, the relationship between psychological wealth, positive excitement and organizational commitment with job performance has been relatively overlooked. The purpose of this study was to investigate the relationship between psychological wealth, positive excitement and organizational commitment with job performance among male employees of Sarcheshmeh copper complex.

**Materials and methods:** The research method was correlational. The statistical population of this research included all male employees of water and electricity affairs of Sarcheshmeh Copper Complex(305 employees). Simple random sampling was used. Based on Morgan table 169 employees selected as a sample. Subjects responded to the Lutans psychological wealth (2007) Porter's organizational commitment (2007) Watson positive excitements (2008) and Paterson job performance(2000) questionnaires. Pearson correlation coefficient and focal correlation were used for analysis of the results.

**Results:** The results showed that there was a direct and significant relationship between psychological wealth, positive emotions and organizational commitment with job performance. The components of positive excitement and organizational commitment were the strongest predictors of job performance, respectively.

**Conclusions:** The findings encourage future research on the relationship between psychological wealth, positive excitement and organizational commitment with job performance. We offer and discuss some possible explanations for these findings.

**References:**

1. A Cohen, D Keren: Organizational commitment and cultural values: examining their relationship and their mutual effect on in-role performance and organizational citizenship behavior. *Group Organization Management* 2008: 33, 425-452
2. PA Creed, BM Evans: Personality, well-being and deprivation theory, *Personality and Individual Differences* 2002: 33, 1045-1054
3. P Currie, B Dollery: Organizational commitment and perceived organizational support in the NSW police *Policing* 2006: 29, 741-756
4. Solinger, W van Olffen, R Roe: Beyond the three-component model of organizational commitment. *Journal of Applied Psychology* 2008: 93,70-83



## **P111 Does lithium act by reducing proinflammatory cytokines levels in bipolar disorder? A systematic literature review.**

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A correlation between elevated levels of proinflammatory cytokines and bipolar disorder, major depressive disorder (MDD) and schizophrenia has been suggested in several studies. Lithium is a first-line treatment option in bipolar disorder, and used as an adjunctive treatment in MDD and schizophrenia. Despite its extensive use, its mechanism of action is not fully understood. One of the proposed hypotheses of lithium's mechanism of action is reduction in the levels of proinflammatory cytokines. In current study we investigate the effects of lithium on proinflammatory cytokines (IL-1, IL-6, INF- $\gamma$ , TNF) in bipolar disorder, MDD and schizophrenia.

A systematic literature review, was conducted through search via electronic database PubMed. Inclusion and exclusion criteria were specified using the PICOS format. Search words and filters were combined using both Medical Subject Headings (MeSH) terms and free text search words. The search initially resulted in 105 articles and through inclusion and exclusion criteria full-text articles were estimated for eligibility. Risk of bias was estimated using the Cochrane Handbook.

A total of 10 eligible articles/studies were included. Nine out of 10 studies investigated bipolar patients, and one study investigated patients with MDD. No study investigated patients with schizophrenia. Four out of 9 studies regarding bipolar patients reported a significant decrease in some proinflammatory cytokines, 4 studies reported a significant increase, and one study reported no change in the proinflammatory cytokines. In two well conducted studies, lithium appeared to have differential effects, namely decreasing proinflammatory cytokines in lithium responders compared to lithium non-responders. No detectable levels of proinflammatory cytokines were found in the article studying MDD patients.

The results indicated that lithium may have different effects depending on which specific cytokine was studied and on the specific characteristics of the studied population. Therefore, the outcomes of our review cannot unequivocally answer whether lithium acts by increasing or decreasing proinflammatory cytokines, or both depending on the experimental conditions. Further research is needed to fully elucidate the relationship between lithium and proinflammatory cytokines in bipolar disorder, MDD and schizophrenia.

### **P112 The efficacy of cognitive behavioral play therapy on social, emotional and shy**

Fatemeh Mahmodzadeh Zarandi, Farshid Khosropour

Department of Psychology, Zarand Branch, Islamic Azad University, Zarand, Iran

**Background:** Cognitive-Behavioral Play therapy (CBPT) has been proposed since several decades as an interventional aid for developing social relationships in children. CBPT is a developmentally sensitive adaptation of CBT. Play therapy is an effective method in resolving behavioral and mental problems in children. The purpose of this study was to evaluate the efficacy of CBPT on social, emotional and shy among slow learner students in Kerman.

**Materials and methods:** Pre-test and post-test, control group, quasi-intervention design was adopted for the study. The statistical population of this study consisted of all female students referring to the counseling centers, with the slow learner diagnosis (75 subjects) in Kerman city. The simple random sampling method was used. From the statistical population, 30 subjects were selected and randomly assigned to control and experimental groups (each group was 15). The experimental group participated in ten sessions of CBPT, but the control group received no training. In both the groups, the pre-test and post-test was conducted by the Sinha and Sing adjusting students scale (1983) Jack and Boss (1983) shy questionnaire. The data obtained were analyzed using co-variance test by SPSS software.

**Results:** The efficacy of cognitive behavioral play therapy on social, emotional and shy.

**Conclusions:** It seems that CBPT is an effective method to increase social relationship in slow learner students. Therefore, educators and teachers are advised to use this method as an adjunctive therapy for such children in rehabilitation centers and schools.

#### **References:**

1. V Ebrahimi-Dehshiri, MA Mazaheri, K Tahmasian: Efficacy of cognitive-behavioral play therapy in reducing children's night-time fears. *International Journal of Behavioral Sciences* 2011: 5(3):253-259
2. HH Wettig, A Coleman, FJ Geider: Evaluating the effectiveness of Play therapy in treating shy, socially withdrawn children. *International Journal of Play Therapy* 2011: 20(1):26-37
3. R Hassani, B Mirzaeean, AR Khalilian: Effectiveness of cognitive behavior-based play therapy on anxiety and self-esteem of children with attention deficit/hyperactivity disorder (ADHD) children. *Journal of Psychology* 2013: 8(29):163-168
4. A Chinekesh, M Kamalian, M Eltemasi, S Chinekesh, M Alavi: The effect of group play therapy on social-emotional skills in pre-school children. *Global Journal of Health Science* 2014: 6(2):163-167



## **P113 The efficacy of cognitive behavioral play therapy on social, emotional and shy among slow learner students**

Fatemeh Mahmodzadeh Zarandi, Farshid Khosropour

Department of Psychology, Zarand Branch, Islamic Azad University, Zarand, Iran

**Background:** Cognitive-Behavioral Play therapy (CBPT) has been proposed since several decades as an interventional aid for developing social relationships in children. CBPT is a developmentally sensitive adaptation of CBT. Play therapy is an effective method in resolving behavioral and mental problems in children. The purpose of this study was to evaluate the efficacy of CBPT on social, emotional and shy among slow learner students in Kerman.

**Materials and methods:** Pre-test and post-test, control group, quasi-intervention design was adopted for the study. The statistical population of this study consisted of all female students referring to the counseling centers, with the slow learner diagnosis (75 subjects) in Kerman city. The simple random sampling method was used. From the statistical population, 30 subjects were selected and randomly assigned to control and experimental groups (each group was 15). The experimental group participated in ten sessions of CBPT, but the control group received no training. In both the groups, the pre-test and post-test was conducted by the Sinha and Sing adjusting students scale (1983) Jack and Boss (1983) shy questionnaire. The data obtained were analyzed using co-variance test by SPSS software.

**Results:** The results showed that CBPT increased emotional and educational adaptability and reduced shy.

**Conclusions:** It seems that CBPT is an effective method to increase social relationship in slow learner students. Therefore, educators and teachers are advised to use this method as an adjunctive therapy for such children in rehabilitation centers and schools.

### **References:**

1. V Ebrahimi-Dehshiri, MA Mazaheri, K Tahmasian: Efficacy of cognitive-behavioral play therapy in reducing children s night-time fears. *International Journal of Behavioral Sciences* 2011: 5(3):253-259
2. HH Wettig, A Coleman, FJ Geider: Evaluating the effectiveness of Ply therapy in treating shy, socially withdrawn children. *International Journal of Play Therapy* 2011: 20(1):26-37
3. R Hassani, B Mirzaeean, AR Khalilian: Effectiveness of cognitive behavior-based play therapy on anxiety and self-esteem of children with attention deficit/hyperactivity disorder (ADHD) children. *Journal of Psychology* 2013: 8(29):163-168
4. A Chinekesh, M Kamalian, M Eltemasi, S Chinekesh, M Alavi: The effect of group play therapy on social-emotional skills in pre-school children. *Global Journal of Health Science* 2014: 6(2):163-167



**P114 IV Ketamine Infusion in Treatment resistant Depression - Early results**

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**Background:** Up to 20% of the patients suffering from depression meet criteria for treatment-resistant depression (TRD). Ketamine, a glutamate N-methyl-D-aspartate (NMDA) receptor antagonist, appears as a novel treatment in resistant unipolar and bipolar depression, with rapid antidepressant effects.

**Materials and methods:** Ketamine administration was attempted in patients with treatment resistant Major Depression Disorders with suicide ideation in General Hospital of Corfu, Greece. More specifically, the ketamine was administered after the initial failed attempts in first, and second line antidepressant medications and the patients' disagreement in ECT usage. Seven patients whose age ranged, from 42 to 58 years old, participated to the research project. Two males and five females were suffering from treatment resistant unipolar depression. A consent form was signed beforehand. Every patient did six Ketamine infusions IV 0.5mg/ kg, in 100ml N/S, every 3 days, with 45 minutes duration each.

**Results:** The overall response rate was 100%. An SCL-90 and MADRS scale decrease was observed, even at 4 hours after the first Ketamine infusion, sustained at the duration of the infusion period. Suicide ideation was decreased, but most importantly the general functionality of the patients improved significantly, according to their performance in GAF rating scale. Ketamine was well tolerated. Cephalalgia, dizziness and alteration of taste were reported during the infusion. All side effects disappeared within an hour after the infusion ended.

**Conclusions:** Ketamine's potential as an antidepressant is strong, although future controlled studies will be required to identify strategies to maintain an antidepressant response among patients.



## **P115 Preliminary study on the correlations between oxytocin levels and irritable bowel syndrome in patients with depression**

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**Background:** Lately there are increased evidences that oxytocin may be an important mediator in several psychiatric disorders including depression and anxiety. Oxytocin system seems to be linked with several neurotransmitters important in psychiatric disorder, but also with the hypothalamic-pituitary-adrenal (HPA) axis and is also a key factor in stress regulation mechanisms.

**Materials and methods:** Considering the oxytocin receptor pattern of distribution both central and peripherally and the growing data concerning the disbalance of oxytocin in psychiatric disorders we may speculate that oxytocin system may be at the core of psychosomatic disturbances. Also, recent data brought to attention that oxytocin receptor is distributed throughout gastrointestinal tract. Our hypothesis of the present study was that oxytocin system is disbalanced in irritable bowel syndrome considering also the psychological component of this digestive disorder.

**Results:** We preliminary report here a significant decrease of serum oxytocin levels in patients with major depression disorder and irritable bowel syndrome, as compared with those with major depression disorder alone.

**Conclusions:** There seems to be a correlation between between oxytocin levels and irritable bowel syndrome in patients with depression

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### **P116 Comparison of eye movement desensitization reprocessing and cognitive behavioral therapy as adjunctive treatments for recurrent anxiety**

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**Background:** Eye movement desensitization and reprocessing (EMDR) and cognitive-behavioral therapy (CBT) are both widely used in the treatment of anxiety. There has, however, been debate regarding the advantages of one approach over the other. This study sought to determine whether there was any evidence that one treatment was superior to the other. Treatment of recurrent anxiety disorders is currently only moderately successful. The aim of this research was the comparing the efficacy of Eye Movement Desensitization Reprocessing and cognitive-behavioral therapy in the treatment of recurrent anxiety.

**Materials and methods:** In this double-blind clinical trial study, 40 patients with recurrent anxiety referred to psychiatric clinic of Kerman University of Medical Sciences Clinics were randomly divided into the EMDR and CBT groups. Patients received up to 12 sessions of CBT or EMDR treatment. Data were collected using the anxiety inventory(2010). The participants were evaluated at the beginning and 8 weeks after the end of the treatment.

**Results:** Both treatments showed large effect sizes on the recurrent anxiety symptom outcomes, and a medium effect size on the behavior outcome, all statistically significant. A non-significant trend on self-reported recurrent anxiety favored EMDR over CBT.

**Conclusions:** Further research is needed within the framework of randomized controlled trials. Our results suggest that in the treatment of recurrent anxiety, both therapy methods tend to be equally efficacious. We suggest that future research should not restrict its focus to the efficacy, effectiveness and efficiency of these therapy methods but should also attempt to establish which recurrent anxiety patients are more likely to benefit from one method or the other. Although these results can be considered preliminary only, this study suggests that EMDR could be a viable and effective treatment for reducing recurrent anxiety symptoms and improving the quality of life of patients with recurrent anxiety.

#### **References:**

1. K Cusack, D E Jonas, C A Forneris, C Wines, J Sonis, J C Middleton, et al: Psychological treatments for adults with post traumatic stress disorder: a systematic review and meta-analysis. *Clin. Psychol. Rev* 2016:43, 128-141
2. B R Keeshin, J R Strawn: Psychological and pharmacologic treatment of youth with post traumatic stress disorder: an evidence-based review. *Child Adolesc. Psychiatr. Clin. N. Am* 2014:23. 339-411
3. N Morina, R Koerssen, T V Pollet: Interventions for children and adolescents with post traumatic stress disorder: a meta-analysis of comparative outcome studies. *Clin Psychol Rev* 2016: 47- 41
4. E Alisic, A K Zalta, F Van Wesel, S E Larsen, G S Hafstad, K Hassanpour, et al : Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: meta-analysis. *Br. J. Psychiatry* 2014: 204 335

## **P117 Lornoxicam as a treatment for head and neck pain in female elements with professional athletic activity**

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**Background:** Lornoxicam is a nonsteroidal anti-inflammatory drug of the oxicam class with analgesic and anti-inflammatory properties

**Materials and methods:** Aim of this study was to evaluate the use of lornoxicam in 5 professional female athletes, with head and neck pain

**Results:** 5 female amateur athletes (1 soccer,1 basket -ball,1 volley-ball ,1 tennis, 1 long distance runner) were included in this study .All of them were suffering from head and neck pain that effects the athletic performance and the overall health. Range of age 25-45 and mean age 35 years. All of them were treated with lornoxicam 8 mg , 2 times a day, for 21 days(oral dosage)

**Conclusions:** All of them ,report pain relief and return to play with optimal results . No contraindications and no problems were reported.It seems that this treatment is safe and effective

**P118 Meloxicam as a treatment for chronic back pain in professional athletes**

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**Background:** Meloxicam is a nonsteroidal anti-inflammatory drug with analgesic and anti-inflammatory properties. Aim of this study was to evaluate the use of meloxicam in 5 elements with chronic back pain and professional athletic activity.

**Materials and methods:** 5 athletes were included in this study .All of them were suffering from chronic back pain that effects the athletic performance and the overall health. Range of age 25-45 and mean age 37,5 years..All of them were treated with meloxicam 7,5 mg , 2 times a day, for 21 days(oral dosage)

**Results:** ALL of them, report pain relief and optimal , results.

**Conclusions:** No contraindications and no problems were reported. It seems that this treatment is safe and effective.



## **P119 Initial validity and reliability of the social and emotional loneliness scale for adults among students and elderly**

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**Background:** Social relationships are at the core of human life, not surprisingly, problematic aspects of relationships have been a major focus of psychological research. Some problems of social relations have, however, been emphasized to the neglect of others. Emotional loneliness is proposed to result from the lack of attachment to another person who offers emotional support. The Social and Emotional Loneliness Scale for Adults (SELSA; Ditommaso & Spinner, 1993) is a 37-item scale based on the Weiss (1973) theory of social and emotional loneliness. Loneliness is likely to be an important aspect of life.

**Materials and methods:** This study aimed to examine the psychometric properties of the SELSA by utilizing two separate and independent samples: university students ( $n = 210$ ) and elderly ( $n = 202$ ). Participants completed romantic, social, and family sub scales of the SELSA.

**Results:** The results demonstrate that the SELSA model reveals significant results in both samples in terms of goodness of fit indices in confirmatory factor analysis. In addition to satisfactory reliability, the concurrent and discriminant validity of the scale were supported in both samples by revealing the association of the SELSA with conceptually related measures (i.e., social support, social provision, depression, positive affect, negative affect, and self esteem in the sample of university students; geriatric depression, self esteem and life satisfaction in the sample of elderly) and the unrelated measure (social desirability). Finally, results from a factor analysis indicated that the three-factor model of the SELSA provided the best fit to the data.

**Conclusions:** In sum, these results provide some support for SELSA. The findings also support the reliability and discriminant validity of the scores on the subscales of the SELSA. These findings suggest that young and elderly people have a common core of social loneliness. However, it is also probable that these different types of loneliness may reflect distinct deficits, experiences, and consequences.

### **References:**

1. S Balandin , N Berg, A Waller : Assessing the loneliness of older people with cerebral palsy . *Disability & Rehabilitation* 2006: 28 ( 8 )469 - 479
2. P C Britton , K R Conner : Reliability of the UCLA Loneliness Scale in opiate dependent individuals . *Journal of Personality Assessment* 2007: 88 ( 3 ) 368 - 371
3. N Civitci, A Civitci : Self-esteem as mediator and moderator of the relationship between loneliness and life satisfaction in adolescents . *Personality and Individual Differences* 2009: 47 , 954 - 958
4. I Stepanikova, N H Nie , X He : Time on the Internet at home, loneliness, and life satisfaction: Evidence from panel time-diary data . *Computers in Human Behavior* 2010: 26 ( 3 ) 329 - 338

**P120 Investigating the effectiveness of cognitive behavioral group therapy on emotional regulation, self-efficacy and self-destruction behavior among substance abusers**

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**Background:** Cognitive Behavioral Group Therapy CBGT is a kind of psychotherapy that concentrates on the way people think about a situation. However, the literature review showed that no research comprehensively discusses the effectiveness of CBGT on improving the emotional regulation, self-efficacy and self-destruction behavior among substance abusers. The aim of the current study was to investigate the effectiveness of CBGT on emotional regulation, self-efficacy and self-destruction behavior among substance abusers in Kerman city.

**Materials and methods:** The current research is a semi-trial research with pretest-post test experimental design and control groups. 40 substance abusers were chosen via proper sampling approach and they were stochastically classified into test and control group (each group, n = 20). The participants were responded to Cognitive Emotion Regulation (2002) Self-Injury (1998) Self-Efficacy (2008) questionnaires. Subsequently, the experimental group was trained in the CBGT for eight sessions and the control group received no interventions. In the end, both groups responded to questionnaires, and the data were investigated by using a co variance method and SPSS-20.

**Results:** The outcomes demonstrated that there were notable distinctions between the experiment and the control groups after the implementation of the CBGT training ( $P < 0.001$ ) so that the average score of emotion regulation, self-efficacy increased and self-destruction decreased in experimental group rather than in the control group.

**Conclusions:** The findings indicated that the CBGT practice is useful in improving emotion regulation, self-efficacy and self-destruction behavior in substance abused women. Thus, one can recommend that appropriate therapy training could be designed to improve their mental health.

**References:**

1. SB Patte: Depression in MS in the face of overlapping symptoms. *International MS Journal* 2012,2:1-14
2. N Ahmadi, S Talepasand, MA Rezaie, P Sarkeshik Zadeh, A Aghdasi: The effects of health promotion training on preventing high school students from addiction. *Journal of Analytical Psychology* 2014,5(21):256-267
3. S Khodaie, K Khazaei, T Kazemi, Z Aliabadi: The Effect of cognitive-behavioral group therapy on decreasing anxiety and depression in patients with myocardial infarction. *Modern Care* 2012,9(4):364-37
4. JV Levinsoon: The effect of cognitive behavioral group therapy on the regulation and self\_ efficiency of divorcee. *J Educ Gift* 2014, 21: 228-309



## P121 The effect of reality therapy on moral commitment of couples and ability to prediction of divorce

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**Background:** Commitment to the partner is one of the most important factors to ensure the continuity of marriage and family bonds that come due to increasing infidelity and divorce in the past two decades. Reality therapy based on training is effective on the improvement of, couples communication and commitment. The purpose of this research was to examine the effect of reality therapy on moral commitment among couples and ability to prediction of divorce.

