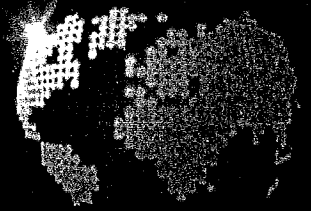


Chongqing 2012  
International  
Neurological Forum  
November 30–December 1 2012



**PROGRAM & ABSTRACT BOOK**



附件(三)

# WELCOME

Dear Colleagues and friends,

I am pleased to welcome you to attend Chongqing International Neurological Forum which is held on November 30th, December 1st at the Daping Hospital in Chongqing, China. This conference is the sequel to the 2009, 2010, 2011 International Clinical Neuroscience Forum & NeuroDrug Conferences which involved over 400 experts from all over the world. The conference is organized and hosted by Daping Hospital and Third Military Medical University in Chongqing, China.

The aim of this conference is to exchange ideas and discuss cutting-edge research and therapy-oriented technologies in the field of clinical neuroscience by bringing together neuroscientists, neurologists, neurosurgeons, and nurses from around the world. The clinical neurosciences are undergoing rapid progress in the diagnosis and treatment of neurological disorders, especially in the fields of brain tumors, spinal disorders, vascular disease, stroke, neurodegenerative diseases, neural repair, pain and more. This conference will continue to serve as an ideal platform for updating cutting-edge technologies in both established and emerging treatment options for delivering optimal care to patients. Meanwhile, the forum also fosters the exchanging of new research data with academic neuroscientists, sharing your successful experiences with peer colleagues, and establishing collaborations.

Following the success of the three previous annual meetings, this year's conference will highlight multiple new topics. This forward thinking event will aid participants by reviewing current hot topics as well as discussing future directions in neuroscience research, neurological medication discovery and delivery. Do not miss the unique opportunity to share your findings and ideas with experts around the world.

Chongqing, the largest inland city of China, is famous for towering mountains, roaring rivers, as well as the vibrant city life, which offers a great platform for many activities around the forum that will make your participation a memorable event.

Thank you and we look forward to seeing you in the conference!

Sincerely,



Huadong Zhou, Professor

Dean of Neurology Department, Daping Hospital, Chongqing, China Chairman,  
Chongqing International Neurological Forum, Chongqing, China

## Conference Information

### Registration

The registration desk will be situated on level one of the hotel.

Opening times will be:

Friday 30<sup>th</sup> November 8:00 – 24:00

Saturday 1<sup>st</sup> December 8:00 – 24:00

### Conference Organising Committee Contact:

Prof. Hua-Dong Zhou

Department of Neurology, Daping Hospital, Third Military Medical University

A/Prof. Yan-Jiang Wang


Department of Neurology, Daping Hospital, Third Military Medical University

### Hotel Contact

Wanyou Conifer Hotel

Address: 77 Changjiang Er Road, Daping, Yuzhong district, Chongqing

Telephone: +86 23 68718888

1. 

2. Burn

3. 

### Conference program (会议日程)

30 November 2012 Friday

14:30-17:30	Workshop: Intervention for Ischemic Cerebrovascular Diseases 脑血管病介入治疗
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1 December 2012 Saturday

8:30-8:40	Opening Ceremony (开幕式) 石逢
<b>Session 1</b>	Chairs(主持人): Qing Xinyue (秦新月) Zhang Meng (张猛)
8:40-8:55	Hu Xueqiang (胡学强), Department of Neurology, The Third Affiliated Hospital of Sun Yat-sen University Topic: Advances in Multiple Sclerosis research 多发性硬化研究进展
8:55-9:10	Yuan Zengqiang (袁增强) Laboratory of Brain and Cognition, Institute of Biophysics, Chinese Academy of Sciences, Beijing, China Topic: Signaling studies in the oxidative stress-induced neuronal cell death 神经细胞凋亡的信号转导研究
09:10-9:25	Wu Jian (武建) Department of Neurology, Xuanwu Hospital, Capital Medical University, Beijing, China Topic: Antithrombotic therapy after Stenting for stenosed intra- and extra-cranial arteries--Reality and Guideline 颅内动脉狭窄支架术后的抗栓治疗--现实与指南 石友峰
<b>Session 2</b>	Chair(主持人): Li Zhiwei (李志伟) Wang Yanjiang (王延江)
09:25-09:40	Chen Haibo (陈海波) Department of Neurology, Beijing Hospital, China Topic: Advances in Parkinson's disease research 帕金森病研究进展
09:45-10:00	Philippe Patrick Monnier Division of Genetics and Development, Toronto Western Hospital, Canada Topic: The dyslexia-associated gene KIAA0319-Like perturbs cell migration in the developing brain
10:00-10:20	Tea Break (茶歇)
<b>Section 3</b>	Chairs(主持人): Chen Kangning (陈康宁) Yan Yong (晏勇)
10:20-10:35	Guan Yangtai (管阳太) Department of Neurology, Changhai Hospital, Second Military Medical University, Shanghai, China Topic: Hemodynamic stroke 血液动力学与卒中 中风
10:35-10:50	Alina Borkowska Head of Chair and Department of Clinical Neuropsychology Nicolaus Copernicus University Collegium Medicum in Bydgoszcz, Poland

