



ECNP

ECNP Seminar

in Neuropsychopharmacology

10-12 October 2014, Tsaghkadzor, Armenia





Introduction

The European College of Neuropsychopharmacology (ECNP) was established in 1987 on the initiative of scientists and clinicians working in Europe in the convergent disciplines in neuropsychopharmacology and related neurosciences.

ECNP is an independent, non-governmental, scientific association dedicated to the science and treatment of disorders of the brain. Founded in 1987, its goal is to bring together scientists and clinicians to facilitate information-sharing and spur new discoveries.

The objective of ECNP is to serve the public good by stimulating high-quality experimental and clinical research and education in applied and translational neuroscience. It seeks to do this by:

- Co-ordinating and promoting scientific activities and consistently high-quality standards between countries in Europe.
- Bringing together all those involved in or interested in the scientific study of applied and translational neuroscience by arranging scientific meetings, seminars, and study groups.
- Providing guidance and information to the public on matters relevant to the field.
- Providing a format for the co-ordination and for development of common standards in Europe.

To fulfil this aim ECNP organises, amongst others, yearly the ECNP Congress that comprises of 6 plenary lectures, 28 symposia and 7 educational update sessions. The annual meeting attracts more than 6,000 participants and is considered to be the largest event in neuropsychopharmacology in Europe.

ECNP organises seminars, as the one you have been invited to participate, in areas of Europe where there are less opportunities for psychiatrists to participate in international meetings. Interaction is the keyword at these meetings and they have proved very successful both for the participants and for the experts. During the seminar we discuss clinical and research issues that the local organisers feel that are needed to be covered and using these topics as a model for teaching how to ask a research question and how to plan an effective study. Leading ECNP experts that are



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also talented speakers will facilitate mutual discussion in small groups allowing you to present your abstract and get feedback from your colleagues and local mentors.

So far, ECNP has organised this meeting in Poland, Estonia, Turkey, Bulgaria, Slovak Republic, Hungary, Czech Republic, Moldova, Romania, Greece, Russia, Latvia and recently in Macedonia, Armenia, Georgia and Serbia. In some countries we have organised it more than once.

ECNP also supports on an annual basis participation of 100 junior scientists and researchers in an intensive three-day Workshop in Nice. Other educational activities of ECNP include the journal *European Neuropsychopharmacology* that promotes scientific knowledge along with publishing consensus statements. . In addition, since 2009 ECNP organises a summer school of neuropsychopharmacology in Oxford, since 2012 a school of child and adolescent neuropsychopharmacology in Venice and since 2013 a school of old age neuropsychopharmacology in Venice. We plan to start a workshop on methodology and clinical research in Barcelona in 2015..

This year we start with a pilot of a new initiative, The ECNP Research Internship. This is a new collaborative initiative of ECNP and the ECNP Junior Member Advisory Panel (JMAP) that aims to provide short-term research internship opportunities for junior researchers. Senior researchers from the list of ECNP Fellow members offer unpaid 2 week exploring research internship in their institutions.

Please see the ECNP website (www.ecnp.eu) where you can find information about all the above initiatives and additional information and look for the activity that fits you.

I look forward to a fruitful and inspiring meeting in Armenia!

Gil Zalsman
Chair ECNP Educational Committee



Program

Friday 10 October 2014

Arrival of participants and experts

19.00 Welcome and Dinner

Saturday 11 October 2014

09.00 – 09.15 What is the ECNP? Introductions to the programme, Gil Zalsman, Seminar leader, Israel

09.15 – 10.00 Studying gene X environment in affective disorders as a model for research design in psychoneuropharmacology, Gil Zalsman, Israel

10.00 – 10.45 How to plan a research study? Avi Avital, Israel

10.45 – 11.30 Coffee break

11.30 – 12.15 *T.b.a.*, Carmen Moreno, Spain

12.15 – 12.30 How to give a talk? Gil Zalsman, Israel

12.30 – 13.30 Lunch

13.30 – 15.00 Groups Round 1

Group A	Group B	Group C
G.Zalsman &A.Melik-Pashayan	A.Avital & M.Yeghiyan	C.Moreno& A.Mkrtchayn

15.00 – 15.30 Break

15.30 – 16.15 How to prepare a scientific paper? Gil Zalsman, Israel

16.15 – 17.00 Panel discussion: How to prepare a clinical research project? Chair: Gil Zalsman, Panel members: Avi Avital and Carmen Moreno

17.00 – 21.00 Social activity, group photo and dinner



Sunday 12 October 2014

08.30 – 10.00 Groups Round 2

Group A	Group B	Group C
G.Zalsman &A.Melik-Pashayan	A.Avital & M.Yeghiyan	C.Moreno& A.Mkrtchayn

10.00 – 10.30 Coffee break

10.30 – 12.00 Groups Round 3

Group A	Group B	Group C
G.Zalsman &A.Melik-Pashayan	A.Avital & M.Yeghiyan	C.Moreno& A.Mkrtchayn

12.00 – 14.00 Lunch and preparation for plenary session

14.00 – 15.00 Plenary Session

14.00 – 14.20 Group A Presentation and discussion

14.20 – 14.40 Group B Presentation and discussion

14.40 – 15.00 Group C Presentation and discussion

15.00 – 15.15 Time to fill out evaluation forms and preparation of awards ceremony

15.15 – 15.30 Short break

15.30 – 15.45 Awards ceremony

15.45 – 16.00 Concluding remark and thanks, G.Zalsman, Israel and A.Melik-Pashayan, Armenia



**Professor Gil Zalsman M.D., M.H.A., B.Sc.
Deputy Director and Chief of Child Psychiatry Division,
Geha Mental Health Center, Tel Aviv, Israel**



Prof. Zalsman graduated from the Hebrew University and Hadassah Medical School in Jerusalem, Israel. He completed his psychiatry residency at the Geha Mental Health Center and Tel Aviv University and the Child Psychiatry residency at Geha and Yale Child Study Center in Yale University, Connecticut, USA with the late Prof. Donald J Cohen. He completed a two years Post-Doctoral Fellowship with Prof. J John Mann, in the Neuroscience Department, Columbia University, New York State Psychiatric Institute, where he holds an ongoing position as an Associate Research Scientist. He also holds a Master degree in health administration (MHA. summa cum laude) from Ben Gurion University, Israel. His academic research focuses on gene-environment interactions in childhood depression and suicidal behavior

and other psychiatric disorders.

Prof. Zalsman has published more than a 200 papers, of them more than 90 original papers, dozens of reviews, book chapters, two edited books and actively participated in more than a 170 scientific meetings. Currently he is the Deputy Director and Chief of Child Psychiatry Division at Geha Mental Health Center in addition to being the director of the Adolescent Day Unit. He is an Associate Professor in Psychiatry at Sackler School of Medicine and former director of psychiatry continuing education program.

Prof. Zalsman is the past board member and president of the child psychiatry section at the Association of European Psychiatry (EPA). Currently he a counselor and chair pf education at the executive committee of the European College of Neuropsychopharmacology (ECNP) and the president of the Israeli Society of Biological Psychiatry (ISBP). He served as the deputy editor of the Israel Journal of Psychiatry and recently chaired the 14th European Symposium for Suicide and Suicidal Behavior (ESSSB), held in Tel Aviv. Prof. Zalsman owns a private psychiatric outpatient clinic for children and adolescent in Tel Aviv, the Zalsman Institute. He is married with two children and resides in Tel Aviv suburb, Israel.



Dr. Abraham Avital M.D., M.A., Ph.D.
Assistant Professor, Behavioral Neuroscience Lab.,
The Bruce Rappaport Faculty of Medicine, Technion, Haifa, Israel



Academic Degrees

1997-1999: M.A., Haifa University, Psychobiology, magna cum lauda.

1999- 2003: Ph.D, Haifa University, Psychobiology.

Academic Appointments

2012 – Present : Assistant Professor, Bruce Rappaport Faculty of Medicine, Technion.

2010 - 2011: Temporary (summer) Department of

Psychology Chair, The Yezreel Valley College (YVC).

2009 - 2011: Tenure position, Department of Psychology, YVC.

2008 - 2011: Head of The Center for Psychobiological Research, YVC.

2006 - 2012: Scientific consultant, Neurobiology, Weizmann Institute of Science.

2003-2006: Postdoctorate training, Neurobiology, The Weizmann Institute of Science.

TEACHING EXPERIENCE Courses:

2000 - 2003: Neurobiology of learning and memory, undergraduate.

2000 - 2003: Neurobiology of mental disease, undergraduate.

2001 - 2011: The psychology of learning and behavior, undergraduate.

2001 - 2011: Statistics, undergraduate.

2004: Experimental Methodology and Statistics, undergraduate.

2004: Psychoneuroendocrinology, graduate.

2006 - 2009: Introduction to Physiology, undergraduate.

2009 - 2011: Schizophrenia as a multi-dimensional disease, undergraduate.

2013: Learning, memory and behavior, graduate.

2014 - Present: The Neurobiology of attention processes, graduate.

Programs:

2011: Rodent control training program (Certified by the Israeli Ministry of Health), M.D,

2011: "Research methodology and statistics – from basic to clinical science", Emek Medical Center, MD.

2012 - Present: Head of the young basic science leadership program: The Israeli Society for Biological Psychiatry, Graduate.



Dr. Carmen Moreno M.D., Ph.D.
**Associate Professor of the Gregorio Marañón Psychiatry Department and
Complutense University School of Medicine, Madrid, Spain**



Dr. Moreno completed her MD and PhD degrees at Autónoma University and Complutense University in Madrid, followed by a Research Fellowship in Child and Adolescent Psychiatry at Columbia University, New York, USA. Dr. Moreno has been focusing her career on early-onset psychiatric disorders, mainly psychotic and affective disorders, and recently also other neurodevelopmental disorders. She is recognized by her studies in raising awareness of misdiagnosis of bipolar disorder in children and adolescents. Dr. Moreno is actively involved on research projects exploring key biological aspects of early-onset psychiatric disorders, including multimodal neuroimaging, intermediate mechanisms such as inflammation and oxidative stress, and metabolomics. Her efforts are also focused on exploring secondary effects of psychopharmacological interventions towards development of new treatment interventions in young patients, being currently involved on independent clinical studies with PUFAS omega-3 and N-acetylcysteine. Dr. Moreno has authored more than 30 peer-reviewed publications. She was awarded the ECNP Research Fellowship Award, and the Awards for Young Scientists and Senior Scientists of the Spanish Association of Biological Psychiatry. She is member of the ECNP, where she serves in the Membership Committee, and is Co-chair of the ECNP Adolescent Child and Adolescent Neuropsychopharmacology Network.



**Professor Melik-Pashayan Armen M.D., Ph.D., D.Sc.
Head of the Department of Psychiatry,
Yerevan State Medical University after M.Heratsi,
Head Physician of Mental Health Center «Nork» Yerevan, Armenia**



Professor Melik-Pashayan is currently a Head of the Department of Psychiatry of Yerevan State Medical University after M. Heratsi,

He is a Member of the Chairmen's Council of the Association of Psychiatrists and Narcologists of Armenia, Secretary of Education of Armenian Psychiatric Association, Member of Ethics Committee,

Member of the Scientific Board, Yerevan State Medical University after M. Heratsi,

Chairman of Expert Commission of the Scientific Coordination Council of Yerevan State Medical University after M.Heratsi,

Chairman of Specialized Council for Thesis

Defending "Psychiatry and Medical Psychology" of Yerevan State Medical University after M.Heratsi, Member of the Editorial Board of the Armenian Journal of Psychiatry. During his professional career Professor Melik-Pashayan was also Vice director and Director of the Republican Centre of Mental Health "Nork".