**Materials and methods:** Research method was semi-experimental, and the design used in this research was pre-test post-test with a control group. The sample was 30 couples who referred to counseling and crisis intervention centers in city of Kerman. They were randomly placed in experimental (15 couples) and control (15 couples) groups. The independent variable was reality therapy in 8 sessions over a period of 2 months. The dependent variable was moral commitment that evaluated by the dimensions of commitment inventory of Stanly and Markman (1992) and prediction of divorce that evaluated by Siros Divorce Scale(2010). The data analysis was performed by co variance.

**Results:** Results showed that reality therapy increased moral commitment of couples and decreased divorce prediction ( $P \leq 0/001$ ). But the men's and women's participants didn't have a significant difference in moral commitment.

**Conclusions:** All in all results of this research showed that moral commitment factor which its protective effect in variety of foreign studies and so few native ones has been proven, can be effective in decreasing and preventing of problems and threats of family as divorce and marital infidelity. Using this approach is recommended in order to educate the essential skills to couples.

### References:

1. A Karraker, K Latham. K: In Sickness and in Health? Physical Illness as a Risk Factor for Marital Dissolution in Later Life. *Journal of Health and Social Behavior* 2015, 56: 420-435
2. S Macher : Social interdependence in close relationships: The actor Partner Interdependence-investment model (API-IM. *European Journal of Social Psychology* 2013, 43: 84-96
3. P K Mark, D Herbenick, Fortenberry, S Sanders, M Reece : A Psychometric Comparison of Three Scales and a Single-Item Measure to Assess Sexual Satisfaction. *The Journal of Sex Research* 2014, 51: 159-169
4. C Y Tang, M A Curran : Marital Commitment and Perceptions of Fairness in Household Chores. *Journal of Family Issues* 2013, 34 (12): 13- 43



**P122 Effect of logotherapy on depression and identity crisis among multiple sclerosis patients in Kerman city**

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**Background:** As Multiple Sclerosis (MS) grows exponentially in world and affects the mental health, the quintessence of taking appropriate actions on mental health, like logotherapy which is a psychological intervention is essential. This study aims at measuring the impact of logotherapy on the depression and identity crisis in MS patients in Kerman city.

**Materials and methods:** This is a quasi-experimental study. It contains pretests and posttests. Sampling is done by convenience method and allocation of samples to two groups of intervention and control. Each group contains 20 samples. Samples are measured by standard tools of Ahmadi Identity crisis Questionnaire (2010) and Beck Depression Inventory (2000). Then logotherapy sessions were arranged for patients in 8 session twice a week for 2 hours, and after a month they were again tested for their depression and identity crisis. Descriptive and analytical methods including covariance by SPSS software were used to render the statistics.

**Results:** The average depression points after the intervention in comparison to what it was before the intervention in control group was 2.6 units reduced but in intervention group 18.8 units decreased. Also the average depression points after the intervention in comparison to what it was before the intervention in control group was 3.8 units reduced but in intervention group 11.5 units decreased. According to the covariance, the difference between the average of depression and identity crisis points in intervention group is significantly decreased in comparison to control group ( $P < 0.001$ ).

**Conclusions:** This shows how logotherapy method can be used to improve the mental disorder like depression and identity crises in MS patients as well as their knowledge about MS as related to the impacts of logotherapy on their lives.

**References:**

1. AM Julom, R de Guzman: The effectiveness of logo therapy program in alleviating the sense of meaninglessness of paralyzed in-patients. *International Journal of Psychology and Psychological Therapy* 2013, 13(3): 357-371
2. AK Kyung, JK Shin, S Mi-Kyung, K Mi-Jeong : Effects of Logo therapy on Life Respect, Meaning of Life, and Depression of Older School-age Children. *J Korean Acad Nurse* 2013, 43(1): 91-101
3. S Robat Mili, M Mehrabizadeh Honarmand, Y Zargar : The effect of group logotherapy on depression and hope in university students. *Knowledge and Research in Applied Psychology* 2014, 4 (3): 3-10
4. M Shoae Kazemi, M Saadat : The effect of education Logotherapy (responsibility, freedom, value, etc.) to reduce the disappointment of women with breast cancer. *Quarterly breast disease Iran* 2010, 2:24-84

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Fields of clinical expertise include stress- and trauma-related disorders, anxiety disorders, OCD and treatment-resistant/post-partum depression, while his current research focus centers in stress neurobiology with particular emphasis on psychoneuroendocrinological, neurophysiological and -immunological aspects of PTSD and depression, as well as in circadian rhythms and chronodisruption.

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Dr. Georgios Alevizopoulos is a Professor and Head of Psychiatry and Psychopharmacology at the University Psychiatric Clinic, "Aghioi Anargyroi" Hospital of Kifissia. He holds a degree in medicine and pharmacy and holds postgraduate and doctoral degrees in medicine, both in Greece and abroad. He was trained in Psychiatry and subsequently in Forensic Psychiatry and Psychopharmacology at the Dromokaitio, King's, Bethlem Royal & Broadmoor hospitals and the Institute of Psychiatry, University of London. He teaches psychiatry, psychopharmacology, psychoactive substances, forensic psychiatry and medical ethics at undergraduate and postgraduate levels, both in Greece and abroad, and has supervised more than 80 postgraduate Master and Doctoral theses. He has published more than 160 scientific papers in national and international medical journals and books in Greece and abroad. He is an invited speaker in more than 15 congresses a year, on the areas of his scientific expertise.

He is a member of the World Psychiatric Associations Taskforce on: Social Divisions & Extremist Violence: gangs, cults, terrorists, and violent offending. He also serves as a reviewer in international scientific journals and he is a member of nine scientific associations and societies, including the American Psychiatric Association and the American Academy for Psychiatry and the Law. He has served as a Vice Chairman of the Ethics Committee of the National Organization for Medicines in Greece and as an advisor regarding electronic health records. He is also primer investigator for Phases II, III and IV clinical trials for innovative medicines and medical devices.



**Aptalidis, Daniil**

Specializing student in the Second Psychiatric Clinic of the University Hospital for Active Treatment in Neurology and Psychiatry, Bulgaria, Sofia

Daniil Aptalidis is a specializing student in the Second Psychiatric Clinic of the University Hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum", Bulgaria, Sofia. He has graduated from the Medical University of Plovdiv, Bulgaria. He is a member of the Bulgarian Medical Association, Bulgarian Young Psychiatrist's Association and Scientific Society of Neuropsychopharmacology and Neurosciences. He is a lector working with the Bulgarian ministry of education. He is interests are in emergency psychiatry and affective disorders.

**Athanasiadis, Loukas**

Associate Professor in Psychiatry-Psychosexuality, Aristotle University of Thessaloniki, Greece

Dr. Loukas Athanasiadis is Associate Professor in Psychiatry-Psychosexuality at the Aristotle University of Thessaloniki (AUTH) Medical School (1st Psychiatric Dep., Papageorgiou General Hospital, Thessaloniki). His areas of special interest are Sexology, Addiction and Psychotherapy.

Dr. Athanasiadis completed his medical studies at the AUTH and specialized in Psychiatry. He won a scholarship and completed an MSc Degree (Human Sexuality, St. George's Hospital Medical School, University of London ) and a Clinical Diploma in Behavioural & Cognitive Psychotherapy (St. George's Hospital Medical School, University of London) in the UK. He worked, in various clinical and academic positions for the University of London and the British NHS. He also worked for the Greek NHs, he completed his PhD research, and he has been working for the AUTH since 2005.

Dr Athanasiadis is FECSM (UEMS) and ECPS (EFS/ESSM) member and is involved in various clinical, research, and teaching activities. He has been elected, and is currently acting Chairman of the Sexuality-Interpersonal Relationships Branch of the Greek Psychiatric Society for three consecutive terms.

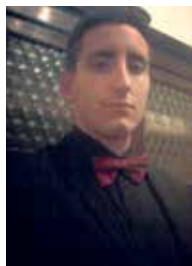
**Athanasiou, Maria**

Self-Employed Psychiatrist,  
Alexandroupolis, Evros, Greece

Dr. Athanasiou Maria is a Psychiatrist. She studied medicine in Plovdiv University Medical School. After her graduation, she specialized in Psychiatry in the Psychiatry Department in Alexandroupolis University General Hospital. She completed her specialization in 2017. She has also a Master's Degree (MSc) in 'Social Psychiatry' from Democritus University of Thrace (Degree 8/10). She is currently training in Animal Assisted Therapy in Frances' National Animal Assisted Therapy institute.

Since 2018, she is a self-employed Psychiatrist in Alexandroupolis, located in Eastern Macedonia and Thrace. Her research interests, concerns the role of vitamin D 25(OH) D plasma levels on Mental Disorders, such as Psychosis and Depression. In June 2018, the research team, in which she took part, announced at the 2nd International Congress on Evidence Based Mental, the preliminary results of their study on the effect of Vitamin D plasma levels on Dopamine Metabolism, based on the clinical observation of Vitamin D Deficiency in psychotic patients.

She has made a number of publications and scientific announcements in national and international conferences. In October 2018, she was chosen, as an early young psychiatrist, to represent Greece, in the International "Leadership and Professional Skills Course" of Young Psychiatrists in Athens, directed by Prof. Norman Sartorius & Sir Prof. Graham Thornicroft and within the collaboration of «Young Psychiatrists and Mental Health Professionals Network of Greece».



**Bachetti, Massimo**

Division of Psychiatry, Department of Medicine, University of Perugia, Italy

Was Born in Macerata (Marche region, Italy) in 03.08.1989. Currently living in Perugia (Umbria region, Italy), but resident in Macerata in Via Padre Matteo Ricci, 25 CAP 62100 (Italy).

2006 - Entry in as active voluntary member of Italian Red Cross;

2008 - Diploma of agricultural expert obtained with the vote of 98/100 at Istituto Tecnico Agrario "G. Garibaldi", Macerata (Italy);

2008 - Matriculation at Università Politecnica delle Marche (Ancona, Italy) School of Medicine;

2010 - Voluntary enrollment at the Military Corp of the Italian Red Cross with the rank of corporal;

2015 - Graduated as Medical Doctor at Università Politecnica delle Marche (Ancona, Italy) School of Medicine with the vote of 110/110 cum laude;

2016 - Obtained a license to practice medicine and subsequently enrolled at the Medical Professional Order of Macerata (Italy) in February;

2016 - Enrolled at Cognitive-Behavioural Training School (SPC) directed by Prof. Francesco Mancini, in Ancona, Italy;

2016 - From March to June, voluntary attendance at the Internal Medicine ward of the Macerata civil hospital;

2016 - Worked as Physician at ASL Area Vasta 3 (Macerata, Italy) Emergency Medical Service from April to September;

2016 - Worked as Physician at Assisted Health Residence "Abitare il tempo" (Loreto, Italy) From September to the end of October;

2016 - Winner of a contract as former Psychiatrist at the Università degli Studi di Perugia (Italy);

2017 - Member of Società Italiana di Psichiatria (SIP);

2017 - Ordinary Member of Società Italiana di PsicoNeuroEndocrinologia (SIPNEI);

2017 - Took part as translator to the Italian translation of the book "Introduction to Relation Frame Theory (RFT)" di Niklas Torneke, published at the end of 2017;

2018 - Advanced as Medical Officer at the Military Corp of the Italian Red Cross with the rank of lieutenant;

2018 - Member of Centro Studi Psichiatrici (CEN.STU.PSI);

2018 - Co-author of the paper "Dysphoria as a psychiatric syndrome: a preliminary study for a new transnosographic dimensional approach";

2018 - Obtained the IRC-ERC certification of "Advance Life Support" executor.

**Bali, Panagiota**

Clinical Psychologist, Research Associate, Forensic Psychiatry Unit, 2nd department of Psychiatry Attikon University Hospital, Athens, Greece

Panagiota Bali is a licensed psychologist. She graduated from the department of Psychology at Panteion University of Social and Political Sciences in Athens.

She earned her MSc in Mental Health Promotion - Prevention of Psychiatric Disorders at the Medical School of the National and Kapodistrian University of Athens and her MSc in Mental Health at the Nursing School of the National and Kapodistrian University of Athens.

She is a PhD candidate in Forensic Psychiatry in Medical School at the National and Kapodistrian University of Athens.

From 2012 is psychologist - scientific associate in the 2nd Department of Psychiatry at the University Hospital Attikon (National and Kapodistrian University of Athens).

She has participated in training in Forensic Psychiatry in South London and Maudsley NHS Foundation Trust, London.

From 2014 to 2018 she participated in a european project about conduct disorder in children and young girls, conducted in collaboration with the 1st Department of Psychiatry, Medical School University of Athens.

Her special interests include mental health, forensic psychiatry, clinical psychology, psychopathology and psychotherapy.

She has attended several national and international conferences, both as a participant and as a speaker, with oral presentations and posters. She has participated also in research projects.

She is training in Family Therapy and Marital Therapy at the University Mental Health Research Institute of Athens.

**Batrakouli, Vasiliki**

Psychologist-Psychotherapist, Greek Association of Behavioural Research, branch of Macedonia, Institute of Psychosocial Development, Larissa, Greece

Vassiliki Batrakouli was born and raised in Larissa. She studied psychology at the Aristotle University of Thessaloniki, Greece. Her master's degree (MSc.) is in Health Psychology at the University of Stirling, Scotland. She has been trained in Cognitive Behavioural Therapy and in Systemic Family and Couple Therapy. She is an accredited EABCC and NBCC Career Development Facilitator/Supervisor. Since 2001, Vassiliki has been working as a psychologist- psychotherapist at the Institute of Psychosocial Development (I.Ψ.A.), Larissa. She provides psychological care (including individual and group interventions) for patients with mental health problems as part of the multi-disciplinary team. Since 2007, she has also been working at the Mobile Mental Health Unit of the prefecture of Trikala. Her duties are to provide supervision, training and consultation to other health care staff, schools and organizations. From 2005 till 2007, she was a scientific fellow and a regional mental health associate in the European Rehabilitation Program "Psychargos, Phase II". Since 2009, he has been working as a counsellor for Postgraduate Students-Dept of Education, at the University of Thessaly. Since 2006, Vassiliki is a trainer at a postgraduate mental health course at the Technological Institute in Larissa. Since 2004, she is working as a trainer and supervisor at the



Greek Association of Behavioral Research, branch of Macedonia. Since 2008 she is a volunteer trainer of the Social Welfare Volunteers of the Regional Department of Larissa of the Greek Red Cross. She often participates in European and national programs as a trainer for trainers. She is attending in conferences in Greece as well as abroad. Vassiliki is an active member of Greek and European Associations for psychology, psychotherapy and counseling.



**Boksay, Istvan J.E.**  
Clinical Professor of Psychiatry/  
Retired, USA

Istvan J.E. Boksay M.D, Ph.D. is a retired Clinical Professor of Psychiatry at NYU, USA where he was Vice Chairman of the Pharmaceutical and Therapeutic Committee and Chairman of The Quality Assurance Committee and the Medication Safety Committee. He was President of the New Jersey Psychiatric Association (NJPA). He is a Distinguished Life Fellow of the American Psychiatric Association (APA). He served several years as a member of the Council on Aging of APA. Dr. Boksay is a geriatric psychiatrist, published extensively and lectured worldwide. He did major contributions to describe the course of Dementia and the effect of medical conditions on the course of Dementia. He was the first who reported stage specific medical conditions in demented patients and reported behavioral and cognitive aspects of patients with Normal Pressure Hydrocephalus (NPH) before and after Ventriculoperitoneal (VP) shunt. He graduated Summa Cum Laude from the Semmelweis University of Medical Sciences in Budapest, Hungary and obtained a Doctor of Pharmacology and Toxicology from the University of Frankfurt in Germany.



**Bonotis, Konstantinos**  
Assistant Professor in Psychiatry,  
Head of the Department of  
Psychiatry, University Hospital,  
Faculty of Medicine, School of  
Health Sciences, University of  
Thessaly, Greece

Dr Konstantinos Bonotis received his Medicine Diploma and PhD in Medicine from the School of Medicine in Aristotle University of Thessaloniki, Greece in 1996 and 2004 respectively. His PhD thesis was conducted in the area of Alzheimer disease investigation. Currently, he is an Assistant Professor in Psychiatry at the Faculty of Medicine, University of Thessaly and Director of the University's Psychiatric Clinic.

Dr Bonotis research interests cover topics related to etiopathology and treatment of psychiatric disorders, psychosomatic medicine and psychogeriatrics, as illustrated in related international publications and conferences presentations. He has been trained in the biological treatment of transcranial magnetic stimulation (r-TMS) at the Psychiatric Clinic, Hospital Pitié-Salpêtrière, Paris, France and the University of Columbia, New York, USA.

Dr Bonotis has been teaching in the Faculty of Medicine since 2009. He is responsible for teaching Psychiatry, Medical Psychology, Psychosomatic Medicine and Social Psychiatry of

undergraduate studies as well as for the psychiatric clinical practice. He is also head of the training programme of the Psychiatry Clinic and the supervisor of the Psychiatry Clinic's resident physicians. Moreover, he offers lectures at various postgraduate programmes in the Faculty of Medicine and the former Technological Educational Institute of Thessaly, which was integrated into University of Thessaly in 2018.

Dr Bonotis is also supervisor and participates in Advisory Boards of several PhD Dissertations and Master Theses.



**Bonti, Eleni**

Assistant Professor (Area of specialization: Specific Learning Difficulties), 1<sup>st</sup> Psychiatric Clinic, Medical School, Aristotle University of Thessaloniki, Papageorgiou General Hospital of Thessaloniki, Greece

Eleni Bonti is a permanent Assistant Professor, specializing in the area of Specific Learning Difficulties (SLD), at the 1st Psychiatric Clinic of the Medical School of Aristotle University of Thessaloniki ("Papageorgiou" General Hospital of Thessaloniki). She studied at Aristotle University of Thessaloniki (School of Education (1st Degree) & School of Psychology (Phd) and at the Institute of Education, University of London (Adv. Diploma & Master of Arts). Her research and clinical interests include diagnostic and intervention procedures for children, adolescents and adults with learning difficulties, early diagnosis of Specific Learning difficulties (SLD) and intervention methods during preschool age, language and motor difficulties - issues of comorbidity with SLD, etc. She is an educator at the Medical School (Aristotle University of Thessaloniki), the author of an academic book on learning difficulties and has published several articles in both Greek and international journals. She is also the director of the State certified out-patient Clinic of Learning Disabilities, (1st Psychiatry Clinic, Aristotle University of Thessaloniki, 'Papageorgiou' General Hospital, Thessaloniki, Greece). Since 2016, Eleni Bonti is also a lecturer at the Distance Learning Postgraduate Program in the area of Special Education at the University of Nicosia, Cyprus. She has been working at a clinical level since 1996, in the areas of diagnosis and intervention for children, adolescents and adults with learning difficulties. Finally, she undertakes seminars for training teachers and other professionals (as well as parents) in the areas of diagnosis and intervention techniques for students with learning difficulties.

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**Chatzaki, Aikaterini**

Professor of Pharmacology, Medical School of the Democritus University of Thrace, Greece

Dr Aikaterini Chatzaki is a Professor of Pharmacology in the Medical School of the Democritus University of Thrace. Following academic and industrial post-docs, during which she worked in pre-clinical R&D of small molecule antagonists for stress and depression, she developed an interest in Epigenetic/Pharmacoepigenetic biomarkers in human pathology for precision pharmacotherapy. She has an >25 year experience in pharmacological characterization of newly developed compounds, with a large publication record of >85 scientific articles. Her research has received funding primarily by the EEC and the Greek Government and by the industry. Currently, she is also Member of the Health Technology Assessment Committee of the Hellenic Ministry of Health.