	Skłodowskiej-Curie str 985-094 Bydgoszcz, Poland Topic: Affective temperament and cognitive dysfunctions in patients with obesity in genetics context
10:50-11:05	Zhou Huadong (周华东) Department of Neurology, Daping Hospital, Third Military Medical University, Chongqing, China Topic: New understanding of vascular risk factors 对血管危险因素的新认识
11:05-11:20	Yang Qingwu (杨清武) 杨清 Department of Neurology, Xinqiao Hospital, Third Military Medical University, Chongqing, China Topic: Advances in diagnosis and treatment of cerebral hemorrhage 脑出血的诊疗进展 Toll-like receptor (TLRs)
11:20-11:35	Li Jingcheng (李敬诚) Department of Neurology, Daping Hospital, Third Military Medical University, Chongqing, China Topic: Hot issues of stenting for stenosed intracranial arteries 颅内动脉狭窄支架热点问题 ICAD
11:35-11:50	Satellite meeting 陈血通
11:35-13:00	Photograph and Launch 照相、午餐
<b>Section 4</b>	Chairs(主持人): Chen Yangmei (陈阳美) Wang Yan-Jiang (王延江)
13:00-13:15	Zhang Suming (张苏明) Department of Neurology, Tongji Hospital, Huazhong University of Science and Technology Topic: Issues worthy of attention for prevention and treatment of ischemic cerebrovascular diseases in China 中国缺血性脑血管病防治应关注的问题 ICH
13:15-13:30	Malgorzata Piskunowicz Department of Clinical Neuropsychology, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, Poland Topic: Neuropsychological and neurobiological aspects of Mild Cognitive Impairment
13:30-13:45	Mahmoud Balbaa Biochemistry Faculty of Science Beirut Arab University Beirut, Lebanon Topic: Diverse effects of cardiac and respiratory drugs on succinate-cytochrome reductase
13:45-14:00	Wang Li (王沥) Institute of Genetics, Chinese Academy of Sciences; Zhejiang Normal University, China Topic: Advances in molecular genetics of neurological Diseases 神经系统疾病的分子遗传学研究进展 GWAS

14:00-14:15	Jiang Xiaojiang (蒋晓江) Department of Neurology, Daping Hospital, Third Military Medical University, Chongqing, China Topic: Treatment and Diagnostic strategies for chronic insomnia 慢性失眠症的诊治策略
14:15-14:35	Tea Break (茶歇)
<b>Section 5</b>	Chairs(主持人): Wei Chiming (魏启明) Li Wei (李玮)
14:35-14:50	Mansoor Ahmad Editor-in-Chief, International Chemical Pharmaceutical and Medical Journal-Pakistan Research Institute of Pharmaceutical Sciences, Department of Pharmacognosy, University of Karachi, Karachi-75270, Pakistan Topic: By birth epilepsy in Pakistani children, causes, diagnosis and efficacy of herbal treatment
14:50-15:05	Feng-Bin Wang Department of Psychology, National Chung Cheng University, Chiayi 62102, Taiwan, China Topic: Double Labeling of Vagal Preganglionic and Sympathetic Postganglionic Fibers in Celiac Ganglion, Superior Mesenteric Arteries and Myenteric Plexus
15:05-15:20	Liu Yong (刘勇) Department of Neurology, Xinqiao Hospital, Third Military Medical University, Chongqing, China Topic: How to deal with the common complication of neuro-intervention 神经介入常见并发症及其处理
15:20-15:35	Xiao Hong Yu CNS & Pain Therapeutic Areas, WuXi App Tec (Shanghai) Co., Ltd, 288 Fute Zhong Road, Waigaoqiao Free Trade Zone, Shanghai 200131, China Topic: Development of clinical releveant end-point measurements in an animal model of schizophrenia
15:35-15:50	Discussion
15:50-16:00	Closing Ceremony (闭幕式)