In 2001 he has received degree of Candidate of Medical Science (Ph.D) Clinical Epidemiological Research of Mental Disorders among the Child, Adolescent and Recruits Population of Armenia and in 2006 - degree of the Doctor of Medical Science. Since 2008 Head of the Department of Psychiatry Yerevan State Medical University after M. Heratsi. Now he also holds a position of Head Physician of Mental Health Center «Nork».

His scientific interests are guided for improving the organization of mental service of child and adolescent and mental expertise of the recruits, psychopharmacology, child and adolescent psychiatry, epidemiology of psychiatric disorders.

Professor Melik-Pashayan has over 60 publications including monographs, handouts and handbook.



Professor Maruke G. Eghiyani M.D., Ph.D., D.Sc.
Head of Department of Psychiatry at Children's Neurological hospital
Department of Psychiatry,
Yerevan State Medical University after M.Heratsi,
Yerevan, Armenia



Professor Maruke G. Eghiyani graduated Yerevan State Medical Institute at 1977. After graduation he was a resident at the Republican Neurological Dispensary and get qualification of Psychiatrist. He continued postgraduate education at the Serbski Scientific Research Institute of general and forensic Psychiatry (Moscow) with qualification of PhD Doctor. He was working at St' Cadoc's Hospital (UK) during 3 months. Since 2008 doctor Eghiyani is a professor at the department of Psychiatry in Yerevan State University. He is a Head of Department of Psychiatry at

Children's Neurological hospital and Head child psychiatrist of Armenia. Since 2000 he is a president of Association Child Psychiatrists and Psychologists (ACPP, Armenia). His trend of scientific research is affective spectrum disorders and obsessive compulsive disorders among adolescents, neuroscience and pharmacotherapy. He is a Member of Editorial Board of International Journal "Bridging Eastern & Western Psychiatry". 2005- 2008 he was a Principal Investigator (Armenian Side) International Study "Refractory Depression and OCD among adolescents"(jointly with Tirat Karmel MH Center, Haifa, Israel). Also he holds a position of Opinion Leader Janssen-Cilag Pharmaceuticals in Armenia and Consultant and Adolescents Mental Health Care Psychiatrist, Child Service (Armenia) (sponsored by CAFOD, UK). Professor Maruke G. Eghiyani has 41 publication (32 articles, 2 handbook, 1 book, 6 chapters). He has many participations and presentations in Armenian and international scientific conferences. Professor Eghiyani speaks English and Russian fluently.



Dr. Artur Mkrтчyan M.D., Ph.D., D.Sc.
Associate Professor of Department of Psychiatry,
Yerevan State Medical University after M.Heratsi,
Deputy Director for Science «Avan» Mental Health Center, Yerevan,
Armenia



Doctor Artur Mkrтчyan graduated Yerevan State Medical Institute(Faculty of general medicine) at 1998. 1998-2000 he was a resident at the Yerevan State Medical University after Mkhitar Heratsi, Department of Psychiatry and Medical Psychology and graduated the residency with the qualification of Psychiatrist. After graduation he did Postgraduate Study in Psychiatry, PhD Degree Thesis: “Clinical-psychopathological aspects of the anxiety-depressive conditions in some types of therapeutic pathology”. 2008-2012 he did Postgraduate Study in Psychiatry, DSc Degree Thesis: “Clinical

psychopathological, clinical-dynamic and prognostic aspects of manifest prodromal forms of schizophrenia on the current stage».

Now he holds a position of Associate Professor at the Department of Psychiatry at Yerevan State Medical University. Also doctor Mkrтчyan is Deputy Director for Science «Avan» Mental Health Center. Since 2009 he is Secretary in charge of clinical management publications of Armenian Psychiatric Association and Secretary in charge of publications of Armenian Psychiatric Association. He is a Associate Editor of Armenian Journal of Mental Health.

Doctor Mkrтчyan has over 40 publications in psychiatry. He is a member of the Specialized Council for Thesis Defending on Psychiatry and Medical Psychology and Member of Expert Council in Psychiatry and Medical Psychology of Yerevan State Medical University after M.Heratsi. Doctor Artur Mkrтчyan is fluent in English and Russian.



**Professor Gil Zalsman M.D., M.H.A., B.Sc.
Lecture Topic:
Diagnosis and Treatment of the Suicidal Patient**

According to the WHO approximately 1.5 million people will die from suicide in 2020. The estimated global suicide rate is 14 suicides per 100,000 inhabitants. Last year, approximately 150,000 people completed suicide in Europe of them 63,000 in the European Union. The highest suicide rates are in Lithuania, Russian Federation, Belarus, Finland, Hungary and Latvia. There is approximately 4:1 male to female ratio in suicides. Suicide continues to be the first or second cause of premature death among 15-24 year olds and rates can be 6-8 times higher in the elderly

Extensive research during the past three decades has elucidated various biological, psychological and social risk factors to suicidal behavior, such as gender, age, previous suicide attempt, substance abuse, presence of psychiatric disorders and a family history of suicide. The most studied candidate polymorphism in suicide in the context of gene X environment interaction is the 5HTTLPR.

A clinical approach focusing in risk assessment in the single patient and some national prevention strategies will be discussed. Optional prevention and treatment options will be discussed.



Diagnosis and Treatment of the Suicidal Patient

Prof. Gil Zalsman MD, MHA

Director, Child and Adolescent Division
Geha Mental Health Center
Psychiatry Department
Sackler Faculty of Medicine
Tel Aviv University, Israel
&
Associate Research Scientist
Molecular Imaging Division
Psychiatry Department
Columbia University
New York, NY

ECNP Seminar Macedonia 2014



REVIEW **CLINICIAN'S CORNER**

Suicide Prevention Strategies

A Systematic Review

<p>J. John Mann, MD Alisa Agler, MD Yon Ben-David, MD Agnes Bostrom, PhD Dianna Cramer, PhD Ann Haan, PhD Ulrich Heipert, MD Robin Loney-Drake, MD Karen Mahoney, MD Adam Mittman, MD, PhD Lara Muthén, MD George Patton, MD Michael Phillips, MD Wolfgang Rössler, MD Juliana Salzman, MD, PhD, DSc Alicia Schwartz, MD, PhD David Shaffer, MD Monica Silverman, MD Yoshitomo Tsubota, MD Art Vroman, MD Donald Zimmerman, MD Paul Yip, PhD Herbert Zilsman, MD</p>	<p>Context: In 2002, an estimated 870 000 lives were lost worldwide through suicide. Some developed nations have implemented national suicide prevention plans. Although these plans generally propose multiple non-pharmaceutical interventions, a study evaluated.</p> <p>Objective: To examine evidence for the effectiveness of specific suicide-prevention interventions and to make recommendations for future prevention programs and research.</p> <p>Data Source and Study Selection: Relevant publications were identified in electronic searches of MEDLINE, Cochrane Library, and PsycINFO databases using multiple search terms related to suicide prevention. Studies published between 1960 and June 2009, included those that related prevention interventions to major depressive, anxiety, and personality disorders; treatment of psychiatric disorders; screening tools for at-risk individuals; treatment of psychiatric disorders; screening tools to inform, and support media reporting of suicide.</p> <p>Data Extraction: Data were abstracted on primary outcomes of interest: suicidal behavior (prevention, attempt, ideation), morbidity or secondary outcomes (prevention, treatment, identification of at-risk individuals, and programmatic approaches), mortality, or both. Reports from 16 countries reviewed. Included articles were those that reported observational and experimental suicide and suicidal ideation or behavior, immediate outcomes, including help-seeking behavior, identification of at-risk individuals, entry into treatment, and long-term follow-up. We included 2 subgroups of studies for which the research question was clearly defined: systematic reviews and meta-analyses ($n = 10$); quantitative studies, either randomized controlled trials ($n = 18$) or cohort studies ($n = 10$), and ecological, or population-based studies ($n = 1$). Heterogeneity of study populations and methodology did not permit formal meta-analysis. Thus, a narrative synthesis is presented.</p> <p>Data Synthesis: Components of primary and secondary outcomes to lethal means were found to prevent suicide. Other methods including public education, screening programs, and medication also had some benefit.</p> <p>Conclusions: Physician education in depression recognition and treatment and increasing access to lethal methods reduce suicide rates. Other interventions need more evidence of efficacy. Assessing which components of suicide prevention programs are effective in reducing rates of suicide and suicide attempt is a matter of order to optimize use of limited resources.</p> <p style="font-size: small;">DOI: 10.1001/jama.294.2064-2074</p>
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Suicide is a leading cause of death. In 2002, an estimated 870 000 lives were lost worldwide through suicide, representing 1.3% of the global burden of

Mann et al., JAMA 2005, 294:2064-2074



Suicide in children & adolescents

- Second leading cause of death until age 24y
- Suicide before puberty is rare (Pfeffer 1996)
- Adolescence- age of risk



Columbia University

New York State
Psychiatric Institute



MOST COMMON DIAGNOSES IN TEEN SUICIDES

	MALE (N=213)	FEMALE (N=46)
Depression	50%	69%
Antisocial	43%	24%
Substance Abuse	38%	17%
18- to 19-year olds*	60–67%	13%
Anxiety	19%	48%

**66% of 17- to 19-Year-Old Male Suicides
Have Substance/Alcohol Abuse**

Brent et al. 1999, Shaffer et al. 1996; *N=120

D17



■ Diagnosis

Definitions

- **CSSRS**
- **“An act of self harm with at least partial intent to die”**
(Posner et al., 2010)
- **Spectrum Theory: ideation- justures-attempt (aborted/disrupted)-attempt-completed**



NSSI

- Non Suicidal self Injury
- New @ DSM 5
- No Intent to die
- Typically BLPD

New York Suicide Study

New York State
Psychiatric Institute

DURATION OF DETAILED PLANNING

(N=106)

	N	%
Less than a day	77	73
More than a day	29	27
More than a week	17	16
More than a month	7	6



DEPRESSION AND SUICIDE

**Not all depressed patients
think about suicide.**

**Not all suicidal patients
are depressed.**

■ Risk Assessment



Risk Assessment

- Male!!!
- Psychopathology (MDD)
- Previous attempt
- Impulsive aggression
- Loss
- Leaving alone
- Support system

Risk Assessment

- Substance abuse
- Problem with the law
- Genetics
- Hopelessness- Despair
- Helplessness
- Poor decision making



Evaluation after a suicide attempt

- Timing and consultation
- Letter (SMS/email)
- Medical lethality
- Access to means
- Support system
- Collaboration with therapist
- Personal connection

■ Treatment



Tx of suicidal patients

- National prevention plan
- Safety plan
- Restriction of means
- No-suicide contract
- Aggressive treatment of psychopathology!!
- Postcard approach
- Human compassion and true care
- Effective treatment of depression
- Specific psychotherapies

Evidence- Based Psychotherapies for Depression and Suicidal Behavior

- **CBT**
- **DBT**
- **IPT**
- **MBCT**



Third Generation of CBT

- **Dialectical Behavioral Treatment (DBT)** . Linehan et al. 1991.
- **Mindfulness-Based Stress Reduction (MBSR)** Kabat-Zin 1994
- **Acceptance and Commitment Therapy (ACT)**. Hayes et al. 1999
- **Mindfulness-Based Cognitive Therapy (MBCT)** Segal et al., 2002
- *Treat private events...to alter the function of internal phenomena... to diminish their behavioral impact*

Third Generation of CBT

- *2500 years of Zen Buddhist ideology and practice*
- *Mindfulness*
- *Moment by moment*
- *Acceptance*
- *Dialectics*
- *Don't change problematic thoughts but accept them for what they are-just private experience (Hayes 2004)*
- *Dialectics: Balance acceptance and change Accept the thought and change relationships with the thoughts... gain flexibility (Linehan 1993).*



Third Generation of CBT

- **MBSR (Kabat Zin 1979).**
- Mindfulness is a primary mode of Tx.
- Both clinical and school settings
- 8 weeks program to reduce both medical and psychological symptoms
- Pediatric chronic pain
- Stress and Anxiety
- Age appropriate language. School age (Saltzman & Goldin, 2000)
- Mindful eating. Thoughts parade.
- Tai Chi and mindfulness in Boston schools (Wall 2005)

Third Generation of CBT

- **MBCT (Kabat Zin 1990).**
- Mindfulness is a primary mode of Tx.
- **CBT+MBSR=MBCT**
- Developed to prevent relapse in MDD clinical patients.
- The mindful way through depression (Mark Williams, John Teasdale, Zindel Segal and John Kabat Zin 2007)

- Acceptance and mindfulness treatment for children and adolescents (Laurie Greco, Missouri and Steven Hayes, Nevada, 2008)



MBCT

(Ma & Teasdale, 2004; Teasdale et al., 2000).

