International seminar:

ADVANCES IN NEUROLOGY, PSYCHIATRY & RADIOLOGY

President: *Prof. Mohammad Hossein Somi*

Vice President: *Prof. Seyed Kazem Shakouri*

Head of Executive Committee: *Dr. Hassan Soleimanpour*

Head of Scientific Committee: *Dr. Babak Mahmoudian*

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Prof. Seyed Kazem Shakouri
Dr. Manouchehr Seyedi Vafaee
Prof. Poul Flemming Højlund Carlsen
Prof. Shahram Dabiri Oskuei
Dr. Mohammad Hossein Daghighi
Prof. Mojtaba Zarei
Dr. Hassan Soleimanpour
Dr. Firooz Salehpoor
Prof. Mehdi Farhoudi
Prof. Ali Meshkini
Dr. Mohammad Mohammadzadeh
Prof. Abbas Alavi
Dr. Babak Mahmoudian
Prof. Albert Gjedde
Dr. Bjørn H. Ebdrup
Prof. Ayyoub Malek
Dr. Javad Alaghband Rad
Prof. Nosratollah Pourafkari
Dr. Sima Salari Rad

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Yaser Ahadi

Professor Mohammad Hossein Somi

Message of Chancellor of Tabriz University of Medical Sciences, Tabriz, IRAN

In the name of Allah

University is dynamic and exuberant environment which it`s development could be guaranteed through recruiting excellences and higher talents, novel ideas and connection to intelligent. Though in the recent age of information sharing ideas and potentialities has been facilitated, holding seminars and conferences could also provide us with human based and emotional communication and decisions for future mutual projects beside possibility to exchange knowledge and information.

Holding international seminar on new findings of neurology, psychiatry and radiology–three fields of medicine which has been maintained their dynamics and also created new horizons to search and expedite for researchers and sparkle promises of sooner and precise diagnose and treatment for patients– is a great opportunity for my dear colleagues in this historic Tabriz medical school to get benefit of knowledge and experiences of attending dear scientist and also present their own knowledge.

I welcome to our precious guests from Copenhagen, Odense universities of Denmark and Tehran University, also I cherish the presence of dear prof. Alavi outstanding scientist of neurology and radiology from Pennsylvania University, the one who is one of great honors of Tabriz city, City of wisdom and culture. Regarding to the scientific atmosphere and collaboration possibilities here, I invite all intelligent and scientists to use this opportunity to render great and novel projects and I do embrace any kind of group work to develop science and technology and quality services to our patients.

May it influence our descendant`s judgment about our efficacy and management to acceptable way. It`s necessary to show my gratitude to all associates specially Dr. Hassan Soleimanpour for rending such great event.

Professor. Seyed Kazem Shakouri

Message of dean of Medical faculty, Tabriz University of Medical Sceinces, Tabriz, Iran.

In the name of Allah

Scientific seminars are a place for exchanging valuable scientific achievement, which is the result of tireless and invisible efforts of researchers. Especially this is an opportunity for young researchers to be with pioneers and benchmarking their learning and using from the experience of olders. Undoubtedly international seminar of nervous sciences, psychiatry and radiology is a great scientific event which held by participating of Tabriz, Tehran, Kopenhag, Arhovs and Pensilvani University of Medical Sciences. This is an appropriate opportunity for scholars and scientists to be familiar with the latest scientific findings of nervous, psychiatry and radiology sciences; use them for developing their knowledge and research level.

Multidisciplinary approach is advantage point of this symposium, because it provides an opportunity to combine different specialists in the same place. Certainly, exchanging of data between teachers of various specialty, improve knowledge of them. I hope this seminar by participating of dearest teachers become a step for developing clinical sciences in the country. Here I extend my special thanks for deputy dean of research and technology of faculty of medicine and mayor of Tabriz and have success wishes for educated society participating in this seminar.

In the name of Allah

Dr. Hassan Soleimanpour

Hand writing of dean of research & technology deputy, faculty of medicine, Tabriz University of Medical Sciences, Tabriz, Iran.

Recently, exchanging scientific findings have an effective role in developing and promoting scientific level of students and researchers. Although Rapid development of technology facilitate exchange of information but it seems holding seminars as a useful method for exchanging information has a critical role.

Presence in scientific symposium, converse with expert, achieve new scientific findings before their publishing, participate in research workshop, cultural exchange of conferences are advantage points of scientific seminars. Now International seminar of Neurology, Psychiatry and Radiology was held in faculty of medicine in Tabriz with focus on students work to promote scientific level of students, make them motivate for learning Neurology, Psychiatry and Radiology and grow and prosperity dearest students talent. It is hoped holding such seminars can be effective in promoting international cooperation and cultural interaction. Finally I wish to thank all those who helped us without them; I could not have completed this project:

1.Prof. Somi, Chancellor of Tabriz University of Medical Sciences and Prof. Shakouri, Dean of medical faculty, two research oriented directors who always encourage us.

2. Dr. Najafi and Prof. Dabiri Mayor of Tabriz and head of city council.

3. Dr. Manouchehr Seyedi Vafaee, associate professor of Copenhagen university who cooperate foreign lectures.

4. Dr. Mahmodian, faculty member of medical faculty, Tabriz University of Medical Sciences, Tabriz, Iran, and head of scientific committee of seminar

5. Deputy Finance and Administration of faculty of medicine and staffs of research deputy of faculty of medicine, Tabriz University of Medical Sciences, Tabriz, Iran.

6. Students' Research Committee of the medical faculty. Tabriz University of Medical Sciences, Tabriz, Iran.

7. Andishe pajuhan SinaTeb

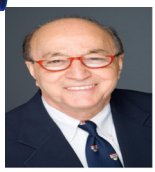
Tuseday 06 October 2015					
		Time	Speaker	Title	Position
Tuseday 06 October 2015	1	08:00-08:10	Quran Recitation		
		08:10-08:20	Dr. Mohammad Hossein Somi	Opening Lecture	*Professor of Internal Medicine, Subspecialist of Gastrointestinal Disease, Chancellor of Tabriz University of Medical Sciences, Tabriz, IRAN*
		08:20-08:30	Dr. Kazem Shakouri	Welcome lecture	*Professor of Physical Medicine and Rehabilitation, Dean of Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN*
		08:30-08:40	Dr. Manouchehr Seyedi Vafaee	Introducing of invited guest speakers	*Associate Professor of Neurosciences, Department of Neuroscience andPharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark*
		08:40-09:20	Prof. Poul Flemming Højlund Carlsen	Where and when to apply PET in atherosclerosis, inflammation, musculoskeletal, neurology and cancer	*Professor of Clinical Physiology, Head and Director, Clinical Physiology and Nuclear Medicine, University of Southern Denmark, Odense, Denmark*
		09:20-09:45	Prof. Albert Gjedde	Imaging consciousness	*Professor of Neurobiology and Pharmacology, Chairman, Department of Neuroscience and Pharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark*
		09:45-10:00	Dr shahram dabiri	Current status and cost effectiveness of PET in oncologic disease	*Professor of Nuclear Medicine, Chief of Nuclear Medicine Division, Department of Radiology, Medical Faculty of Tabriz University of Medical Sciences, Chairman of City Council of Tabriz, IRAN*
		10:00-10:15	Dr. Manouchehr Seyedi Vafaee	Neurodegenerative diseases and the brain blood flow and metabolism	*Associate Professor of Neurosciences, Department of Neuroscience and Pharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark*
		10:15-10:30	Dr. Kazem Shakouri	Role of rTMS in neurorehabilitation	*Professor of Physical Medicine and Rehabilitation, Dean of Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN*
		10:30-10:45	Discussion Panel	Dr. Somi, Dr. Shakouri, Dr. Vafaee, Prof. Carlsen, Prof. Gjedde, Dr. Dabiri	
		10:45-11:00	Break		

Tuseday 06 October 2015	**2**	**11:00-11:30**	**Dr. Mohammad Hossein Daghighi**	**New Imaging in Brain**	***Associate Professor of Radiology, Director of Department of Radiology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		11:30-11:45	**Prof. Mojtaba Zarei**	**Evidence based Neurology**	***Professor of Neurology and Neuroscience, President of National Brain Mapping Centre, National Institute for Medical Research Development, Tehran, IRAN***
		11:45-12:15	**Dr. Hassan Soleimanpour**	**Breaking bad news to patient's relative and Updates regarding family presence during resuscitation (Medical Ethics)**	***Associate Professor of Anesthesiology and Intensive Care, Fellowship of cardio-pulmonary Resuscitation and ntensive care of Traumatic Patients, Deputy Dean in Research and Technology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		12:15 – 12:30	***Pray time***		
		12:30 – 12:45	**Dr. Hassan Soleimanpour**	**Breaking bad news to patient's relative and Updates regarding family presence during resuscitation (Medical Ethics-Cont)**	***Associate Professor of Anesthesiology and Intensive Care, Fellowship of cardio-pulmonary Resuscitation and Intensive care of Traumatic Patients, Deputy Dean in Research and Technology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		12:45-13:00	**Dr. Firooz Salehpoor**	**Synthesis of Zn-Doped manganese ferrite nanoparticles via coprecipitation method for MRI contrast agent**	***Professor of Neurosurgery, Director of Department of Neurosurgery, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		13:00-13:15	**Discussion Panel**	**Prof. Rad, Dr. Daghighi, Dr. Zarei, Dr. Salehpoor, Dr. Soleimanpour**	

Wednesday 07 October 2015					
Date		**Time**	**Speaker**	**Title**	**Position**
Wednesday 07 October 2015 07	**3**	**08:00-08:15**	**Dr. Mehdi Farhoudi**	**New strategy for primary stroke prevention**	***Professor of Neurology, Director of Neurosciences Research Center (NSRC), Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		08:15-08:30	**Dr. Hassan Soleimanpour**	**Alternative and complementary treatment for ischemic stroke**	***Associate Professor of Anesthesiology and Intensive Care, Fellowship of cardiopulmonary Resuscitation and Intensive care of Traumatic Patients, Deputy Dean in Research and Technology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		08:30-08:45	**Dr. Ali Meshkini**	**Advances Fields of Stereotactic & Functional Neurosurgery**	***Professor of Neurosurgery, Department of Neurosurgery, Deputy in Academic Staff, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		08:45-09:00	**Dr. Mohammad Mohammadzadeh**	**Novel Technics of Radiation Therapy in Brain Tumors**	***Associate Professor of Radiation Oncology, Division of Radiotherapy, Department of Radiology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		09:00-09:45	**Prof. Abbas Alavi**	**Emerging role of PET in day to day practice of medicine**	***Professor of Radiology, Neurology and Psychiatry, Hospital of the University of Pennsylvania, Associate Director, Center for the Study of Aging, Perelman School of Medicine, MD, MD (Hon), PhD (Hon), DSc (Hon)***
		09:45-10:00	**Dr. Hassan Soleimanpour**	**Role of ultrasonography in determination of intracranial pressure in traumatic patients**	***Associate Professor of Anesthesiology and Intensive Care, Fellowship of cardiopulmonary Resuscitation and Intensive care of Traumatic Patients, Deputy Dean in Research and Technology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		10:00-10:15	**Dr. Babak Mahmoudian**	**New advances in Brain SPECT**	***Assistant Professor of Nuclear Medicine, Division of Nuclear Medicine, Department of Radiology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		10:15-10:30	**Discussion Panel**	**Prof Alavi, Dr. Meshkini, Dr. Farhoudi, Dr. Farshad Seyednejad, Dr. Esmaeil Gharepapagh, Dr. Soleimanpour**	