Nano medicine  
 Glucose 1 Nm  
 Antibody 10  
 Virus 10  
 Bact. 103  
 Cancer cell 10

刘勇  
 90p

李玮

李玮科技论坛

与峰会初 (筛选) 切隔取代

杨主任

## ALINA BORKOWSKA



### Current position:

Head, Chair and Department of Clinical Neuropsychology  
Collegium Medicum Bydgoszcz, Nicolaus Copernicus University Torun, Poland

### Educational Qualifications:

- 2007: State Professor Of Medicine Nicolaus Copernicus University Torun, Collegium Medicum Bydgoszcz
- 2002: Postdoctoral Thesis University School Of Medicine, Bydgoszcz
- 1996: Doctoral Thesis

### Awards

Awarded with national and international scientific awards.

### Memberships:

- Member of Polish Psychiatric Association
- European Psychiatrist Association
- Member of scientific board in numerous scientific journals.

### Publications:

She is invited speaker in international congresses and author more than 350 publications including book chapters, books, paper in polish and international journals. She is also the reviewer in international journals in neuropsychiatry, neuropsychology and neurobiology areas.

### Research Fields:

Research Concerns On Neurobiology And Genetics Of Cognitive Dysfunctions In Psychiatric And Neurological Diseases, Especially Schizophrenia, Bipolar Disorder, Anxiety Disorders, OCD, MCI, Dementia, And Pathological Obesity. Current Topics Involved Neuropsychology And Neurobiology Of Decision Making Processes In Healthy People Exposed For High Stress Job. She Is a Head Of Numerous University And National Polish Grants In This Area And Participates In International Programs Concerning Genetics, Neurobiology And Treatment Of Cognitive Dysfunctions In Psychiatric And Neurologic Diseases.

## AFFECTIVE TEMPERAMENT AND COGNITIVE DYSFUNCTIONS IN PATIENTS WITH OBESITY IN GENETICS CONTEXT

Prof. Alina Borkowska

Chair and Department of Clinical Neuropsychology Nicolaus Copernicus University Torun, Collegium Medicum in Bydgoszcz, Poland

Obesity appears as a serious problem, especially in countries with high economic development. It is associated with severe health disturbances including metabolic, neurological, cardiac and cancer diseases. Etiopathogenesis of this disease is complex. Psychological factors, affective disturbances and cognitive dysfunctions seem to play a significant role in etiology and the course of the disease. The cognitive disturbances, especially frontal dysfunctions in patients with obesity may coexist with depression, metabolic syndrome and hypertension.

The aim of this study was to assess 5 dimensions of affective temperament (depressive, cyclothymic, hyperthymic, irritable and anxious) using the Polish version of TEMPS-A Akiskal scale and frontal functions using neuropsychological frontal tests in relation to the polymorphism of serotonin, dopamine and BDNF system genes in 500 patients with obesity with BMI>35. The results of patients with obesity were compared with the results of healthy controls, sex, age and education matched to the investigated group.

Subjects with obesity presented higher prevalence of depression (up to 50% cases) measured with Beck Depression Scale and Hamilton Depression Scale, significant impairment of prefrontal functions measured by Wisconsin Card Sorting Test (WCST) compared to the results of healthy controls.

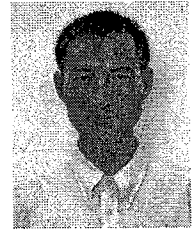
Obese patients show higher prevalence of depressive and anxious temperament than healthy subjects. Female patients present the highest prevalence of depressive and anxious, while males score higher on the irritable and hyperthymic dimensions. The intensity of depression was correlated with depressive temperament especially in females. The PCA analysis shows different factors associated with hyperthymic and the other dimensions on TEMPS-A scale. The higher score of depressive temperament in TEMPS-A scale was associated with the s/s allele of 5-HTT polymorphism gene. The val/val allele of Val/Met polymorphism of BDNF gene was associated with higher score of depressive and anxious temperament, while met/met allele of this gene was connected with higher score of hyperthymic dimensions of TEMPS-A.

The results of all aspects of WCST were connected with the polymorphism of COMT gene, the G/G allele of 5-HTT gene was associated with worse results on two dimensions on WCST (non-perseverative errors and numbers of cards needed to complete 1<sup>st</sup> category).