Prevention clips

zalsman@post.tau.ac.il
www.zalsman.org





Dr. Abraham Avital M.D., M.A., Ph.D.

Lecture Topic:

**Mapping the Developmental Trajectory of Stress Effects:
Implication of Animal Model for Cognitive, Emotional and
Physiological Aspects**

The exposure to stress at different developmental time points has long been postulated to have a crucial impact on various brain structures involved in mental disorders. The long-term specific effects seem to emerge as a function of timing and duration of the exposure to stress, as well as the characteristics of the stressor. Previous studies have addressed this issue with an effort to describe a single “hyper-sensitive” time point, and have led to disagreement on a particular sensitive period for stress exposure. The primary aim of our study was to investigate the hypothesis that indeed there is a developmental stress risk window.

We conducted a systematic mapping of the effects of an equivalent stress protocol, applied at 11 different time-points during development, on its long-term consequences in adulthood. We found both behaviorally and physiologically that the pubescence time points are the most vulnerable to stress compared to all other tested time points along the developmental trajectory. Considering the comparison between rat and human age, our findings recommend focusing on the childhood-to-adulthood transition, which can exacerbate the predisposition for the development of major stress-induced psychopathologies.

Next, we applied this stress sensitive time window in establishing animal models for psychopathologies such as Schizophrenia and PTSD.

Finally, one of the most prominent function that is impaired in the aforementioned psychopathologies (and in many others) is social functioning. Trying to depict this function in animal model, we established a full-computerized behavioral task



***Mapping the Developmental Trajectory
of Stress Effects:
Implication of Animal Model for
Psychopathology***

Avi Avital, Ph.D

*The Bruce Rappaport Faculty of Medicine, Technion– Israel Institute of Technology,
Behavioral Neuroscience Lab*

Outline

- Does stress=stress: Mapping the developmental trajectory for sensitive period.**
- Implication of stress-sensitive period in an animal model for Schizophrenia.**
- Implication of stress-sensitive period in an animal model for PTSD and examining possible treatment.**



Increased vulnerability to psychiatric disorders has been associated with early-life stress.

There is a long history attempting to evaluate the developmental trajectory of stress in humans, but these studies are limited by their retrospective nature.

Many animal models evolved for this purpose, in an effort to investigate the existence of a possible hyper-sensitive developmental period for applying a stressor or the developmental programming of the HPA-axis.

Some animal models reproduce physical stress whereas others reproduce psychological stress, either in acute or chronic paradigms.

In different studies, stressors were applied at different time points during development, together with various time points of evaluation of either short- or long- term effects.



we aimed to map the long-term effects of an acute stress applied at different developmental time-points.



Stress protocol consisted of 3 different stressors applied during 3 consecutive days
(Room light set at 1000 ± 25 lux):



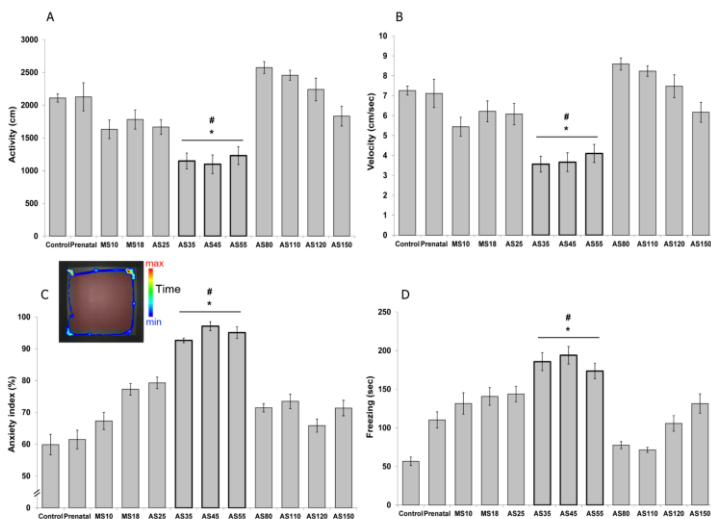
Rats were forced to swim for 15 min, while pregnant rats for 5 min, in a squared water tank: 38×30 cm, water depth: 60 cm. Water temperature maintained at $23 \pm 1^\circ\text{C}$.



Rats were placed on a platform (10 cm in diameter) elevated 50 cm above floor level, three times for 30 min with 1 hour inter trial interval spent in a resting cage.

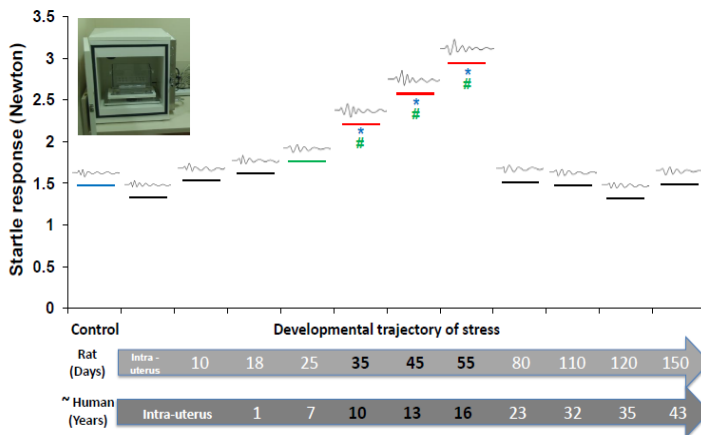


Rats were placed in a radial-shaped metal net restrainer 6 cm height, three times for 30 min with 1 hour ITI.

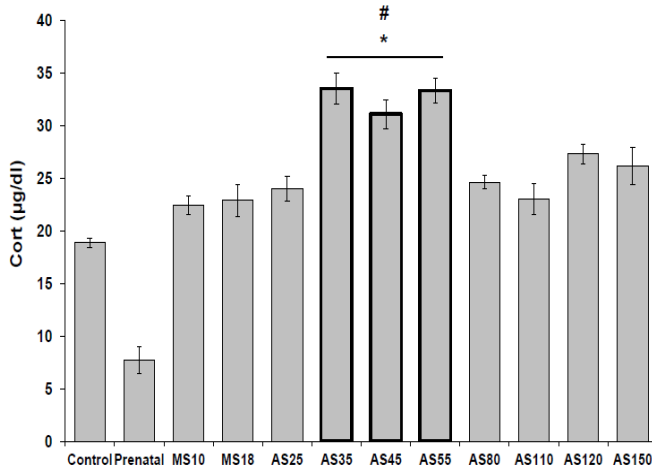




Tsaghkadzor 2014



The Startle response: equivalent developmental trajectories of rat and human. Groups AS35-55 showed higher maximal startle response than the controls ($*P<0.001$) as well as from the highest (AS25) amongst the other groups ($\#P<0.022$).



Serum corticosterone level. Groups AS35-55 showed the highest corticosterone level compared either with the controls ($*P<0.0001$), or the AS120 rats that showed the highest corticosterone level amongst all other groups ($\#P<0.001$).



To conclude, the important methodology of this study regarding the equivalent acute stress paradigm and testing its developmental-dependant effects in adulthood, allowed us the comparison of the potential stress-sensitive periods and their long-term effects in adulthood.

Carefully considering the comparison between rat and human age (Quinn 2005, Holder and Blaustein 2014), our results reinforce the notion that the childhood-to-adulthood transition is the hypersensitive-stress developmental risk period with long-lasting behavioural and physiological effects.

Thus, may predispose the appearance of psychopathology in adulthood.

Prepubertal Chronic Stress and Ketamine Administration to Rats as a Neurodevelopmental Model of Schizophrenia Symptomatology

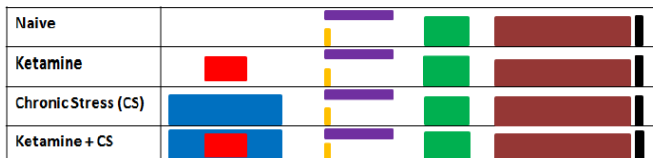
- ❖ Increased vulnerability to psychiatric disorders, such as schizophrenia, has been associated with high levels of stress.
- ❖ In the early development of the central nervous system, changes in function of glutamatergic NMDA receptors can possibly result in development of psychosis, cognitive impairment and emotional dysfunction in adulthood.



We examined the behavioral consequences of the exposure to chronic stress (postnatal days 30-60) and ketamine administration (postnatal 41-45); both during the sensitive developmental time window.



Fig 1

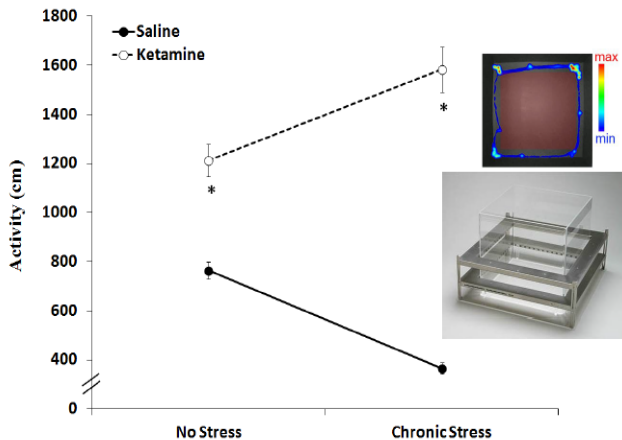


Time line in PND: 30-- 41-- 45-- 60---100 --- 107-108--110-111 125

- ChronicStress
- Ketamine administration
- Motor Monitor test
- Sucrose Preference test
- Object Recognition test
- Eight-Arm Radial Maze
- Pre-pulse inhibition (PPI)

International Journal of Neuropsychopharmacology, 2013

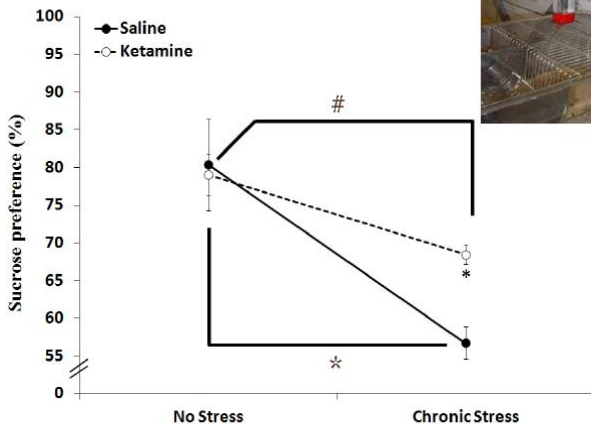
Fig 2



While the exposure to chronic stress has led to decreased activity in saline treated group, interacting with Ketamine treatment, chronic stress has yielded a significant increase in locomotor activity (* $P < 0.0001$).