Wednesday 07 October 2015	4	**10:30-10:45**	**Break**		
		10:45-11:15	**Prof. Albert Gjedde**	**The neurobiology of addiction**	***Professor of Neurobiology and Pharmacology, Chairman, Department of Neuroscience and Pharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark***
		11:15-11:45	**Dr. Bjørn H. Ebdrup**	**Schizophrenia as a measurable diagnosis: Towards personalized treatment in psychiatry**	***MD PhD, Centre for Neuropsychiatric Schizophrenia Research, CNSR & Centre for Clinical Intervention and Neuropsychiatric Schizophrenia Research, CINS, Copenhagen University Hospital, Mental Health Centre Glostrup, Denmark***
		11:45-12:00	**Dr. Ayyoub Malek**	**Clinical applications of neuro-imaging methods in pediatric psychiatry**	***Professor of Psychiatry, Director of Department of Psychiatry, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		12:00-12:15	**Dr. Manouchehr Seyedi Vafaee**	**Neurobiology of Attention Deficit and Hyperactivity Disorders ((ADHD**	***Associate Professor of Neurosciences, Department of Neuroscience and Pharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark***
		12:15 – 12:30	***Pray time***		
		12:30-12:45	**Dr. Javad Alaghband Rad**	**Imaging of ADHD in Children**	***Associate Professor of Psychiatry, Tehran University of Medical Sciences, The first President and founding member, Iranian National Board of Child and Adolescent Psychiatry Subspecialty, Ministry of Health and Medical Education***
		12:45-13:15	**Prof. Nosratollah Pourafkari**	**The future of psychiatry**	***Professor of Psychiatry, Department of Psychiatry, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN***
		13:15-13:30	**Dr. Sima Salari Rad**	**The importance of imaging biomarkers of subclinical cerebrovascular and Alzheimer's pathologies in late life cognitive decline**	***Assistant professor of Psychiatry and Neuroscience, Department of Psychiatry, Tabriz University of Medical Sciences, Tabriz, Iran. Honorary Research Fellow in Aberdeen University, UK***
		13:30-13:45	**Discussion Panel**	**Prof. Gjedde, Prof. Pourafkari, Dr. Malek, Dr. Vafaei, Dr. Alageband Rad**	
		13:45	**Closing lecture**	**Dr. Soleimanpour, Dr. Shakouri**	

Biography



Prof. Abass Alavi

Professor Abass Alavi is a well known figure and a recognized pioneer in nuclear medicine having a CV comprising over 660 peer-reviewed publications. He is recipient of many awards and distinctions, among which are the highest distinction in nuclear medicine, the Georg Charles de Hevesy Nuclear Pioneer Award given by the Society of Nuclear Medicine, the Cassen Prize of the Society of Nuclear Medicine, and honorary degrees from the University of Bologna, the University of the Sciences in Philadelphia and the University of Shiraz in Iran. .

Abass was born 1938 in Tabriz, Iran. He was the second of three children of Mohsen Alavi, who had a 6th grade education. His father's family was originally from Marash in Syria, many generations ago they went to Iran, were in religious positions, in various cities. The grandfather was a hakim, a traditional herbal doctor. His father grew up in Marand, where he started to work in textile business for Mr Nilchi, Abass' maternal grandfather..

Prof. Alavi received his medical degree from the University of Tehran in 1964. At that time, the government required all new medical graduates to serve in the military and in a public health service. The graduates spent a few months in basic training and then were assigned to villages where medical need was great. Abass served in a small village in the mountains north of Tehran. He went to the US to continue his training in 1966, and worked as an intern and resident in Internal Medicine in several hospitals before deciding on Nuclear Medicine as a specialty.

When he began as a research fellow at the University of Pennsylvania in 1971 under David Kuhl, tomographic imaging was very new, and Abass had the opportunity to be in the front line, applying the many novel methodologies including the FDG technique to the human brain, coordinating the research with the chemistry group at Brookhaven National Laboratory. Abass along with Kuhl and Reivich were the first to introduce the concept of labeling deoxyglucose with Fluorine 18. Abass, in fact, was the first to administer FDG to a human subject it 1976, and to acquire tomographic images of the brain and planar scans of the whole body.

He was appointed to Penn’s faculty in 1974, and currently holds appointments as Professor and Director of Research Education, Department of Radiology.

He was also Medical Director of the Positron Emission Tomography (PET) Center .

He is recognized internationally as an innovator in this field.. He has made numerous contributions to the field of modern medical imaging, including the introduction of F-18Fluorodeoxyglucose (FDG)-positron emission tomography (PET) with his colleagues.

He and his colleagues have conducted pioneering research in modern imaging techniques including PET, SPECT, CT and MRI . He is an expert in modern imaging techniques and the clinical applications of PET imaging for the detection of cancer and other disorders including dementia, seizures, cardiovascular disease, and infection. He served as a member and chairman of scientific study sections at the NIH and American Cancer Society. He has published numerous scientific papers, and is the most cited faculty member at Penn.

He is a devoted educator, and his former students and research fellows now occupy leading positions in Nuclear Medicine worldwide, including Italy, Brazil, Canada, Germany, Belgium Turkey, India and China. He has been a long-time supporter of educational and research opportunities for students in nuclear medicine. While his name is associated with the Alavi-Mandell Awards, which recognize trainees and young scientists who publish articles as senior authors in the Journal of Nuclear Medicine, his generosity also supports the Pilot Research Grants and the Bradley-Alavi Student Fellowship Awards funded by the Education and Research Foundation of the Society of Nuclear Medicine.

Dr. Bjørn H. Ebdrup

Bjørn H. Ebdrup (BE) MD PhD,

Along with his full-time clinical position, BE holds a senior researcher grant at the Center for Neuropsychiatric Schizophrenia Research (CNSR) & Center for Clinical Intervention and Neuropsychiatric Schizophrenia Research (CINS) at Psychiatric Center Glostrup (PCG), University Hospital Glostrup.

BE was born in 1973 in Aalborg, Denmark and graduated from medical school at the University of Copenhagen in 2002. BE has completed his internship in digestive surgery (Hvidovre Hospital), internal medicine (Frederiksberg Hospital), and in general practice (Copenhagen). Also, BE has worked in neurological departments (Gentofte Hospital and Rigshospitalet).

BE is married to Rikke Norling, MD PhD in diagnostic radiology, and they have three children (10 years, 7 years, and 3 months).

As a pregraduate, BE obtained a scholarship and a Denmark-America Foundation grant enabling epidemiological alcohol research combined with clinical psychiatry at Kansas University Medical Center (KUMC), Kansas City, USA (5 months).

In 2010 BE obtained his PhD degree at the University of Copenhagen on the thesis 'Structural Brain Changes in Antipsychotic-Naïve First-Episode Schizophrenia Patients Before and After Six Months of Antipsychotic Monotherapy'.

Still engaged at CNSR & CINS, BE was granted a senior researcher grant from the Capital Region of Copenhagen in 2011.

BE was appointed associate professor at the University of Copenhagen, before starting his residency in clinical psychiatry, Psychiatric Center Glostrup in 2013.

The core of CNSR & CINS, which is headed by professor Birte Glenthøj MD DMSc, is recruitment and very extensive neurobiological examinations of never-medicated ('antipsychotic-naïve'), first episode schizophrenia patients. The protocols comprise neuropsychological, electrophysiological, structural and functional magnetic resonance imaging (MRI), as well as neurochemical examinations with PET or SPECT imaging. All cohorts are followed longitudinally, while undergoing a period with antipsychotic monotherapy before re-examinations.

BE is supervising several current PhD studies at CNSR & CINS. Moreover, BE is co-leading the efforts at CNSR & CINS in modelling subgroups of these well-characterized antipsychotic-naïve first-episode patients. In close collaboration with professor Lars Kai Hansen, Head of Section Cognitive Systems, Department of Applied Mathematics and Computer Science, DTU Compute at the technical University of Copenhagen, advanced multivariate machine learning approaches are applied on multimodal neurobiological data aiming at identifying biological valid and predictive subgroups of schizophrenia.

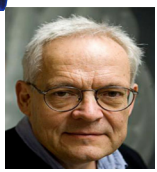
Sprouting from his interest in clinical psychopharmacology, BE has initiated current investigations on the common, but clinically very problematic metabolic side effects of antipsychotics. BE is sponsor and principal investigator for a PhD study: "Treatment of antipsychotic-associated obesity with a GLP1- receptor agonist--protocol for an investigator-initiated prospective, randomized, placebo-controlled, double-blinded intervention study: the TAO study protocol". A -3year PhD grant has been granted from the University of Copenhagen for this first clinical study examine potential effects of a GLP1-analogue on antipsychotic-associated obesity.

Since 2010, BE has published 24 PubMed.com indexed papers (mean impact factor >5). Moreover, BE has authored book chapters and webpages about schizophrenia, written regional clinical guidelines regarding e.g. acute agitation, clozapine treatment, and clinical and para-clinical work-up of first episode psychosis (Capital Region of Copenhagen).

BE is treasurer for the Danish Society for Biological Psychiatry, and is a member of various scientific societies, including the World Federation of Societies of Biological Psychiatry (WFSBP), Schizophrenia International Research Society (SIRS), the Scandinavian College of Neuropsychophamacology (SCNP), and Danish Society for Academic Psychiatry.

BE has served as part of an international advisory board evaluating a major psychiatric research grant in Helse Vest, Bergen, Norway, and BE is ad hoc reviewer for several well-esteemed international journals in the fields of neuroscience, neuroimaging, clinical psychiatry and metabolism.

BE is devoted to disseminating complex neuropsychiatric data in a clinically relevant context, and BE has extensive teaching experience at multiple levels: from talks at international scientific meetings; through clinical PhD courses in ratings of psychopathology, diagnostics and neuropsychiatry, and lectures for medical students; to seminars for layman, patients and patient organizations.



Prof. Albert Gjedde

Albert Gjedde is a Danish-Canadian neuroscientist. He is Professor of Neurobiology and Pharmacology at the Faculty of Health and Medical Sciences, Department of Neuroscience and Pharmacology, at the University of Copenhagen. He is currently also Adjunct Professor of Neurology and Neurosurgery in the Department of Neurology, Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, and Adjunct Professor of Radiology and Radiological Science in the Division of Nuclear Medicine, Department of Radiology and Radiological Science, Johns Hopkins University, Baltimore, MD, USA

In Denmark, Albert Gjedde served on the Medical Research Council (FSS) and chaired the Research Advisory Committee of the Royal Library. He also served as deputy on the official Danish Committee on Science Misconduct (UVVU). In the Nordic countries, he served on the coordinating committee of Nordic medical research councils (NOS-M). In Europe, he served on the standing committee of the European Medical Research Councils (EMRC) of the ESF and currently serves on the Program Committee of the Health or Social Challenges theme 1 (SC1) of the Horizon2020 program of the European Commission after service on the erstwhile precursor committee of the Framework Program, as well as on a panel of the European Research Council. He also serves on the Executive Committee of the European Dana Alliance for the Brain (EDAB) which is affiliated with the Dana Foundation. Albert Gjedde is Fellow of the American Association for the Advancement of Science, The Royal Society of Canada, and the American College of Neuropsycho-pharmacology, and Member of the Academy of Europe and the Norwegian Academy of Science and Letters.

Born in the Copenhagen suburb of Gentofte in 1946, Albert Gjedde spent time as an undergraduate student in Berkeley, California, USA (,65–1964 1970 ,1968), Stellenbosch, Cape Province, South Africa (1967), and Lexington, Kentucky, USA (1969). Albert Gjedde obtained his M.D. and D.Sc. degrees from Copenhagen University in 1973 and 1983, respectively. He did postdoctoral and internship work in the Neurology Department of the New York Hospital-Cornell Medical Center 76-1973, and he held assistant and associate professorships in Medical Physiology at the University of Copenhagen -1976 1994.

As a junior investigator, Albert Gjedde worked as a visiting scientist at universities and research institutions in Lund, Sweden; Cologne, Leipzig and Dresden, Germany, Paris, France, Szeged, Hungary, and Baltimore, MD, USA. In 1986, he joined the McConnell Brain Imaging Center at McGill University in Montreal as Associate and Full Professor from 1986 to 1994 and as Director of the McConnell Brain Imaging Center from 1989 to 1994. In Denmark, Albert Gjedde founded and headed the PET Center at Aarhus University Hospitals in Denmark during the years from 1994 to 2008, and in Aarhus during this period he also founded the Center of Functionally Integrative Neuroscience (CFIN) of the Danish National Science Foundation in 2001 and the Danish Neuroscience Center in 2008, both at Aarhus University. Albert Gjedde joined the University of Copenhagen as Head of Department in 2008.