**Chrousos, George**

1<sup>st</sup> Department of Pediatrics and UNESCO Chair on Adolescent Health Care, National and Kapodistrian University of Athens, Athens, Greece

Professor George Chrousos was born in Patras, Greece, in 1951. He completed his MD studies at the National and Kapodistrian University of Athens (NKUA) as the valedictorian of his class in 1975. He obtained his Sciences Doctorate from NKUA, and did his residency in Medicine, NKUA, and Pediatrics, New York University, and his fellowship in Endocrinology, Metabolism and Diabetes at the National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH), Bethesda, MD. He was Chief of the Pediatric and Reproductive Endocrinology Branch, NICHD, NIH, and subsequently Chairman, Department of Pediatrics, NKUA, Athens, Greece, until 2018. Currently, he is Professor Emeritus of Pediatrics and Endocrinology, Holder, UNESCO Chair on Adolescent Health Care, Director of the University Research Institute on Maternal and Child Health and Precision Medicine at the NKUA, and Senior Investigator at the Biomedical Research Foundation of the Academy of Athens. Professor Chrousos pioneered studies that elucidated the effects of stress on the organism at the behavioral, neuroendocrine, cellular and molecular levels and made fundamental contributions to the understanding, diagnosis and treatment of pituitary, adrenal and stress-related complex pathologies, i.e., major depression, obesity/metabolic syndrome, and autoimmune/inflammatory, reproductive and sleep disorders. He made seminal observations in the glucocorticoid signaling system of the cell and deciphered some of its key clinical implications. Professor Chrousos's work has been cited over 140,000 times (H-index183) making him one of the top 100 cited authors (Google Scholar) and physician-scientists (ISI) in both Clinical Medicine and Biology and Biochemistry, and the top cited clinical pediatrician or endocrinologist in the world. He has received numerous major awards, including the Fred Conrad Koch Award, the highest honor of the US

Endocrine Society. He is a Doctor Honoris Causa of the Universities of Liege, Belgium, Universita Politecnica delle Marche, Ancona, Italy, and University of Patras, Greece, and an honorary professor of the Universities of Warwick, UK, St. Petersburg State Pediatric Medical University, Russia, and Xi'an Medical University, China. He is an elected member of the American Society for Clinical Research, the Association of American Physicians, the Academia Europaea and the US National Academy of Medicine. .



**Chumpalova, Petranka**

Assistant Professor of Psychiatry,  
Department "Psychiatry and Medical  
psychology", Medical University,  
Pleven, Bulgaria

Petranka Georgieva Chumpalova was born in 1983 in Karajsen, Bulgaria. She graduated at Medical University, Pleven in 2008. Become a specialist in psychiatry in 2013. From 2008 to present she works in University Hospital "Dr. Georgi Stranski", Department of Psychiatry in Pleven, Bulgaria. From 2010 to 2018 she is an Assistant professor of Department "Psychiatry and Medical psychology", Medical University, Pleven. From 2016 she had PhD degree "Clinical and epidemiological studies of comorbid schizophrenic disorders in patients with drug use disorders" From October 2018 she becomes Associated Professor. From April 2016 till present she is a resident of Child Psychiatry. She has published more than 40 papers in national and international journals.

She is a Membership of Bulgarian Medical Association and Bulgarian Psychiatry Association

She speaks proficiently English.

Scientific interests: comorbid disorders; drug abuse; assessment and support of quality in education; children mental disorders; psychodermatology; sport psychiatry;



**Diakaki, Kalliopi**

"Agios Charalambos" Mental Health  
Clinic, in Heraklion, Crete, Greece

Kalliopi Diakaki, MD, is a graduate of the University of Crete Medical School. She trained as a resident rural General Practitioner at the General Hospital of Kos and as a resident in General Medicine at the General Hospital of Rethymnon. She currently works in "Agios Charalambos" Mental Health Clinic, in Heraklion, Crete, expecting to start her training in Psychiatry later in 2019. Diakaki has been involved in numerous voluntary activities, both within and outside of Greece. Domestic activities include Health Education courses for high school students in Heraklion, refugee support and consultation at Kastelorzio, and organization of an obesity awareness program in collaboration with the Director of the General Hospital of Kos. Notable voluntary activity outside of Greece was Diakaki's participation in the "Ethiopian project" aimed to raise AIDS awareness, for which Diakaki was placed in Ethiopia for six weeks. There, in collaboration with non-profit organizations she helped organ-

ize and participated in awareness, consultation and treatment of AIDS patients. Her research interests lie in neuropsychiatry. More specifically, she is interested in the manifestation of cognitive impairments in psychiatric disorders and the use of neuropsychological assessment in behavioral disorders, as well as in the presence of soft neurological signs in affective and non-affective psychoses.



**Diakogiannis, Ioannis**

Chairman of the 1<sup>st</sup> Department of Psychiatry, Aristotle University of Thessaloniki, Papageorgiou General Hospital, Thessaloniki, Greece

Dr Ioannis Diakogiannis was born in Thessaloniki and graduated from the American College Anatolia of Thessaloniki in 1974. He received his medical degree from the Medical School of Aristotle University of Thessaloniki (AUTH) in 1980. He was specialized in Psychiatry in the 1st and 3rd Psychiatric departments of A.U.TH and in the Department of Psychiatry of the Yale University-USA. He received a fellowship in Addiction Psychiatry in Substance Abuse Treatment Unit of Yale University-USA. From 1991 to 1998 he worked as a scientific associate in the Department of Psychiatry and the Department of Pharmacology of the Aristotle University of Thessaloniki while he achieved his doctorate thesis in 1992. In 1998 he became Lecturer of Psychiatry, in 2002 Assistant Professor, in 2008 Associate Professor and in 2015 Professor of Psychiatry. From 1998 until 2018 he was the head of the Drug Dependence Unit of the 3rd Department of Psychiatry of A.U.TH. and since Sept 2018 he is the Chairman of the 1st Department of Psychiatry A.U.TH in Papageorgiou Gen Hospital.

Dr. Diakogiannis has co-authored more than 160 scientific papers which have been presented in scientific meetings or have been published in scientific journals. He is member of many Scientific Committees. He served as the National representative in the Scientific Committee of the European Center for Drugs and Drug addiction in Lisbon, Portugal and participated as member of the European Commission's projects for Alcohol ("Bridging the Gap"; "brief interventions for alcohol abuse" and "building capacity") and as member of the working group of the European Psychiatrists specialized in alcoholism. He is the President of the Greek Society for the Study of Addictive Substances, President of the branch of Addiction Psychiatry of the Greek Psychiatric Association.

He is married with Thalia Gatzouli, doctor of Nuclear Medicine and visual artist and has one son.

**Dikeos, Dimitrios**

Professor of Psychiatry,  
1<sup>st</sup> Department of Psychiatry of  
Athens University Medical School,  
Athens, Greece, Director of the Sleep  
Research Unit of Athens University,  
Eginition Hospital, Greece

Dimitris Dikeos is Professor of Psychiatry at the 1st Department of Psychiatry of Athens University Medical School, Athens, Greece and Director of the Sleep Research Unit of Athens University at Eginition Hospital.

His research activities have focused on psychiatric genetics, sleep research, psychopharmacology and psychopathology. He has participated in various Multicentre Research Programmes in Europe and the U.S.A. such as: European Collaborative Studies of Affective Disorders, Johns Hopkins Genetic Epidemiology Schizophrenia Program, Meta-analysis of Sleep Laboratory Studies on Tolerance and Rebound Insomnia with Rapidly Eliminated Hypnotics, Maudsley Family Study, European Collaborative study by the Group for the Study of Resistant Depression (TRD), International Multicentre Study "FACTOR", International Study on the Genetics of Anorexia Nervosa, The Psychiatric Genetics Consortium (PGC); Neurobiology and Treatment of Adolescent Female Conduct Disorder: the Central Role of Emotion Processing (FemNAT-CD), etc.

He is currently: President of the Hellenic Sleep Research Society (HSRS); Past President of the International Neuropsychiatric Association (INA); Treasurer of the World Federation of Societies for Biological Psychiatry (WFSBP).

Dr. Dikeos is co-editor of three English-language books, two of which have been published by the World Psychiatric Association, and he is author or co-author of more than 100 full publications, out of which more than 60 are articles in SCI Journals with more than 2500 citations (h-factor=30), among which: American Journal of Medical Genetics, British Journal of Psychiatry, Current Opinion in Psychiatry, International Clinical Psychopharmacology, Journal of Psycho-somatic Research, Molecular Psychiatry, Nature Genetics, Psychiatric Genetics, and Science.

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**Douzenis, Athanassios**

Professor in Psychiatry -Forensic  
Psychiatry National and  
Kapodistrian University of Athens,  
Head of the 2<sup>nd</sup> Department of  
Psychiatry Athens University Hospital,  
Athens, Greece

Athanassios Douzenis is married and has three children. He qualified in Medicine in 1985 from the Ioannina Medical School and did higher psychiatric training in the UK receiving an M. Med. Sci from Sheffield University Medical School. He trained in psychiatry in England (Sheffield and London) and became MRCPsych in 1992. He completed his doctorate in Athens University Medical School on Forensic Psychiatry under the supervision of Prof. Stefanis.

Since his return in Greece (1995), he worked with OKANA where he helped establish the first substitution programme in Greece and was head of the largest methadone unit in Athens.

He became a lecturer of the National and Kapodistrian University of Athens Medical School in Forensic Psychiatry in 2000 and Assistant Professor on the same subject in 2005. He was elected Associate Professor in Psychiatry- Forensic Psychiatry in 2012 and Professor in 2015. As an academic, initially he worked in Eginition Hospital and in 2004 moved on to establish the Second Psychiatry Department in Attikon University Hospital.

He has published two books about Forensic Psychiatry and one about Ethics in Psychiatry and has written 38 chapters in psychiatric books (4 with international publishers. He has 205n SCI journal scientific publications. He has participated in numerous national and international psychiatric conferences.

Currently he is the Medical Director of the 2nd Department of Psychiatry of the National and Kapodestrian Athens University Medical School and head of the Forensic Psychiatric Unit in Greece.

He is President of the Greek Forensic Psychiatry and is the publisher of the Forensic Psychiatry Journal "Ate" (Ατη)



**Einat, Haim**

Professor, School of Behavioral  
Sciences, Tel Aviv-Yaffo Academic  
College, Adjunct Professor,  
Department of Clinical Biochemistry  
and Pharmacology, Ben-Gurion  
University of the Negev, Israel

Haim Einat is a professor at the School of Behavioral Sciences, Tel Aviv-Yaffo Academic College in Israel and an adjunct professor at the Dept. of Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Israel and in the College of Pharmacy at the University of Minnesota, USA. Professor Einat received diverse education with an undergraduate degree in biomedical sciences from the Hebrew University of Jerusalem, followed by graduate degrees in zoology (from Tel-Aviv University) and in neuroscience and behavioral sciences (McMaster University, Canada) and finally a Ph.D. in psychopharmacology from Ben-Gurion University of the Negev in Israel. Professor Einat received additional training as a post-doctoral fellow at the National Institute for Mental Health in Bethesda, MD and in 2004 accepted a faculty position at the College of Pharmacy, University of Minnesota. In 2011, Professor Einat moved back to his home country Israel and took his current position.



Professor Einat is using a combined behavioral, biochemical and molecular approach to study the underlying biology of affective disorders and to identify possible novel drug targets. His work is highly recognized by the scientific community with over 100 publications in the professional literature, numerous conference presentations and over 4300 citations. Professor Einat also serves on the editorial boards of a number of journals in his field of research and serves as an ad hoc reviewer for most scientific journals in the field as well as a reviewer for many of the granting agencies.



**Eleftheriou, Neoklis**

Private Psychiatrist/CAT Therapist,  
Samos, Greece

Graduation from University of Ioannina, Medical School.  
Residency in Psychiatry at Psychiatric Hospital of Thessaloniki, General Hospital of Kozani, AHEPA General University Hospital of Thessaloniki.  
Accreditation in Cognitive Analytic Therapy.  
Private psychiatrist/CAT therapist in Samos.



**Erhardt, Sophie**

Department of Physiology and  
Pharmacology (FYFA), Karolinska  
Institutet, Stockholm, Sweden

**Personal Statement**

Founder and head of the Neuropsychimmunology laboratory at the Karolinska Institutet with members. This laboratory has been instrumental in establishing psychoneuro-immunological research in Sweden. I am PI on multiple grants awarded from KI, VR and pharmaceutical companies and work closely with clinicians, the drug discovery platform at SciLifeLab, Sweden, pharmaceutical companies as well as with international collaborators.

**Current Position**

2016-present Professor in Experimental Psychiatry at Dept of Phys & Pharm, KI

**Previous Positions**

Senior researcher (Rådsforsk.) at Karolinska Institutet (paid by VR), Sept 2010-May 2016

Senior researcher at Karolinska Institutet (paid by KI central) Feb 2010-Aug 2010

Forskarassistent at Karolinska Institutet (paid by VR), July 2005-Jan 2010

**Scientific Merits**

Published over 90 scientific articles, reviews and book chapters

Total number of citations: 4800, H index: 39

Supervisor for 11 Ph.D. students (8 as main supervisor)

Supervisor for 7 post docs  
 Docent at Karolinska Institutet 2006  
 More than 56 million SEK awarded as PI in research grants  
 Education and Training  
 Bachelor in Chemistry, Stockholm University 2000  
 Ph.D. in Medicine, Karolinska Institutet 2001  
 Post doc, Karolinska Institutet and UCSD, San Diego, USA  
 Nov 2001-June 2005  
 Boards and Committees:  
 Member, Steering Board of Comparative Medicine, KI Since 2019  
 Deputy Head, Dept of Phys & Pharm, KI Since 2018  
 Chairman and member, Election Board at KI 2018-2022  
 Member, Nomination College at KI 2014-2022  
 Member, Board SCNP Since 2018  
 Member, Management Board, Dept of Phys & Pharm, KI Since 2017  
 Member, Board Ulf von Euler Foundation Since 2017  
 Member, Board Karolinska Schizophrenia Project Since 2016  
 Member, Nomination Committee at KI 2015-2017  
 Member of the Executive Committee at ISTRY Since 2015  
 Member, Nomination Committee, Swedish Mental Health 2014-2017



**Fotiadis, Petros**

Psychiatrist, Military Community  
 Mental Health Center, 424 General  
 Military Hospital, Thessaloniki,  
 Greece

Director of Military Community Mental Health Center, at rank of Lieutenant Colonel, 424 General Military Hospital, Thessaloniki, Greece.

Petros Fotiadis received his medical degree at Aristotle University of Thessaloniki (A.U.TH.), Greece in 1993. He was specialized in the 2nd Psychiatric department of A.U.TH, and completed his residency in psychiatry in 2002.

He served as consultant at rank of Major, Psychiatric department, 496 General Military Hospital, Didimoteixo, Greece (2002-2003), and as consultant at rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece (2004-2012). He also works in his private practice (2002-Today).

He has received a 2 years Fellowship, 3rd Psychiatric department (A.U.TH), Greece (2012-2014), in "Neuropsychological Assessment of Cognitive deficits in Schizophrenia and other Organic Psychiatric disorders". He is director of Military Community Mental Health Center of 424 General Military Hospital. His areas of clinical and research interest are Schizophrenia, Bipolar spectrum disorders, Organic Psychiatric disorders, Military and Disaster Psychiatry and Psychopharmacology.

He is in charge on Depot-clinic of MCMHC.

He has participated in more than 100 International and Region-

al meetings and congresses, in some of which as a speaker for specific areas of interest.

He has authored and co-authored in more than 20 papers delivered in Greek and International congresses.

He is also in collaboration with the National and Kapodistrian University of Athens, Faculty Nursing, in Post Graduate program "Disaster Medicine and Crisis Management".

He has participated at several Training Meetings and Master-classes and at the translation of Judith S.Beck book "Cognitive Therapy Basics and Beyond" 1995 The Guilford Press.

Also participated in the preparation of therapeutic recommendations for schizophrenia, in the framework of the project « Psychodiabasi».

He is member of Hellenic Psychiatric Association and chairman of Military Psychiatry section.



**Fountoulakis, Konstantinos N.**

Professor of Psychiatry, Aristotle University of Thessaloniki, Greece  
Chair of the 6<sup>th</sup> International Congress on Neurobiology, Psychopharmacology & Treatment Guidance - ICNP2019  
Chair, WPA Section on Pharmakopsychiatry and Section on Evidence-Based Psychiatry

Konstantinos N. Fountoulakis, is Professor of Psychiatry at Aristotle University of Thessaloniki, AHEPA University Hospital, in Thessaloniki, Greece.

He received his medical degree (1989), performed his residency in psychiatry (1998), and earned his doctorate in psychiatry (1999) at the Aristotle University of Thessaloniki. Until 2003 he served as a medical officer in the Greek Armed forces retired with the rank of major. In 2005, Dr. Fountoulakis was a Research Fellow in the Department of Psychiatry, Division of Neuropsychiatry, at the University of Geneva in Switzerland. He has coauthored more than 400 papers with approx. 10,000 citations and h=50 (Publish or Perish). During the years 2016-8 he was ranked by expertscape.com within the top 25 world experts concerning Bipolar disorder (top 0.068%) and among the top 50 concerning suicidality (top 0.097%).

He authored or co-authored a number of chapters in books and has authored the book 'Bipolar disorders: An Evidence-Based Guide to Manic Depression' (Springer-Verlag 2015), co-edited the WPA book 'Advances in Psychiatry vol 3' (Springer-Verlag 2018), and the book 'Psychobiology of behavior' (to be published by Springer in late 2019)

Dr. Fountoulakis is Editor in Chief of Annals of General Psychiatry and served as Section Editor of Current Opinion in Psychiatry as well as guest editor in other international journals. He has received a number of national and international research awards, including the 2012 Kraepelin-Alzheimer medal of the University of Munich and the 2015 Excellence in Education Award of the WFSBP. Since 2014 he is honorary member of the WPA.





**Franza, Francesco**  
Psychiatric Rehabilitation Centre  
"Villa dei Pini", Avellino, Italy

Dr. Franza was born in Naples February 29, 1960.

Currently, he is a Director of Psychiatric Rehabilitation Center "Villa dei Pini", Avellino - Italy. He graduated in Medicine and Surgery from the Naples University. At Psychiatry Institute of Naples (Director Prof. Mario Maj) he specialized in Psychiatry in 1994. Since 1992 he worked as a psychiatrist at Mental Health Dept. "Villa dei Pini", Avellino - Italy, where he directed First Neuropsychiatric Division of the Psychiatric Department (from 2001). Dr. Franza is now a member of several scientific associations (ECNP, EPA, Cen.Stu.Psi, WFSBP, AAS), and coordinator of scientific research and organization scientific events.