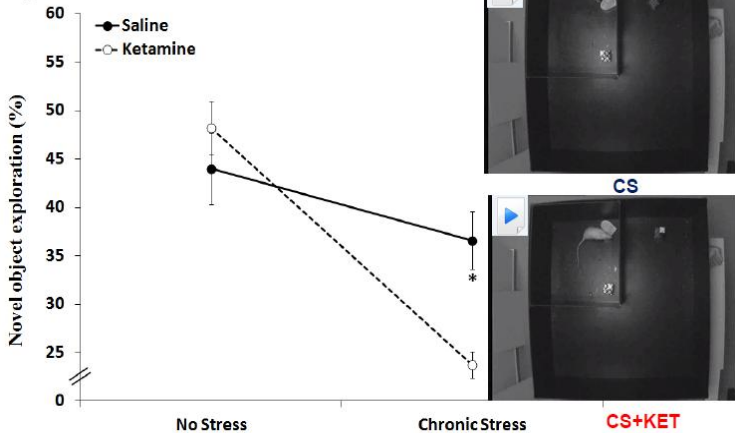


Fig 3



Sucrose intake of rats that were exposed to chronic stress, treated with saline or with Ketamine, showed a significant anhedonia compared with their counterparts no-chronic stress rats (* $P < 0.0001$; # $P < 0.034$, respectively).

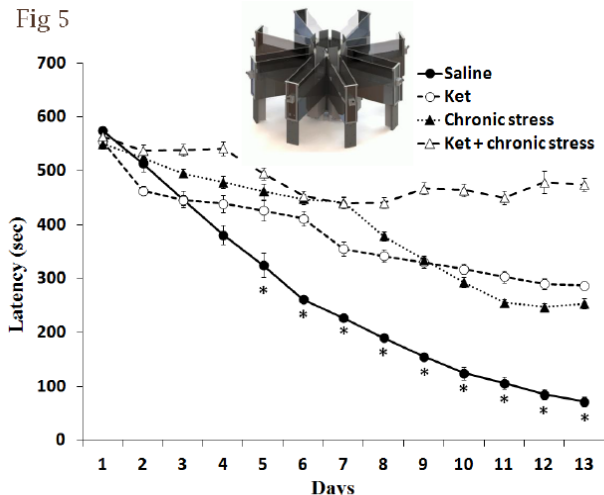
Fig 4



The attention to the novel object was significantly impaired in the chronic-stress rats treated with Ketamine (* $P < 0.0001$).



Fig 5



Starting on day 5 and onward all experimental groups showed poor learning compared with their counterpart saline treated. Interestingly, Ketamine+chronic stress group showed the poorest performance starting on day 8 (* $P < 0.0001$).

We observed that adding ketamine to chronic stress, both occurring during a sensitive developmental time window, had an impact similar to that of positive and negative symptomatology of schizophrenia.

Ketamine injected rats that were exposed to chronic stress showed hyper-activity alongside low sucrose preference, poor memory performance, attention deficits in the object recognition and impaired pre-pulse inhibition.

This manifestation of symptoms succeeds in modeling rather profoundly the human cluster of schizophrenia, both negative and positive symptomatology.



Methylphenidate and Desipramine Combined Treatment Improves PTSD Symptomatology in a Rat Model

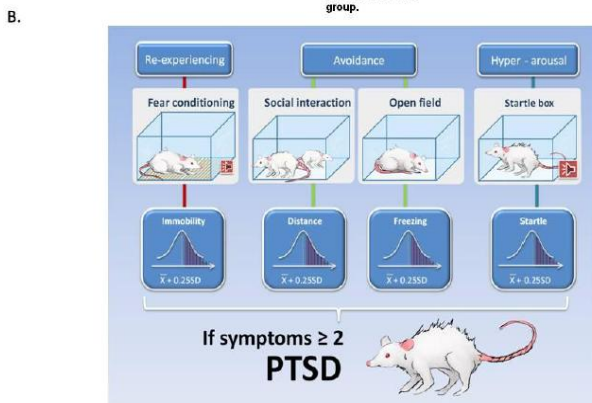
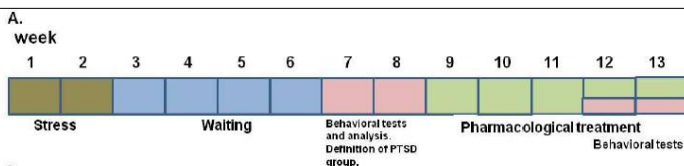
The characteristic symptoms of post-traumatic stress disorder (PTSD) include: re-experiencing, avoidance and hyper-arousal.

Nowadays, the common treatment for PTSD includes various antidepressants. However, these treatments focus on the anxiety, depression, flattened affect or detachment symptoms and less on attention problems.



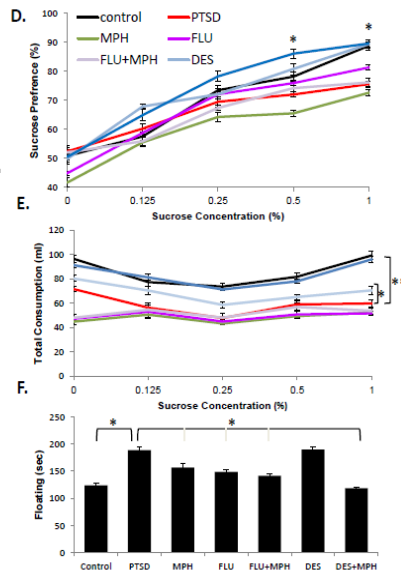
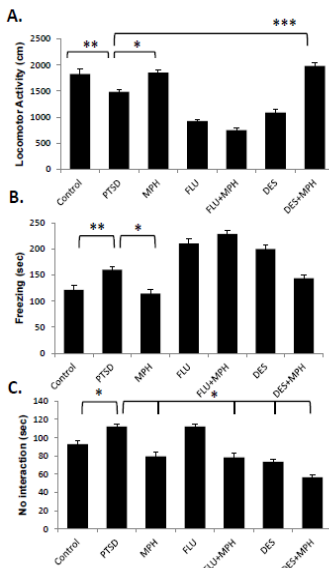
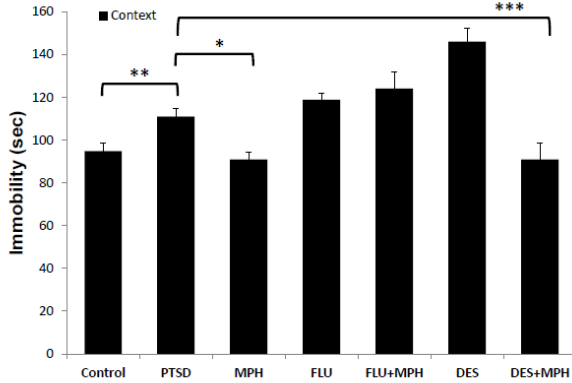
AIMS:

- 1) **Focusing on PTSD symptoms: to establish a comprehensive rat model for PTSD, with two emphases: (i) exposure to chronic stress; (ii) definition of PTSD-like animal.**
- 2) **To determine whether, in addition to the common antidepressants, Methylphenidate (Ritalin) treatment will affect PTSD core symptoms.**



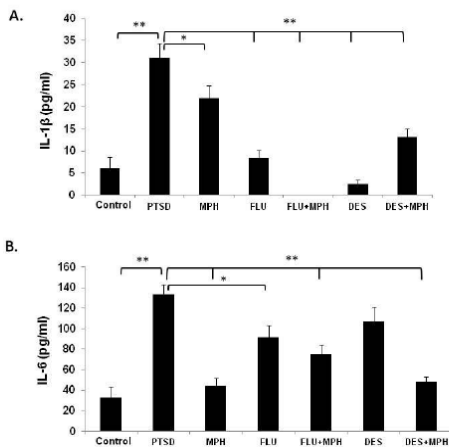
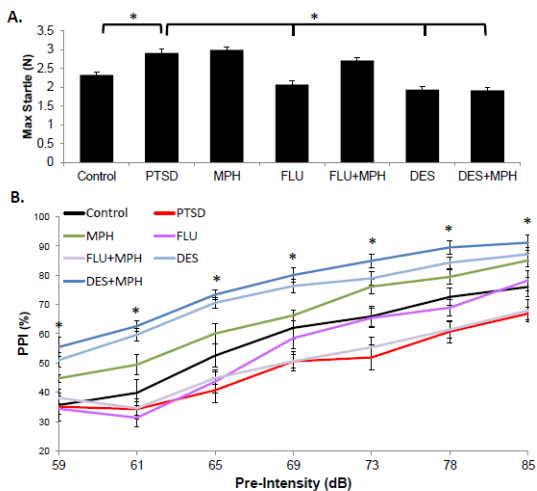


Aim 2: re-experiencing





Aim 2: hyper-arousal





Considering the versatile emotional and cognitive symptoms of PTSD, our results suggest a new duo-treatment for PTSD comprised of antidepressant (desipramine) and psycho-stimulant (methylphenidate) that partially share norepinephrine-reuptake-inhibition mechanism.

Acknowledgments:

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Shani Raphaeli

Talya Dolev

Yael Hazan

Inon Maoz

Dr. Adi Cymerblit-Sabba

Dr. Edward Ram

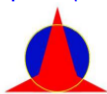
Behavioral Neuroscience Lab's staff:

Dr. Shlomit Aga-Mizrachi Mr. Salman Zubedat



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**Israel's MOD Directorate for
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**US-Army Research Office
(ARO)**





Dr. Carmen Moreno M.D., Ph.D.

Lecture Topic:

A new approaches to treatment of psychosis and clinical pharmacology of antipsychotics

Development of antipsychotic treatments has been focusing until recently on dopamine pathways known to be altered in psychosis. In fact, following initial serendipity clinical observation, most antipsychotic drugs have been developed targeting D2 dopamine receptors. D2 blockade is related to clinical efficacy measured as improvement in positive psychotic symptoms, but is also related to adverse events such as extrapyramidal symptoms, impairment of negative symptoms, and worsening on cognition.

Positive symptoms are most easily recognized in the acute setting, but negative and cognitive symptoms are pervasive on most psychotic disorders, have great impact on long-term functioning and increase the complexity of treatment. Biological and psychological factors, including medical and psychiatric comorbidities, have also great impact on functionality, and adverse events such as weight gain and sedation may worsen them.