Albert Gjedde's research focuses on the relations between neuroplasticity and neurotransmission that can be revealed by mapping radioligand binding and the neuroplastic changes of brain functions. The investigations explore the relation between energy metabolism and neurotransmission by recording the changes of energy metabolism and consciousness under pharmacological and other manipulations. He uses PET to understand the synthesis of radioligand and tracer molecules that match the neurotransmitter molecules and the behavior of these transmitters under different functional conditions of the brain, normal as well as pathological, and the spatial and temporal relations among changes of cerebral blood flow, which is commonly used as a measure of brain work, and the cerebral oxygen consumption rate, which is the precise measure of this work. Albert Gjedde's collaborations focus on experiments with volunteer subjects and patients that explore the lesions and degeneration of brain tissue in disorders such as epilepsy, ludomania, Parkinson's disease, stroke, depression, and somatizing disorders, as well as disorders related to addiction. The experiments test the hypotheses seeking to explain the restructuring of neuronal networks that follows when sensory activity is processed by healthy subjects or by volunteers suffering from inborn or acquired lesions. In 1977, with Clifford Patlak, Albert Gjedde described the Gjedde-Patlak plot, also known as Multitime Graphical Analysis (MTGA), (Gjedde 1982 ,1981, Patlak et al. 1983). The MTGA linearizes irreversible brain uptake of tracers in a manner that enables regression estimates to be made of uptake rates. Albert Gjedde's publications number more than 650, more than 350 of those listed in PubMed, with more than 20,000 citations and a Hirsch Index of 73-65, depending on source.

Prof. Ayyoub Malek

Prof. Ayyoub Malek was born in the city of Tabriz, Iran, on February 8, 1965. He is married and has two children. He received his M.D degree from Tabriz University of Medical Sciences in 1991. And at the same year he began to study specialty of psychiatry at Tabriz University of Medical Sciences and received Board Certificate in 1994.

He was appointed as the director of students and cultural affairs at Ardebil University of Medical Sciences when he was spending his commitments to health system as a faculty member for one year duration.

From November 1995 he continued to spend his commitments to health system as an assistant professor of psychiatry at Tabriz University of Medical Sciences. He was Educational vice dean of Faculty of Medicine from 1996 to 1998.

He promoted to associate professor of psychiatry in October 2001 and enrolled permanently at Tabriz University of Medical Sciences.

He successfully passed fellowship course of child psychiatry in department of child and adolescent psychiatry at Glasgow University in UK from May 2002 to October 2002.

Then following a two-year training course at Shahid Beheshti University of Medical Sciences in Tehran, Iran, he sub- specialized in child and adolescent psychiatry and continued his activity exclusively in the field of child and adolescent psychiatry at Tabriz University of Medical Sciences in 2004.

For the first time in northwest of Iran, he launched child and adolescent psychiatric ward. Now he is head of the child and adolescent psychiatric ward. He was selected as director of the department of psychiatry since February of 2011.

Because of his endeavor, two-year subspecialty training course of child and adolescent psychiatry was launched at department of psychiatry of Tabriz University of Medical Sciences, which was approved by Iranian Ministry of Health, Treatment and Medical Education.

He promoted to Full professor of Psychiatry in 2012. Dr. Malek has been a member of different centers, councils and commissions at Tabriz University of Medical Sciences and also was a member of the National Board of Medical Students' Exams from 2002 to 2007. At the moment, he is a member of the national board of child and adolescent psychiatry since 2007, a part time member of Research Center of Psychiatry and Behavioral Sciences, member of compilation and translation council of the university, chairman of the English language journal of the faculty of medicine, i.e. Journal of Analytical Research in Clinical Medicine (JARCM), and member of audit board (Heiate-momayyezeh) at Tabriz University of Medical Sciences.

Prof. Malek has participated in numerous national and international congresses and conferences, has published 4 books including 3 compilations and 1 translation and more than 40 original articles in prestigious English language journals and some internal Persian language journals. He is one of the authors of Iranian comprehensive textbook of psychiatry. He has been supervisor and advisor of more than 30 theses. His research interests include: child and adolescent psychiatric disorders (especially ADHD, Autism Spectrum disorders, and psychometric studies of research measures in child psychiatry), Islamic psychology, monthly biological rhythms, and qualitative research methods.

Dr. Babak Mahmoudian

Babak Mahmoudian, MD, FEBNM, Assistant Professor of Nuclear Medicine, Department of Radiology, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, IRAN.

He completed medical school in Tabriz University of Medical Sciences at September 1995, residency of nuclear medicine in University of Hacettepe at Ankara/TURKEY on 2003 and also achieved Iranian board of nuclear medicine from Tehran University of Medical Sciences on Sept 2005. At Oct 2006 he acquired certificate of FEBNM from European Union of Medical Specialists. He is establisher and technical responsible of Tabriz Gamma Scan Nuclear Medicine Center from 2006 till now. From June 2012 he was employed as a scientific board member in Tabriz University of Medical Sciences and occupied in division of nuclear medicine of Imam Reza hospital of this university. He is author and co-author of about 20 articles in numerus peer-reviewed medical journals and 25 abstracts and oral presentations in national and international congresses. His interest is in nuclear oncology and nuclear cardiology fields.

Prof. Shahram Dabiri

Shahram Dabiri Oskuei was born in Tehran at 1960. He achieved MD diploma from Tabriz university of medical sciences on 1986 and Iranian Board of Specialty in Nuclear Medicine from university of Tehran on 1989. He is academic staff of department of radiology, radiotherapy and nuclear medicine since 1989. He is professor of nuclear medicine. He finished complementary period in specialty of Nuclear Medicine in Kazanawa University of Japan in 1989 and radiation protection in Moscow in 1990 on behalf of the International Atomic Energy Agency. Current positions of SD are chair of nuclear medicine division of Imam Reza Hospital of Tabriz University of Medical Sciences, establisher of Dr. Dabiri nuclear medicine center since 1990, chief of Islamic council of city of Tabriz, executive manager of international hospital of Tabriz, member of board of Tabriz medical council, founder of Dr. Dabiri sport and cultural club, chairman of board of tennis in eastern Azarbaijan province. He published numerous original papers and abstracts in national and international scientific journals and also attended to multiple congress and meetings as speaker and scientific board. SD has special interest in nuclear cardiology and oncology.

Prof. Mehdi Farhoudi

**Full name: MEHDI FARHOUDI
**Date and place of birth: 22th November 1968, Maragheh
** MD: Tabriz University of Medical Sciences (TUOMS), IRAN, 1994– 1987.
** Board-certified in Neurology, Imam Medical Center, TUOMS, Tabriz, IRAN, 1998– 1994.
** A complementary course on Doppler study of cerebral arteries & Carotid Duplex, Al- Zahra Medical Center, Isfahan University of Medical Sciences, Isfahan, IRAN, 2001.
** Stroke fellowship, Cerrahpasa Medical Faculty, Istanbul University, Istanbul, TURKEY, 2011.
** I have worked in neurology department, faculty of medicine, Tabriz University of Medical Sciences (TUOMS), as assistant professor (2005-2001), associate professor
(2012-2005), and now as professor of neurology since November 2012.
** I have been interested in research fields since I started to work at the neurology department so I have had some positions in that field and now I have been the director of Neurosciences Research Center (NSRC) since 2007. Also I am Funding Chief Editor of Experimental and Clinical Neurosciences (JECNS) Journal.
**My special interest has been stroke since the beginning of my academic position and now I have been the head of stroke team since 2010 and Manager of Doppler Unit of Neurology Department since 2001. I was elected in online voting of World Stroke Organization (WSO) Board of Directors, as individual member of WSO board of directors, presenting Sub-Sahara Africa, Middle East/ East Mediterranean, 2018 – 2014.

Prof. Ali Meshkini

My name is Ali Meshkini. I am a professor of neurosurgery in Tabriz University of medical Sciences. I was born in Sharafkhaneh port, North West Iran in 1966. I enrolled in University of Tabriz in 1984and graduated in 1991 as a general practitioner. In 1996 I acquired specialty degree in neurosurgery. After passing my legal obligations in Yasouj University of medical Sciences and Tabriz Shahid Mahallati Hospital I was employed as a scientific board member (Assistant professor) in Tabriz University of Medical Sciences (TUOMS) in 1998. Then in year 2005, I was promoted to have associate professor degree in my field. During 2007 to 2009 I was successful tom pass stereotaxic fellowship course in Tehran shahid Beheshti University, London King's College Hospital and Hanover MHH. In year 2013 was promoted to have full-professor degree. During recent years I also obtained MS degree in medical education from Tehran Shahid Beheshti University. Up to now I have been written more than 14 literary, religious, and story books. Furthermore, I also published over 60 articles in local or international journals. More than 100 abstracts are published as outputs of national and international congresses. My total citations in Google scholar citing database are reported to be over 115 while my h-index is 6.

Regarding administrative occupations, I was deputy for education in Tabriz Imam- Khomeini Hospital, deputies for research and scientific board staffs affairs in Tabriz faculty of medicine, deputies for research and education in neurosurgery department and C.E.O of specialty and subspecialty clinics of TUOMS.

Throughout 18 years of constant work, I have been carried out more than 4000 surgeries in terms of various neurosurgery fields (brain and vertebral column damages, brain /spine/vertebral column tumors, congenital brain and VC abnormalities and so on. looking from the perspective of my sub- specialty field of study I have done over 360 stereotaxic surgeries during my fellowship time and more than 140 surgeries in Tabriz Shohada hospital later on.

Neurosurgery in general and stereotaxic surgeries in special terms experience more safety and developments by increasing advances in sciences and technologies in terms of medical tools, diagnostic apparatus and also operation rooms. This issue requires great efforts on behalf of authorities to provide facilities and our hard work to acquire and develop our practical and theoretical standpoints to serve patients as much as we can.

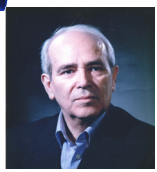
Dr. Mohammad Mohammadzadeh

I am Mohammad Mohammadzadeh. I was born in 1966 in Tabriz.I educated on the level of elementary, junior, high school, and general physician in Tabriz. Then, I educated in the Isfahan University of Medical Sciences as a Radiation-Oncologist after acquasition of second rank in the 50th national board exam in 2003.

Since 2003,I am an academic member of Tabriz University of Medical Science as an associate professor. I published several articles, and books and attended on several international and domestic congress.

Prof. Poul F. Høilund-Carlsen

PFHC is a Medical Doctor (MD) and Doctor of Medical Sciences (DMSc) from Copenhagen University, Denmark, and a board specialist in Clinical Physiology and Nuclear Medicine. He is a Professor and Head of Research in Clinical Physiology and Nuclear Medicine at the University of Southern Denmark, Odense, and the Department of Nuclear Medicine, Odense University Hospital. As head of department, he renewed clinical physiology and nuclear medicine in what is now Denmark's largest hospital, establishing a Dept. of Nuclear Medicine with new buildings, new equipment, new methods, and since 2006 a new PET-center with cyclotron, radiochemical laboratories, and soon 5 PET/CT scanners, cellular and research facilities. His scientific contributions comprise 366 publications including doctoral thesis and 214 peer review articles; 434 oral/poster presentations, of which 116 invited. He is the recipient of grants/funding for own and others' projects worth a total of > 11 million Euros and supervisor of 18 defended and 13 ongoing Doctoral or PhD theses. He is a member of multiple review boards and editorial board member/guest editor on several publications.



Prof. Nosratollah Pourafkari

Prof. Nosratollah Pourafkari was born on 28th of April 1942 in Tabriz. He accomplished primary and high school education in Tabriz. He entered medical school in 1960. He graduated in 1967. He attended Psychiatric residency program in 1973 in The United States and graduated as a Psychiatrist in 1977. When he came back to Iran and began his work as assistant professor of psychiatry in Tabriz University. In 1991 he became associated professor and full professor in 1996. He has been the director of department of psychiatry Tabriz University of medical science since 1997. In his 30 years of work in medical school, he has published 27 articles in Iranian or international medical journals and has been director or associate of 12 research programs. He has published 70 books, some of them has been reprinted several times. His Synopsis of psychiatry was chosen as “awarded academic book “in 1988. Prof. Pourafkari was nominated as laureate professor in 1993 and awarded researcher of faculty of medicine in 2001 ,1998 and 2004, and awarded researcher of state in 2004. He was chosen as international professor of the year in 2006 by Institute of IBC (Cambridge _ England). In 2015 prof. Pourafkari received a Certificate of Appreciation from UNESCO chair in health education in recognition of his outstanding scientific effort in health promotion. Prof. Pourafkari was retired in September 2010. Dr. Pourafkari married in 1979 and has two daughters. One is a cardiologist and the other is an architect.

Dr. Sima Salarirad

Dr. Sima Salarirad graduated in General Medicine in 1993 and got her Special Board of Psychiatry in 1997 both from Mashed University of Medical Sciences in 1997.