He's the author of several studies and articles. The most recent works are following:

- Franza F et al. Relationship between Cognitive Remediation and Evaluation Tools in Clinical Routine. *Psychiatr Danub*. 2018 Nov;30(Suppl 7):405-408.
- Tavormina MGM, Tavormina R, Franza F, Vacca A, Di Napoli W. Mental Illness and Prejudices in Psychiatric Professionals. Data from the Social Stigma Questionnaire for Psychiatric Professionals: A Multicentre Study. *Psychiatr Danub*. 2018 Nov;30(Suppl 7):479-484
- Franza F et al. Relationship between cognitive remediation and atypical antipsychotics in negative syndrome of schizophrenia. Presentation E-poster n. EP.1069. 31st ECNP Congress - Barcelona 2018
- Franza F et al.. "Assessing the critical issues of atypical antipsychotics in schizophrenic inpatients". *Psychiatr Danub* 2017; 29(Suppl. 3), 405-408
- Tavormina G, Franza F, Stranieri G, Juli M, Juli MR "Clinical utilisation and usefulness of the rating scale of mixed states, ("GT-MSRS"): a multicenter study". *Psychiatr Danub* 2017; 29(Suppl. 3), 365-367
- Perito M, Calia RM, Carpentieri G, De Guglielmo S, Del Buono G, Fasano V, Fiorentino N, Napolitano R, Forgiione M, Scotti D, Solomita B, Franza F. "Migrants and Psychosomatic Symptoms: an Evaluation in an Emergency Centre" e-Poster presented at the 25th European Congress of Psychiatry 1-4 April 2017, Florence, Italy
- Franza F et al. Neurocognitive management of the primary negative symptoms of schizophrenia: a role of atypical antipsychotics. *Psychiatr Danub* 2016, 28, S:145-148
- Franza F et al. Burnout in families. The emotional burden of the "traumatized" families. *J Family Med Dis Prevention* 2016, 2,4:040.



**Freund-Levi, Yvonne**

Associate Professor, Senior researcher (lector) at Dept. of Clinical Medicine School of Health and Medical Sciences Örebro University Sweden

#### Current positions

2018 Associate Professor, Senior researcher (lector) at Dept. of Clinical Medicine School of Health and Medical Sciences Örebro University Sweden

2018 Visiting Senior Lecturer, Dept. of Old Age Psychiatry, Psychology & Neuroscience, King's College London, UK : Visiting professor, NVS, Alzheimer's Disease Research Centre, Karolinska Institute, Stockholm,

2015 Associate Professor, Senior researcher ,Department of Neurobiology, Care Sciences and Society Karolinska Institutet, Center for Alzheimer Research | Division of Clinical Geriatrics  
2017 Member of the Regional Ethical Review Board Karolinska Institutet in Stockholm

2010 Chairman of Stockholm City Council Expert Chamber (Stockholms läns expertråd).

2010 Commissioner of the Stockholm City Council Drug Committee (Stockholms läns läkemedelskommitté).

2014 Senior Consultant and Head Physician and Medical Legislator within the Department of Psychiatry Norrtälje Hospital Tiohundra AB

1985 M.D. license as medical doctor

SCIENTIFIC COLLABORATIONS ongoing

2019 DiOldstudy ,Brintellix study PD and depression, Apathy and dementia and biomarkers The Nordic diet study in mild depression :all Örebro University

2016 DietAge Advisory Board Call Horizon 2020. Proposal 733332, DIETAGE - Diet and Aging over the life course..

2015- Mindfulness treatment in depressive disorders in adults, Department of Psychiatry, Norrtälje Hospital ongoing randomized controlled trial.

2014 Research projects on memory impairment in normal aging and Alzheimer's disease using Anatomical MRI and resting fMRI, neuropsychological testing and PET of the brain..

2013- Ongoing research project; The imagery of the brain of AD patients with new Radioalegander, to visualize the Beta Amyloid in the central nervous system.

2013- Ongoing research project and collaboration; to develop a disease-index method to predict the risk of conversion from cognitive impairment to AD and Dementia. .

Research expertise:

On-going research includes old age psychiatry, neuropsychiatric, behavioral and psychiatric symptoms in dementia (NPSD) measured through lifestyle changes and nutrition in the elderly and also physical activity within psychiatric health , mindfulness interventions in health professionals and drug effects in the elderly. Biomarkers in cerebrospinal fluid blood and saliva.



**Gatopoulos-Gatos, Angelica**  
Psychiatry Resident, Psychiatry  
Hospital of Attika, Greece

#### Experience

04/2013 - 02/2014 Internist (Giagkos General Hospital)

02/2013 - 04/2013 Psychiatry Resident (L.V.R Klinik Krankenhaus - Bedburg Hau Deutschland)

08/2012 - 01/2013 Psychiatry Resident (Mental Health Center of Piraeus)

08/2010 - 08/2012 Internist ( Giagkos General Hospital)

2008 - 2010 GP service with rotation in internal medicine, surgery, and cardiology (Panarkadiko Hospital of Tripolis)

#### Education

1996- 2002 Victor Babes University of Medicine and Pharmacy Timisoara Romania

2007 Academic and professional recognition of qualification (DOATAP)

#### Personal skills

Mother tongue(s) : Romanian, Serbian

Other language(s) : English (C1), German (B2)

Driving licence : B1

Good use of: Word, Excel, PowerPoint, Windows

#### Seminars/Conferences

- 06/2014- Psychiatry Masterclass VIII
- 09/2014-European program Leonardo da Vinci (Hopitaux Universitaires de Geneve)- On the job training for mental health professionals in old age mental health .
- 10/2014-International Congress of the World Federation for Mental Health & the Hellenic Psychiatric Association -Living with Schizophrenia.
- 11/2014- 3rd National Conference of Special Psychiatric Hospitals and 1st Conference of Holistic Treatment of Severe Mental Disorder - speaker (Omega-3 fatty acids, Negative symptoms of schizophrenia)
- 12/2014- National Conference of Forensic Psychiatry-speaker (Violent transgression of mentally ill)
- 4/2015-23rd National Conference of Psychiatry & 2nd National Psychopharmacology Congress-speaker (Liver diseases and psychopathology & Inflammatory processes at mental illnesses - differential diagnosis)
- 6/2015-12th World Congress of Biological Psychiatry
- 10/2015-2nd Workshop "Risk Assessment for the Mentally Ill in Daily Clinical Practice ".
- 4th East European Psychiatric Congress & 3th Preventive Psychiatry International Congress-speaker (Neurobiology of anger).
- 4-12/2015-4th phase study of Zypadhera.



**Gavanozis, Efstathios**  
Psychiatry Registrar, University  
General Hospital of Thessaloniki  
AHEPA, Greece

I am Efstathios Gkavanozis, 31 years old, of Greek Nationality, living in Thessaloniki, Greece. I was born on 13/1/1988 in Serres, Greece.

In 2005, after the Greek National Exams, I began my studies in the University of Thessaly, School of Health Sciences, Department of Medicine, Greece. In 2013, I graduated with my grade being: 6,37 ('Good').

From 6/6/2013 to 8/9/14 I worked as a Psychiatry Registrar in the General Hospital of Katerini-Psychiatry Department. From 27/1/15 to 27/10/15 I was Military Doctor in the Greek Army, as I was doing my compulsory military service for Greece. From 20/5/16 to 19/4/17 I was Rural General Practitioner (SHO equivalent) in the Health Center of Nigrita in Serres, Greece. From 9/9/17 to 10/12/17 I was working voluntarily as a doctor in Local Amateur Football championship as Sports Medical Assistant in Thessaloniki.

From 6/2/18 to 6/8/18 I was Trust Grade Doctor in Lancashire NHS Foundation Trust in Royal Blackburn Hospital and Burnley General Hospital in the UK. From 1/11/2018 to date I am working as a Psychiatry Registrar in the University General Hospital Thessaloniki AHEPA. My post in AHEPA will last for the next 3½ years. I speak Greek, English and German. My IT skills include using Microsoft Word, Excel, Powerpoint and Internet Navigation. My personal interests are mostly sports and board games.

Throughout my training so far, I gained a good insight into the different fields of medicine and I developed clinical skills and attributes suitable for a trainee registrar, as well as a strong interest in Psychiatry.



**Georgiadou, Soutlana**  
Psychologist, Research Associate,  
3<sup>rd</sup> Psychiatric Department,  
University Hospital AHEPA,  
Thessaloniki, Greece

Soutlana Georgiadou was born in 1992 in Kavala, Greece. She is a licensed psychologist and graduate of Aristotle University of Thessaloniki (AUTH), Greece. She holds a Master in Special Education and Rehabilitation with specialization in Visual Impairment from the Department of Education and Social Policy, University of Macedonia, Greece (2018). She also received a Master's degree in Applied Psychology in Clinical Neuropsychology from the Department of Psychology, AUTH (2018). Mrs Georgiadou recently completed her third Master's degree in Language Disorders and Educational Intervention from the Department of Italian Language, AUTH (2019). She attended a theoretical seminar in Cognitive - Analytic Therapy (2019) and in the near future she is planning to take the clinical part of this educational seminar which involves sessions with clients/patients. She had clinical experience at outpatient epilepsy and psychiatric clinics, during which she administered neuropsychological tests and provided psychological support to patients. She is

currently a research associate in 3th Psychiatric Department, at University Hospital AXEPA, Thessaloniki, Greece. She participated in national and international conferences with numerous presentations.



**Giotakos, Orestis**  
 Psychiatrist, Athens, Greece

Orestis Giotakos graduated from the Military Medical School, University of Thessaloniki, Greece, and he has been working as a Military Psychiatrist since 1992. He obtained the M.Sc. in Neuroscience at the Institute of Psychiatry, London, and the Ph.D. at the Medical School of Athens. He has conducted several investigations and has written a number of articles and books in psychopathology and in prevention strategies. He is the founder of the npo “obrela – Neuroscience & Mental Health” ([www.obrela.gr](http://www.obrela.gr)), the editor of the Journal “Dialogues in Clinical Neuroscience & Mental Health” ([www.obrela-journal.gr](http://www.obrela-journal.gr)), and the director of the project “I care for my brain” ([www.icareformybrain.org](http://www.icareformybrain.org)).



**Gonda, Xenia**  
 Clinical Psychologist and Pharmacist,  
 Associate Professor, Department  
 of Clinical and Theoretical Mental  
 Health, Semmelweis University,  
 Budapest, Hungary

Xenia Gonda MA PharmD PhD is a clinical psychologist and pharmacist working as associate professor at the Department of Clinical and Theoretical Mental Health of Semmelweis University, Budapest. Her main research interests include personality genetics, neurobiology of suicide and bipolar disorders, effects of seasonality and birth season, and mood fluctuations related to the reproductive cycle.



**Halaris, Angelos**  
 Department of Psychiatry, Loyola  
 University Chicago Stritch School of  
 Medicine, Maywood, IL, USA

Dr. Angelos Halaris was born and raised in Athens, Greece. He graduated from the University of Munich School of Medicine and received research training at the Max-Planck Institute for Psychiatry in Munich. After a year at Novartis in Switzerland he joined the University of Chicago where he trained in psychiatry and psychopharmacology. He subsequently accepted a professorship at UCLA School of Medicine. He was later appointed Vice Chair of Psychiatry at Case Western Reserve University and Department Chair at MetroHealth Medical Center in Cleveland, Ohio. From 1993 through 2003 he served as Chairman of the Department of Psychiatry at the University of Mississippi Medical Center. In 2003 he was appointed Chairman of the Department of Psychiatry at Loyola University Stritch School of Medicine in Chicago. He has received numerous research



grants. He has published over 200 refereed articles, numerous chapters, and three books and co-edited "Inflammation in Psychiatry" and "Neuroprogression in Psychiatric Disorders" with Dr. B. Leonard. He has received numerous awards and honors including the Kraepelin-Alzheimer's Medal from the University of Munich and the International Union of Angiologists. He is an Honorary Member of the Hellenic Society for Sleep Medicine, the Latin American College of Neuropsychopharmacology, and the Cuban College of Neuropsychopharmacology. He is a Lifetime Distinguished Fellow of the American Psychiatric Association. He was recognized with a Distinguished Service Resolution by the State of Mississippi Legislature for establishing an international Research Mentor Program for CINP. He was recently elected to active membership in the European Academy of Sciences and Arts and was awarded the Owl of Wisdom Award by the International Society of Neurobiology and Psychopharmacology at its annual congress. His research focuses on biomarkers of inflammation in mood disorders and cardiovascular disease.



**Heinz, Elena**  
Psychologist, Thessaloniki, Greece

I was born at Thessaloniki and I work privately as psychologist since 1986.

I fulfilled my studies in Psychology in 1986 when I graduated from the Department of Behavioral Psychotherapy in Medical School of University College of London. In addition, I have been trained as Schema therapist and supervisor.

I teach and supervise professionals who attend the training program on CBT at the Branch of Macedonia of the Greek Association for Behavioral modification and Research [GBA] since 2002.

I also teach and offer supervision on Schema Therapy training program at Thessaloniki since 2013.

I teach at the postgraduate level of Counseling Psychology at the University of Thessaly since 2011.

I have many presentations in many local and international congresses, articles in science magazines. I have translated and I have made the editing of several psychological books relative to CBT, I have written two books, one on Communication and Marital Therapy (2012) and second on Body Image and eating disorders (2019), Thessaloniki: University Studio Press.

I am in chair of the Branch of Macedonia of GBA since 2001.

Since 2012 I am elected as general secretary of GBA.

Since 2008 I represent GBA at the European Association for Behavioral and Cognitive Therapies [EABCT] where I am member of the editorial board.



**Henry, Michael**

Director, Somatic Therapies Medical  
Director, Dauten Family Center  
for Bipolar Treatment Innovation,  
Massachusetts General Hospital, USA

Dr. Michael Henry is a graduate of the University of Massachusetts Medical School in Worcester, Massachusetts. He completed his residency in adult psychiatry at the University of Massachusetts Medical Center. He then assumed the medical directorship of the university's affiliated unit for mentally ill deaf people. After two years as director, he accepted and completed a fellowship in clinical pharmacology at the Intramural Program of the National Institutes of Mental Health in Bethesda, Maryland.

Dr. Henry subsequently joined Abbott Laboratories as the Associate Medical Director of the team developing Sertindole, a novel antipsychotic medication. Shortly after completion of the new drug application, he moved to McLean Hospital to become the Director of the Electroconvulsive Therapy Service. After 10 years as Director, he switched to a research affiliation at McLean Hospital and joined St. Elizabeth's Medical Center in Brighton as the Chairman of Psychiatry. Subsequently, he was appointed Vice President of Mental Health for Caritas Christi, a position he continued to hold after the network was purchased by Steward Health. During his tenure at Steward Health, Dr. Henry received recognition for his outstanding teaching from the Tuft's University Medical Students and received the annual teaching award from the psychiatry residents in 2010. He also held the position of Director of Residency Training and was the Chairman of the Committee on Graduate Medical Education. In 2012, He moved to the Massachusetts General Hospital where he is currently the Director of Somatic Therapy and Medical Director of the Dauten Family Center for Bipolar Treatment Innovation. Dr. Henry's academic interests have focused on understanding the brain circuitry of mood disorders and applying them to the clinical practice of electroconvulsive therapy and psychopharmacology. Dr. Henry is a member and Vice-Chair of the Massachusetts Board of Medicine's Committee on Quality and Patient Safety.



**Hionidou, Christina**

PhD, Psychologist, CBT  
Psychotherapist, Greece

I live and work in Thessaloniki, private practice.

I studied Psychology at the Aristotle University of Thessaloniki (B.Sc, M.Sc) and I had my PhD at the National and Kapodistrian University of Athens (2000).

In addition I have been trained in supporting people with Life challenging illness and Bereavement.

I teach and supervise professionals who attend the training program on CBT at the Branch of Macedonia of the Greek Association for Behavioral modification and Research [GBA] since 2004. My research and theoretical interests are mainly on meaning making in illness, and the communication and the relationships between patients and health practitioners in health settings.

I have many presentations in local and international congresses, articles in science magazines and in books (collective works).

I have served as a member of the board of the Branch of Macedonia of GBA.



**Iakimova, Rossitza**

Head of the Second Psychiatric Clinic,  
University Multiprofile Hospital  
for Active Treatment in Neurology  
and Psychiatry "Sveti Naum",  
Bulgaria, Sofia, Assistant Professor  
in Psychiatry, Medical University of  
Sofia, Bulgaria

Rossitza Iakimova is a certified psychiatrist. She is the Head of the Second Psychiatric Clinic of the University Multiprofile Hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum", Bulgaria, Sofia and an Assistant Professor in the Medical University of Sofia. She is also a consultant on domestic violence in NGO "Centre Nadja Fondation" and a consultant for NGO "For our children". Member of the Bulgarian Medical Association, Bulgarian Psychiatric Association and Scientific Society of Neuropsychopharmacology and Neurosciences. Scientific interests in the fields of affective disorders and premenstrual depressive disorder.



**Ierodiakonou-Benou, Ioanna**

Associate Professor of Psychiatry,  
3<sup>rd</sup> Department of Psychiatry,  
Aristotle University of Thessaloniki,  
AHEPA University General Hospital,  
Thessaloniki, Greece

Dr Ioanna Ierodiakonou-Benou was born in Thessaloniki in 1956, she graduated from the Medical School of Aristotle University of Thessaloniki in 1981 and she received her specialty in Psychiatry in 1988.

She attended a 4-year postgraduate course in Psychoanalysis and Psychoanalytic Psychotherapy in the Adolescent Unit of the Tavistock Clinic of London and she earned her PhD in 1994.

She has served as a Consultant of the National Health System in the Department of Psychiatry of the "Ippokraton" General Hospital of Thessaloniki for 10 years. Since 2000 she works at the 3<sup>rd</sup> Department of Psychiatry, Aristotle University of Thessaloniki at AHEPA Hospital. Today is Associate Professor of Psychiatry and in charge of the Psychotherapeutic Service of the Department.

Her clinical, teaching and research work focuses on the Psychoanalysis and the Psychoanalytic Psychotherapy in clinical psychiatry and on Consultation-Liaison psychiatry. Her main research interests include suicidal behavior, psychotherapy in the General Hospital, perinatal mourning and psychotherapy of chronically suffering patients.

She participated with presentations and scientific papers in International and National Scientific Meetings and with publications in International and National scientific journals.

Dr Ioanna Ierodiakonou-Benou is member in 7 International Scientific Societies and 5 Hellenic.





**Javed, Afzal**

WPA Secretary for Sections  
Consultant Psychiatrist & Visiting  
Clinical Associate Professor University  
of Warwick, UK

Dr. Afzal Javed is a Consultant Psychiatrist at Coventry & Warwickshire NHS Trust at Nuneaton. He is an Honorary Clinical Associate Teacher at Warwick Medical School, University of Warwick UK. He also holds the position of Chairman Pakistan Psychiatric Research Centre, Fountain House, Lahore (Pakistan). He graduated from King Edward Medical College Lahore, Pakistan and received higher specialised training in Psychiatry from Pakistan and UK (from Royal Edinburgh Hospital, University of Edinburgh and Institute of Psychiatry & Maudsley Hospital London). He has served the UK Royal College of Psychiatrists as Deputy / Associate Registrar, member Board of International Affairs of the College, Chairman of West Midlands Division of the College & one of the lead College office bearers for SAS doctors & Patients & Carers groups. He was also elected as executive committee member of the College Faculty of Rehabilitation and Social Psychiatry & represents the faculty at Education and Training Committee of the College.

His role in international psychiatry is highlighted by his involvement with a number of professional organisations. He is currently working as:

- Secretary for Sections World Psychiatric Association (WPA)
- President Elect Asian Federation of Psychiatric Associations (AFPA)
- Immediate Past President World Association for Psychosocial Rehabilitation (WAPR)
- Advisor & Founder Secretary General of South Asian Forum on Mental Health & Psychiatry (SAF)
- Advisor SAARC Psychiatric Federation (SPF)
- Founding Secretary General Asian Federation of Psychiatric Associations (AFPA)
- Immediate Past Co Chairman / Founder office Bearers WPA Section on Psychiatry in Developing Countries
- Chairman Pakistan Psychiatric Research Centre, Fountain House, Lahore, Pakistan

His areas of special interest are Psychosocial Rehabilitation, Social and Transcultural Psychiatry and Psychiatric Research. His academic skills have been invaluable when publishing more than 110 scientific papers and being author of six books/monographs on different topics of psychiatry. He is currently involved in a number of projects on Schizophrenia and is completing audits in different clinical aspects of long term management of chronic mentally ill in the community.