New insights suggest that treatment approaches to psychosis need to move from the single-disease paradigm and the search of new medications based on the mechanism of action of the old ones, towards treatment development using experimental medicine methods based on new target identification, and aiming at domains of brain function relevant to psychopathology across different units of analysis (such as genes, circuits or behaviors).

Preventive strategies such as primary prevention of vulnerability or treatment at vulnerability stages previous to psychosis onset are currently being studied with promising initial results.



A new approaches to treatment of psychosis and clinical pharmacology of antipsychotics

Carmen Moreno, MD, PhD

cmoreno@hggm.es

www.hggm.es/ua

www.cibersam.es

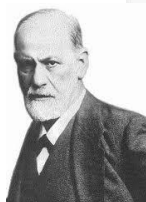
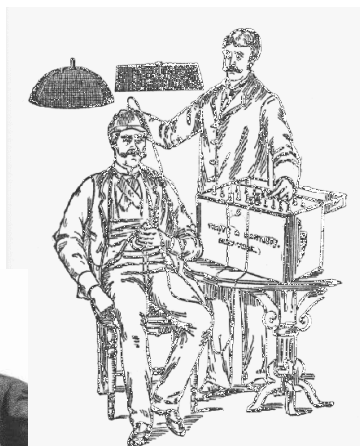
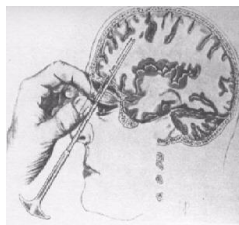


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19th and 20th Centuries:

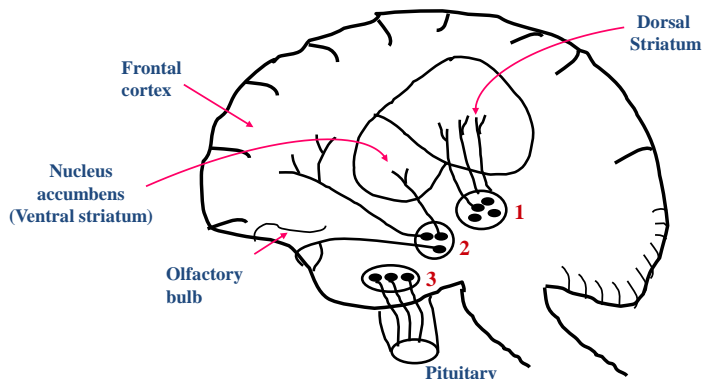
New approaches to treatment of schizophrenia





- 19th century: the discovery of phenothiazines has its origin in the development of German dye industry
- Up to 1940 they were employed as antiseptics, anthelmintics and antimalarials
- Finally, in the context of research on antihistaminic substances in France after World War II chlorpromazine was used in anaesthesiology

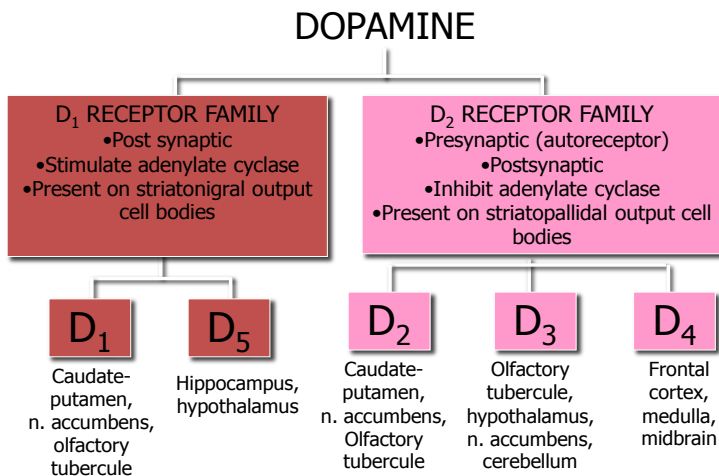
Dopamine pathways



1. Nigrostriatal pathway (substantia nigra)
Parkinson's disease, initiation of motor plans
2. Mesocortical and mesolimbic pathways (Ventral tegmental area: VTA)
Psychosis, reward and motivation
3. Tuberoinfundibular pathway (Median eminence)
Prolactin release

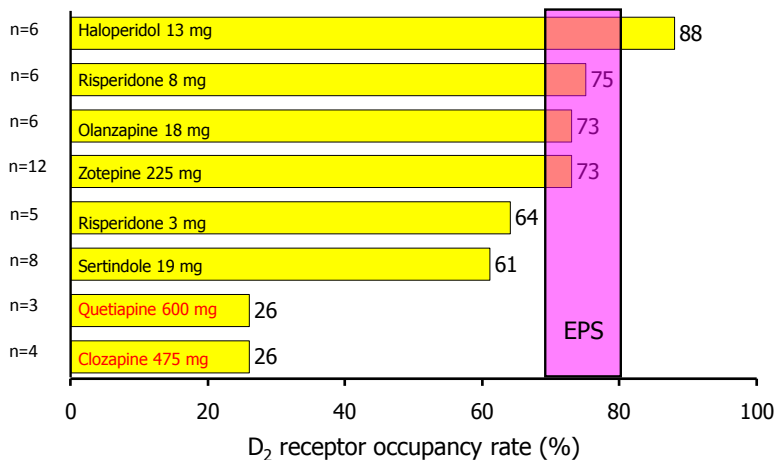


Classification of Dopamine Receptors



Conventional & New Antipsychotics

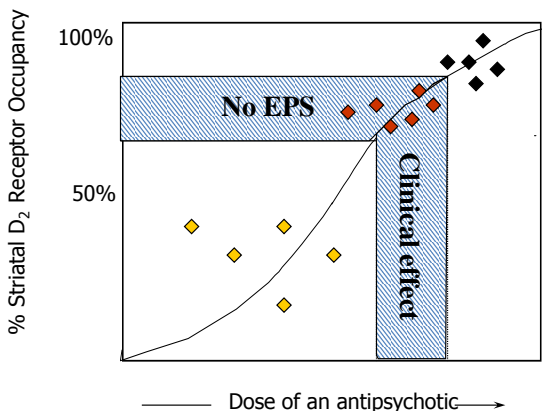
Striatal D₂ receptor occupancy rates



(Kasper et al 1999)



Relationship between D₂ receptor occupancy, EPS and response



(after; Farde et al, 1992, Nyberg et al 1996, Pickar et al 1996 & Kapur et al 2000)



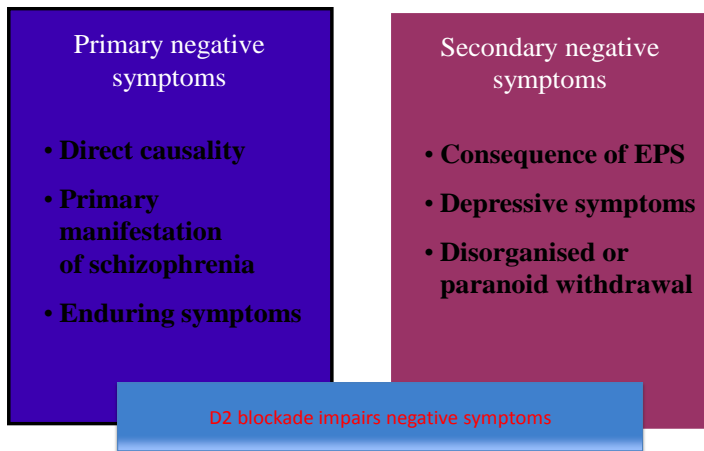
Barriers to Drug Discovery: Reasons for Minimal Progress since 1952

Adherence to single disease paradigm where psychosis represents the latent disease structure.

Discovery platforms produce dopamine antagonists.

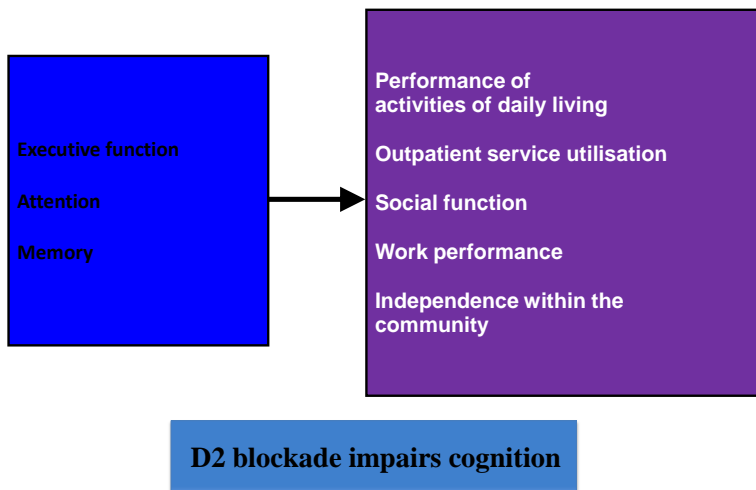


Negative symptoms of schizophrenia



Arango et al 2004, Artaloyta et al 2008

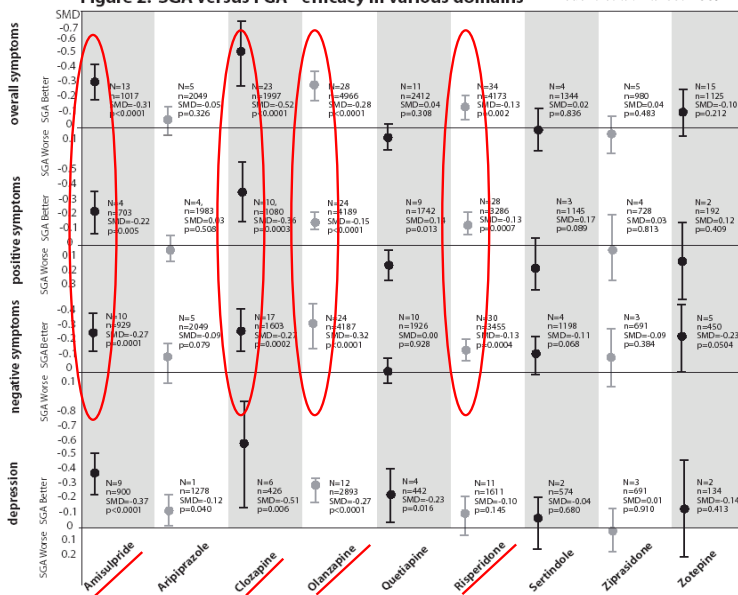
Cognitive deficits predict functional outcomes



Velligan et al 1997; Green et al 2000; Bryson & Bell 2003; McGurk et al 2004



Figure 2: SGA versus FGA - efficacy in various domains Leucht et al. Lancet 2009



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Schizophrenia: more than positive symptoms

- **Positive symptoms** are the most easily recognised in the acute setting.
- But **negative and cognitive symptoms** need to be considered of:
 - Independent neurobiological substrate
 - greater influence on long-term functioning
 - increase the complexity of treatment
 - associated with a detrimental impact on patient self-care
 - increases family concern due to patient's lack of activity and limited occupational and social functioning