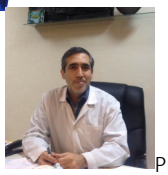
She joined the Department of Radiology, University of Aberdeen, in the UK as a Research Assistant in 2005 and graduated PhD in Neuroimaging in 2011. Her study was a part of a longitudinal study of cognitive ageing in the well – characterized Aberdeen 1921 and 1936 Birth Cohorts. She has also developed a good understanding of Old age Psychiatry in the UK during a period of Fellowship.

She has held an honorary appointment as Research Fellow in Clinical Department of Radiology at the University of Aberdeen from 2011 and she works as an Assistant professor in Department of Psychiatry in Tabriz University of Medical Sciences.

She is interested in Geriatric psychiatry and keen to improve her experience in the field of Neuroimaging research and its application to studies of brain aging.

Prof. Firooz Salehpour

Professor of Neurosurgery of TABRIZ Medical University , IRAN .
Born in Tabriz (1955) and graduated from this university , he obtained pediatric Neurosurgery training under the mentorship of professor James Goodrich (New-York USA1993-) , were in a cranial base surgery for 1 year (-1997Tehran) , had short term courses in Germany , Switzerland , France for (Neuroendoscopy , Spine , Laser, CUSA)
He has 56 articles , and 5 book , launching of micro neurosurgery in or and LAB (1998-1997).
Very active in fields of neurosurgery (Aneurysm , Tumors , hypophysis , spine , pediatric and craniofacial malformations).
Active member of Iranian neurosurgery society.
Director of ABRIZ and Uromia Neurosurgery Departments.
Member of board exams.
He was manager of education of Tabriz medical university (2000-1996) , and president Kurdistan medical university 2 times (2000) , (1990).



Prof. Seyed Kazem Shakouri

Prof.. Seyed Kazem Shakouri is a professor of Physical Medicine & Rehabilitation at the Tabriz University of Medical Sciences, Tabriz, Iran, where he is the head of medical faculty. He is also vice chanceller of physical medicine and rehabilitation national board.

Prof. Shakouri currently serves on several review boards and committees. His Research interests include Musculoskeletal and Neuro- Rehabilitation, Sport Medicine, Electro-diagnostic Medicine, and he has several publications related to these areas. Furthermore, He had Certifications for course, workshop and fellowship attendance is as followings:

1. Musculoskeletal Ultrasound Clinical Visiting Fellowship , Thomas Jefferson University Hospital , Philadelphia, PA USA 2013
2. Clinical observation program. Mayo clinic Rochester MN USA March-Feb 2010
3. Electro-neurophysiologic course. Wadham college ,Oxford, England March 2005
4. Academic Skills Course: educational management and planning, educational counseling, teaching methodology, student assessment, program evaluation, research methodology and computer assisted teaching. Education Development Center, Tabriz University of Medical Science ,April –Sep 2009.
5. Acupuncture course. Seoul ,south Korea April 2007

He has been attending 30 international and domestic seminars and workshops during which he has presented papers. He also severs as Chief Manager of Physical Medicine and Rehabilitation Research center and Editorial board of cardiovascular journal. Finally, his past Academic Administrative Appointments is as followings:

1998-1997 Chief resident, Physical Medicine and Rehabilitation Tabriz University of Medical Sciences Tabriz, Iran
2002-2001 Vice chancellor of Rehabilitation Faculty
2004-2002 Vice chancellor of Tabriz University of medical science
2004- 2013 Head of Physical Medicine and Rehabilitation Department Tabriz University of Medical Sciences Tabriz, Iran
2013-2012Vice chancellor of Tabriz University of medical science

Dr. Hassan Soleimanpour

Dr. Hassan Soleimanpour (First top researcher of the Medical Faculty, Tabriz University of Medical Sciences in 2013-2014), is Associate Professor of Anesthesiology and Critical Care and also Deputy Dean of Research and technology of the Medical Faculty, Tabriz University of Medical Sciences, Tabriz, Iran (-2014Ongoing). Following his medical degree from Tabriz University of Medical Sciences, Tabriz, Iran (1998), he completed an Anesthesiology residency at the Urmia University of Medical Sciences, Urmia, Iran (2005), and obtained a Fellowship in Trauma Critical Care and CPR from Vienna University of Medical Sciences, Vienna, Austria, (2011). His Research interests include Airway management, Acute pain management, Hypothermia After Cardiac Arrest (HACA), CPCR and Clinical science education. He has published 3 academic books regarding CPCR and Airway management and 61 articles in renowned medical journals, presented his studies at multiple international meetings and organized national meetings. He has H-index of 11-8 (depending on source). He is founder of 5 E-learning Program (Hypothermia After Cardiac Arrest (HACA), ACLS Drugs, Airway management, Basic Life Suppourt and Procedural sedation, CME, Tabriz University of Medical Sciences, Tabriz, Iran). Furthermore, he is a member of World Stroke Organization (WSO: -2014Ongoing) and ATLS Instructor of American College of Surgeons (2013 – ongoing), too. Finally, he serves also as Editorial Board Member ((Emergency medicine Journal (EGM: 2012 – ongoing) and Anesthesiology and Pain Medicine journal (2013– ongoing)) and reviewer in several prestigious journals.

Dr. Manouchehr Seyedi Vafaee

Manouchehr Seyedi Vafaee (M.Sc., Ph.D., cand. Dr.Med.Sci.) Associate professor of department of Neuroscience and Pharmacology of Faculty of Medicine of University of Copenhagen and a guest professor of Shahid Beheshti Univeristy of Medical Sciences as well as an honorary professor of Tabriz University of Medical Sciences. Born and raised in Tabriz, Iran, he moved to Tehran and graduated from Shahid Beheshti University with a degree in Nuclear Physics. He then moved to Canada and obtained an M.Sc. training in Nuclear Medicine from McGill University of Canada and worked under the supervision of pioneers of CT, MRI and PET such as Professors Chris Thompson, Ernst Meyer, and Lucas Yamamoto (pioneers of PET imaging in Canada), and Terry Peters (co-inventor of CT scan). He obtained a Ph.D. training in Neurological Sciences also from McGill University (Montreal Neurological Institute) where he worked under the mentorship of Professor Albert Gjedde a world-renowned neuroscientist with several discoveries in the field of neuroreceptor mapping. He has also done a brief internship at the Emory University of Atlanta in USA under the supervision of Professor Flint Beal, a pioneer of neurodegenerative diseases research and currently at the Harvard medical school. He has published more than 60 papers of which over 40 are peer-reviewed and has H-index of -18 20 (depending on source). He is an active member of several international scientific organizations such as International Society of Cerebral Blood Flow and Metabolism, International Organization of Human Brain Mapping, Society of Nuclear Medicine and Society for Neuroscience. He served and currently serves on editorial boards of several National and International Medical Journals. His main research interest is the study of the relationship between cerebral blood flow and cerebral metabolism in neurological and psychiatric disorders by employing several imaging modalities. As an Iranian-Canadian neuroscientist working abroad and with the aim of promoting the level of medical sciences and assisting the Iranian students and academia, he is continuously trying to create links between the Iranian universities and universities abroad. In this line, he has linked Tehran University of Medical Sciences with the Montreal Neurological Institute at the McGill University in Canada and has helped to sign collaboration agreements between the Neuroscience Research Center of Tabriz University of Medical Sciences and University of Copenhagen, the Department of Radiology of Tabriz University of Medical Sciences and the Department of radiology of Aarhus University in Denmark as well as National Brain Mapping Center of Shahid Beheshti University of Medical Sciences and University of Copenhagen.

Abstracts

Emerging Role of PET in Day to Day Practice of Medicine Around the World

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The past 4 decades have witnessed a true revolution in medical imaging. The introduction of single photon emission computed tomography (SPECT), x-ray computed tomography (CT), positron emission tomography (PET), and magnetic resonance imaging (MRI) have brought about a truly unprecedented era in medicine. While structural imaging with either CT or MRI have been of great value for certain specialties in medicine such as surgery and radiation therapy, the impact of molecular imaging with either SPECT or PET has been of much wider in scope. By now, it has become evident that most diseases and disorders are initiated at the molecular level and may or may not eventually translate to structural abnormalities. Thus, relying on structural imaging alone may prevent early detection, and therefore, timely interventions for many serious disorders such as cancer and cardiovascular diseases. When the disease is detected at the structural level, it is usually irreversible and therefore cannot be treated effectively. Also, for most serious human diseases and disorders, physicians employ treatment modalities that are effective only in a segment of the affected patients. This would mean that frequently, the course of treatment has to be altered because of failure of the initial therapeutic intervention. Again, structural imaging techniques are quite insensitive for demonstrating the efficacy of most drugs soon after they are initiated, and as such, are inadequate for guiding the clinicians about their decision and in adopting alternate therapies. In contrast, molecular imaging techniques allow detecting early failures and as such shifting to other drugs. Finally, structural imaging techniques are non-specific and cannot differentiate between active and inactive processes. Because of this shortcoming, many patients are subjected to invasive and costly procedures based on non-specific information provided by modalities such as CT and MRI.

Molecular imaging in general and PET in particular, have overcome many of these deficiencies and truly has had a revolutionary impact in patient care over the past 3 decades. In addition, this type of approach has allowed exploring new domains of research which has resulted in better understanding of many disease processes at the molecular level which has substantially improved our knowledgebase in many disciplines in medicine and biology. The outstanding spatial and contrast resolution of PET compared to SPECT is a major advantage for this modality and may eventually eliminate the need for using single gamma emitting compounds for either research or clinical purposes. Finally, the ability to characterize the disease activity quantitatively is unique to PET and cannot be matched by any other modality.

The introductions of PET-CT over the past decade and PET-MRI in recent years have allowed combining capabilities that are provided by these two powerful imaging approaches for better detection and characterization of many serious and common maladies of mankind. Currently, PET-CT is routinely employed to manage a multitude of diseases including cancer and cardiovascular, neurological and infectious/inflammatory disorders around the globe. This technology is very cost effective and has resulted in reducing expenses that associated with un-necessary surgeries and hospitalizations.

Novel molecular imaging techniques with PET along detailed structural assessment with CT/MRI have brought about the greatest revolution in the history of medicine and will have a unprecedented impact as we enter into the 21st century practice of medicine.

Schizophrenia as a measurable diagnosis: towards personalized treatment in psychiatry

-Lessons learned from longitudinal studies of antipsychotic-naïve first-episode schizophrenia patients

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Centre for Neuropsychiatric Schizophrenia Research, CNSR &
Centre for Clinical Intervention and Neuropsychiatric Schizophrenia Research, CINS
Copenhagen University Hospital
Mental Health Centre Glostrup, Denmark

Schizophrenia is a severe and heterogeneous brain disease, which is associated with progressive and widespread structural and functional brain changes. Although great advances in the understanding of the neurobiology of schizophrenia have been achieved, the translation of these endeavors into clinical practice benefitting the individual patient, has been negligible.
The inclusion of medicated patient populations pose a serious confound to most studies, because antipsychotics widely affect neurochemistry, brain structure and function, which were the subject of investigation. Moreover, many studies are cross-sectional, and focusing on a single modality (e.g. gray matter volume, white matter integrity, psychophysiology, or cognition). While the single-modality approach is sensitive to cross-sectional differences on a group-level, correlations to long-term outcome and associations to other modalities, cannot be systematically assessed.
Since schizophrenia is a very complex disorder, which from a biological point of view, comprise several subgroups with different pathogenetic and pathophysiological disease mechanisms, current approaches have failed to translate into clinical benefit for the individual patient. In spite of the complex disease mechanisms, dopamine antagonists still constitute the cornerstone in the treatment of schizophrenia patients. A key question in schizophrenia research today is if antipsychotics prevent, or in fact aggravate, the structural brain changes and cognitive dysfunction, which are associated with illness progression.

Longitudinal studies of initially antipsychotic-naïve schizophrenia patients applying an integrative, multi-modal approach are required to disentangle primary pathophysiological processes associated with clinical psychopatology from neurobiological and functional disturbances induced by medication. Moreover, such studies are crucial for identification of biologically valid disease subgroups, which are directly linked to patients' individual treatment response and long term functional and societal outcome.

The core of CNSR & CINS is recruitment and very extensive neurobiological examinations of never-medicated ('antipsychotic-naïve'), first episode schizophrenia patients. The protocols comprise neuropsychological, electrophysiological, structural and functional magnetic resonance imaging (MRI), as well as neurochemical examinations with PET or SPECT imaging. All cohorts are followed longitudinally, while undergoing a period with antipsychotic monotherapy before re-examinations.