**Kalimeris, Spyros**  
Psychiatrist, Athens, Greece

Spiros Kalimeris was born in Athens Greece, where he lives today with his wife and two children. He has graduated from Medical School of Crete, Greece in 2004. He is a psychiatrist Msc since 2012, having concluded his 5 year training in Psychiatric Hospital of Athens. His work experience also includes neurology residency, province medical practice, army medical practice, private psychiatry clinical employment. Lately he has been credited with rTMS Course certification from Maastricht University (UEMS recognized).

Spiros Kalimeris is a certified Cognitive Behavioral Therapist having concluded a long clinical CBT training program of the National Kapodistrian Athens University. He is receiving ongoing psychiatric and variable psychotherapeutic education at various courses & seminars broadening his therapeutic and interest background.

Spiros Kalimeris is currently being active providing biological psychiatric (psychopharmacology & rTMS) and synthetic psychological therapies at his private practice in Athens, frequently in association with esteemed colleagues of similar fields.



**Kaparounaki, Chrysi**  
Medical Student, Aristotle University  
of Thessaloniki, Greece

Chrysi Kaparounaki is a 4th year Medical student at the Aristotle University of Thessaloniki. In 2015, she graduated from Kapetanakeio High School in Heraklion of Crete with honors and she has been awarded with certificates of excellence. She speaks fluently English (Proficiency of Michigan) and French (Sorbonne C1) and she has attended two years of Greek Sign Language lessons (first level degree). Since 2015 she attended numerous Medical Conferences including the 8th Scientific Event: Psychiatry in daily clinical practice, Days of Psychiatry in Thessaloniki, the 8th Scientific Congress of Medicine School of Thessaloniki and Arrhythmias Update 2019. In addition, she assisted at the organization of the seminar Miracle of life, 2nd and 3rd abcs3 and the 25th Scientific Congress of Greek Medical Students. Also, she attended the 22nd, 23rd, 24th and 25th Scientific Congresses of Greek Medical Students with an oral presentation at the latest three ("Parkinson and Huntington Diseases - Autophagy", "Taboo of AIDS" and "Socially defined Suicides" respectively) and a Workshop: "Emergency Psychiatry: Diagnosis, Differential, diagnosis and Medication" at the first one. Moreover, she worked at the foundation Zoodochos Pigi for people with special abilities, in Heraklion of Crete, launching new technology methods in primary and secondary health care. She is an active member of Scientific Society of Greek Medical Students (ΕΕΦΙΕ) and the Hellenic Medical Students International Committee (HELMASIC). Finally, she is an active volunteer for the NGO "Medicines du Monde" - Open

Polyclinic in Thessaloniki assisting in a psychiatric and a cardiological infirmary.



**Karakatsoulis, Gregory**

Psychiatrist-Psychotherapist,  
Consultant in Adult General  
Psychiatry, 3<sup>rd</sup> Psychiatry Department,  
AHEPA Hospital, Aristotle University  
of Thessaloniki, Greece

Gregory Karakatsoulis graduated from the Medical School of the Aristotle University of Thessaloniki and has been specialized in Psychiatry. He is also Cognitive Analytic Psychotherapist since 2015 as he has attended the Cognitive Analytical Psychotherapy training program. He works as a consultant at the Third Psychiatric Department of the Aristotle University of Thessaloniki since 2018 and he is a PhD candidate at the same University.



**Karanikola, Maria**

Cyprus University of Technology,  
School of Health Sciences,  
Department of Nursing – Limassol,  
Cyprus

Dr Maria Karanikola is an Associate Professor at Cyprus University of Technology since 2008. She holds a BSc in Nursing (1999) from the National and Kapodistrian University of Athens, School of Nursing, as well as a Master's degree in Mental Health (2001) and a PhD in Mental Health Nursing (2006) from this institute. She has a clinical experience as a staff nurse in a variety of clinical settings, including mental health services, since 1999.

Her main research interest focuses on the link between health-care environment and mental health issues and well-being in both clinicians' (nurses, physicians) and healthcare service users (patients & family members), with special interest in mental health, emergency and critical care settings. Moreover, she is exploring the experience of mental health disease and of receiving/delivering care and how this may affect patients' and providers' neuro-cognitive and psychological responses, their meaning-making and values. Additionally, she has explored professional role issues among Greek and Cypriot nurses and their association with mental health parameters, as well as with the quality of delivered care. In the immediate future she intends to explore the effectiveness of psychological support interventions in nurses' and patients' mental health status, as well as the role of neuro-cognitive functioning in nurses' and patients' response to clinical issues. She has published more than 65 original papers in high impact factor journals (pubmed/ scopus) with a high score of citations, several text books, book chapters and monographs, as well as technical reports of research projects. She has participated in more than one hundred international conferences, and she has published

relevant abstracts in proceedings. Her research work on the living experience in those living with severe mental illness has been awarded in international settings.



**Karathanasi, Vasiliki**

Oral Pathology & Medicine Specialist,  
Dermatology Resident, General  
Hospital of Athens "Evangelismos",  
Athens, Greece

Dr. Vasiliki Karathanasi graduated from the Dental School of University of Athens and afterwards having passed successfully the entrance exams she completed the 3-year postgraduate program of Oral Pathology & Medicine first with HONOURS. Subsequently she unanimously received her PhD referring to oral oncogenesis with HONOURS and continued her studies in the Medical School of Athens from which she graduated with HONOURS. She was elected President of the European Dental Students Association and Delegate in the Association for Dental Education in Europe so contributing to the criteria establishment regarding the curriculum development in health sciences across Europe. She has participated in medical volunteering missions both in Greece and abroad. She has participated in more than 40 congresses and has received 4 awards among which the Young Scientist Award of the European Association for Oral Medicine while she counts 15 publications. She holds a private oral medicine practice for 14 years and served as clinical and research associate in Oral Medicine & Oncology units of the University of Athens. She is currently a Dermatology Resident in the General Hospital of Athens "Evangelismos" so aiming at further exploring and bridging Dermatology with Oral Medicine. The concept of a potential psychogenic causal and/or triggering mechanism underlying the development and progress of oral and skin disease has significantly occupied her both scientifically and humanly.



**Karzis, Antonis**

Psychiatrist, Private Practice and a  
Geriatric Hospice, Volos, Greece

Born and raised in the city of Volos.

Graduated from the National & Kapodistrian University of Athens Medical School.

Completed his Psychiatric residency in 2012 and became a board certified Psychiatrist.

Holds an MSc degree in Mental Health Promotion & Mental Disorder Prevention from the National & Kapodistrian University of Athens Medical School.

Works since 2012 in private practice and a geriatric hospice in Volos.

Areas of personal interest include New & Emerging Technologies in Psychiatric Care, Portrayal of Mental Illness in Cinema and the Media, Advocacy for Mental Health Services Users.



**Kasper, Siegfried**

Professor and Chair, Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Dr. Siegfried Kasper is Professor of Psychiatry and Chairman of the Department of Psychiatry and Psychotherapy at the Medical University of Vienna, Austria. Born in Salzburg, Austria, he was educated at the medical schools of the University of Innsbruck, Austria and the Universities of Freiburg and Heidelberg, Germany. Dr. Kasper gained clinical and research experience in psychiatry at the Central Institute of Mental Health, Mannheim, Germany, the Psychiatric Department of the University of Heidelberg, Germany, the Clinical Psychobiology Branch of the National Institute of Mental Health, Bethesda, Maryland/USA, and the Psychiatric Department of the University of Bonn, Germany; in neurology at the Neurological Department of the University of Heidelberg in Mannheim; and psychotherapeutic and psychoanalytic training at the Ausbildungsinstitut für Psychotherapie und Psychoanalyse in Heidelberg/Mannheim, Germany.

Dr. Kasper published 646 in PubMed listed publications (Google: Citation Index: 38.677; Hirsch-Index: 96, i10-index: 586) and more than 250 books or book chapters, in various areas of psychiatry. He concentrates on the biological bases of mental disorders and their possible treatment approaches. Furthermore, he has conducted studies in psychopathological as well as clinical areas. Dr Kasper is a frequent national and international speaker and continues to be actively involved in research programmes studying depression, anxiety, psychosis, and dementia.

Dr. Kasper serves/served on the executive committees and advisory boards of several national and international societies, such as the Austrian Association of Psychiatry, Psychotherapy and Psychosomatic (ÖGPP), the European College of Neuropsychopharmacology (ECNP) and the European Psychiatric Association (EPA). From 2005 to 2009 Dr. Kasper was President of the World Federation of Societies of Biological Psychiatry (WFSBP) and has been appointed as Honorary President of the WFSBP in 2013. He has been elected to the Executive Committee of the International College of Neuropsychopharmacology (CINP) for the period of 2012 to 2018 and is now President of this society. Moreover, Dr. Kasper is Chair of the World Psychiatric Association (WPA) Section of Pharmacopsychiatry. He is Founding President of the Austrian Society of Neuropsychopharmacology and Biological Psychiatry (ÖGPB) and of the Austrian Society of Drug Safety in Psychiatry (ÖAMSP). Furthermore, he is a Honorary Member of the Czech Society of Neuropsychopharmacology, the Romanian Society of Neuropsychopharmacology, the Hungarian Psychiatric Association and a Fellow of the Royal College of Psychiatrists, UK, as well as of the Scan-



dinavian College of Neuro-Psychopharmacology (SCNP) and of the Ukrainian Association of Psychiatry. He is a member of the European Academy of Sciences and Arts (EASA). Furthermore, he has been appointed as Honorary/Visiting Professor at the following universities: University of Hong Kong, China, in 2004; Universidad Andrés Bello, Santiago de Chile, Chile, 2014; Aino University in Osaka, Japan, 2015; Kolkata Institute of Psychiatry, Department of Health & Family Welfare, India in 2016; University of Hiroshima, Japan, in 2017 and Belgrade University School of Medicine, Serbia, in 2017.

Dr. Kasper serves on the editorial boards of numerous learned journals, including *The Lancet Psychiatry*, *CNS Spectrums*, *Journal of Affective Disorders*, *Pharmacopsychiatry*, *European Archives of Psychiatry and Neuroscience*. He is Chief-Editor of the *World Journal of Biological Psychiatry* and the *International Journal of Psychiatry in Clinical Practice*, and Field Editor of the *International Journal of Neuropsychopharmacology* as well as Section Editor of the *Annals of General Psychiatry*.

As a result of his research expertise he is the recipient of numerous national and international scientific and public awards and prizes and has been acknowledged with the Grand Decoration of Honor in Silver for Services to the Republic of Austria, the Austrian Cross of Honor for Science and Art, First Class and the Gold Medal for Meritorious Service to the Province of Vienna.



**Konsta Anastasia**

Assistant Professor of Psychiatry and Psychogeriatrics, 1<sup>st</sup> Psychiatric Department, Aristotle University of Thessaloniki, "Papageorgiou" General Hospital, Thessaloniki, Greece

Anastasia Konsta is an Assistant Professor of Psychiatry and Psychogeriatrics at the First Psychiatric Department of the Aristotle University of Thessaloniki at the "Papageorgiou" General Hospital, where she is responsible for the Psychogeriatrics Inpatient and Outpatient Unit. Her academic, clinical and research work focuses mainly on the subject of Psychogeriatrics. She has published in academic journals and has contributed with chapters in edited volumes. She, also, participates regularly as a speaker in conferences, seminars and educational programs. She teaches the course "Psychogeriatrics" in the context of the undergraduate program of the Medical School of the Aristotle University of Thessaloniki.



**Krespis, Marios**  
Fourth-Year Psychiatry Resident,  
Psychiatric Hospital of Attica, Greece

Dr Marios Krespis is a fourth-year psychiatry resident at the Psychiatric Hospital of Attica. As part of his placement he gained experience working in the acute inpatient wards of the hospital and had the chance to become familiar with a wide variety of psychiatric conditions. More recently, he provided care in the community as part of a multi-disciplinary team based at the hospital's off-site mental health centre. This gave him the opportunity to personally appreciate the fascinating distinctiveness of PDs as a diagnostic category and the challenges in treating them.

After earning his M.D. from the University of Patra he held various posts in Greece and abroad. Notably, he worked as a junior doctor in psychiatry for the South London and Maudsley NHS Foundation Trust which he considers an eye-opening experience. He held his first position as a psychiatrist in training at the General Hospital of Katerini and has served as a medical private.



**Krystal, John**  
Professor of Translational  
Research, Professor of Psychiatry,  
Neuroscience, and Psychology, Chair  
of the Department of Psychiatry, Yale  
University, Chief of Psychiatry and  
Behavioral Health, Yale-New Haven  
Hospital, USA

Dr. Krystal is the Robert L. McNeil, Jr., Professor of Translational Research; Professor of Psychiatry, Neuroscience, and Psychology; and Chair of the Department of Psychiatry at the Yale University. He is also Chief of Psychiatry and Behavioral Health at Yale-New Haven Hospital. He is a graduate of the University of Chicago, Yale University School of Medicine, and the Yale Psychiatry Residency Training Program. He has published extensively on the neurobiology and treatment of schizophrenia, alcoholism, PTSD, and depression. Notably, he led the discovery of the rapid antidepressant effects of ketamine in humans. He is the Director of the NIAAA Center for the Translational Neuroscience of Alcoholism and the Clinical Neuroscience Division of the VA National Center for PTSD. Dr. Krystal is a member of the U.S. National Academy of Medicine. Currently, he is a member of the NIMH National Mental Health Advisory Council; co-director of the Neuroscience Forum of the U.S. National Academies of Sciences, Engineering, and Medicine; and editor of *Biological Psychiatry* (IF=11.982). He is past president of the American College of Neuropsychopharmacology (ACNP) and International College of Neuropsychopharmacology (CINP).

**Kypouropoulos, Stelios**

Consultant Psychiatrist,  
2<sup>nd</sup> Psychiatric Department,  
University General Hospital of  
Attikon, Greece

Stelios Kypouropoulos is a Consultant Psychiatrist from Athens, Greece.

He graduated from the Athens Medical School, National & Kapodistrian University, Greece and specialised in General Adult Psychiatry in Attikon hospital, Athens, Greece.

Following the completion of his training Stelios started working as a Consultant Psychiatrist at the 2nd Psychiatric Department of the University General Hospital of ATTIKON.

He is currently placed at the First Psychotic Episode unit and is also in charge of the "Sexual Function" outpatient department of Attikon Hospital.

Stelios is an enthusiastic consultant psychiatrist, dedicated to his clinical work with a high interest in psychiatric research.

He also holds a Master of Science in the field of "Promoting mental health - Prevention of psychiatric disorder" .

Stelios Kypouropoulos was recently elected as a Member of the European Parliament; his new role will give him additional opportunities in his long standing efforts on promoting mental health awareness and the significance of prevention of psychiatric disorders.

**Manolopoulou, Danai Ioanna**

Specialty trainee in General  
Psychiatry at Psychiatric Hospital of  
Attica, ST6, Greece

Graduation from University of Athens, Medical School  
Specialty trainee in General Psychiatry at Psychiatric Hospital of Attica, ST6

Residency in Psychiatry at General Hospital of Katerini , Greece, Blackberry Hill Hospital, Avon and Wiltshire Mental Health Partnership NHS Trust , Bristol , UK and West Middlesex University Hospital , West London Mental Health NHS Trust , UK.

Residency in Neurology and Internal Medicine at 251 Hellenic Air Force General Hospital, Athens, Greece.

Residency in Internal Medicine, Department of Cardiology and Coronary Care Unit at General Hospital of Pirgos, Greece.

Research Fellow in Clinical Trials unit, CIDS at West Middlesex University Hospital, London,UK

Attendance at educational seminar in Psychodynamic Psychotherapy Aiginitio University Hospital, Athens, Greece and training in Systemic Psychotherapy Psychiatric Hospital of Attica, Athens, Greece.





**Mavreas, Venetsanos**  
Emeritus Professor of Psychiatry,  
University of Ioannina Medical  
School, Greece

Professor Venetsanos Mavreas was born in Athens in 1951. He studied medicine at the University of Athens and specialized in Neurology and Psychiatry in Athens. From 1983 to 1988, he worked at the Maudsley Hospital and the Institute of Psychiatry in London, where he took his Ph.D. in 1990. From 1988 to 2000, he worked at the Department of Psychiatry of the University of Athens Medical School and the University Mental Health Research Institute in Athens. From 2000 to 2018, he was Professor of Psychiatry at the University of Ioannina Medical School and Director of the Department of Psychiatry of the University Hospital of Ioannina. Currently he is Professor Emeritus of the University of Ioannina Medical School. The main topics of his work is psychiatric epidemiology, social and community psychiatry, trans-cultural psychiatry and research methodology in mental health. He is member of the Hellenic Psychiatric Association and the World Psychiatric Association. He has been advisor of the World Health Association in issues of mental health, psychiatric classifications, research instruments and disability. He has published over 100 scientific papers in international and Greek scientific journals and books.



**Möller, Hans-Jürgen**  
Emeritus Professor of Psychiatry,  
Ludwig-Maximilians University,  
Munich, Germany

Hans-Jürgen Möller, MD, worked from 1988 to 1994 as full Professor of Psychiatry and Chairman of the Psychiatric Department at the University of Bonn (Germany) and from 1994 to 2012 as full Professor of Psychiatry and Chairman of the Psychiatric Department at the Ludwig-Maximilians-University in Munich (Germany), where he acts now as professor emeritus. Professor Möller's main scientific contributions include clinical and neurobiological research into psychiatry, schizophrenia and depression, and clinical psychopharmacology. Professor Möller has written and co-authored over 1,300 scientific publications (Hirsch Factor 120) and several books. He was certified 2014 and 2015 by Thomson Reuters among 1% of researches for most cited papers (2002-2012).

He was editor or co-editor of several German or English scientific journals like "European Archives of Psychiatry and Clinical Neuroscience", "World Journal of Biological Psychiatry" and is member of the editorial board of several psychiatric journals. He was President of the World Federation of Society of Biological Psychiatry (WFSBP), of the European Psychiatric Association (EPA), The International College of Neuropsychopharmacology (CINP) and Chairman of the Section on Pharmacopsychiatry of the World Psychiatric Association (WPA).

His scientific and academic merits were honoured among other with several Dr. h.c. titles, the Jean Delay Prize (WPA), the lifetime Achievement Award (WFSBP) and the Pioneer Award (CINP).



**Moraitou, Despina**

Senior Lecturer of Cognitive Psychology and Applied Gerontology / Geropsychology, Department of Psychology, Aristotle University of Thessaloniki, Greece

Despina Moraitou is a Senior Lecturer of Cognitive Psychology and Applied Gerontology / Geropsychology in the Department of Psychology, Aristotle University of Thessaloniki. She is the author and co-author of 43 articles published in international and Greek journals and books as well. She is the Editor (Psychology) (2015-) in interdisciplinary journal «Journal of Happiness Studies». It's «President-elect» of Division 7 - Applied Gerontology / Geropsychology the International Association of Applied Psychology (IAAP). Her research interests are oriented in psychology lifelong development and aging and, in cognitive and affective processes taking place during the lifelong development and aging and the positive aging.