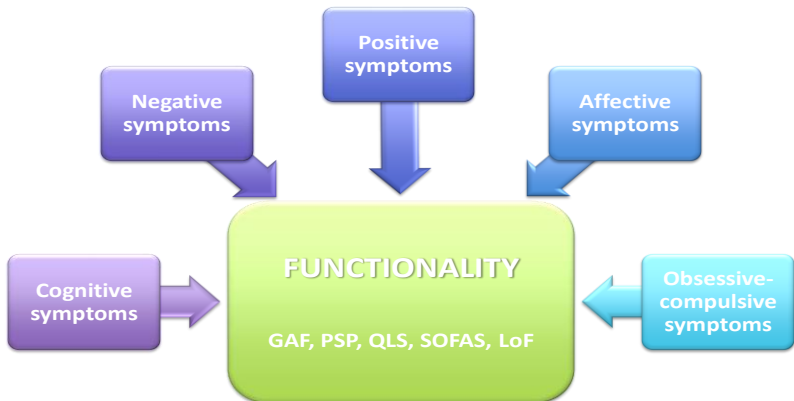
Carpenter et al 1988; Arango et al 2005; Meyer 2007; Rapado-Castro et al 2010



Functionality in schizophrenia

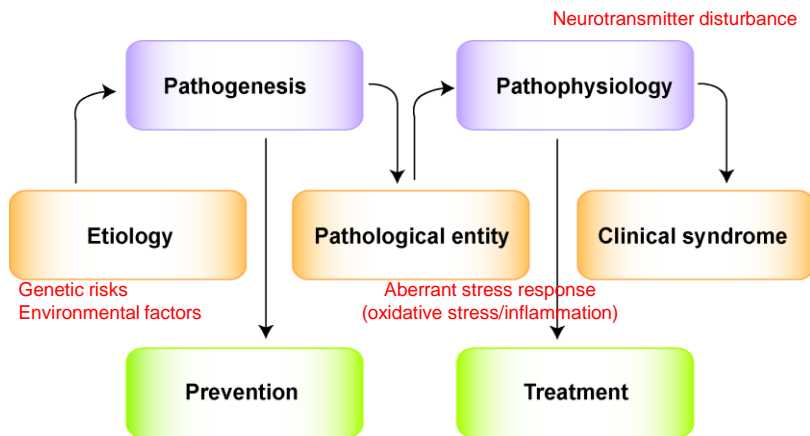


Symptoms and functionality



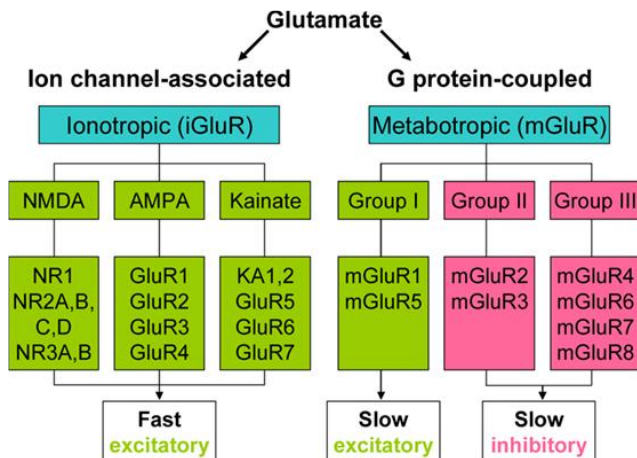


From etiologies to clinical phenotypes



Paradigms for Therapeutic Discovery

1. Sz as disease
2. Sz as syndrome comprising disease entities
3. Sz as domains of psychopathology
4. Sz as impaired role and social function
5. Sz endophenotypes
6. Sz behavioral/neural circuit impairment
7. Sz development for primary prevention
8. Sz development for secondary prevention

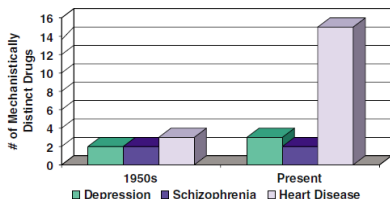


Where should we put our effort in....

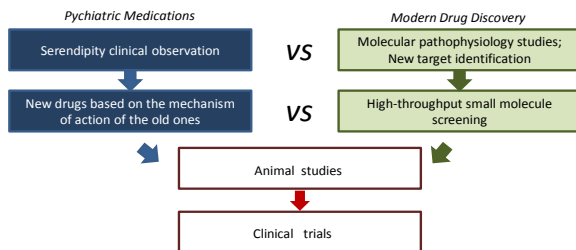
- Understanding the pathogenesis and mechanisms of psychopathology
- Targeting domains of brain function relevant to psychopathology across parallel units of analysis (genes, molecules, cells, circuits, behavior, etc.)
- Treatment development using experimental medicine methods:
 - Pathogenesis-derived target
 - Documentation of target engagement
 - Proof-of-concept studies for efficacy signal



New strategies for an old challenge: drug discovery in Mental Health

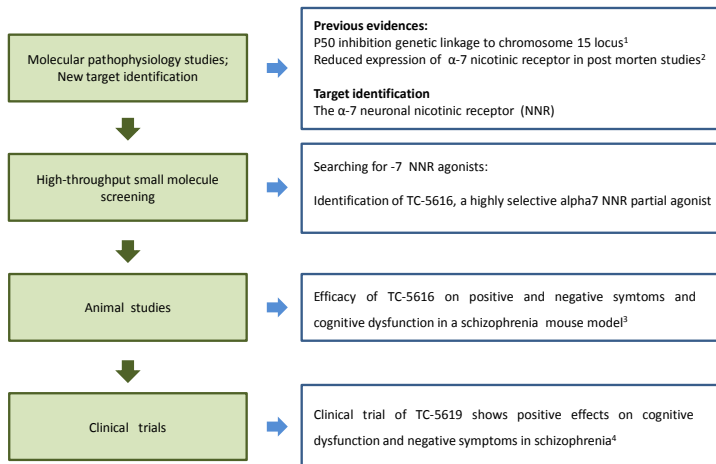


Are we doing something wrong?



Insel T. R., Scolnick E. M. (2006). Mol. Psychiatry 11, 11–17

Modern drug discovery in mental health: The example



¹Freedman R et al., PNAS 1997. ²Freedman R et al., Biol Psychiatry 1995. ³Hauser TA., Biochem Pharmacol 2009. ⁴Lieberman JA., Neuropsychopharmacology 2013



Tsaghkadzor 2014

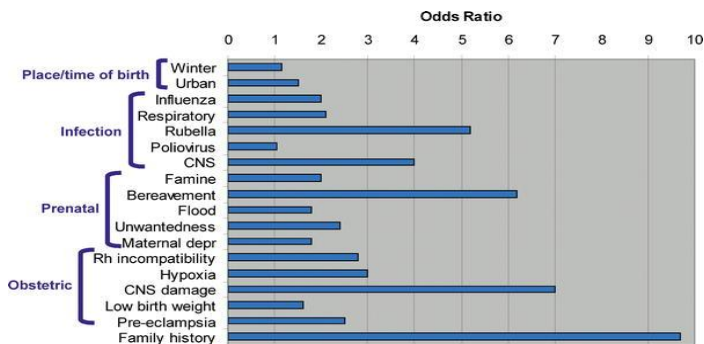
Studies	Country	No	Screening instrument	Age (yrs, range)	Comparison	Duration (wks)	Follow up (wks)
Addington 2011	Canada	51	Structured interview for prodromal symptoms	20.9 (NR)	CBT vs supportive counselling	26	52 and 78
Amminger 2010	Austria	81	PANSS	16.4 (NR)	Omega 3 fatty acids (1200 mg/day) vs placebo	12	52
Bechdolf 2012	Germany	128	Early Recognition Inventory	25.8 (NR)	Integrated therapies vs supportive counselling	52	104
McGlashan 2003	US	60	Structured interview for prodromal symptoms	17.8 (12–36)	Olanzapine (8 mg/day) vs placebo	12	52
McGorry 2002	Australia	59	BPRS	20 (14–28)	Risperidone (4 mg/day) vs placebo	52	104–208
McGorry 2013	Australia	115	CAARMS	17.6 (12–24)	Risperidone (4 mg/day) vs placebo	52	52
Morrison 2004	UK	60	PANSS	20.9 (14–34)	Integrated therapies and supportive counselling vs supportive counselling	52	156
Morrison 2012	UK	60	PANSS	20.9 (14–34)	CBT and supportive counselling vs supportive counselling	26	104
Nordentoft 2007	Denmark	104	ICD-10	24.9 (NR)	Integrated therapies vs standard treatment	104	N/A
Phillips 2012	Australia	59	CAARMS	17.9 (NR)	Risperidone (2 mg/day) and CBT vs CBT and placebo vs supportive counselling and placebo	52	104
Ruhrmann 2012	Germany	124	Early Recognition Inventory	25.6 (NR)	Amisulpride (118.7 mg/day) and NBI vs NBI	12	N/A
Van der Gaag 2012	Netherlands	201	CAARMS	22.7 (NR)	CBT vs supportive counselling	26	52 and 78

Preventing transition to psychosis

NR, not reported; NBI, needs based intervention; CAARMS, Comprehensive Assessment of At Risk Mental States ; BPRS, Brief Psychiatric Rating Scale; CBT, cognitive behavioural therapy; PANSS, Positive and Negative Syndrome Scale; ICD-10, International Classification of Diseases

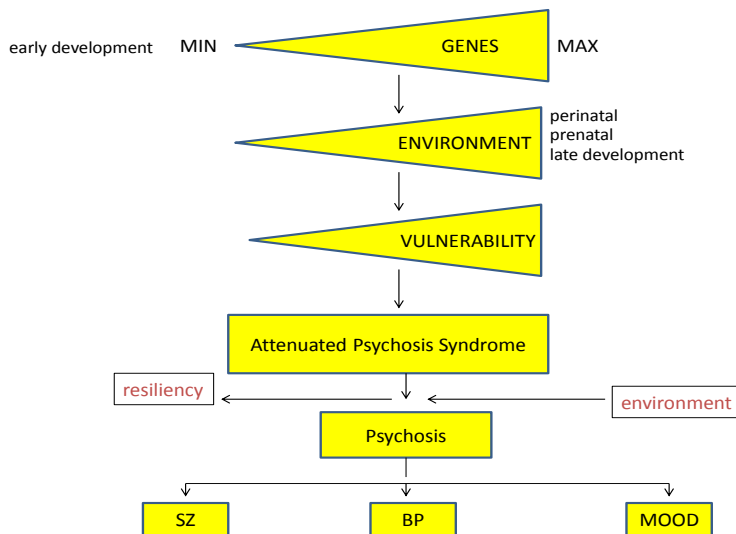
Stafford et al. *BMJ* 2013; Morrison et al. *BMJ* 2012; McGorry et al. *J Clin Psychiatry* 2013.

Many replicated risk factors for schizophrenia



PRIMARY PREVENTION?

Ross RG, Hunter SK, McCarthy L, Beuler J, Hutchison AK, Wagner BD, Leonard S, Stevens KE, Freedman R. Perinatal choline effects on neonatal pathophysiology related to later schizophrenia risk. *Am J Psychiatry*, 170(3):290-8, 2013.