Key data from these cohorts will be presented and perspectives for a more coherent understanding of the neurobiology of schizophrenia, as well as for the possibilities for a future stratification of patients based on biologically valid markers, will be discussed.

Current status and economic evaluation of PET/CT

Shahram Dabiri Oskoei, MD, Professor of Nuclear Medicine, Tabriz University of Medical Sciences

PET/CT is a relatively new imaging technology, whose undoubted advantages are valuable in clinical oncology as well as in all fields of diagnosis, staging, and treatment. PET and PET/CT have changed the diagnostic algorithm in oncology. PET using 18F-fluorodeoxyglucose (FDG) is increasingly used for the staging of solid malignancies, including colon, lung, etc., but anatomic information is limited. Integrated PET/CT enables optimal anatomic delineation of PET findings and identification of FDG-negative lesions on computed tomography (CT) images and might improve preoperative staging. However, controversy still exists in relation to the application of PET/CT in clinical practice, mainly because of its high cost. It is evident that apart from additional costs, potential savings also are associated with PET/CT as a result of avoiding additional imaging examinations or invasive procedures and by helping clinicians make the optimum treatment decisions. Health care systems worldwide have recently approved reimbursement for PET and PET/CT for staging of non–small cell lung cancer and differential diagnosis of solitary pulmonary nodules because PET and PET/CT have been found to be cost-effective for those uses. Additional indications that are covered by health care systems in the United States and several European countries include staging of gastrointestinal tract cancers, breast cancer, malignant lymphoma, melanoma, and head and neck cancers. Regarding these indications, diagnostic effectiveness and superiority over conventional imaging modalities have been shown, whereas cost-effectiveness has been demonstrated only in part. We review on the current knowledge of economic evaluations of PET and PET/CT in oncologic applications.

Key Words: positron emission tomography; computerized tomography; cost-effectiveness; image fusion; tumor staging; response to therapy; treatment individualization

New imaging in brain

Mohammad Hossein Daghighi
Department of Radiology, Tabriz University of Medical Sciences

In this article I discusses new modalities and sequences for demonstrating of brain structures, neuronal activities and functions, blood flow, glucose metabolism, neurochemical material measurements and high anatomical details.

The importance of each one for diagnosis of different pathology is also highlighted.

MRI=NMR=SMR

MRA&MRV

MRF,MRS,

SPECT,PET

DTI/DW

TTP/MTT

CBF/CBV

Neurobiology of Consciousness

Albert Gjedde, BRAINlab, Dept of Neuroscience and Pharmacology, University of Copenhagen

Consciousness has become the final frontier of neuroscience. The mechanisms responsible for on the one hand the emergence of the conscious state, and on the other the loss of that state, are among the most elusive of the remaining mysteries of brain function. The neurobiology of these mechanisms applies to all animals that enter and leave the state of consciousness almost at will, like humans do. An important method of testing the hypotheses of conscious brain function is neuroimaging, i.e., the use of CT, MR or PET to map the sites and magnitudes of brain energy turnover associated with consciousness or its absence. The importance of tests of these hypotheses is emphasized by the unexplained rise of dementia towards the top of the list of disorders affecting the quality of life of mature men and women of the Western world, often as the later stages of a succession of degenerative events that begins with chronic stress and depression.

Recent observers now see brain function as a manifestation of assemblies of neurons that qualify as circuits or networks. The joint activity of the networks is said to give rise to the phenomena that wevaguely refer to as experiences. That consciousness is associated with energy turnover in resting-state networks of the mammalian brain is almost a truism, but the definition of the networks is not clear. Many networks appear statistically as sources of correlated extracellular field potential changes at rest, but the early perturbations associated with non-steady-state activations rarely adhere to the boundaries of these networks.

At the BRAINlab, we tested the hypothesis that conscious brain function is associated with thresholds of brain energy turnover in cerebral cortex as a whole that allow the phase transitions of molecular interactions that are necessary to impose conscious activity on the networks. The hypothesis is based on the claim that the energy turnover elicits the connectivity rather than the previously assumed reverse chain of events.

We tested the hypothesis by mapping brain energy turnover in units of glucose phosphorylation in groups of patients and healthy volunteers with different levels of consciousness ranging from vegetative and minimally conscious states to mild conscious impairment and full consciousness. The results indicated that the energy turnover transitions of the entire cerebral cortex were discontinuous among the states of consciousness,at %50-40 and %100 of normal, respectively. The conclusion that discontinuous energy turnover rates drive the functions of consciousness, rather than the reverse, does not give any clues to the mechanism that drives the energy turnover.

The Curse of Dopamine: On the Neurobiology of Addiction

Albert Gjedde, Department of Neuroscience and Pharmacology, Panum Institute, University of Copenhagen

Dopaminergic neurotransmission and brain energy metabolism interact at corticaland subcortical sites in the mammalian brain. Dopaminergic volume transmissionin cortex and striatum serves blood flow and oxygen consumption regulationby supporting the maintenance of dendritic spines and by stimulating neuroplasticity, learning,and memory. The interaction changes with age but at different rates in differentparts of the brain. The interaction is involved in neurodegeneration in ways thatimplicate mitochondria. As dopamine receptors and transporters are lost with age,impaired vesicular incorporation leads to extracellular increase of dopamine with stimulation of maladaptive plasticity and neurodegeneration, in part because of reactive oxygen generation and oxidantaction by dopamine and its breakdown products. This course of events appears to dependcritically on the sensation-seeking propensity of susceptible humans.

Dopamine belongs to the diverse group of monoamines and other transmitters that contribute to learning by modulating working memory consolidation in dendritic spines. The majority of the modulators bind to two types of receptors with opposing effects on cyclic AMP (cAMP) formation. One type is the high-affinity receptors that inhibit cAMP formation, while the other type is the low-affinity receptors that serve the formation of cAMP. Examples for dopamine are the low-affinity and excitatory D-1like receptors and the high-affinity inhibitory D-2like receptors. The distributions of the two receptor types vary but their presence in most regions enable cells to react in ways that differentially reflect the concentration of dopamine, rather than just being more or less of the same. Cyclic AMP is a link in a chain of second messengers that reaches all the way to the genome where it regulates the transcription of plasticity genes. The chain is important to short-term working memory functions by dynamic network connectivity (DNC) modulation (Arnsten et al. 2010). The high-affinity inhibitory receptors of monoamines tend to serve the adjustment of existing DNC to short-term contingencies, while low-affinity excitatory receptors appear to contribute to the renewal of connections beyond the short-term modulation, through inhibition or excitation of cAMP formation, respectively. Substantial fluctuations of extracellular dopamine or other monoamine concentration, as seen in addictive drug abuse, can seriously disrupt cognitive brain functions in the short term and permanent network connections in the long term, with consequences in the form of neurodegenerative and psychiatric disorders.

New Advances in Brain Perfusion SPECT

Babak Mahmoudian, MD, FEBNM, Assistant Professor of Nuclear Medicine, Faculty of Medicine, Tabriz University of Medical Sciences

Brain Single Photon Emission Computerized Tomography (SPECT) is a functional and easy accessible neuroimaging technique that allows noninvasive study of physiologic and physiopathologic events in the human brain.
SPECT can be used to define a patient's pathologic status when neurologic or psychiatric symptoms cannot be explained by structural neuroimaging findings. Brain SPECT, in particular, with perfusion agents or with neuroreceptor imaging radiopharmaceuticals, is rapidly becoming a clinical tool in many places.
Common indications of brain SPECT are evaluation of: 1. Cerebrovascular disease (Acute stroke, chronic ischaemia, preoperative evaluation for potential ischaemia following carotid artery sacrifice), 2. Presurgical lateralization and localization of epileptogenic foci, 3. Evaluation of suspected dementia (Early detection and differential diagnosis of various forms of dementia, such as Alzheimer's disease, Lewy body dementia, Parkinson's disease with dementia, vascular dementia and frontotemporal dementia), 4. Evaluation of traumatic brain injury, 5. Evaluation of suspected inflammation (Progressive inflammatory disorders, viral encephalitis, vasculitis and HIV-encephalopathy), 6. Assessment of brain death.
Besides the common indications, brain perfusion SPECT can be useful in other indications such as movement disorders (differential diagnosis of parkinsonism) and psychiatric diseases (e.g. for follow-up of depression).
For many neurologic and psychiatric conditions, this imaging modality has been used in diagnosis, prognosis assessment, evaluation of response to therapy, risk stratification, detection of benign or malignant viable tissue, and choice of medical or surgical therapy. The importance of this technique in nuclear medicine today should not be overlooked, particularly in cerebrovascular diseases, dementias, epilepsy, head injury, malignant brain tumors, movement disorders, obsessive–compulsive disorder, Gilles de la Tourette's syndrome, schizophrenia, depression, panic disorder, and drug abuse.
I present recent advances on clinical value of brain SPECT and also discuss about new potentials of brain perfusion SPECT.

Clinical Applications of Neuroimaging Methods in Child Psychiatry

Ayyoub Malek,
Professor of Child and Adolescent Psychiatry, Department of Psychiatry, Tabriz University of Medical Sciences, Tabriz, Iran

During the past decades a variety of neuroimaging modalities have been used in the study of childhood psychiatric disorders. These technologies have helped us in better understanding of the causes of psychiatric disorders in youth population, which potentially may provide new and more specific treatments for these disorders and help us in monitoring therapeutic response. But, in today's child psychiatry, the primary use of neuroimaging is in research.

In clinical child psychiatry practice, neuroimaging is used for specific indications. Brain scanning is indicated for patients with new neurological symptoms and in cases of suspected child abuse or inconsistent history of a traumatic event. In psychiatric patients, neuroimaging may be used to rule out systematic or CNS disorders that potentially contribute to psychopathology.

As an introduction to neuroimaging methods in child psychiatry a range of existing modalities, with emphasize on clinical indications, advantages and limitations of each technology will be reviewed. Among these methods Magnetic Resonance Imaging (MRI) is the first choice for neuroimaging in the children. MRI and MRI-based modalities such as fMRI, MRS, and DTI have high safety profile and does not expose patients to radiation.

However, there are many practical and methodological challenges in pediatric imaging studies; The successful scanning of children requires addressing adequately a wide variety of practical problems. Young age and developmental delay often limit understanding and compliance with the procedures. Impulsivity, hyperactivity, anxiety, and phobia may also impair testing; thus sedation is necessary for most MRI studies in children younger than 8 years, unless an audiovisual system is available for the child's entertainment during the procedure.

In addition to the practical challenges of scanning children, many methodological issues make difficult the valid interpretation of imaging data. A challenge particular to pediatric imaging is interpreting cross-sectional imaging studies from a developmental perspective. The high frequency of comorbid conditions in children with neuropsychiatric disorders raises another challenge to studying these disorders. Potential solutions to these challenges will be discussed during the presentation of lecture.

New Strategy for Primary Stroke Prevention

Mehdi Farhoudi
Neurosciences Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

According to international reports, the global burden of stroke is increasing despite a steady decrease of related mortality over the last decades. Every year, almost 17 million strokes occur worldwide. In 2010, there were 33 million stroke survivors in the world. Age of stroke occurrence is going to decrease especially in our country possibly due to some crisis in incidences of stroke major risk factors such as diabetes mellitus and overweight. Fortunately, about %80 of the first ever strokes are preventable by appropriate control of the risk factors.

Many strategies are suggested for the primary prevention of stroke and transient ischemic attack as mass approach, such as Framingham Stroke Risk Score (FSRS) and QStroke. Using new mobile technology, Stroke Riskometer mobile application was introduced by Auckland University and was validated by comparing FSRS and QStroke. This application was approved by World Stroke Organization and recently by the World Heart Federation, which, together with approval from other world-leading professional organizations, makes this app the most internationally recognized health-related app in the world. The Stroke Riskometer app provides people to calculate their absolute risk of stroke within the next 5 to 10 years and to compare it with risk factor free people of the same age and gender. Also, it engages the person concerned in related risk factor modification. The Farsi-translated version will be released in few months for Iranian people's use.

Advances Fields of Stereotactic & Functional Neurosurgery

Meshkini A. MD. Professor, Fellowship of Stereotactic &Functional Neurosurgery, Dept. Neurosurgery, Tabriz University of Medical Sciences

Stereotactic (Greek: stereo=3dimensional, tactic=to touch) means to touch in three dimensions, Functional neurosurgery began prior to the introduction of stereotactic surgery.Even the first neurosurgical procedures were for functional aims e.g. craniotomy for epilepsy.