**Moretti, Patrizia**

Division of Psychiatry, Department of Medicine, University of Perugia, Italy

Born in Perugia June 11 1957

Degree in Medicine and Surgery in July 1982

Specialist in Psychiatry in July 1986

Assistant at the Department of Medicine University of Perugia Teaching School of Medicine - Faculty of Medicine, place of Terni University of Perugia from 1987 until today

Teaching School of Specialization of Psychiatry, Anesthesiology, Oncology at University of Perugia

Teaching School of Nursing, School of Obstetric, School of Physical Therapists at the place of Foligno University of Perugia 1982-1990 Training on Group Analysis in Rome with Leonardo Ancona

1990-1997 Clinical supervision with Alice Von Platten

1986-2000 Personal training on Analytical Psychology in Rome at Analytic Training Institution: Association Italian Psychology Analytical (A.I.P.A.)

from 1986 to 1992 (totaling over 560 hours) with Alessandra De Coro

from 1992 to 1994 (over 120 hours) with Concetto Gullotta

from 1995 to 2002 (equaling over 250 hours) with Michele Pignatelli di Cerchiara and Antonio Grassi

1991-2001 Training in Rorschach Test at CEIPA Rome

2003-2004 Master Diagnosis and Treatment on Eating Disorders University of Padua

1989 Training for rehabilitation at the Psychiatric Hospital Lion France

1991 Training in Psychiatry Department Washington Medical Centre Saint Louis LO USA

1992-1993 Training in psychodynamic psychiatry at Tavistock Clinic London UK

Since 1989 until 2001 he carried out care functions with autonomous management of patients both in hospitalization and in

outpatient settings and also as tutoring for assistants in training of the School of Specialization in Psychiatry, first at the Chair of Psychiatry UO of Clinical Psychology of the Perugia General Hospital and then from 1987 to today it is in agreement with the Perugia Hospital with the status of 1st level medical director In Psychiatric Unit of Perugia General Hospital  
 Membership Società Italiana di Psichiatria, Group Analytic Society London since 1992, IAAP since 2001, LIRPA since 2009  
 Throughout this period he has also carried out scientific activity as attested by 135 printed memories. He has participated with communications and reports at numerous national and international conferences. Main areas of interest and research: Applied clinical psychopharmacology, individual and group analytical psychotherapy, eating behavior disorders: psychotherapy, nosography, drug therapy, personality disorders, psychometric tests, bipolar disorders, eating disorders.



**Mousa, Danaï Priscila**  
 Fourth-year Medical Student,  
 Aristotle University of Thessaloniki,  
 Greece

Danaï Priscila Mousa is a fourth-year medical student at the Aristotle University of Thessaloniki. In 2014 she graduated from Ursulines' French College with honors and she has been awarded certificates of excellence for outstanding performance for all classes. Her awards also include winning the scholarship of the Law Department of the French Institute of Athens (Competition of Oral Expression and Exposure, 2012) and the scholarship of State School of Orchestral Art for 8 consecutive years (2005-2013). Since 2015 she attended numerous medical conferences including the 23th, 24th and 25th Scientific Congress of Hellenic Medical Students (SCHMS) and the 7th Urological Conference (Dec. 2018) in which she participated with an oral presentation on the Cancer of Urinary Tract. She also participated in the 25th Scientific Congress of Hellenic Medical Students (SCHMS) (May 2019) with an oral presentation on the "Epidemiological data of suicide in Greece and worldwide". She has been a member of the organizing committee of the 25th SCHMS and of the psychological conference "Miracle of Life" in Thessaloniki, and she is an active member of the Scientific Society of Greek Medical Students (ΕΕΦΙΕ) and also a member of Hellenic Medical Students' International Committee (HELM-SIC). She participates in volunteering actions with the Doctors of the World (MdM) Greece, as well as, in 24-hour on-call duty, in major Medical Centers in Athens (Hippokrateio, KAT, Attico) and the Health Center of Poligiros in Chalkidiki under the EKYBE programme. She speaks Greek, English, French and German (Mother tongue, Cambridge Proficiency, C2 Sorbonne and B1 level, respectively).

**Nimatoudis, John**

Professor of Psychiatry and Chairman of the 3<sup>rd</sup> Department of Psychiatry, Aristotle University of Thessaloniki, Greece

John Nimatoudis, MD PhD is Professor of Psychiatry and Chairman of the 3<sup>rd</sup> Department of Psychiatry at Aristotle University of Thessaloniki, Greece.

Prof. Nimatoudis received his medical degree in 1979 at the Aristotle University of Thessaloniki and became a specialist in psychiatry in 1984. He finished his PhD in psychiatry (1989) at the Aristotle University of Thessaloniki and he was elected as Lecturer in Psychiatry in 1991. Since 2011 he is Professor of Psychiatry at the Aristotle University of Thessaloniki.

He has one year sabbatical at the Universite Catholique de Louvain, Bruxelles: Service de Psychopathologie, "Cliniques Universitaires Saint-Luc" and "Centre de Revalidation Neuropsychologique" (Neuropsychological Unit).

Since 2013 he is Chairman of the 3<sup>rd</sup> Department of Psychiatry at the University Hospital AHEPA, Thessaloniki, Greece and President of the Neuroscience Sector of the Aristotle's University Medical School.

Prof. Nimatoudis is an active member of the Health Committee for the Psychiatry Reform and the deinstitutionalization project of the Greek Ministry of Health. During 2013 - 2015 he was President of the National Health Committee of the Greek Ministry of Health.

He has participated to the European Research Program "Neuropsychology", Sub-program: "Calculation and number processing disorders" (1990-1992) and to the European Program BIOMED I, Sub-program E.S.C.A.P.E (1992-1996).

Prof. Nimatoudis' areas of clinical and research interest is: biological psychiatry, schizophrenia, mood disorders (especially bipolar disorders), psychopharmacology, and neuropsychology.

He is the author or co-author of more than 300 papers presented to congresses and published in international and national journals.

**Ntafouli, Mary**

Clinical Sleep Researcher, Sleep Research Unit, Athens University, Eginition Hospital, Athens, Greece

Mrs Mary Ntafouli is Clinical Psychologist (AUTH) and accredited CBT Therapist (by EABCT) with MSc on Sleep Medicine (Hons) at Democritus University of Thrace. She is also PhD candidate at Sleep Wake Epilepsy Center, Department of Neurology, University Hospital of Bern, supervised by Prof.C.L.Bassetti. Currently, she is working as Clinical Sleep Researcher at Sleep Research Unit of Athens University at Eginition Hospital, supervised by Prof. D.Dikeos. Her position is supported by two grants, Swiss European Mobility program and European Sleep Research Society. She has participated in various conferences on Psychiatry, CBT, Sleep Medicine and Psychology. The latest publication was at Journal of Neurological Sciences with topic "Apathy in Parkinson's disease with REM sleep behavior disorder" (2019).



**Ntouros, Evangelos**

Psychiatrist, Military Community  
Mental Health Center, 424 General  
Military Hospital, Thessaloniki,  
Greece

Current work positions

Dates 09/2016→

Occupation or position held: Attending physician (psychiatrist)

Main activities and responsibilities: Diagnosis and treatment in both outpatient and inpatient settings. Training of residents and medical students in psychiatry rotation.

Name and address of employer: 424 Army General Hospital/ MCMHC, Gr. Lampraki 3, 54363

Dates 08/2018 →

Occupation or position held: Scientific associate, 2<sup>nd</sup> Psychiatric Clinic, Aristotle University Thessaloniki

Main activities and responsibilities: Management of Early Intervention Clinic. Management of day to day resident (trainee). Lectures to 6th year medical students. Some lectures to residents (trainees).

Name and address of employer: 2nd Psychiatric Clinic, Aristotle University of Thessaloniki

Dates 10/2009 →

Occupation or position held Private practice (psychiatry)

Main activities and responsibilities: Diagnosis, treatment of psychological conditions in a private practice setting.

Name and address of employer: Private practice (Evangelos Ntouros), Tsimiski 89, 54622 Thessaloniki (Greece)

Education and training

Dates 08/2015 →08/2016

Title of qualification awarded: post-Doc

Principal subject: Early Intervention in Psychosis

Dates 05/2007 →02/2014

Title of qualification awarded: PhD

Title: Social cognition and obsessive-compulsive symptoms in first episode psychosis

Dates 2/2003 - 6/2008

Title of qualification awarded: Specialist in Psychiatry

Principal subjects / occupational skills covered: Inpatient care, Outpatient care, Pharmacotherapy, Psychotherapies (dynamic, CBT, CAT, structural systemic, group, supportive). Special populations, addictions.

Organisation providing education and training: 2nd Psychiatric Clinic, Aristotle University of Thessaloniki

Additional information

11 publications and more than 50 presentations in Greek and International Psychiatric Congresses.





**Nystazaki, Maria**

University Psychiatric Clinic "Aghioi Anargyroi" Hospital, NKUA, Greece

Dr. Maria Nystazaki is a postdoctoral fellow at the University Psychiatric Clinic at "Aghioi Anargyroi" Hospital. She holds a BSc in Nursing from the National and Kapodistrian University of Athens, School of Nursing, as well as a Master's degree in Mental Health and a PhD in Mental Health Nursing from the University of Athens. In 2016 he was trained in Psychopharmacology at the British Association of Psychopharmacology. She has publications in Greek and international scientific journals and books. She is an invited speaker at more than ten Greek and international conferences and workshops per year. She is qualified in the provision of approved psychometric scales for psychosis, depression and dementia. She participates as a secondary investigator in Phase III clinical studies for innovative medicinal products in the field of mental health. She is also a visiting professor at the Cyprus University of Technology, Department of Nursing.



**Oikonomou, Achilleas**

Psychiatrist-Psychotherapist, Greece

Achilleas Oikonomou is a psychiatrist-psychotherapist trained at the Psychiatric Hospital of Attica. He has entered private practice and has now been running two private offices in Trikala and in Grevena. He has been elected President of the Hellenic Association of Professional Psychiatrists as well as President of Young Psychiatrists of the Hellenic Psychiatric Association. He is also Past President of the Association of Hellenic Psychiatric Trainees. He holds a medical degree from the Aristotle University of Thessaloniki and an MSc in Health Management. He has delivered over 50 presentations in Greek and international congresses.



**Panagiotidis, Panagiotis**

Consultant at the rank of Lieutenant Colonel, Psychiatric Department, 424 General Military Hospital, Thessaloniki, Greece

Dr Panagiotis Panagiotidis received his medical degree at Aristotle University of Thessaloniki (A.U.TH.), Greece in 1998, and completed his residency in psychiatry in 2007 in the 3rd Psychiatric department of A.U.TH. He currently serves as consultant at the rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece. He also works in his private practice (Co-owner, Ψ-Center Thessaloniki, Private sector, Mental Health and Addictions Center, Thessaloniki, Greece).

Dr Panagiotis Panagiotidis has earned his PhD Thesis in 2012, from Medical School of A.U.TH. with the subject: "Prevalence of neurological soft signs in patients with schizophrenic psychosis" and received a 2 years Fellowship, 3rd Psychiatric department (A.U.TH) in "Drug addictions, screening and identification of problematic use and dependence from psychoactive substances, prevention and brief interventions in the general population and special subgroups, therapeutic management, individual and group psychotherapies". He is scientific associ-

ate, 3<sup>rd</sup> Psychiatric Department, Aristotle University of Thessaloniki and participates in psychiatric training of undergraduate medical students, as well as of psychiatry residents and psychologists.

Dr Panagiotis Panagiotidis is member of many Scientific Committees, member of the European Commission's projects for Alcohol ("Bridging the Gap», «brief interventions for alcohol abuse" and "building capacity") and also member of the working group of the European Psychiatrists specialized in alcoholism. He is General Secretary of the Greek Society for the Study of Addictive Substances. ". His areas of clinical and research interest are Addictions, Schizophrenia, Bipolar spectrum disorders, Liaison Psychiatry, Psychopharmacology and Military Psychiatry. He has participated in various International and Regional meetings and congresses and as an invited speaker for various scientific associations. He has authored and co-authored more than 50 papers delivered in Greek and International Journals.



**Pandova, Milena**

Psychiatrist, University Hospital for Active Treatment in Neurology and Psychiatry, Sofia, Bulgaria

Dr. Milena Pandova has graduated from the Medical University Sofia in 2011 and started an internship in psychiatry the following year. Since 2017 she is a qualified psychiatrist with a special interest in the fields of affective disorders and more specific bipolar disorder but also neurocognition, psychopharmacology, prodromal symptoms and early intervention and prevention opportunities in affective and psychotic disorders. She has also defended a doctoral thesis on the topic of cognition in bipolar disorder.



**Papadimitriou, Panagiota**

Resident in Adult General Psychiatry, Psychiatric Hospital of Attica, Greece

Dr Papadimitriou is a graduate of the Medical School of Palermo (Università degli Studi di Palermo, Italia). During Medical school, she practiced in specific programs of Internal Medicine, Forensic Medicine, Sports Medicine, and Neurosurgery. In 2012, she returned to Greece to practice medicine and for 1 year and a half she was a physician of rural service in Sperchiada, a village in Fthiotida's countryside. After that time, she started her psychiatric internship at Kozani's General Hospital, where she was trained 8 months in acute psychiatric disorders and 6 months in intercourse psychiatry. At the present, she is completing her psychiatric training in Psychiatric Hospital of Attica at the 5th Department. During her training time, she participated in two neuropsychiatric seminars in Primary Health Care and attended the 23rd and 25th Pan-Hellenic Congress of

Psychiatry. Specifically, in the 25th Congress she presented 2 posters, one concerning the impact of unemployment on mental health and the other about refugee migration crisis.

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**Papadopoulou, Eleni**  
Fourth-year Year Medical Student,  
Aristotle University of Thessaloniki,  
Greece

Eleni Papadopoulou was born on July 19, 1997 in Thessaloniki and is currently a 4th year medical student at the Aristotle University of Thessaloniki. In 2015 she graduated from the European School of Munich (ESM) after succeeding in the EB examination and receiving the EB diploma (European Baccalaureate). Since 2015 she has attended multiple medical conferences and educational seminars including the 26th Armed Forces Medical Conference, the 8th Scientific Event: Psychiatry in Clinical Setting, the 4th ABCS3 (Applied Basic Clinical Seminar). Moreover she has participated in the 23rd and 25th Scientific Congress of Greek Medical Students with both oral presentations and Round Table (Everything you always wanted to know about suicidality but were afraid to ask), whilst being in the Organisation Committee of the latter one.

In her free time she is actively engaged in the Scientific Society of Hellenic Medical Students (ΕΕΦΙΕ) as well as the non-profit, non-governmental group "ATP" - Aristotle Team of Pharmacy. She has participated as a volunteer and organiser in various activities of educational and humanitarian purpose both within the SSHMS and ATP.

Lastly she is a fluent speaker both in German and English and possesses basic knowledge of French.

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**Papadopoulou, Konstantina**  
Fourth-year Year Medical Student,  
Aristotle University of Thessaloniki,  
Greece

Konstantina Papadopoulou is a fourth-year medical student at the Aristotle University of Thessaloniki. In 2015 she graduated from Mandoulides High School with Honours and she has been awarded with certificates of excellence. Since 2015, she is an active member of the Scientific Society of Greek Medical Students (ΕΕΦΙΕ) and the Hellenic Medical Students' International Committee (HELMSIC). Furthermore, she has attended numerous medical conferences, seminars and workshops, including Surgical Suturing Workshop (May 2016) and Exploring Novel Medical Frontiers (April 2016). Also, she participated in the 23rd Scientific Congress of Greek Medical Students (May 2017) with an oral presentation regarding Pompe Disease. She has worked voluntarily in the Health Centre of Nea Kallikrateia and in Mediciens du Monde in Thessaloniki. In addition, she has participated in activities to raise awareness of health issues in students and in general public (diabetes, smoking), organized by Medschool program and HELMSIC. Lastly, she speaks English and German (Cambridge Proficiency and B1 respectively).

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**Paparrigopoulos, Thomas**

Professor of Psychiatry, Athens University Medical School, Head of the Neuropsychiatry Unit, 1<sup>st</sup> Department of Psychiatry, Eginition Hospital, Athens, Greece

Thomas Paparrigopoulos is Professor of Psychiatry at the Department of Psychiatry of the University of Athens Medical School. His clinical and research activities have focused mainly on sleep medicine, alcoholism, addiction, psychoneuroendocrinology, neuropsychiatry, and clinical studies in psychiatry. He is member of several international, European and Greek medical societies, and section co-chair of the WPA Section on Psychiatry and Sleep/Wakefulness Disorders. He is heading the Inpatient Alcohol Detoxification Clinic, the "ATHENA" Outpatient Detoxification Service, and the Neuropsychiatry Unit at the 1st Psychiatric Clinic of the Department of Psychiatry, University of Athens Medical School, at Eginition Hospital. He is also the co-director of the Sleep Study Unit at the same hospital. He is the author or co-author of more than 100 articles in peer-reviewed international journals and of more than 100 publications in international conference proceedings; also, he is invited author of chapters in various edited books.



**Pappa, Aglaia**

Associate Professors of Molecular Physiology, Democritus University of Thrace, Greece & Molecular Biology Student, Democritus University of Thrace, Greece

Pr. Pappa is Associate professor in Democritus University of Thrace in the department of Molecular Biology and Genetics. She teaches Physiology and Pharmacology. She is a graduate of Biology Department from Aristotle University of Thessaloniki. She had her PhD. in Pharmacology and Chemistry Laboratories from University of Ioannina. She had her post PhD training in Dr. Vasiliou's Laboratory, University of Colorado Health Sciences Center, School of Pharmacy, and Denver, Colorado, U.S.A. and Dr. D. J. Krolls', Natural Products Laboratory, Center for Organic and Medicinal Chemistry, Research Triangle Institute (RTI), Research Triangle Park, North Carolina, U.S.A. She has a significant number of announcements in National and International conferences. She has also a significant number of publications in International scientific Journals.



**Pasalidou, Christy**

Psychologist, MSc, Certified Cognitive Behavioral Therapist, Certified Advanced Schema Therapist, Trainer and Supervisor, Greece

My name is Christi Pasalidou. I was born in Athens in 1979 and was raised in Thessaloniki. I completed my undergraduate studies in Psychology at Aristotle University of Thessaloniki and my got my MSc in Cognitive Psychology, also at Aristotle University of Thessaloniki. I am a certified Cognitive Behavioral Therapist and a certified Advanced Schema Therapist, Trainer and Supervisor. I was also specialized in Eating Disorders and parent counseling. I hold a private practice as a psychotherapist since 2006, practicing Cognitive Behavioral Therapy and Schema Therapy and supervising other professionals. Moreover, I have taught several courses in Mediterranean College, Hellenic Society for Behavioral Research and other institutes and I am an external

partner performing Critical Incident Stress Management and Counseling in EAP programs.

I have published articles and chapters in books concerning CBT and psychophysiological disorders and I have presented oral and poster presentations in numerous Greek and international congresses.

I am a member of European Association of Behavioral and Cognitive Therapies, International Society of Schema Therapy and Hellenic Society for Behavioral Research.



**Patsali, Mikaella**

Fifth-year Medical Student, Aristotle  
University of Thessaloniki, Greece

Mikaella Patsali was born in Nicosia, Cyprus in 1996. She is a fifth-year medical student at the Aristotle University of Thessaloniki. She has also studied for a semester at the University of the Basque Country, in San Sebastian (2018).

While in High School, she was elected as the president of the Children Parliament of Cyprus and she represented Cyprus in Eurochild Conference in Wales (2011). She took part in the European Youth Parliament / Euroscola in Strasbourg (2013) and participated in several projects including Comenius (Slovenia, 2010), Youth in Action (Greece, 2013), MEDIMUN (Cyprus, 2014), AEGEE Summer University (Russia, 2016), Erasmus+ (Poland, 2016) and Global Volunteer program of AIESEC (Czech Republic, 2017).

As a medical student, she was an active member of the Hellenic Medical Students' International Committee (HELMSIC) and participated in the Medical Twinning of the European Medical Students Association (Würzburg, 2015).

In addition, she attended educational seminars and conferences including the First Aid seminar of the Red Cross, the European Training Program on Organ Donation (ETPOD), the Basic Life Support and Automated External Defibrillation (BLS/AED) Provider Course of the European Resuscitation Council, the 8th Scientific Conference of the Department of Medicine of the Aristotle University, the Applied Basic Clinical Seminar with Scenarios for Students (ABCS) and the Scientific Congress of Greek Medical Students (2017, 2019) of the Scientific Society of Greek Medical Students (ΕΕΦΙΕ).