The results obtained show higher prevalence of depression, specific temperamental picture and prefrontal dysfunctions in patients with obesity. Polymorphism of serotonin system gene (5-HTT) and BDNF was related to the affective temperament dimensions, while dopaminergic COMT gene to the performance of cognitive prefrontal tests. This may indicate different influence of serotonin, dopamine and neurodevelopmental system genes on affective temperament and cognition in obese subjects.



## FENG-BIN WANG



### Current Position:

Department of Psychology, National Chung Cheng University

### Educational qualifications:

1995: PhD in Pschobiology/Neuroscience, Department of Psychological Sciences, Purdue University

### Recent publications:

- **Wang F-B\***, Young YK, Kao C-K. 2012. Abdominal Vagal Afferent Pathways And Their Distributions Of Intraganglionic Laminar Endings In The Rat Duodenum. *J Comp Neurol.* 520:1098-1113.
- **Wang F-B\***, Powley TL. 2007. Vagal Innervation Of Intestines: Afferent Pathways Mapped With New En Bloc Horseradish Peroxidase Adaptation. *Cell Tissue Res* 329:221-230.
- **Wang FB**, Powley TL. 2000. Topographic Inventories Of Vagal Afferents In Gastrointestinal Muscle. *J Comp Neurol* 421:302-24.
- Powley TL, **Wang FB**. 1995. Mapping Regional Distributions Of Vagal Afferent Projections To The Gastrointestinal Tract. *Gastroenterology*, 108:A670.
- **Wang FB**, Holst M-C, Powley TL. 1995. The Ratio Of Pre- To Postganglionic Neurons And Related Issues In The Autonomic Nervous System. *Brain Res Rev* 21: 93-115.
- Walls EK, Phillips RJ, **Wang FB**, Holst M-C, Powley, TL (1995). Suppression Of Meal Size By Intestinal Nutrients Is Eliminated By Celiac Vagal Deafferentation. *Am J Physiol* 269:R1410-R1419.
- Walls EK, **Wang FB**, Holst MC, Phillips RJ, Voreis JS, Perkins AR, Pollard LE, Powley TL. 1995. Selective Vagal Rhizotomies: a New Dorsal Surgical Approach Validated With Intestinal Deafferentation. *Am J Physiol* 269:R1279-R1288.
- Lee EHY, **Wang FB**, Tang YP, Geyer MA. 1987. Gabaergic Interneurons In The Dorsal Raphe Mediate The Effects Of Apomorphine On Serotonergic System. *Brain Res Bull* 18:345-353.
- **Wang FB**. 1995. Inventory And Distribution Of Vagal Afferent Projections In The Gastrointestinal Tract Of Rat. Dissertation, West Lafayette, IN: Purdue University.

## DOUBLE LABELING OF VAGAL PREGANGLIONIC AND SYMPATHETIC POSTGANGLIONIC FIBERS IN CELIAC GANGLION, SUPERIOR MESENTERIC ARTERIES AND MYENTERIC PLEXUS

Feng-Bin Wang\*, Shi Jane Ting, Chih-Kuan Kao

Department of Psychology and Advanced Institute of Manufacturing with High-tech Innovations, National Chung Cheng University, Chiayi 62102, Taiwan

Vagal preganglionic fibers were suggested to spread pathogens associated with Parkinson's disease. It has been confirmed that all vagal preganglionic, but not vagal afferent, projections express alpha-synuclein, both in axons and terminal varicosities in apposition with myenteric neurons. To examine the interactions of the vagal and sympathetic motor fibers in the celiac ganglion (CG) and gastrointestinal tract as well as along the superior mesenteric artery (SMA), we double-labeled the vagal efferents by injecting Dextran-Texas Red into the dorsal motor nucleus of the vagus and the sympathetic postganglionics with tyrosine hydroxylase immunohistochemistry in the male Sprague-Dawley rats (n=18). The laser scanning confocal microscope was used for examination. Vagal nerve endings were densely distributed around CG neurons, and the right CG received more. Different types of vagal and sympathetic efferent endings were identified in the myenteric plexus (MP). Vagal and sympathetic efferents coursed within the same nerve bundles before reaching the MP, had in-apposition varicosities, and ran parallel with the SMA and its small branches. Double-labeling of the autonomic efferents results in several significant conclusions: 1) Inventories of both the vagal and sympathetic efferents show their interaction patterns and may guide further functional studies; 2) The prominent projections of the sympathetic efferents to the blood vessels and MP may explain the rapid sympathetic responses in emergency conditions; 3) The various in-apposition innervation varicosities within the same nerve bundles and in the MP of the gut may suggest a possible infection route of the Parkinson's disease between the autonomic efferent endings.