Expanding field of stereotacticsurgery are I -Functional stereotactic II- Mass lesions stereotacticIII- Localizing stereotactic & open surgery Functional stereotactic :Movement disorders,Pain syndromes, Intractable epilepsy,Psychiatric disabling disease(Depression, Obsessive-compulsive disorders, Spasticity ,Spinal stereotactic,procedures,Cluster Headache(posterior hypothalamus DBS),Head injury (persistent vegetative states),Addiction, eating disorders,...

Mass lesions Stereotactic: Diagnostic mass lesions stereotactic,Therapeutic mass lesions stereotactic Localizing Stereotactic & Open Surgery:Interventional stereotactic, Localizing stereotactic

Novel technics of radiotherapy in brain Tumors

Mohammad Mohammadzadeh, MD, Associate Professor of Radiation Oncology, Medical Faculty of Tabriz University of Medical Sciences, Tabriz, IRAN

The incidence of primary brain tumors is increasing rapidly. Gliomas and primary CNS lymphoma are the most common primary brain tumors in the United States and accounted for %2 of adult tumors. Glioblastoma multiform is the most common primary brain tumors.Surgery is bonestone treatment but adjunctive treatments such as radiotherapy and chemotherapy have improved survival of patients with high-grade tumors.

Radiotherapy after surgery reduced local failure, delayed in tumor progression,and increased patient 's survival.The techniques of radiotherapy have evolved over the time and available treatments include two-dimensional, three- dimensional, VMAT, SRS, IMRT and Tomotherapy. New conformal treatments based on the sophisticated images can save normal tissues from radiation damages.Each radiotherapy methods have their own advantages and disadvantages.

Where and why to apply PET in clinical practice and research? – Ideally, and in reality, i.e., in Odense Denmark (40 min + 10 min discussion)

Poul F. Højlund-Carlsen

The story of PET in Denmark and in the city of Odense is briefly presented: how to get funding of scanner, cyclotron and radiochemistry? How to get proper rooms, facilities and logistics? How to train the staff? How to make the users aware of PET and start using it? How was PET initially used after installment in Odense in early 2006 (experience from the first 6,000 scans), and how was PET actually used 6 years later (experience with some 9,000 scans)? How should PET be used in modern medicine – for routine purposes and research? Examples of research in Atherosclerosis, Inflammation, Musculoskeletal disease, Neurological disorders, and Cancer are given together with ideas for new research areas. What are the main pros and cons of PET? What could we do together?

Future of Psychiatry

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Psychiatry as a preferred discipline in the health field in the post war period became less certain in the early 1970's. Many have been pessimistic about the future of psychiatry, but others were optimistic.

In the past three decades the chemical imbalance theory of somatic psychiatry has almost completely replaced the genuine understanding of human struggle. Indeed the brainless psychiatry of the first half of the century became 'mindless' psychiatry.

Tom Brown from Royal college of psychiatrists in U.K told to Luncet "common perceptions within the medical profession include the view that psychiatry is just not scientific enough, is too remote from the rest of medicine, is often viewed negatively by other medical professionals and is specially too often characterized by different doctor-patient relationships and limited success rates of therapeutic interventions". Probably that is why in U.K the numbers of medical students choosing psychiatry has dropped more than 50 percent since 2009 and over the past decade the number of psychiatrists has dropped 26 percent. While, the number of physicians over all increased over 31 percent. Psychiatry posts were running more than on third unfilled.

In US in 2012 less than 4 percent of graduating students chose psychiatry. But psychiatry has become the hot especiality for those who want to do research.

The WHO is currently undertaking a global survey of 26 countries in all regions of the world. The first published figures indicate that, of those disorders assessed anxiety disorders are the most common and mood disorders next most common in all but two countries.

In US, Colombia, the Netherland and Ukraine tended to have higher prevalence estimates across most classes of disorders, while Nigeria, Shanghai and Italy were consistently low, and prevalence rates, was lower in Asian countries in general. It seems the prevalence of psychiatric disorders in Iran may be lower than western countries. In 2005 the prevalence of psychiatric disorders in Iran was %10.81. It was more common among females than males. The prevalence of anxiety and mood disorders were %8.35 and %4.29 respectively. It is estimated that at least 7 million of Iranian population suffer from one or more of the psychiatric disorders.

It can be concluded that as long as anxious and depressed people are living in the whole world, psychiatry will survive.

The importance of imaging biomarkers of subclinical cerebrovascular and Alzheimer's pathologies in late life cognitive decline

Sima Salari Rad (MD, Psychiatrist, PhD), Assistant professor of Psychiatry, Tabriz University of Medical Sciences, Tabriz- Iran. Honorary Research Fellow in Aberdeen University, UK.

This presentation will discuss the role of individual and combined effects of brain magnetic resonance imaging (MRI) markers of the two age-related brain pathologies associated with dementia on cognitive ability of about 100 normal old people in a cohort study in the UK. We had access to their cognitive abilities, and then measured their MRI white matter hyperintensities (WMH) using a visual scoring method and their hippocampal volume using an automated method. The influence of these two MRI brain aging markers on cognitive abilities evaluated. Results showed the main predictor of late life cognitive decline is hippocampal volume. These findings also suggest that the association of hippocampal volume with cognitive functioning is not amplified by the presence of WMH in the brain of very old people.

Synthesis of Zn-Doped Manganese Ferrite Nanoparticles Via Coprecipitation Method for Magnetic Resonance Imaging Contrast Agent

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Two different preparations of biocompatible magnetic nanoparticles (MNPs), both (MnFe2O4 and Mn0.91Zn0.09Fe2O4) coated with methoxy polyethylene glycol aldehyde (m-PEG-CHO) were prepared through coprecipitation method. The prepared powder was reanalyzed for material structure with an X-ray diffractometer (XRD) and for parti cle size using a transition electron microscope (TEM). Magnetic saturation (MS) and coercivity (HC) of the formed particles were examined by a vibrating sample magnetome ter (VSM). Surface structure of the samples was characterized by Fourier transform infrared spectroscopy (FTIR). Biocompatible ferrofluids were intravenously injected into four rabbits. Then the magnetic resonance (MR) images of brain were obtained by mag netic resonance imaging (MRI) experiments before and after intravenous injection of fer rofluids. The MNPs demonstrate super paramagnetic behavior with a spinel structure measuring 40–30 nm in size. Doping of these magnetite nanoparticles with zinc resulted in decreases in crystallite size from 24.23 nm to 21.15 nm, the lattice parameter from 8.45 A˚to 8.43 A˚and the coercivity from 41.20 Oe to 13.07 Oe. On the other hand, satura tion magnetization increased from 50.12 emu/g to 57.36 emu/g following zinc doping.
Image exposure analysis revealed that the reduction of MR signal intensity for zinc doped magnetite nanoparticles was more than nondoped nanoparticles (shorter T2 relaxation time) thereby making the images darker. [DOI: 1.4029855/10.1115]

Role of Transcranial magnetic stimulation (TMS) on Neuro- Rehabilitation

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TMS is a noninvasive method used to stimulate small regions of the brain. During a TMS procedure, a magnetic field generator, or "coil", is placed near the head of the person receiving the treatment. The coil produces small electric currents in the region of the brain just under the coil via electromagnetic induction. The coil is connected to a pulse generator, or stimulator, that delivers electric current to the coil

TMS is used diagnostically to measure the connection between the brain and a muscle to evaluate damage from stroke, multiple sclerosis, amyotrophic lateral sclerosis, movement disorders, motor neuron disease and injuries and other disorders affecting the facial and other cranial nerves and the spinal cord.

The use of single-pulse TMS was approved by the FDA for use in migraine and repetitive TMS (rTMS) for use in treatment-resistant major depressive disorderEvidence suggests it is useful for neuropathic pain and treatment-resistant major depressive disorder. Evidence also suggests that TMS may be useful for negative symptoms of schizophrenia and loss of function caused by stroke. As of 2014, all other investigated uses of rTMS have only possible or no clinical efficacy.

Matching the discomfort of TMS to distinguish true effects from placebo is an important and challenging issue that influences the results of clinical trials. The greatest risks of TMS are the rare occurrence of syncope (fainting) and even less commonly, induced seizures. Other adverse effects of TMS include discomfort or pain, transient induction of hypomania, transient cognitive changes, transient hearing loss, transient impairment of working memory, and induced currents in electrical circuits in implanted devices.

For neuropathic pain, for which there is little effective treatment, high-frequency (HF) repetitive TMS (rTMS) appears effective.

For treatment-resistant major depressive disorder, HF-rTMS of the left dorsolateral prefrontal cortex (DLPFC) appears effective and low-frequency (LF) rTMS of the right DLPFC has probable efficacy. The Royal Australia and New Zealand College of Psychiatrists has endorsed rTMS for treatment resistant MDD.

A 2015 Cochrane review found not enough evidence to make any conclusions in schizophrenia. For negative symptoms another review found possible efficacy.

For loss of function caused by stroke LF-rTMS of the corresponding brain region has probable efficacy.

Many other potential uses have only demonstrated weak or negligible efficacy. TMS has failed to show effectiveness for the treatment of brain death, coma, and other persistent vegetative states. As of 2014 there was insufficient evidence to determine the safety and efficacy of TMS in panic disorder. In 2003 there was not enough evidence to determine if transcranial magnetic stimulation was useful in obsessive compulsive disorder.

Role of ultrasonography in determination of intracranial pressure in patients with trauma

Hassan Soleimanpour
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Increased intracranial pressure (ICP) in critically trauma patients is a major concern and its early diagnosis is pivotal. Rise in ICP results in increased optic nerve sheath diameter (ONSD) as optic nerve sheath is attached to the subarachnoid space. To detect increased ICP which is often associated with papilledema fundoscopy is the most broadly used bedside test. The emergence of ultrasound techniques has opened new doors on the modern medicine. Use of ultrasound techniques has been introduced as alternative bedside tests. Through transbulbar B-mode sonography, ONSD can be evaluated. This ultrasound technique is not only easier to learn than fundoscopy but also is more feasible even under field conditions. Mechanically induced septum pellucidum undulation (SPU) is a less known measurement technique for rise in intracranial pressure. Our aim in this presentation is to compare these two ultrasound bedside tests with each other and with fundoscopy regarding their ability and accuracy in detecting increased intracranial pressure.

Alternative and Complementary Treatment for Stroke

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Therapeutic hypothermia is a means of neuroprotection well established in the management of acute ischemic brain injuries i.e. anoxic encephalopathy after cardiac arrest and perinatal asphyxia. The aim of this presentation is to evaluate therapeutic hypothermia, its complications and various methods of inducing mild hypothermia in patients with ischemic stroke as an alternative and complementary treatment for Stroke. Temperature at presentation in acute stroke patients plays an important role in outcome while turning therapeutic hypothermia into one of the most hopeful treatment modalities in acute ischemic stroke. Consequently, higher temperatures are associated with deteriorated out-come. In combination with other reperfusion strategies, TH is the most hopeful modality for patients with acute ischemic stroke. However, very limited clinical data are available on the advantages of hypothermia in these patients are not providing abundant confirming data on potential its efficacy. Based on primary studies, the probable neurological improvement require to be considered against the increase incidence of pneumonia and decreased thrombolytic activity. Hypothermia in combination with other neuroprotectants and modern reperfusion therapies should be considered in brain ischemia. However, further studies might be required including newer, less invasive cooling methods and pharmacological cooling strategies. A main concern would be to test the effect of hypothermia on functional outcome. In addition, it should be born in mind that although therapeutic hypothermia is feasible in stroke patients, it is not absolutely risk-free and more study is clearly required to bring us closer to the successful application of hypothermia in the treatment for patient with stroke.

Breaking bad news to patient's relative (Medical Ethics)

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Breaking bad news, as an extremely challenging task, is considered one of physicians' most demanding responsibilities. Unfortunately, very little medical education has been offered for being prepared for breaking bad news. Emotionally disengagement of the physicians from patient's relative might occur following breaking bad news without the required training hints. Treating doctors undergo immense pressure for having to inform the family members of the sudden death of their loved ones. Such a burden requires tremendously specialized skills. Unfortunately, little guidance is available on to the appropriate approaches which are advantageous in these extremely sensitive cases. Rather than receiving the required training courses in medical schools, doctors rely on their own very individual experiences. The further trained a doctor, the better position to handle the daunting task he/she will be in. Being sensitive and emotionally highly charged, family members usually cannot accept the sudden loss of their loved one easily. Consequently, violent grief reactions or anger might be encountered by medical staff in case of lack of compassion or kindness from the medical staff. Focusing on the importance of training doctors how to communicate effectively with patients and their relatives, this presentation focuses on “breaking bad news”.