Furthermore, she did a two month traineeship at the Alzheimer - Dementia Rehabilitation Center "Archangelos Michael" in Nicosia, as part of the program "New Technologies in Health Services" of the Aristotle University (2018).

She is an active volunteer for the NGO "Medecins du Monde" as a doctor assistant at their Open Polyclinic in Thessaloniki. She attends the School of Rescuers of ResqueGR, as well.

Lastly, she speaks English, French and Spanish (certified by Cambridge, DELF and Cervantes respectively).



**Penckofer, Sue**

Professor, School of Nursing, Loyola University Chicago Illinois, USA

Dr. Penckofer is a Professor in the School of Nursing and the Associate Dean of Academic Programs for the Graduate School at Loyola University Chicago Illinois, USA. Her program of research focuses on women's cardiovascular health, more specifically diabetes and depression and the treatments to improve these conditions. Her research team developed a novel psychoeducational program (called SWEEP) that uses cognitive behavioral therapy (CBT) for treating depressed women with T2D and was published in the Annals of Behavioral Medicine. Despite the successful outcomes of the SWEEP program, its limitation was the dependency on providers and the cost of CBT. As a result, her team wanted to examine a more accessible and cost-effective therapy for improving depression and its symptoms. They first conducted an open label proof of concept study (n=50) using weekly vitamin D2 supplementation (50,000 IU) for 6 months in T2D women with significant depressive symptoms. Their one group pretest-post test study demonstrated an improvement in mood and tolerability of the supplement (Journal of Diabetes Research). Subsequently, they conducted a randomized clinical trial (n=129) to examine the impact of weekly vitamin D3 supplementation (50,000 vs 5000 IU) for 6 months on depressive symptoms in women with T2D. They found an improvement in depressive symptoms with no differences between groups. Since reducing inflammation is associated with an improvement in mood, they are examining if vitamin D3 supplementation reduces levels of C-reactive protein (CRP) which may be a potential mechanism of action to explain their finding



**Perugi, Giulio**

Associate Professor of Psychiatry, University of Pisa, Director of the Second Psychiatric Unit, University of Pisa, Italy

Giulio Perugi, MD, is associate professor of Psychiatry at the University of Pisa and director of the Second Psychiatric Unit of the University of Pisa. In the last 35 years, he has been engaged in numerous research projects focused Affective Disorders. In this context, he has been involved in the International Research Project on Mood Disorders in collaboration with the University of South California at San Diego. In this project he has developed and directed many researches on Mixed States, Mania, Anxious-Bipolar Co-morbidity and Atypical Depression-Bipolar II-Borderline connection. Most recently, he has been involved in the international project "The Bipolar Disorders: Improving Diagnosis, Guidance and Education" (the BRIDGE and BRIDGE-II-MIX studies), in which a bottom-up approach has been applied to assess the validity of the criteria used for the identification of hypo/mania in depressed patients. He is the author of 3 books and over 500 papers, (more than 250 peer reviewed), on psychopathology, clinical psychopharmacology, and pharmacotherapy of affective disorders.

**Ramnalis, Anestis**

Psychiatrist, Inpatient Psychiatric Department, 424 General Military Hospital, Thessaloniki, Greece

Ramnalis Anestis graduated from the Medical School of Aristotle University of Thessaloniki in 2002, and completed his residency in psychiatry in 2011. He currently serves as consultant at the rank of Major, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece, and also private practice. He is scientific associate, 1st Psychiatric Department, Aristotle University of

Thessaloniki. He participates in psychiatric training of undergraduate medical students, as well as of psychiatry residents and psychologists.

His interests include Psychopharmacology (owner of Master of Psychopharmacology), Schizophrenia and other Psychotic disorders, Bipolar Spectrum disorders and liaison Psychiatry. He has participated in various International and Regional meetings and congresses and as an invited speaker for various scientific associations.

**Rantis, Konstantinos**

Psychiatrist, Inpatient Psychiatric Department, 424 General Military Hospital, Thessaloniki, Greece

Konstantinos Rantis is a Psychiatrist in the Hellenic Armed Forces. Graduated from Aristotle University of Thessaloniki Medical School and the Hellenic Military School of Combat Support Officers in 2003.

Served as Medical Corps Officer in several Military Units in Greece, as well as NATO peace keeping operations in Afghanistan and Kosovo.

Received his specialty title in Psychiatry in 2012 at the 3rd Psychiatric Dpt AUTH.

In 2008-2010, Dr Rantis attended the 2-year seminar in Psychoanalytic Thought and Practice, by the North-Hellenic Psychoanalytic Association. In 2016-2018 received post-graduate training in Addiction Psychiatry, at the Substance Abuse Dpt of the 3rd Psychiatric Dpt, AUTH. Since October 2018, commenced his Master's Degree on Criminal Law and Addiction, by the Law Schools of Aristotle University of Thessaloniki and University of Nicosia.

Member of the Hellenic Psychiatric Association (HPA), Hellenic Association of Professional Psychiatrists (HAPP), Hellenic-American Psychiatric Association (HAPA), European Psychiatric Association (EPA), World Psychiatric Association (WPA), Hellenic Society for the Study of Substance Abuse (HSSSA), European Federation of Addiction Societies (EUFAS), Young Psychiatrists Network (YPN), European Association of Psychosomatic Medicine (EAPM). Participated in round tables, oral and poster presentations in panhellenic and international congresses, as well as 3 published articles in scientific journals.

Dr Rantis is currently positioned as a consultant psychiatrist at the Psychiatric Dpt of the 424 Military Hospital of Thessaloniki,



as supervisor of the Hellenic Army Psychosocial Care Group in Limnos island, and keeps a private practice since 2014.



**Rera, Eirini**  
Psychologist, Greece

Mrs. Eirini Rera graduated from the Department of Psychology of Aristotle University in Thessaloniki, Greece and continued with postgraduate studies in School Psychology, in the Faculty of Psychology of University in Turin, Italy and also in Psychopathology of Children, in the Faculty of Medicine of Aristotle University in Thessaloniki, Greece. She has acquired a diploma in Sport Psychology for Peak Performance from Ashworth College, U.S.A. For the last six years she has provided counseling and psychological support to F.C. PAOK Academy's coaches, athletes and parents. Also, she works in elementary and middle school education, as school and child psychologist, with students, parents and educators.



**Rizos, Emmanouil**  
Associate Professor of Psychiatry,  
National and Kapodistrian  
University of Athens, 2<sup>nd</sup> Psychiatric  
Department, "Attikon" University  
General Hospital, Athens, Greece

Dr. Emmanouil Rizos is an Associate Professor in Psychiatry, at the University of Athens General Hospital Medical School, at Second Psychiatric clinic of University General hospital "ATTIKON", since March 2006. His previous employment was at National health Service Doctor, as a senior Registrant Psychiatrist at "DROMOKAITEIO" Psychiatric hospital, TARSI & SEVAS-TOPOULEIO division, since July 2002 to February 2006. His interest in psychiatric research has been consistent and he was specializing in genetic psychiatry. Pr. Rizos has been doing research involving genetic studies in the field of schizophrenia in the Greek population and in specific in first psychosis episode, as well as pharmacogenetic studies of antipsychotic drugs. He has published several original papers in international psychiatric publications and he also took part in several multicenter European psychopharmacological studies. Pr. Rizos has been a member of the organizing committees in several medical conferences concerning molecular medicine. He is also in charge of a clinical psychiatric department as a senior psychiatrist (second psychiatric department ATTIKON University Hospital) as well as senior psychiatrist of liaison psychiatry, in the Athens University Medical School of Psychiatry and he represented Greece as a national coordinator for one year in the European Union of Consultation- Liaison Psychiatry. Finally, he is President of International Society for Research of Interplay Between Mental and Somatic Disorders (I.S.R.I.M.S.D) since 2016 with a big number of Academic and Educational activities in Greece and Europe.

**Sakmman, Bert**

Head of Emeritus Research  
Group "Columns in silico" MPI of  
Neurobiology, Martinsried,  
Nobel Laureate in Physiology or  
Medicine 1991,  
Germany

**Education:**

Physikum (Medicine) University of Tuebingen, 1964

Staatsexamen (Medicine) University of Munich, 1967

Internship (Medicine) University Hospitals, Munich (Surgery,  
Internal Medicine and Gynaecology), 1968-1970

**Positions held:**

1969-1970 Research Assistant, Max Planck Institute (MPI)  
of Psychiatry, Munich, Dept. of Neurophysiology (Prof. O.D.  
Creutzfeldt)

1971-1973 British Council Fellow, Dept. of Biophysics, Universi-  
ty College London (Prof. B. Katz)

1974-1979 Research Assistant, MPI for Biophysical Chemistry,  
Goettingen, Dept. of Neurobiology (Prof. O.D. Creutzfeldt)

1979-1982 Research Associate, MPI for Biophysical Chemistry,  
Membrane Biology Group

1983 Member of the Max Planck Society, Head of Membrane  
Physiology Unit

1985 Director, Dept. of Cell Physiology, MPI for Biophysical  
Chemistry, Goettingen

1989 Director, Dept. of Cell Physiology, MPI for Medical Re-  
search, Heidelberg

2007-present Head of Emeritus Research Group "Columns in  
silico"

MPI of Neurobiology, Martinsried

2008-2010 Hans Fischer Research Fellow, Institute of Neurosci-  
ence, Tech. University Munich

2009-2012 Inaugural Director and Research Group head, Max  
Planck Florida Institute, Jupiter/ FL/ USA

**Academic Degrees:**

1974 Doctor of Medicine, Medical Faculty, University of Goet-  
tingen

1981 Privatdozent, Medical Faculty, University of Goettingen  
Subject: Physiology and Neuropharmacology

1987 Professor, Medical Faculty, University of Goettingen

1990 Professor, Medical Faculty, University of Heidelberg

1991 Professor, Biological Faculty, University of Heidelberg

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**Samakouri, Maria**

Professor of Psychiatry and Head of the Department of Psychiatry, Medical School, Democritus University of Thrace, University General Hospital of Evros, Alexandroupolis, Greece

Maria Samakouri, MD, is Professor of Psychiatry and Head (since 2013) of the Department of Psychiatry, Medical School, Democritus University of Thrace (DUTH) at the University General Hospital of Evros, in Alexandroupolis (UGHA)- Greece.

Dr. Samakouri graduated from the Medical School, University of Athens-Greece, in 1985. She received her Certificate of the Specialist Training in Psychiatry in 1991 and earned her Doctorate in Psychiatry, in 1994, from the Medical School, DUTH. She worked as a NHS psychiatrist in the Department of Psychiatry - UGHA, for ten years, and later (2001 up today) served as a faculty member (lecturer, assistant, associate and full professor) at the Medical School, DUTH & UGHA. The services offered by the Department of Psychiatry of the above Hospital form a network of inpatient, outpatient, community and rehabilitation mental health units. In 2012, Dr Samakouri spent her 6-month sabbatical at the Institute of Psychiatry, King's College London & South London and Maudsley NHS Foundation Trust, London, UK. Since 2013, Dr. Samakouri is the Head of the master degree program in Social Psychiatry, offered by the Medical School, DUTH and since 2016 she serves as the Head of the newly founded Students' Psychosocial Support Service of the same University.

Dr Samakouri has been teaching, to undergraduate students, clinical psychiatry, community psychiatry, medical psychology and psychosomatics, for more than 15 years. Moreover, the courses she teaches to post-graduate students include ethics in psychiatry, forensic psychiatry and psychopharmacology.

Dr. Samakouri clinical and research interests concern community psychiatry. She has been actively involved in the "Psychiatric Reform" in the catchment area served by the UGHA. She has been the founding Director of many community mental health services of that Hospital that have been funded by EU, during the last 15 years.

Dr.Samakouri has coauthored more than 40 papers and chapters published in national & international journals and books.

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**Senikidou, Georgia**  
Psychologist and Sports Coach,  
Thessaloniki, Greece

Graduate of the Psychology Department of Aristotle University. She conducted a diploma thesis on Neuropsychology in childhood and the executive functions of pre-school students. She has taken part in a plethora of sessions and seminars focusing on psychology and improving human well-being. Such as 8th scientific symposium: psychiatry in everyday clinical practice, congress of developmental psychology, sports and psychology of children with developmental difficulties, 1st symposium on «psychology and old age», conference « self regulation: cognitive, metacognitive and thymic processes» and the international conference « Humans Rights and Cultural Diversity».. Moreover she took special education on the “introduction to cognitive behavioral therapy”, by European Psychiatry Association. She was a member on a research program of AUTH on the economic crisis and the psychological impact on Greeks, with a sample from all over Greece. She is also a sports coach specializing in training people with special skills (participate as a coach in Dubai with the Greek paraolympic team and award for team performance). Has knowledge of english and arabic language. Also, has first aid knowledge and computer skills. Furthermore, she is a human rights trainer based on the Compass manual of the non-governmental organization Arsis. She is working in the organization of «mother work» as a psychologist, psycho-educational actions of a child. Her personal interests are participation in marathons, a member of Greek rescue team and voluntary actions in the non-governmental organization metadrasi as a psychologist in socially vulnerable groups, such as refugees. And in the organization «Shine» for children with neoplastic diseases and their families.



**Sheean, Patricia**  
Registered Dietitian with expertise in  
clinical nutrition epidemiology and  
post-doctoral training in cancer and  
vitamin D, Loyola University Chicago,  
USA

I am a Registered Dietitian with expertise in clinical nutrition epidemiology and post-doctoral training in cancer and vitamin D. I maintain a research portfolio that entails the nutrition assessment of acute and chronically ill patient populations. The focus of my research involves the evaluation of medical nutrition therapies on outcomes in clinical populations, including those with critical illness, scleroderma, and hematological malignancies requiring stem cell transplant. However, over the last several years I have expanded my research interests and funded work to include breast (early and late stage) and prostate cancer, with particular attention on survivorship, minority health, body composition and vitamin D. I work with a multi-disciplinary team of scientists gathering foundational evidence to eventually support the development and implementation of interventions, primarily focused on nutrition and/or physical activity. Our overarching goal is to improve the lives of



those diagnosed with cancer and to discern the mechanisms by which our interventions improve health, specifically quality of life, symptom burden and physical functioning. I also serve as the Chair of the American Society of Parenteral and Enteral Nutrition Body Composition Guidelines for Clinical Populations.



**Skapinakis, Petros**

Professor of Psychiatry, University of Ioannina School of Medicine, Greece

Petros Skapinakis has graduated from the Medical School of the University of Athens and also holds a Masters in Public Health (MPH) from the University of Wales College of Medicine (UWCM) and a PhD in Psychiatric Epidemiology from the same University (UWCM). He is currently Professor of Psychiatry in the University of Ioannina School of Medicine (Greece). He has published several papers in peer-reviewed International Psychiatric and general medical Journals. His main research and clinical interest is the epidemiology, diagnosis and treatment of the common mental disorders of depression, anxiety and obsessive-compulsive disorder, the epidemiology of psychiatric symptoms in the general population and evidence-based psychiatry including meta-analysis. His profile in scholar google is: <https://scholar.google.gr/citations?user=KKtLVv8AAAAJ>

#### Selected Publications

- Skapinakis P et al. Clarifying the relationship between psychiatric disorders and unexplained chronic fatigue: Results from a community survey in Great Britain. *American Journal of Psychiatry* 2000; 157:1492-1498
- Skapinakis P et al. Socio-economic position and common mental disorders. Longitudinal study in the general population in the UK. *British Journal of Psychiatry* 2006; 189:109-17.
- Skapinakis P, Bellos S, Koupidis S, Grammatikopoulos I, Theodorakis PN, Mavreas V. Prevalence and sociodemographic associations of common mental disorders in a nationally representative sample of the general population of Greece. *BMC Psychiatry*. 2013 Jun 4;13:163.
- Skapinakis P, Rai D, Anagnostopoulos F, Harrison S, Araya R, Lewis G. Sleep disturbances and depressive symptoms: an investigation of their longitudinal association in a representative sample of the UK general population. *Psychol Med*. 2013 Feb;43(2):329-39.
- Bellos S, Skapinakis P, Rai D, Zitko P, Araya R, Lewis G, Lionis C, Mavreas V. Cross-cultural patterns of the association between varying levels of alcohol consumption and the common mental disorders of depression and anxiety: secondary analysis of the WHO Collaborative Study on Psychological Problems in General Health Care. *Drug Alcohol Depend*. 2013 Dec 15;133(3):825-31

- Skapinakis P, Caldwell DM, Hollingworth W, Bryden P, Fineberg NA, Salkovskis P, Welton NJ, Baxter H, Kessler D, Churchill R, Lewis G. Pharmacological and psychotherapeutic interventions for management of obsessive-compulsive disorder in adults: a systematic review and network meta-analysis. *Lancet Psychiatry*. 2016 Aug;3(8):730-739.



**Sofologi, Maria**  
Cognitive Psychologist, Aristotle  
University of Thessaloniki, Greece

Maria Sofologi holds a PhD in Cognitive Psychology, in Aristotle University of Thessaloniki. She also holds a Master of Science degree in Cognitive Neuropsychology in Aristotle University of Thessaloniki. She works as a Program Director in a Community Mental Health Center for adults with different cognitive and mental impairments. She is also an Academic Associate of the Department of Education and Inclusion and the Department of Psychology of Metropolitan College in Thessaloniki, in co-operation with East London University. She is a key speaker in many international and Hellenic conferences concerning mental health and different cognitive impairments. Her academic work includes monographs and she is the author of many scientific publications in the field of cognitive impairments in children and adults as well.



**Soldatos, Constantine**  
Emeritus Professor of Psychiatry and  
Director of the Mental Health Care  
Unit, Evgenidion Hospital, University  
of Athens, Greece

For the last 52 years Professor C.R. Soldatos has served in the faculty of Departments of Psychiatry at the University of Athens, Pennsylvania State University and New York Medical College. During his academic career, he became Associate Director of the Sleep Research and Treatment Center at Pennsylvania State University, Director of the Sleep Research Unit and Sleep Disorders Center at Athens University, Chairman of the 2nd Department of Psychiatry (Attikon Hospital) as well as the 1st Department of Psychiatry (Eginition Hospital) at the University of Athens. He is currently Emeritus Professor of Psychiatry and Director of the Mental Health Care Unit of the University of Athens.

Over the years he has been Chairman of the Committee for Mental Health of the Central Health Council of Greece and Member of many other Committees of national and international Organizations. He was President of the International Neuropsychiatric Association (I.N.A.) from 2006 to 2008 and of the World Federation of Societies of Biological Psychiatry (WFSBP) from 2013 to 2015, as well as of six other scientific societies based either in Greece or abroad. Until now, he is President of the Hellenic Society for the Advancement of Psychiatry and Related Sciences, which he has founded in 2004. In addition, he served as Co Chair of the Operational Committee on Scientific Sections of the World Psychiatric Association

(WPA) and he has been member of five more major committees of WPA and another seven of the WFSBP, three of which he presently chairs. Moreover, he has been actively involved in the organization of more than 350 national or international congresses, having being President in 22 of them.

Prof. Soldatos has been the Editor-in-Chief of the Archives of Hellenic Medicine and Guest Editor of 3 International Psychiatric Journals. He has published 40 scientific books (10 in English) and about 500 journal articles or book chapters. His scientific journal articles have received 12.442 citations (h-index =58), as per Google Scholar in June 2019. Most of his research work pertains to Sleep Pathology and Pharmacology, particularly to the study of insomnia and its relationship to psychopathology. In recognition of his scientific contributions, Prof. Soldatos has received a number of distinctions from various scientific institutions; most notably, he is Doctor Honoris Causa of the Patras University, Honorary President of the World Federation of Societies of Biological Psychiatry (WFSBP), Honorary President of the Hellenic Sleep Research Society, which he founded in 1997, and Honorary Fellow of the World Psychiatric Association (WPA), Finally, in July 2014, he was elected Member of the European Academy of Sciences and Arts.