## MAHMOUD MOHAMED ESSMAT BALBAA

### Current Position:

Department of Biochemistry, Faculty of Science Alexandria University, Egypt

### Professional experience:

2009-Now: Department of Biochemistry, Faculty of Science, Beirut Arab University,

Lebanon. Professor

2007-2009: Head of Department of Biochemistry, Faculty of Science, Alexandria University

2006-2007: Department of Biochemistry, Faculty of Science, Alexandria University, Professor

2002-2006: Department of Chemistry & earth Sciences, University of Qatar, Doha, State of

Qatar. Professor

1999-2002: Department of Biochemistry, Faculty of Science, Alexandria University, Egypt.

Professor

1994-1999: Department of Biochemistry, Faculty of Science, Alexandria University, Egypt.

Assistant Professor

1988-1994: Department of Biochemistry, Faculty of Science, Alexandria University, Egypt.

Lecturer

1979-1988: Department of Biochemistry, Faculty of Science, Alexandria University, Egypt.

Assistant Lecturer

### Educational qualifications:

1975: Alexandria University, Faculty of Science, Egypt: Bachelor of Science in

Biochemistry

1979: Alexandria University, Faculty of Science, Egypt: Master of Science in

Biochemistry

1988: Hokkaido University School of Medicine, Japan: Ph.D. in Biochemistry, 1988.

### Research Areas:

- Enzyme Inhibition, Kinetics and Mechanism.
- Biochemical Changes in Schistosmiasis.
- Cell Signaling.

### Publications:

40 published articles in different journals. H-Index is 6.0.

# DIVERSE EFFECTS OF CARDIAC AND RESPIRATORY DRUGS ON SUCCINATE-CYTOCHROME c REDUCTASE

MAHMOUD BALBAA

Department of Biological and Environmental Sciences, Faculty of Science, Beirut Arab University,  
Beirut, Lebanon

**Background:** Several drugs have been implicated as having various respiratory and cardiac effects. For example, phenobarbitone is a central nervous system sedative and is also an anticonvulsant. Neostigmine, which is a stimulant of the parasympathetic nervous system, acts as a reversible anti-cholinesterase for the treatment myasthenia gravis and certain types of glaucoma. Aminophylline is a vasodilator, which improves the cardiac index and pulmonary vascular resistance. Gallamine is considered as a muscle relaxant that has a cardiovascular effect [1]. On the other hand, the main respiratory chain in mitochondria consists of dehydrogenases, including succinate-cytochrome c reductase (SCR), linked to flavoproteins and the cytochrome system. This enzyme catalyzes the oxidation of succinate by cytochrome c (cyt c) or 2,6-dichlorophenolindophenol (DCIP) under optimal conditions. The reduction of DCIP by succinate was found to be highly dependent upon DCIP concentration [2].

**Aims:** In clinical applications, different types of enzymes were investigated in an attempt to reflect changes occurring in the different tissues. SCR was subjected for the current study to reveal the effect of the above mentioned drugs on the biological oxidation because of their clinical application without enough knowledge of their specific action on the enzymes of the respiratory chain.

**Methods:** The mice were treated with different doses of the above mentioned drugs in saline by *i.m.* or *s.e.* injections. At the end of each infection period, the infected group and the corresponding control one were sacrificed. The livers were immediately removed, homogenized and centrifuged. The obtained supernatant was subjected to enzyme assay and the corresponding enzyme purification of the kinetic study.

**Results:** SCR was inhibited *in vitro* and *in vivo* by phenobarbitone, aminophylline and neostigmine using both DCIP and cyt c as substrates. The enzyme was also activated by gallamine towards both substrates. *In vitro*, phenobarbitone and aminophylline inhibited the enzyme with respect to the reduction of DCIP and cyt c in a non-competitive manner with  $K_i$  values of  $1.5 \times 10^{-5}$  and  $5.7 \times 10^{-5}$  M, respectively. Moreover, neostigmine competitively inhibited the enzyme towards both substrates with  $K_i$  values of  $1.36 \times 10^{-5}$  and  $1.50 \times 10^{-5}$  M, respectively.