Updates regarding family presence during resuscitation (Medical Ethics)

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Conventionally, throughout the resuscitation procedure, in case of in-hospital cardiac arrest, patients' relatives are guided to a separate room in which an experienced nurse advises them of the patient's status. Permitting patients' relatives to witness the resuscitation has always been a controversial issue. In general, relatives are rarely asked to be present in the resuscitation room, unless they are eager to be. Throughout the international meeting of the American College of Chest Physicians in 2000, experts from all over the world presented numerous perspectives on dealing with Family Presence during Resuscitation (FPDR). At this conference, scholars emphasized that FPDR is an ethnic and cultural issue and that the results obtained from related research are country-specific and not universally applicable. The results obtained from our researches showed that most physicians disapprove of/strongly disapprove of FPDR. Similar to many previous studies, the results obtained from our study revealed that FPDR is associated with increased fear of litigation. Most studies tend to focus on the experience of FPDR, with very few having focused on medical staff's views in this regard. Most have stated that clear and precise policies are required regarding FPDR, so that sufficient psychological support can be provided to family members who choose to be present during CPR.

Neurodegenerative diseases and the brain blood flow and metabolism.

Manouchehr Seyedi Vafaee, Department of Neuroscience and Pharmacology, Panum Institute, University of Copenhagen

Neurodegenerative diseases are a large group of disabling disorders of the nervous system characterized by the relative selective death of neuronal subtypes. In most cases, there is overwhelming evidence of impaired mitochondrial function as a causative factor in these diseases. Mitochondria, aptly termed “powerhouses of the cell”, are responsible for production of most of the cell´s “energy currency” in terms of ATP. ATP is the end of product of a series of pathways involving oxidation of substrates, mainly carbohydrates and fat, in cytosol (glycolysis) and mitochondria including oxidative phosphorylation in neurons and glia. ATP is mainly consumed by ion pumping in neurons, to maintain the ion gradients underlying synaptic and action potentials. Oxygen is the main substrate for production of ATP and is supplied to the neuron by blood flow. Many lines of evidence suggest that the disturbance of relationship between cerebral blood flow (CBF) and cerebral metabolic rate of oxygen (CMRO2) caused by defective mitochondria is the main cause in neurodegenerative diseases. Therefore, it is of great interest to measure and investigate CMRO2 and its relationship with the supplier CBF. Moreover, although CBF augmentation is still considered to be a hallmark of intensified neuronal activity, previous assumptions that behaviourally induced increases in local blood flow reflect similar local increases in oxidative metabolism have been recently contradicted. We will discuss the relationship between CBF and CMRO2/CMRglc in healthy population and compare that with those in neurological disorders such as Alzheimr´s, Parkinson´s, and stroke. We will then present up-to-date results from our own laboratories as well as others in the context of PET and MRI imaging.

Neurobiology of Attention Deficit Hyperactivity Disorders (ADHD)

Manouchehr Seyedi Vafaee, Department of Neuroscience and Pharmacology, Panum Institute, University of Copenhagen

Attention deficit hyperactivity disorder (ADHD), is a neurodevelopmental psychiatric disorder in which there are significant problems with executive functions such as attention and inhibitory control that cause attention deficits, hyperactivity, or impulsiveness which is not appropriate for a person's age. Despite being the most commonly studied and diagnosed psychiatric disorder in children and adolescents, the cause in the majority of cases is unknown. The World Health Organization estimates that it affected about 39 million people as of 2013. It affects about %6-2 children (depending on the criteria used). Rates are similar between countries and depend mostly on how it is diagnosed. ADHD is diagnosed approximately three times more in boys than in girls. About %50–30 of people diagnosed in childhood continue to have symptoms into adulthood. Dopamine has been implicated to have a central role in the disease and new research suggests that low dopamine level caused by disrupted dopaminergic system is the hallmark of ADHD which usually leads to substance abuse too. CNS stimulant drugs such as methylphenidate and amphetamine which increase the dopamine level in the brain have been shown to be effective medicine for ADHD patients. At present, the ADHD diagnosis is solely based on a clinical evaluation of behavioral symptoms. Hence, more objective diagnostic measures are needed, including new biological markers, endophenotypes or cognitive tests. Positron Emission Tomography (PET) has demonstrated a significant correlation between ADHD symptoms and deficits in DA neurotransmission. This includes e.g. association of motivation deficits with lower DA D2 receptor availability in the nucleus accumbens of ADHD adults. There is also evidence for changed levels in ADHD patients of the DA transporter (DAT), which mediates reuptake of DA from the synaptic cleft, with higher levels in previously medicated patients and lower levels in drugnäive patients. Moreover, general DA depletion has been suggested, which is likely to be reversed by the DAT inhibitor methylphenidate, the standard treatment of ADHD patients. The neurobiology of ADHD will be discussed and brain structures involved in the ADHD will be explained. Diagnostic features of the disease and neurotransmitters involved will be discussed. We will then present the PET results from our laboratories where methylphenidate-evoked changes in dopamine have been documented to be correlated with ADHD. Finally, we will explain our upcoming PET imaging project where we plan to image and investigate the dopaminergic system in ADHD in vivo.

دکتر سلیمانپور

معاونت تحقیقات و فناوری دانشکده پزشکی

دســت نوشــته معاونــت تحقیقات و فناوری دانشــکده پزشکی برای سمینار بین المللــی تازه های علــوم اعصاب، راوانپزشکی و رادیولوژی

باسمه‌تعالی

تبادل یافته های علمی، امروزه نقش بســیار موثر در پیشــرفت و ارتقاء سطح علمی دانشــجویان و دانش پژوهان دارد. اگر چه با پیشرفت علم و تکنولوژی در ســالهای اخیر تبادل روان و سریع اطلاعات امکان پذیر شــده اســت، برگزاری ســمینارهای علمی به عنوان یک روش کارآمد در تبــادل اطلاعات، هنوز هم نقش فراوانی در ایــن میان دارد. حضور در مجامــع علمی و تبادل نظر با صاحب نظران و اشــنایی با یافته های جدید علمی حتی قبل از انتشــار این یافته ها در منابع علمی، شــرکت در کارگاههای پژوهشــی و تبادل فرهنگی همایشها از مزایای قابل توجه برگزاری همایشــهای علمی می باشــد. اکنون که ســمینار بین المللی تازه های علوم اعصاب، روانپزشــکی و رادیولوژی در دانشکده پزشکی برگزار مــی گردد و نظر به اینکه توجه ویژه ای نیز به بخش دانشــجویی این ســمینار شده است، امید است برگزاری این سمینار در ارتقای سطح علمی و ایجاد شوق و انگیزه بیشتر برای فراگیری علوم مرتبط با اعصاب، روانپزشکی و رادیولوژی و در رشد و شکوفایی استعدادهای شما عزیزان مفید و موثر باشــد. در پایان امیدوارم برگزاری چنین همایشهایی علاوه بر جنبه های پژوهشــی آن بتواند در ارتقــای همکاریهای بین المللی و تعاملات فرهنگی بســیار موثر باشــد. در انتها وظیفه خود می دانم از تمامی کســانی که در این مهــم یاریگر ما بودند یــادی نموده و مراتب قدردانی خود را اعلام نمایم:

۱-ریاست محترم دانشــگاه، جناب آقای دکتر صومی و ریاست محترم دانشکده پزشکی، جناب آقای دکتر شکوری که به عنوان مدیران پژوهش محور، همواره مشوق ما در این راه دشوار بوده اند.

۲-شــهردار محترم فرهنگ دوست کلانشــهر تبریز، جناب آقای دکتر نجفی و ریاست محترم شورای شهر تبریز، جناب آقای دبیری

۳- جناب آقای دکتر منوچهر ســیدی وفایی، دانشــیار محترم دانشگاه کپنهاگ دانمارک که زحمت هماهنگی ســخنرانان مدعو خارج از کشور سمینار با ایشان بود.

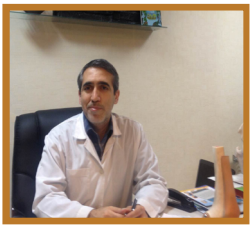
۴-جناب آقــای دکتر محمودیان، عضو محترم هییت علمی دانشــکده پزشکی که به عنوان دبیر علمی سمینار زحمات زیادی را متقبل شدند.

۵-معاونــت محترم اداری و مالی دانشــکده پزشــکی و کارشناســان زحمتکش معاونت تحقیقات و فناوری دانشکده پزشکی

۶-کمیته تحقیقات دانشجویی دانشکده پزشکی

۷-شرکت اندیشه پژوهان سینا طب

دکتر سلیمانپور



دکتر شکوری

رئیس دانشکده پزشکی تبریز

پیام ریاست محترم دانشکده پزشکی جناب آقای دکتر شکوری برای سمینار بین المللی تازه های علوم اعصاب، روانپزشکی و رادیولوژی

باسمه‌تعالی

سمینارهای علمی جایگاه تبادل دستاوردهای علمی ارزشمندی است که حاصل تلاشهای خستگی ناپذیر و نا پیدای محققین است. به خصوص در این عرصه فرصتی فراهم می آید تا پژوهشگران جوان با پیشکسوتان در کنار هم قرار گرفته و با محک زدن آموخته های خود از تجربیات گران سنگ سالیان متمادی آنها توشه برگیرند. بی شک سمینار بین المللی تازه های علوم اعصاب، روانپزشکی و رادیولوژی یک رویداد برزگ علمی است که با مشارکت علمی دانشگاههای علوم پزشکی تبریز، تهران، کپنهاگ، آرهوس و پنسیلوانیا برگزار می شود و فرصت مناسبی را در اختیار اندیشمندان و دانش پژوهان قرار می دهد تا با جدیدترین یافته های علمی روز مرتبط با رشته های اعصاب، روانپزشکی و رادیولوژی آشنا شوند و از آنها برای توسعه سطح دانش و تحقیقات خود بهره گیرند. وجود نگرش چند رشته ای در این همایش از مزایای آن محسوب می شود چرا که امکان حضور تخصص های مختلف را در زیر یک سقف ممکن می سازد و تبادل اطلاعات بینابین اساتید، قطعاً اعتلای دانش در حوزه های مورد بحث سمینار را ممکن می سازد. امید است برگزاری این سمینار با همکاری اساتید محترم، گامی در جهت توسعه دانش علوم بالینی پزشکی در کشور باشد. در این فرصت، ضمن تشکر از همت والای معاونت تحقیقات و فناوری دانشکده پزشکی در برگزاری این سمینار و همچنین همکاری صمیمانه شهرداری محترم کلانشهر تبریز با دانشکده پزشکی، برای جامعه فرهیخته کشور در عرصه های مختلف موفقیت و بهروزی آرزو مینمایم.