**Sotiropoulou, Eleni**

President of Volunteer Program of  
"Health for All", Greece

#### EDUCATION

Athens University, BSc in Economics

#### EMPLOYMENT HISTORY

12.12.1984 I was recruited following successful examinations by the Athens Nursery School Foundation

1986 - 2000, I was the head of the department of the Athens Nursery School

Foundation (800 employees)

2000 Consultant at the Minister of Health and Welfare, in matters of welfare.

A. Planning and implementing the program of 3rd European Welfare program as of: Helping at Home, Creative employment centers for children with disabilities, Day support of Elderly, Nurseries

B. Planning and implementing the Health promotion program of Greek Gypsies, 1st prize of Children's Society.

2002 -2004 Consultant at the Deaf Foundation, Member of the National

Committee of Persons with disabilities.

2004 Assigned to the National Organization of Drugs, Department of Public Relations and Information.

2016 President of volunteer program of "Health for All"

Associate of the A' University Clinic, "Ag. Sofia"

Member of the scientific committee on congress of the National Organization of Drugs.

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**Stoyanova, Maria**

Psychiatrist, University hospital  
for Active Treatment in Neurology  
and Psychiatry "Sveti Naum", Sofia,  
Bulgaria

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Maria Stoyanova holds a master degree in medicine and a doctorate degree in psychiatry. She works as a psychiatrist at the University hospital for Active Treatment in Neurology and Psychiatry "Sveti Naum" in Sofia, Bulgaria. Her research interests are focused on bipolar disorder, mild neurological signs and impulsivity. She is also a neurologist and has defended a doctoral thesis focused on Parkinson's disease in Hannover, Germany.



**Tarazi, Frank**

Professor of Psychiatry and  
Neuroscience, Harvard Medical  
School, Director of Psychiatric  
Neuroscience Program, McLean  
Hospital, USA

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Frank Tarazi, MD, PhD, MBA is Professor of Psychiatry and Neuroscience at Harvard Medical School, and Director of Psychiatric Neuroscience Program at McLean Hospital. He received his medical degree from St. Joseph University, his doctorate degree in neuropsychiatry from Rutgers University and his Executive MBA degree from Northeastern University, USA. Dr. Tarazi published over 130 original articles and reviews. He also published over 10 book chapters, including a chapter in the standard textbook "Goodman and Gilman's The Pharmacological Basis of Therapeutics", and co-edited a book entitled "Neurological and Psychiatric Disorders: From Bench to Bedside". Dr. Tarazi is the Associate Editor of "Pharmacology and Therapeutics" and "CNS Spectrums" and serves on the editorial board of several other journals. He received several awards, including the A.E. Bennett Award from the Society of Biological Psychiatry, the Rafaelsen Fellowship Award from the Collegium Internationale NeuroPsychopharmacologicum (CINP), the Jordi-Folch Pi Memorial Award from the American Society for Neurochemistry, the Alfred Pope Award from McLean Hospital, and the Dean's Dissertation Award from Rutgers University. He is a Fellow of the American College of Neuropsychopharmacology (ACNP), and a member of the American Psychiatric Association and the American Academy of Neurology. He is also a member of the World Economic Forum's Future Global Council on Neurotechnologies and Brain Research.

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**Tavormina, Giuseppe**  
Psychiatrist, Italy

Dr Giuseppe Tavormina (born in 1963) is a Psychiatrist and works exclusively in Private Practice as a clinician since 1998.

He also worked in a Mental Health Institute for more than five years (from Oct 1992 to May 1998); before the hospital career, he worked for two years as Penitentiary Physician.

In the month of June 2000 he co-founded a no-profit Scientific Association of which he is the President ("Psychiatric Studies Centre", or "Cen.Stu.Psi." - [www.censtupsi.org](http://www.censtupsi.org)), that has its first purpose in encouraging and stimulating the scientific, clinical and diagnostic research while carefully gathering current studies of all psychiatric subject matters.

He has been, in the years 2006-2007, a Founding Member (and actually its General Secretary) of two NGO associations, the "European Depression Association" ("EDA", headquartered in Brussels, Belgium), and "EDA Italia Onlus - Associazione Italiana sulla Depressione" (headquartered in Provaglio d'Iseo, Italy): their main role and aim is to create and co-ordinate in all European countries and Italian regions the annual event called "European Depression Day".

He has been appointed, in the October 2007, for scientific merits as "Senior Research Fellow" of the Bedfordshire Center for Mental Health Research in association with the University of Cambridge. He joined during past 16 years to more than 90 national and international congresses presenting personal scientific papers. He also is a Member of ECNP and EPA (in Europe), and SOPSI and SINPF (in Italy).

He is an Editorial Board Member of the scientific journals "Archives of Depression & Anxiety", "Affective Disorders and Psychosomatic Research" journal and "American Journal of Psychiatry and Neuroscience"; he is also a Peer-Reviewer of Dove Medical Press for the journal "Neuropsychiatric Disease and Treatment". He is a Member of "Science Advisory Board".

He published 65 articles in national and international scientific magazines (link: <http://www.censtupsi.org/scientific-publications-of-dr-g-tavormina>), mainly about bipolar spectrum topic, beginning actually one of the European experts in the field of bipolar spectrum mood disorders.

Mainly, he co-edited the issue "The management of bipolar spectrum disorder" of the "Psychiatric Edge Psychiatry in Practice" (SEPT, 2013 - CEPiP.org); he is the main author of the informative book directed to all population with the title "Throwing light on a dark problem - A short guide to mood disorders" (Sardini publisher, 2013 - [www.sardini.it](http://www.sardini.it)) and translated in eleven languages for a free download (from the web site [www.edaitalia.org](http://www.edaitalia.org)).





**Thanasas, Evangelos**  
Psychiatrist in Adult Psychiatry,  
«Dromokaitio», Psychiatric Hospital  
of Athens, Athens, Greece

Thanasas Evangelos - Sotirios is a Psychiatrist. He trained in psychiatry at Dromokaitio Psychiatric Hospital of Athens, at 2st University Psychiatry Department, Attikon Hospital, and 1st Psychiatric Department Eginition hospital. (2008-2010 & 2012-2016)

GP service in prison and General Hospital of Amfissa. (2010-2012).

He has been a doctor at the National Health Operations Center of the Ministry of Health and is a certified Psychiatrist in Telemedicine, of the Ministry of Health.

From 2017 is a psychiatrist at Dromokaitio Psychiatric Hospital of Athens and a scientific associate of the 2nd Psychiatry Department at Attikon University Hospital.

His special interests include Forensic Psychiatry, Clinical Psychiatry, psychosis and telepsychiatry.

He has trained in forensic Psychiatry at 2nd Psychiatry Department at Attikon University Hospital, and in addictions at Eginiteio University Hospital.

Has attended seminars on addictions, Psychopharmacology, Psychopathology, Forensic Psychiatry, and Psychotherapy.

He has participated in training about Forensic Psychiatry in South London and Maudsley NHS Foundation Trust, London.

He has participated in numerous National and International Psychiatric conferences.

He has contributed with presentations and posters to a number of National and International conferences.

Is member of the Board of the Hellenic Forensic Psychiatric Association and foundation member of the Informatics & Innovative Technologies in Psychiatry section of the Hellenic Psychiatric Association.



**Thoma, Foteini**  
Intern of Psychiatry, Panarcadian  
Hospital of Tripoli, Greece

Foteini Thoma works as an intern of Psychiatry at the Panarcadian Hospital of Tripoli City in the Peloponnese. She graduated from Athens Medical School (National and Kapodistrian University) in 2014. After graduation she worked as an intern of Psychiatry at the General Hospital of Katerini (2014-2015) and the University Hospital of Thessaly located in the city of Larissa(2015-2018).She is currently under training as a CAT(Cognitive Analytical Therapy) psychotherapist with Psychiatrist Mr Ioannis Vlachos, member of the ICATA(International Cognitive Analytical Therapy Association).She has attended the Erasmus plus training course in Liaison Psychiatry at the Queen's Medical Centre in Nottingham(Nottinghamshire Healthcare NHS Foundation Trust, UK) and is a certified user of the Maastricht interview approach for problematic thoughts, beliefs and paranoia(established by Dr Marius Romme and Sandra Escher),

under the guidance of Peter Bullimore (mental health trainer/consultant and expert by experience, Sheffield Healthcare and Social Care, NHS Sheffield Foundation Trust).



**Touliatos, George**  
Medical Biopathologist,  
Greece

George Touliatos is a physician, specialized in biopathology (2014).

He was a competitive bodybuilder and national light heavy weight champion (2000, 2009, 2010, and 2013).

He is an expert on medical prevention, regarding PEDs use in sports.

He is a medical associate of Orthobiotiki.gr and Medihall.gr, Age Management-Preventive Clinics in Athens, Greece (2016-2018).

He is a medical associate of Anabolics 11th edition (2017) and medical contributor of the American Muscular Development magazine (2019).

He has extensively developed articles on [www.anabolic.org](http://www.anabolic.org) (2015-2016) and has also become a writer for [steroidabuse.com](http://steroidabuse.com) (2019).

He has being a columnist for the Greek editions of Musclemag and Muscular Development magazines (2014-2016).

George Touliatos was a medical associate for [www.myprotein.gr](http://www.myprotein.gr) (2016-2017).

He has also being tutor of ALS academy of Cyprus and [www.peakperformance.gr](http://www.peakperformance.gr) academy in Greece (2015-2018).

He is author of four Greek books in bodybuilding (2012, 2013, 2015, and 2018).

He participated in several seminars across Greece and Cyprus, numerous TV and radio appearances, interviews in newspapers and websites between 2012-2018.

He entered medical congresses and festivals, regarding sports medicine and antiageing.

He was hosted three times by Super Human Radio of Kentucky (2015-2018), Muscular Development TV (2018) and RXMUSCLE.com (2018, 2019), twice by [www.trtrevolution.com](http://www.trtrevolution.com) (2016-2018) and once by Jay Cutler TV (2018).

His personal website is [www.gtoul.com](http://www.gtoul.com) (2014).



**Touloumis, Charalampos**  
Psychiatrist, Deputy Clinic Director  
in the 10<sup>th</sup> Psychiatric Department,  
Psychiatric Hospital of Athens,  
Greece

Dr Touloumis was born in Chalkis of Evia, in Greece. He graduated from Medical School of Athens University and received his specialty in Psychiatry from Psychiatric Hospital of Athens and Evangelismos Hospital.

Since 1987, he has been working as Psychiatrist in Psychiatric Hospital of Athens (nowadays in the position of Deputy Clinic Director in the 10<sup>th</sup> Psychiatric Department). He has published more than 50 scientific publications through greek and international biomedical magazines. He has made more than 70 scientific presentations in medical conferences. He is interested specifically in Clinical Psychiatry and Psychopharmacology.



**Tsamakias, Konstantinos**  
General Adult Consultant Psychiatrist,  
Athens, Greece

Dr Konstantinos Tsamakias is a highly motivated and enthusiastic General Adult Consultant Psychiatrist.

He graduated from the Medical School of the National & Kapodistrian University of Athens, Greece, where he also completed his PhD. He then moved to the United Kingdom where he completed a MSc at City University, London, before starting his training in Psychiatry. He completed his Core Training in South London and Maudsley NHS Foundation Trust and West London Mental Health Trust, and his Higher Training in East London NHS Foundation Trust. In 2017 he spent three months working as a volunteer in Pantang psychiatric Hospital in Accra, Ghana, as part of the Royal College of Psychiatrists International & Volunteer Scheme.

Following his CCT in General Adult Psychiatry with an endorsement in Substance Misuse Psychiatry, he worked as a Consultant Psychiatrist in RESET, East London NHS Trust's Drugs & Alcohol Service.

As of the end of last year Dr Tsamakias has returned to his beloved Greece, and since January 2019 he has been working as an honorary Clinical & Research Fellow in the 2<sup>nd</sup> Department of Psychiatry, Attikon University Hospital, Athens, Greece.

Dr Tsamakias is an enthusiastic team player, leader and educator, dedicated to research, with a particular interest in teaching.





**Tsapakis, Evangelia**

Visiting Research Associate, Institute of Psychiatry, King's College London, Harvard Medical School, Boston, MA, Director Private Mental health Unit, Heraklion, Crete, Greece

Dr Tsapakis studied pharmacology at King's College London and medicine at St. George's Hospital Medical School, University of London. Having earned the first prize in psychological medicine (the Arthur Crisp Prize), she went on to train in psychiatry at the Maudsley Hospital. She has worked under Ross Baldessarini's mentorship at Harvard Medical School whilst on a traveling fellowship awarded by the Royal College of Psychiatrists. In 2007, she earned a Masters in Affective Neuroscience from the University of Maastricht. Two years later, she earned a PhD in pharmacogenetics (on the role of metabolic enzyme variants in response to treatment with psychotropic agents) and pharmacogenomics (on the differential gene expression induced by antidepressants in juveniles) from the University of London. Dr Tsapakis' awards include a Young Scientist Award at the 11th Biennial Winter Workshop on Schizophrenia (2002), a Research Award at the 5th International Neuropsychiatry Congress (2004), a Young Investigator Award for the 20th International Congress in Schizophrenia Research (2005), and a Poster Prize at the 3rd International Congress on Brain and Behaviour (2007). Dr Tsapakis is a visiting research associate at the Institute of Psychiatry, King's College London and at Harvard Medical School, Boston, MA. Since 2009, she directs a private mental health unit in Heraklion, Crete, Greece.



**Tsonis, Orestis**

PhD candidate in Obstetrics and Gynecology, Senior Registrar in the University hospital of Ioannina, Greece

Orestis Tsonis is a PhD candidate in Obstetrics and Gynecology. His PhD regards the use of hysteroscopy in the treatment of various gynecologic conditions. Currently, he works as a Senior Registrar in the University hospital of Ioannina. He started his specialty in Obs and Gynae department of St. George's Hospital, London, UK. He is an instructor of ALSO, BPS, ALSG, BLS. He is a member of international institutions regarding Obs and Gynae such as ISUOG and ESGE. His special interests include fertility, endometriosis and minimal invasive techniques in his field and he has 4 manuscripts accepted for publication in international journals. He has participated as a speaker in national and international congresses. He speaks 5 languages (Greek (native), English (C2), German (C2), French (C2), Italian (C2)) and as a young researcher believes that science has no borders and medical professionals ought to work in international teams achieving higher goals providing patients an improved healthcare.



**Tsopelas, Chsistos**  
Consultant in Adult General  
Psychiatry, Psychiatric Hospital of  
Attica, Greece

Dr Tsopelas is a graduate of the Medical School of Athens. His psychiatric training was completed in Aeginition Hospital, Athens, and Charring Cross Psychiatric training Scheme, London, UK. He has worked in London in various posts, like Community Drug and Alcohol Teams and Crisis Resolution Home Treatment team. The last post was as Consultant psychiatrist in Community Mental Health Team at South London and Maudsley Trust before he returned to Greece in late 2005. Since then he has been part of Greek National Health system and worked for the last 5 years at the Psychiatric Hospital of Attica.

He completed his MSc in Psychiatric Research at Institute of Psychiatry, London, UK. He is in the process of finishing his PhD. He has training in Brief Solution Focused Therapy and Interpersonal Psychotherapy.

His special interests include Epidemiology, Forensic Psychiatry, patients' rights and community psychiatry. He has been secretary of Forensic Psychiatric Section of Hellenic Psychiatric Association and actively involved in organizing and teaching at European co-funded educational programs about de-institutionalization, community psychiatry and forensic psychiatry. Now he is also member of the Board of the Hellenic Psychiatric Association and Secretary of the newly formed Greek Forensic Psychiatric Association.



**Tzeferakos, George**  
Head of OKANA Substitution Unit,  
Research Associate of the  
Forensic Psychiatry Unit,  
2<sup>nd</sup> department of Psychiatry Attikon  
University Hospital, Athens, Greece

Dr. Tzeferakos Georgios is a Psychiatrist. He is scientific associate to the forensic psychiatric unit-depot outpatient clinic of the 2nd department of Psychiatry University of Athens, where he completed his PhD. He is the director of a substitution unit of the Hellenic Agency Against Drugs, which specializes in dual diagnosis patients treated with Long Acting Therapies. He also works in mobile mental health unit covering the Aegean islands of Milos and Kimolos.

He is the president of the Forensic Psychiatric Section of the Hellenic Psychiatric Association and Secretary of the Psychiatry, Law and Ethics Section of the World Psychiatric Association.



**Venizelos, Nikolaos**

Neuropsychiatric Research Group,  
School of Medical Sciences, Campus  
USÖ, Örebro University, Sweden

Prof. Nikolaos Venizelos, is an active Professor Emeritus and Head of the Neuropsychiatric Research Laboratory & Biobank at the School of Medical Sciences, Örebro University.

Nikolaos Venizelos studied biomedicine with specialization in microbiology at Uppsala University in Sweden and after a Master thesis in clinical chemistry at the Karolinska Institutet.

1981 was obtained a professional license as a specialist in Clinical Chemistry from the Ministry of Health in Greece.

In 1982 was appointed as a research associate at the Dept. of clinical chemistry, Karolinska University Hospital, and during 1986-1999 was acting as head of the Cell Culture & Biobank Section at the Centre for Inherited Metabolic Diseases (CMMS), Karolinska University Hospital.

In 1997 he obtained a Medicine Doctor's degree (PhD-in medicine) at Karolinska Institute and 1999 was appointed as Senior Researcher and moved at the Section of Psychiatry, Karolinska University Hospital.

In 2001, in connection to his position as University Lecturer, he moved to the School of Health and Medical Sciences at Örebro University, where he established a Neuropsychiatric Research Laboratory.

2004 he obtained a Docentship (Associate professor) and was further appointed as Programme Director of Biomedicine Education Programme (4 years program).

In 2012 he was appointed as a full Professor in Biomedical Sciences at the Faculty of Medicine and Health, Örebro University. He has formally established the Swedish-Hellenic Life Science Research Conferences and is the founder and chair of "Nobel Day Festivities" at Örebro University. Prof. Venizelos has been chaired of more than 35 public dissertations of Medicine Doctor's theses.

Prof. Venizelos's conduct research in Experimental Neuropsychiatry with actual focus to explore the role and regulatory mechanisms of proinflammatory cytokines and lithium and clozapine's effects on it, to study environmental lifestyles-, and stress factors, and the influence of probiotics on the neurotransmitter precursor's tyrosine and tryptophan in neuropsychiatric disorders. Currently he is leading the strategical research project "Ikaria - Healthy Ageing".

Prof. Venizelos has been awarded the "Norage-Pharmacia Award", and 2016 was awarded with the "Delphic Prize for Outstanding Contributions to Psychiatry and Related Sciences", from 2017 he is acting as Ambassador of the World Congresses of Biological Psychiatry.

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Kostas N. Fountoulakis

# Bipolar Disorder

An Evidence-Based Guide  
to Manic Depression



Springer



psychiatry  
o n l i n e

The screenshot shows the homepage of psychiatry.gr. At the top, there is a navigation bar with the 'psychiatry' logo and a banner image. Below the banner, the main content area is divided into several sections:

- Left Sidebar:** Contains social media links for Facebook and YouTube, and a list of journals including 'Journals of General Psychiatry' and 'Acta Psychiatrica Scandinavica'. It also features a 'Who's Online' section with a photo of Lewis Judd (1920-2018).
- Center:** Promotes the 6th Congress on Neurobiology, Psychopharmacology, & Treatment Guidelines (ICNP 2019) held from June 27-30, 2019 in Athens, Greece. It includes logos for the International Society of Neurobiology & Psychopharmacology and the World Psychiatric Association.
- Right Sidebar:** Features the logo of the International Society of Neurobiology & Psychopharmacology (ISNP) and a list of past congresses from 2009 to 2017. Below this is a 'Recommended Links' section with a list of articles and a search bar.

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## Acknowledgements

The Organizing Committee wishes to thank the below-mentioned Companies:

















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