**Conclusions:** completely different mechanisms are operative through the effect of these drugs on the enzyme.

## **MALGORZATA TATIANA PISKUNOWICZ**



### **Personal Information:**

Date of Born: 21st of November 1984 in Bydgoszcz, Poland.

### **Current position:**

Assistant at the Chair and Department of Clinical Neuropsychology,  
Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Toruń, Poland

### **Educational qualifications:**

2008-: Master's Degree In Psychology, Adam Mickiewicz University.

2009-: Doctoral Studies At The Chair And Department Of Clinical Neuropsychology, Collegium Medicum In Bydgoszcz, Nicolaus Copernicus University In Toruń.

2006-2007: Socrates -Erasmus Programme at the Università degli Studi di Trieste, Italy.

### **Professional Experience:**

Psychologist At The Psychogeriatric Clinic And Internship At The Department Of Neurology.

### **Memberships:**

Member Of Research Groups Conducting Projects On Cognitive Functions, Temperament, Mood And Quality Of Life In Chronic Obstructive Pulmonary Disease, Crohn's Disease And Ulcerative Colitis.

Member Of Polish Alzheimer's Society.

# NEUROPSYCHOLOGICAL AND NEUROBIOLOGICAL ASPECTS OF MILD COGNITIVE IMPAIRMENT.

**Małgorzata Piskunowicz And Alina Borkowska**

Chair and Department of Clinical Neuropsychology Nicolaus Copernicus University Torun, Collegium  
Medicum in Bydgoszcz, Poland

Mild Cognitive Impairment (MCI) is defined as a heterogeneous condition both in its clinical presentation and etiology. MCI may represent a transitional state between normal cognition and dementia. In many cases cognitive deficits are stable for a long time; however, about 50% of MCI subjects demonstrated significant deterioration of cognitive function within 5 years, and conversion to dementia, mostly of the Alzheimer's type (AD). According to Petersen study after 6 years about 80% of MCI subjects progressed to dementia. By now scientists agree that the DAT pathophysiological process starts decades before onset of clinical symptoms thus MCI is considered to be a prodromal stage of the disease.

Different subtypes of MCI have been discriminated: single domain amnesic form and nonmemory, multiple-domain cognitive impairment. As amnesic MCI harbinger AD, visuospatial MCI may be a risk factor of developin dementia with Lewy bodies. In 2011 prodromal AD phase has been defined as Alzheimer's MCI. According to meta-analysis APOE epsilon4 allele is a moderate risk factor for developing late onset sporadic AD the most common type of dementia in elderly. As inflammatory processes seem to play a crucial role in the pathophysiology of AD genetic variations in inflammatory related genes are being investigated.

Depression, especially in older age, is a frequent cause of cognitive dysfunctions. Cognitive deficits, such as psychomotor slowness, impairment of attention, memory and visuospatial functions occurring during depression are symptoms of what is called "depressive pseudodementia". The prevalence on MCI symptoms in late life depression is detected in 40-60% patients. Our previous study of cognitive functions in non-depressed patients with mild cognitive impairment (MCI), compared with age-, gender- and education-matched patients with acute depressive episode, and with healthy subjects shows that patients with MCI obtained significantly worse results on all domains of the WCST and the N-back test compared to both depressed and healthy subjects. Depressed patients showed significantly worse performance than controls on most scores. In the MCI group, no association with MMSE was found with any of WCST domains, or with reaction time in the N-back test. Three tests, WCST-P, N-back %CORR and WCST 1st CAT obtained highest ranks (<math>\\_90</math>) as predictors for differentiating between groups. The results suggest a usefulness of employing WCST and N-back tests for a neuropsychological evaluation of patients with MCI.

Preliminary results of our current study suggest that subjective memory complaints in elderly may be more related to anxiety and depression symptoms than to objective measures of cognitive performance. This questions the role of subjective cognitive complaints reported by the patient as one of the MCI benchmarks.

## **MANSOOR AHMAD**



### **Personal formation:**

Date of Born: Jan. 15, 1953

### **Current Position:**

Laureate of Presidential Award-2000 and Meritorious Professor Grade-22

Research Institute of Pharmaceutical Sciences, Faculty of Pharmacy, University of Karachi

### **Qualification/Experience**

M. Sc. (Kar.)

M.D. (Alt. Med.)