دکتر سید کاظم شکوری

پروفسور محمد حسین صومی

رئیس دانشگاه علوم پزشکی و خدمات بهداشتی درمانی تبریز

پیام جناب آقای دکتر صومی
ریاست محترم دانشگاه علوم پزشکی

باسمه‌تعالی

دانشـــگاه محيط ديناميك ونشـــاط آفريني اســـت كه تعالي آن در بهـــره گيري از استعدادهاي برتر وايده هاي جديد وارتباط با انديشمندان تضمين ميگردد . اگرچه در عصر جاري با گســـترش فضاى مجازي، اشـــتراك گذاري ايده ها، توانمنديها را تسهيل نموده اســـت ولي برگزاري سمينارها وهمايشـــها، ضمن تضمين تبادل اطلاعات، امكان برقراري روابط عاطفي انســـاني وتصميم براي كارهاي مشترك درآينده را فراهم ميســـازد. برگزاري ســـمينار بين المللي تازه هاي علوم اعصاب، روانپزشكي ورادیولوژي كه هر سه رشته در دو دهه اخيرپويايي خودرا حفظ كرده وحيطه هاي جديدي را فراروي پژوهشـــگران قـــرار داده اند وبارقه هاي اميدي در مقابل چشـــمان منتظر بيماران براي تشخيص ســـريع، دقيق ودرمان هاي مناسب و روشـــن كرده اند فرصت مغتنمي اســـت كه همكاران بزرگوار بنده در دانشگاه با قدمت علوم پزشكي تبريز، از علم وتجربيات دانشمندان عزيز بهره گرفته و دانسته هاي خود را عرضه دارند. اينجانب مقدم مهمانان عزيز از دانشـــگاههاى كپنهاگ و ادنســـه دانمارك وهمچنين تهران را گرامي داشـــته،خصوصا حضور دانشـــمند عاليقدر جناب آقاي پروفسورعباس علوي، استاد بزرگوار وبرجسته علوم اعصاب ورادیولوژي ازدانشـــگاه پنسيلوانيا كه از افتخارات شـــهر عالم پرور تبريز هستند را ارج نهـــاده وبا توجه به ايجاد فضاي علمي ووجـــود فرصتهاي همكاري، همه انديشمندان راجهت بهره گيري از اين شرايط وانجام كارهاي بديع دعوت مينمايم واز هر نوع كار مشـــترك در جهت تعالي جايگاه علم وفـــن آوري وارائه خدمات مناســـب به بيماران استقبال مي نمايم. باشد كه آيندگان درقضاوت خود نسبت به عملكـــرد مديران در زمان جاري، نمره قابـــل قبولي را درنظر بگيرند. درپايان لازم مي دانم ازهمه دست اندركاران، مخصوصا همكار محترم جناب آقاي دكترحسن ســـليمانپور، معاون تحقيقات و فناوری دانشكده پزشكي در تدارك و برگزاري اين سمينار تشكر نمايم.

تاریخ	ساعت	عنوان سخنرانی	نام و نام خانوادگی سخنران	تخصص سخنران
۱۳۹۴/۰۷/۱۵	۸:۰۰ الی ۸:۱۵	استراتژی جدید برای پیشگیری اولیه سکته مغزی	دکتر مهدی فرهودی	استاد گروه بیماریهای اعصاب دانشکده پزشکی، رئیس مرکز تحقیقات اعصاب دانشگاه علوم پزشکی تبریز
	۸:۱۵ الی ۸:۳۰	درمان جایگزین و مکمل سکته مغزی	دکتر حسن سلیمانپور	دانشیار بیهوشی و مراقبهای ویژه، فلوشیپ احیا قلبی - ریوی و مراقبت بحرانی بیماران ترومایی- معاون تحقیقات و فناوری دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۸:۳۰ الی ۸:۴۵	تازه های جراحی اعصاب استریوتاکسی و عملکردی	دکتر علی مشکینی	استاد جراحی مغز و اعصاب، معاون امور هیئت علمی دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۸:۴۵ الی ۹:۰۰	تکنیکهای جدید رادیوتراپی در درمان تومورهای مغز	دکتر محمد محمدزاده	دانشیار پرتودرمانی و انکولوژی دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۹:۰۰ الی ۹:۴۵	نقش در حال ظهور PET در کارهای روزمره انجام یافته در پزشکی	پروفسور عباس علوی	استاد رادیولوژی، پزشکی هسته ای و نورولوژی، رئیس بخش پزشکی هسته ای دانشگاه پنسیلوانیای آمریکا
	۹:۴۵ الی ۱۰:۰۰	نقش سونوگرافی در تعیین فشار داخل جمجمه در بیماران ترومایی	دکتر حسن سلیمانپور	دانشیار بیهوشی و مراقبهای ویژه، فلوشیپ احیا قلبی - ریوی و مراقبت بحرانی بیماران ترومایی- معاون تحقیقات و فناوری دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۰:۰۰ الی ۱۰:۱۵	پیشرفتهای اخیر در کاربرد SPECT دربیماریهای مغز	دکتر بابک محمودیان	استادیار پزشکی هسته ای، گروه رادیولوژی، رادیوتراپی و پزشکی هسته ای دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۰:۱۵ الی ۱۰:۳۰	پرسش و پاسخ و بحث	پروفسور علوی، دکتر مشکینی، دکتر فرهودی، دکتر سیدنژاد، دکتر قره پاپاق، دکتر سلیمانپور	
	۱۰:۳۰ الی ۱۰:۴۵	استراحت و پذیرایی		
	۱۰:۴۵ الی ۱۱:۱۵	نوروبیولوژی اعتیاد	پروفسور آلبرت گیده	استاد نوروبیولوژی و فارماکولوژی، رئیس دپارتمان علوم اعصاب و فارماکولوژی دانشگاه کپنهاگ دانمارک
	۱۱:۱۵ الی ۱۱:۴۵	تشخیص قابل اندازه گیری اسکیزوفرنی: گامی به سمت درمان برحسب مورد در روانپزشکی	دکتر بیورن ابدروپ Dr Bjørn H. Ebdrup	متخصص روانپزشکی، گروه روانپزشکی دانشگاه کپنهاگ دانمارک و مرکز تحقیقات عصبی- روانی اسکیزوفرنی (CNSR)
	۱۱:۴۵ الی ۱۲:۰۰	کاربرد بالینی متدهای تصویربرداری مغزی در روانپزشکی کودکان	دکتر ایوب مالک	استاد روانپزشکی، مدیر گروه روانپزشکی دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۲:۰۰ الی ۱۲:۱۵	نوروبیولوژی نقص توجه و اختلالات بیش فعالی	دکتر منوچهر سیدی وفایی	دانشیار علوم اعصاب، دپارتمان علوم اعصاب و فارماکولوژی دانشگاه کپنهاگ دانمارک
	۱۲:۱۵ الی ۱۲:۳۰	اقامه نماز		
	۱۲:۳۰ الی ۱۲:۴۵	تصویربرداری نقص توجه و اختلالات بیش فعالی در کودکان	دکتر جواد علاقبند راد	دانشیار روانپزشکی، گروه روانپزشکی دانشکده پزشکی دانشگاه علوم پزشکی تهران
	۱۲:۴۵ الی ۱۳:۱۵	آینده روانپزشکی	دکتر نصرت ا... پورافکاری	استاد روانپزشکی، گروه روانپزشکی دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۳:۱۵ الی ۱۳:۳۰	بررسی اهمیت بیو مارکرهای تصویری دخیل در پاتولوژی تحت بالینی اختلالات عروقی مغزی و آلزایمر در کاهش توانایبهای شناختی در سالمندان	دکتر سیما سالاری راد	استادیار روانپزشکی و دکترای علوم اعصاب، گروه روانپزشکی دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۳:۳۰ الی ۱۳:۴۵	پرسش و پاسخ و بحث	دکتر پورافکاری، پروفسور گیده، دکتر وفایی، دکتر مالک، دکترعلاقبند راد	
	۱۳:۴۵ الی ۱۴:۰۰	اختتامیه	دکتر شکوری و دکتر سلیمانپور	

تاریخ	ساعت	عنوان سخنرانی	نام	سخنران تخصص سخنران
۱۳۹۴/۰۷/۱۴	۸:۰۰ الی ۸:۱۰	تلاوت آیاتی از قرآن کریم و سرود ملی		
	۸:۱۰ الی ۸:۲۰	افتتاح سمینار	دکتر محمد حسین صومی	استاد بیماریهای داخلی و فوق تخصص بیماریهای دستگاه گوارش، ریاست محترم دانشگاه علوم پزشکی تبریز
	۸:۲۰ الی ۸:۳۰	خیر مقدم	دکتر سید کاظم شکوری	استاد طب فیزیکی و توانبخشی، ریاست محترم دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۸:۳۰ الی ۸:۴۰	معرفی کوتاه اساتید برجسته مدعو	دکتر منوچهر سیدی وفایی	دانشیار علوم اعصاب، دپارتمان علوم اعصاب و فارماکولوژی دانشگاه کپنهاگ دانمارک
	۸:۴۰ الی ۹:۲۰	کجا و کی میتوان از PET در انکولوژی، نورولوژی، بیماریهای اسکلتی عضلانی، التهابی و آترواسکلروتیک استفاده نمود	پروفسور پل فلمینگ کارلسن	استاد فیزیولوژی بالینی و پزشکی هسته ای، مدیر گروه و رئیس مرکز تحقیقات و روابط بین الملل دپارتمان فیزیولوژی بالینی و پزشکی هسته ای دانشگاه اندسه دانمارک
	۹:۲۰ الی ۹:۴۵	تصویربرداری از هوشیاری	پروفسور آلبرت گیده	استاد نوروبیولوژی و فارماکولوژی، رئیس دپارتمان علوم اعصاب و فارماکولوژی دانشگاه کپنهاگ دانمارک
	۹:۴۵ الی ۱۰:۰۰	وضعیت موجود و صرف اقتصادی PET	دکتر شهرام دبیری اسکویی	استاد پزشکی هسته ای، رئیس بخش پزشکی هسته ای بیمارستان امام رضا (ع) تبریز، دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۰:۰۰ الی ۱۰:۱۵	جریان خون و متابولیسم مغز و بیماریهای نورودژنراتیو	دکتر منوچهر سیدی وفایی	دانشیار علوم اعصاب، دپارتمان علوم اعصاب و فارماکولوژی دانشگاه کپنهاگ دانمارک
	۱۰:۱۵ الی ۱۰:۳۰	نقش rTMS در بازتوانی بیماریهای عصبی	دکتر سید کاظم شکوری	استاد طب فیزیکی و توانبخشی، ریاست محترم دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۰:۳۰ الی ۱۰:۴۵	پرسش و پاسخ و بحث	دکتر صومی، پروفسور کارلسن، پروفسور گیده، دکتر شکوری، دکتر وفایی، دکتر دبیری	
	۱۰:۴۵ الی ۱۱:۰۰	استراحت و پذیرایی		
	۱۱:۰۰ الی ۱۱:۳۰	تازه های تصویربرداری مغز	دکتر محمد حسین دقیقی	دانشیار رادیولوژی، مدیر گروه رادیولوژی دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۱:۳۰ الی ۱۱:۴۵	نورولوژی مبتنی بر شواهد	دکتر مجتبی زارعی	استاد نورولوژی و علوم اعصاب، رئیس مرکز ملی نقشه برداری مغز ایران
	۱۱:۴۵ الی ۱۲:۱۵	نحوه دادن خبر بد به همراهان بیمار و تازه های مرتبط با حضور همراهان هنگام احیا همراه با پرسش و پاسخ (اخلاق پزشکی)	دکتر حسن سلیمانپور	دانشیار بیهوشی و مراقبهای ویژه، فلوشیپ احیا قلبی ریوی و مراقبت بحرانی بیماران ترومایی- معاون تحقیقات و فناوری دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۲:۱۵ الی ۱۲:۳۰	اقامه نماز		
	۱۲:۳۰ الی ۱۲:۴۵	نحوه دادن خبر بد به همراهان بیمار و تازه های مرتبط با حضور همراهان هنگام احیا همراه با پرسش و پاسخ (اخلاق پزشکی - ادامه)	دکتر حسن سلیمانپور	دانشیار بیهوشی و مراقبهای ویژه، فلوشیپ احیا قلبی - ریوی و مراقبت بحرانی بیماران ترومایی- معاون تحقیقات و فناوری دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۲:۴۵ الی ۱۳:۰۰	ساخت نانوذرات فریت منگنز نشاندار شده با عنصر روی به روش رسوب همزمان بعنوان ماده کنتراست در MRI	دکتر فیروز صالحپور	استاد جراحی مغز و اعصاب، مدیر گروه جراحی مغز و اعصاب دانشکده پزشکی دانشگاه علوم پزشکی تبریز
	۱۳:۰۰ الی ۱۳:۱۵	پرسش و پاسخ و بحث	دکتر راد، دکتر دقیقی، دکتر زارعی، دکتر فیروز صالحپور، دکتر سلیمانپور	

سمینار بین المللی تازه های نورولوژی، روانپزشکی و رادیولوژی

۱۴ و ۱۵ مهرماه ۱۳۹۴، تالار شهید شایانمهر دانشکده پزشکی دانشگاه علوم پزشکی تبریز

رئیس ســـمینار: دکتر محمد حســـین صومي (اســـتاد بیماریهاي داخلي و فوق تخصص بیماریهاي دستگاه گوارش، رئیس دانشگاه علوم پزشکي تبریز)

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کمیته علمی:

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دکتر محمد حسین دقیقی
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دکتر حسن سلیمان پور
دکتر فیروز صالحپور
پروفسور مهدی فرهودی
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دکتر محمد محمدزاده
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