Concluding remarks

- Change the paradigm of D2 blockade
- Targeting mechanisms of action related to pathogenesis and mechanisms of psychopathology
- Primary prevention of vulnerability or treat disorder at vulnerability stage or secondary prevention of psychosis



List of Participants

Aghekyan, Elen
Amirkhanyan, Hovhannes
Antonyan, Arshak
Avetyan, Diana
Azatyan , Ruzanna
Bagdasaryan, Armine
Berberyan, Bagrat
Darabyan, Anahit
Darabyan, Anush
Farah, Jack
Gevorgyan, Adelaida
Gharibyan, Andranik
Grigoryan, Arsen
Hakobyan, Hovhannes
Hayrian , Arsen
Hovsepyan, Aram
Israelyan, Narine
Khojayan, Hayk
Manvelyan, Artavazd
Melik-Pashayan, Lilit
Mironava, Katsiaryna
Nersisyan, Narine
Nersisyan, Tigran
Pachlevanyan, Mnatsakan
Pashikyan, Gevorg
Pepoyan, Gohar
Poghosyan, Ashkhen
Shahramanyan, Vrezh
Simonyan, Vahan
Stepanyan, Irina
Tadevosyan, Karine



Abstracts

Aghekyan, Elen

Affective Disorders in Primary Care in General Practice: Depressive and anxiety disorders are highly prevalent in primary health care. And it is difficult for general practitioners (GP) to diagnose these disorders, especially if affective disorders appear as “somatic complaints”. Due to literature about 10% of visits to GP are connected with depression, but only 10-30% of them are recognized by GP.

OBJECTIVES: The present work aimed to reveal the affective disorders in primary care patients, who visit general practitioner with somatic disorders.

METHODS: Prospective study was done. We estimated the psychiatric condition with Spilberger Anxiety Scale and Zung Depression Scale.

Amirkhanyan, Hovhannes

The effectiveness of treatment of alcohol-dependent patients in remission:

Objective: is to examine the effectiveness of treatment of alcohol-dependent patients in remission, placebo medicine - Torpedo.

Methods: the most motivated were selected 20 patients within 5 years, which had been previously acquainted with possible fatal consequences, in the case of drinking and intravenous placebo with striking effect. 19 out of 20 patients lasted for the time that was specified dose received medication. One patient did not last for a specified period of time. **Conclusion:** you can substitute expensive drugs such as Esperal successfully applied a placebo agent.

Antonyan, Arshak

Female Ejaculation: Female ejaculation is a phenomenon in which fluid shoots out of the vulva or vagina at the moment of orgasm. Recent research suggests the ejaculate is an alkaline liquid that isn't like urine, because it doesn't contain urea or creatinine, which are normal urinary constituents. Researchers have claimed that it contains some chemical ingredients similar to those produced by the male prostate – notably PSA (prostate-specific antigen). Many researchers suggest there is such a phenomenon as a G-spot orgasm, which is likely to be accompanied by a gush of fluid from the urethra. However, this phenomenon is not completely scientifically proven, so there is a need to study.



Avetyan, Diana

Genetic factor as a risk for development of PTSD: Posttraumatic stress disorder (PTSD) is a severe psychiatric illness, influenced by both environmental and genetic factors. In the present study we examined a potential association of functional polymorphisms of genes encoding the important components and regulators of the complement alternative pathway, namely factors B, H, and I (CFB, CFH, and CFI, respectively). The obtained results demonstrated positive association of the CFI rs1000954 polymorphism with PTSD. On the base of the obtained results we also concluded that the presence of the rs1000954*A mutant allele of the CFI gene increases the risk for development of PTSD.

Azatyan E. Ruzanna, Hakobyan E.Aram, Grigoryan D.Arsen, Hakobyan V. Sevada, Shahramanyan A. Vrezh

Effects of Premature Ejaculation on the Woman: Premature ejaculation (PE) is considered to be the most common sexual problem among the men with varying prevalence estimates ranging from 3% to 20%. The relational impact of male and female sexual dysfunction, and specifically premature ejaculation (PE), is an important consideration. Clinical experience of YSMU clinic of Sexology and published findings are consistent the negative psychological impact of PE on the female. Female partners of men with premature ejaculation report significantly reduced satisfaction with sex, greater interpersonal difficulty with their partners, and significantly higher numbers of sexual problems than women who are in relationship with men do not have a premature ejaculation. So interpersonal difficulties and female sexual problems usually improve manifestation of PE caused by the principle of reverse connection. However, the effect of PE on the female partner, especially in relation to her sexual functioning, has been less well studied.

Bagdasaryan, Armine

Treatment of Depression associated with Cardiovascular Diseases: Cardiovascular disease (CVD) and depression are common. Patients with CVD have more depression than the general population. People with heart disease are more likely to suffer from depression than otherwise healthy people. Angina and heart attacks are closely linked with depression. Thus, cardiovascular disease can trigger depression.

Additional management strategies for depressed cardiac patients include cardiac rehabilitation and exercise programmes, general support, cognitive behavioural therapy, antidepressant medication, combined approaches, and probably disease management programmes.

We used complex cognitive behavioral therapy and antidepressants as a perspective method of treatment of depression in patients with cardiovascular diseases.



Berberyan, Bagrat

Quality of Life of Patients with Depression: Major depressive disorder is the fourth leading cause of disability worldwide and is predicted to become the second leading cause by the year 2020.

The aim of this study was to compare Quality of life in patients with various depressive and anxiety disorders. Method: Quality of life was assessed by means of the WHOQOL- SF36.

Results: The quantity of patients with clinically severe impairment in quality of life varied with different diagnoses: major depressive disorder (72%), dysthymic disorder (67%), panic disorder (25%), OCD (26%), social phobia (23%) and PTSD (63%).

Darabyan, Anahit

Sleep Disorders In Psychiatric Practice: Insomnia is by far the most common disturbance and is often associated with concurrent psychiatric illness, in particular anxiety and mood disorders. On the other hand, sleep complaints are frequently present among psychiatric patients and have been incorporated in the official diagnostic criteria for many mental disorders, such as major depression, post-traumatic stress disorder, generalized anxiety disorder and substance-related disorders.

Concurrent psychiatric diagnoses are common in individuals with sleep disturbances. In various studies were demonstrated that 30- 40% of respondents with insomnia compared with 16.4% of individuals with no sleep complaints.

The aim of our study to establish sleep disorders prevalence among psychiatric patients in Armenia.

Darabyan, Anush

The Suicidal Risk in Adolescent with Depression and SSRI Prescribing: The adolescence is the age risk group of suicidal behavior. But less than 50% of children and adolescents with depression receive treatment.

The FDA's public health advisory described reports of suicidal ideation and suicide attempts in pediatric patients taking antidepressants and advised "close supervision" of such patients.

For young patients with depression who are being treated, there is a need to evaluate barriers to implementing guidelines in clinical settings and to articulate realistic goals for implementing evidence-based care to improve patient outcomes.

Conclusion: treatment of depression in youth has focused on which treatments should be effective and safe.



Farah, Jack, Dewey J. Kim, Joo H. Shin,

Aren G. Khoyetsyan¹, Karine R. Mayilyan, and Danial R. Weinberger

Genetic Diversity and DLPFC Expression of the MHC HSP70 Genes in Schizophrenia: We investigated genetic variation and mRNA expression of the MHC genes HSPA1L, HSPA1A and HSPA1B in the post-mortem brain prefrontal cortex of 175 schizophrenic patients vs. 222 controls. From mRNA-sequence data 7 SNPs were deciphered by using Galaxy platform. Schizophrenia was associated with high expression of those genes ($p < 0.009-0.02$) and with HSPA1L rs2075799 polymorphism ($P < 0.0099$). HSPA1L rs2075800 ($p < 0.0006$) and HSPA1A rs1043618 ($p < 0.05$) influenced those genes expression. The results demonstrate genetic and DLPFC expression association of those genes with schizophrenia. We acknowledge the RA SCS grant #13-1F291.

Gevorgyan, Adelaida

Clinical and anamnestic features of partial sanity in forensic-psychiatric expertise: Goal: Study conducted to clarify clinical signs that may become the defining criteria for recognizing partially sanity in examinees of forensic-psychiatric expertise.

Methods and materials: 230 acts of forensic-psychiatric expertise were examined. 140 of them were declared sane, 68 – partially sane and 22 – insane. Clinical description and anamnestic data of examinees were analyzed.

Results: 7 clinical and anamnestic features were distinguished: low intellect level, decreased short-term memory, labile emotional and volitional sphere, situational reactions as continuous personality decompensation, unhealthy organic background from childhood, description of personality accentuation in military age examination.

Conclusion: We suggest to use more specific clinical and quantitative assessment methods for data collection during the forensic-psychiatric expertise for further full and partial sanity criteria estimation.

Grigoryan, Arsen

Sexual Manifestations of Military Service Soldiers of RA: Despite the wide prevalence of sexual disturbances, their role and place in the reduction of life quality, as well as in terms of the formation of psychosomatic diseases and influence of non-social behavior, and from point of view of sexological aid, practically not studied among the armed forces servicemen in RA. During the last decades in different countries of the world in has been seen the lowering the threshold age to start sexual life. The large amount of RA citizens aged 18-27 are calling to the military service.

This study represents the prevalence of sexual manifestations and nocturnal enuresis among the armed forces servicemen in RA. Anonymous and voluntary



sexological investigations were undergone 1417 soldiers of armed forces of the Republic of Armenia.

Analysis showed that changes associated with a wet-dream, maximal sexual excesses, being out of sexual life, taking into account that contingent aged different and are quite different in statistically reliability increase or decrease of intensive indices or with different trends.

Gharibyan, Andranik

Marijuana can make sexual process much longer. Some people who use Marijuana have a problem with Premature Eaculation (PE). Maybe before using Marijuana they already had a same problem, and then decided to made a self-medication. This is a really big question. Also we don't know what doses are the best to make a good quality sex. But users admit that small doses except PE, can help the person to increase sexual libido and sexual desire.

Hakobyan, Hovhannes

Often occurred psychosexual disorders in HIV infected men: In HIV infected patients have occurred many disorders which are characterized for healthy population. In early period of the HIV infection a lot of patients have feeling of fear and anxiety related to the risk of transmission for partners. These symptoms particularly manifested in the young men, who were infected by sexual way. Many sexual disorders occur in AIDS stage, when the patients have fatigue, decreased sexual attraction and erectile dysfunction. Owing to ARV treatment many of these disorders are normalized and recovered.

Hayriyan, Arsen

It is known that adolescence and early adulthood is one of the most important risk factors for the development of behavioral disorders associated with the formation of dependence on psychoactive substances. At the same time, only in recent years have become widespread forms of addictive behavior is not related to substance use, moreover, deprived of the chemical substrate dependence.

The wide prevalence of addiction and low efficiency of medical care is accompanied by scepticism of a number of researchers on the issue whether the computer addiction is a disorder (illness) or not. The aim of this research was to study connection between chemical and nonchemical form of addiction. We investigate 36 patients with various forms of addiction. The main method of the study was clinical and psychopathological.

The results demonstrated the essential proximity of various forms of addiction.



Hovsepyan, Aram A.

Contemporary treatment strategies of depressive disorders: This study provides an overview of plenary symposia and poster sessions of the 26th European College of Neuropsychopharmacology (October 5-9 2013, Barcelona, Spain) concerning pharmacological and psychotherapeutic treatment of depressive disorder. This review was done as part of World Psychiatric Association – Servier young psychiatrists academy.

Clinical trials of both well known and newly introduced antidepressive drugs, such as vortioxetine, vilazidone, agomelatine, levomilnacipran etc, as well new looks on etiology of depression are involved in review. In second part novel clinical assessment methods, diagnostic approaches and psychotherapy aspects are presented.