D.Sc. (ETH-Swiss)

DHMS, RHMP,

MPPS, MPSP, MACS

MACS (USA)

MNYAS (USA)

Physiotherapist

### **Memberships:**

Scientific Society of Pakistan

Chemical Society of Pakistan

Pakistan Pharmacology Society

Pakistan Soc. of Biochem.

American Chemical Society

New York Academy of Sciences

### **Previous Award**

2000: KUTS Awards Nishan-e-Azmat-e Danish

2000: Govt. Pakistan Presidential Award

1999: Pakistan Society of Pharmacognosy

1994: Thinker Forum Awards

## BY BIRTH EPILEPSY IN PAKISTANI CHILDREN, CAUSES, DIAGNOSIS AND EFFICACY OF HERBAL TREATMENT

**Prof. Dr. Mansoor Ahmad**

Research Institute of Pharmaceutical Sciences, Department of Pharmacognosy, University of Karachi,  
Karachi-75270, Pakistan

**Aim of study:** Epilepsy is a serious neurological disorder through out the world. In Pakistani population epidemiological studies have shown that 9.99 in 1000 numbers of people aged below 30 suffering from this disorder. The main objective of this study is to find out the causes and effective treatment of epilepsy.

**Methods:** For this purpose Descriptive cross sectional study was used that based on patient history, diagnosis and various methods of treatment.

**Results:** The results showed that out 20 children (1-12 years) 35% have epilepsy due to depression of mother during the pregnancy time. 2% have family history of epilepsy. 2% accidental injuries, 2.5 % develop epileptic episode due to social environment, parent negligence and aggressive behavior. 1% of the selected patients have idiopathic epilepsy. Treatment strategy also varied family to family, traditional way of treatment is more preferred. There is lack of consistency about the treatment. EEG is more often not help full for the treatment. The results of supportive medicines are based on herbal treatment and were effective to control the convulsions/fits.

**Conclusion:** In Pakistani population epilepsy is considered as a strange disease and even after diagnosis people thought it may be due to some false perception. People avoid talking about this. Avoid doctors and medications or take wrong medicine which increased the problems. By birth epilepsy is common in those normal women who have episodes of depression during pregnancy.



## PHILIPPE PATRICK MONNIER



### Personal Information:

Nationality: French/Canadian

Date of Born: August 2, 1968

Address: Toronto Western Hospital McLaughlin Pavilion 399 Bathurst Street 6-415  
Toronto, ON M5T2S8

### Educational qualifications:

1999: PhD Neurobiology, Ophthalmology clinic, University of Tübingen, Germany.

1995: MBA, ICN School of Management, University of Nancy, France.

1994: MSc in Biochemistry, INSERM U284, University of Nancy, France.

1987-1992: Study of Biochemistry, University of Nancy, France.

1987: BSc of Sciences, Lycée Saint Sigisbert, Nancy, France.

1983-1987: Study of Mathematics, Physics and Biology, Lycée Saint Sigisbert, Nancy, France.

### Professional experience:

2003-Now: Scientist at the Toronto Western Hospital, Division of Genetics and Development.  
University of Toronto.

2000-2003: Group leader, member of the management board at Migragen AG, Tübingen, Germany.

1999-2000: Postdoctoral fellow at the Max-Planck-Institute for Developmental Biology, Tübingen.

1996-1999: Doctoral fellow at the Ophthalmology department of the University of Tübingen.

1994-1995: National Service at the centre for veterinary research of Nancy, France.

1992-1993: Master at INSERM U284, Nancy, France.

1990-1991: Teacher at Saint Leon IX College- Teaching of Mathematics and Biology

### Recent publications:

- Diane M. Cockburn, Jason Charish, Nardos G. Tassew, James Eubanks, Rod Bremner, Paolo Macchi, Philippe P. Monnier P.P. (2012). The double-stranded RNA-binding protein Staufen 2 regulates eye size. *Mol. Cell. Neurosci.* [Epub ahead of print]
- Yong-Kee CJ, Warre R, Monnier P.P., Lozano AM, Nash JE. (2012). Evidence for Synergism Between Cell Death Mechanisms in a Cellular Model of Neurodegeneration in Parkinson's Disease. *Neurotox Res.* [Epub ahead of print]
- Tassew N. G., Charish j., Seidah N., Monnier P. P. (2012) SKI-1 and Furin generate multiple RGMa proteins that regulate axonal growth. *Dev. Cell* 22:191-402.
- \*Monnier P.P., D'Onofrio P., Magharious M., Hollander A., Tassew N., Szydloska K., Tymianski M., Koeberle P. D. (2011) Involvement of caspase-6 and caspase-8 in neuronal apoptosis and the regenerative failure of injured retinal ganglion cells. *J. of Neurosci.* 31:10494 -10505.