Israelyan, Narine

The Correlation between Anorexia Nervosa and Body Dysmorphic Disorder in Course of Obsessive Compulsive Disorders among Adolescents (Comparative Pilot Study): Background: According to scientific data OCD are often accompanied by BDD and anorexia nervosa [Grand JE 2005. Aim of the study: is to examine the course and relationship of anorexia nervosa and dysmorphophobic OCD spectrum disorders among adolescents. Methods: We have made dynamic clinical study of 30 patients with OCD (age 13-20) using questionnaire for semi-structured clinical interview. Results: 13 patients had BDD accompanied by anorexia nervosa. In 8 cases dieting first occurred in puberty having only weight controlling purpose. In 5 cases were poor inside, earlier manifestation (9 year) with psychotic feature. Conclusion: OCD spectrum dysmorphophobia and anorexia nervosa keep clear correlation. In base of psychotic disorders anorexia nervosa loses its connection with BDD.

REFERENCES: 1. Grand JE, Phillips KA et al. (2005) Recognizing and treating body dysmorphic disorder. *Ann. Clin Psychiatry.* 17(4) 205-10.

Khojayan, Hayk

Clinical case: 27 years old, male: He complains of fever during bedtime-38.0C. He was undergone all investigations-blood analysis, urine analysis, bacteriological analysis-N.Tuberculosis, syphilis and other sexual transmitted infections were not revealed. X-Ray diagnostics of skull was also done-there are no pathological changes in maxillary and frontal sinuses. Consultation of dentist was also provided-diseases of oral cavity were not revealed.

Mental status – during interview patient was stubborn, irascible and quick-tempered. He behaves himself very arrogant. Patient fell asleep at 03-04AM. Sleep



Tsaghkadzor 2014

duration is short(1-2 hours).He wakes up early morning.Patient is interested only in his profession(engineering).Psychotherapist diagnosed latent depression.During psychotherapeutic treatment the core symptom disappeared.

Manvelyan, Artavazd

Borderline Personality Disorder is a major health burden for persons with this disorder and their families and for the society as well. Although it is established official clinical diagnosis that includes both DSM-5 and ICD-10, people with BPD are underdiagnosed in Armenia. The reason for that is relatively new appearance of BPD as separate diagnostic entity particularly after the growth of Psychodynamic Psychiatry in the USA and Europe. The majority of Armenian psychiatrists do use the old classification of personality disorders introduced by classic German authors and later influenced with Russian ones, which is known as Psychopathic personalities or Psychopathies, and which do not include Borderline Personality Disorder at all. Because of such an irony BPD is usually misunderstood as Histrionic or Unstable Personality disorder or another specific personality disorder, which do have some descriptive overlap with BPD but are different diagnostic categories with different treatment options and outcomes. This case report is intended to emphasize the importance of proper diagnosis of Borderline Personality Disorder, that is crucial for the specific treatment option choice and outcome.

Melik-Pashayan, Lilit

Electroencephalogram (EEG) is a reliable test to assess cerebral function, its value in diagnosis and evaluation of neurological conditions apart from epilepsy has been largely superseded in recent years by other investigations with greater specificity and sensitivity.

EEG is not so commonly used in patients attending psychiatry department. It is predominantly required to rule out any organic cause behind the behavioral changes.

The aim of our study was to establish factors associated with an abnormal EEG in patients with psychiatric problem. 52 patients hospitalized in psychiatry department were included in this study.

We defined that presence of an organic factor, which was previously identified in the history, mental status examination, or physical examination was significantly associated with an abnormal EEG.

So any patient presenting to psychiatry department with seizure disorder or any patient with diagnostic confusion should be evaluated with EEG.



Mironava, Katsiaryna

Psychoeducation as Method of Fighting Stigma Mental Illness in Armenia and Belarus (Transcultural Study): The aim of this study was highlight the transcultural differences of mental illness stigma in schizophrenic patients and their relatives from two different cultural contexts: patients from Armenia and Belarus and develop psychoeducational program.

The obtained results showed that schizophrenic patients and their relatives suffered from negative consequences of stigma mental illness. They felt shame, guilt, social isolation, problems with employment and housing. Patients with schizophrenia had a low quality of life and social functioning. Family members had high level of family burden (objective and subjective), felt distress, had anxiety and depression, psychosomatic disorders and other various health problems. They chose non adaptive coping strategies resulting in the low quality of life. There was a lack of knowledge about psychiatric disorders in the families of people with mental illness.

We established that psychoeducation reduced the stigma mental illness in schizophrenic patients and their family members, improved their quality of life, reduced the negative symptoms in patients, family and social interactions, decrease subjective family burden.

Narine Nersisyan

Observation of 28 women who have recently had abortion reveals that after an abortion they have depressive mood and enhanced sexual interest which compels them masturbate in an obsessive compulsive manner. They feel guilty about their sexuality and obsessive compulsive masturbation deepens their depression. Beck Depression Inventory was used for selection of subjects and clinical assessment for anxiety and sexual interest has been done by a clinician. The result of treatment with antidepressive medications seems to be less effective and needs long time, whereas integrative approach that uses psychotherapy, antipsychotic drugs and SRRI agents, as we see is more effective.

Nersisyan, Tigran

FMF(Famillial Mediterranean Fever) Accompanied By Schizoaffective Disorder: As we know FMF is appeared not only by homogenous genetic predisposition but also by heterogenous genetic predisposition. The last one could be manifested as a mental disorder. According to the study, which was carried out in 60's(E.Nazaretyan 1968), in patients who suffer from FMF and achizoaffective disorder the use of lithium carbonate relieves both affective component of disorder and FMF attack(fever, abdominal pains etc). Therefore, it would be advisable to add lithium treatment to colchicine.



Pachlevanyan, Mnatsakan

Negative Symptoms in Apatho-Abulitcal Type of Defect in Schizophrenia

To date, the treatment of schizophrenia remains a central problem of psychiatry, which is due, on the one hand, its high prevalence in the population (about 1%) and enormous economic damage associated with severe social and labor maladjustment and disability of patients, on the other - the polymorphism of clinical symptoms, requiring psychopharmacological correction. Negative symptoms in schizophrenia are basis for forming a defect and the degree of its expressiveness defines possibilities for rehabilitation. Apatho-abulitcal type of defect is the widespread at patients of late schizophrenia. The aim of research was to establish clinico-psychopathological characteristics in patients with schizophrenia with prevalence of negative symptoms.

Pashikyan, Gevorg

Cognitive Behavioral Therapy in Treatment Of Schizophrenia:

In recent years has been renewed interest in psychosocial interventions, including psychotherapy, in the treatment of schizophrenia. This has included adapting cognitive behavioral therapy (CBT) techniques previously used mainly in the treatment of mood and anxiety disorders for use with individuals with more severe mental disorders.

Several studies showed that cognitive therapy reduced positive symptoms at a faster rate during the initial 12-week period following hospital admission, and the overall amount of positive symptoms were reduced during this time compared to those patients that received an equal amount of activity therapy and support. There was no difference in the decrease in negative symptoms between the groups during the initial 12-week period.

For patients with first episode of psychosis it is very important he earlier promise of compliance therapy (a brief, cognitively based intervention using motivational interviewing techniques).

Pepoyan, Gohar

Comorbid Substance Abuse and Schizophrenia

Nearly 50% of patients with schizophrenia have a co-occurring substance use disorder, most frequently alcohol and/or cannabis (at a rate about three times as high as that of the general population). Patients with dual diagnoses are highly prone to adverse outcomes in several domains: increased symptom severity; increased rates of hospitalization, infectious illnesses, violence, victimization, homelessness, and nonadherence to medication; and poor overall response to pharmacologic treatment. Common psychosocial factors (limited education, poverty, unemployment, peer influence, and the structure of the mental health treatment system) may account for a portion of the increased comorbidity.



Thus, prevention interventions that mitigate the adverse effects of social stress on individuals at risk for schizophrenia may also help curb drug use in this population.

Pogosyan, Ashkchen

Family Burden of Relatives of Patients Suffering from Schizophrenia

One of the negative influences for the family members of patients suffering from schizophrenia is the family burden which was described as the "perceived impact of this workload on caregivers' life.

Family burden on caregivers depends on various socio-demographic factors, diagnosis & duration of psychiatric illness. It was found that high degree of burden associated with female, old age, low educational level, without employment and who are taking care of younger patients.

The aim of the study was investigation of the Family Burden among close relatives of patients with schizophrenia. In our study we used Family Burden Questionnaire. Preliminary results revealed problems in various areas of life in relatives of schizophrenic patients.

Shahramanyan, Vrezh A., Aram E. Hakobyan, Arsen D. Grigoryan, Ruzanna E. Azatyan

Sexual Disorders as a Result of Mistakes of Sexual Upbringing: In the focus of this research are those sexual disorders that are developed due to mistakes of sexual upbringing and misinformation about sexual issues and sexuality.

Participants of the research were 161 patients-among them 120 were male and 41 female. 99 male and 31 female patients suffered from different sexual dysfunctions and the rest, that is 21 male and 10 female patients, had marital and sexual discordances. It was suggested a new solution to this actual scientific problem by developing prevention system according to gained sexual education and peculiarities of sexual upbringing.

Simonyan, Vahan

The efficiency of treatment in the clinic of the first psychotic episode:

Recently in psychiatry much attention devote the first psychotic episode problem. The research was made on the base of the first psychotic episode clinic (PMC) by compact method, the elimination criteria were the unwillingness of the patient to participate in the study. 50 patient with the diagnosis of schizophrenia included in research. The study was conducted using psychometric scales PANSS, BDI, HADS, SCL-90. The results showed a significant reduction in all psychometric scales results, and also showed an improvement in cognitive performance and social functioning. Which shows the high efficiency of the use of atypical antipsychotics in combination with psychosocial therapy.



Stepanyan, Irina

How to Work with Alliances of Patients in our Social Psychiatrists: In our social psychiatrists aren't like very much and psychiatric clinics too. Alliances of patients and patients in most cases prefer apply to neurologists, therapists, psychologists, doctors of general practice etc., but no to psychiatrists. Only 5-10% of whole social accepted their or their alliance problems and apply to psychiatry immediately. In 90-95% cases they come to us after many doctors and treatments, which is in most cases were inefficient.

OBJECTIVES:The present work aimed to less or stop social fright and unacceptance of psychiatric diseases, hospitals, doctors and med.personal.

METHODS:Lead seminars with alliances and why no some patients, who can accept, that special treatment and hospitals in some cases are necessary for them.

Tadevosyan, Karina, Roksana Zakharyan, Sofi Atshemyan Anna Boyajyan

Variations in Immediate-Early Genes Encoding C-Fos, C-Jun and Ier5 Transcription Factors are Associated with Ischemic Stroke and Schizophrenia

In the present study we evaluated the association of single nucleotide polymorphisms (SNPs) rs7101, rs1063169, rs11688 and rs6425663 of c-Fos, c-Jun and Ier5 encoding genes (FOS, JUN, and IER5, respectively) with ischemic stroke (IS) and schizophrenia (SCZ) in Armenian population by genotyping DNA samples of SCZ-affected, IS- affected and healthy control subjects (HCS) using polymerase chain reaction with sequence-specific primers. By the results obtained, mutant alleles of FOS rs1063169, JUN rs11688 and IER5 rs6425663 SNPs might be nominated as protective factors against IS and SCZ, whereas mutant allele of FOS rs7101 SNP might be nominated as a risk factor for IS and SCZ at least.