## THE DYSLEXIA-ASSOCIATED GENE KIAA0319-LIKE PERTURBS CELL MIGRATION IN THE DEVELOPING BRAIN

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Developmental dyslexia, or specific reading disorder, has a genetic component and is thought to involve an abnormality in neuronal migration during development. Several candidate susceptibility genes have recently been identified, and the purpose of this study is to determine the expression pattern and function of the chick counterpart of one of these gene products, namely Kiaa0319-Like (Kiaa0319L), using the developing chick developing brain as a model.

Whole mount *in situ* hybridizations using digoxigenin riboprobes were performed for Kiaa0319L on embryos aged embryonic day (E)3 – E5 and *in situ* hybridizations on sections were performed at later stages. The results demonstrate that Kiaa0319L mRNA is expressed in the developing visual system, including the optic tectum (OT).

RNA interference (RNAi) constructs targeting Kiaa0319L were prepared and their specificity and efficiency for knocking down endogenous Kiaa0319L were tested. Effective RNAi constructs were electroporated in E5 OT, followed by further incubation until the embryos were sacrificed at E12. In the developing visual system and brain, neurons must migrate from the areas where they are born to the areas where they will settle into their proper neural circuits. Knock-down of endogenous Kiaa0319L led to abnormalities in cellular migration in the developing OT, indicating that Kiaa0319L is necessary for this process and provides the first clues as to the important developmental function of this molecule.

In summary, although the notion that dyslexia may be associated with cell migration defects within the developing brain, this was never demonstrated for Kiaa0319L. Here we demonstrate that Kiaa0319L regulates cell migration in the brain. This will have implications for the diagnosis of dyslexia as well as for the development of treatments of the disease.

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### Professional experience:

- 2012: Wuxi App Tec As Senior Director In Charge Of In Vivo CNS & Pain Therapeutic Area.
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### Research Interests

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### Recent publications:

- XH Yu, CQ CAO, G Martino, M Pare, JMA Laird, K Payza, S St-Onge, É Lessard, R Panetta, H Yang, J Ducharme, MN Perkins and T Groblewski (2012): Pre-clinical pharmacological properties of AZD1940, a novel peripherally-acting CB1/CB2 agonist (submitted).
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# DEVELOPMENT OF CLINICAL RELEVANT END-POINT MEASUREMENTS IN AN ANIMAL MODEL OF SCHIZOPHRENIA

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**Aim of the investigation:** There is low success rate of CNS drugs in clinical studies and the rate of failure remains the highest in phase 2, for lack of efficacy (Shah & Federoff, 2009). Multiple reasons are responsible and one of the important concerns that has been raised is the relative lack of clinically relevant preclinical models or measurements (Markou et al., 2008). Here we report the setting up of two assays, mimicking clinical measurements in schizophrenia patients.

△ **Intra-dimensional/Extra-dimensional (ID/ED) attentional set-shifting** measured the ability of subjects to inhibit previously acquired associations (cognitive sets) and re-engage attention to a new cognitive set (learn new rules). This is a classical measure of executive function, among the most severely impaired cognitive domain in schizophrenia patients. **Prepulse inhibition (PPI)** was considered as a form of sensorimotor gating since it referred to the ability of a sensory event to suppress a motor response. Deficits in PPI have been widely reported in schizophrenia patients as well.

**Methods:** The schizophrenia animal model was developed in rats with PCP injections on postnatal day (PND) 7, 9 and 11. Behavioral deficits were measured between PND56 and PND95. For ID/ED, wisconsin card sorting test was applied for human to match cards by color, number or shape of symbols while attentional set-shifting was tested in rats to dig food rewards by media or odors (Birrell and Brown 2000; Goetghebeur and Dias 2009). Both Haloperidol (0.1 mg/kg, i.p.) & Modafinil (64 mg/kg, p.o.) were used to evaluate this end point. PPI was measured in humans by the movements of oculomotor muscles (eye-blink reflex assessed using electromyographic recording of orbicularis oculi muscle and by oculo-graphy) while in rat, startle response was measured using the automated startle chambers, with detector to record whole-body reaction. All animal experiments were approved by Wuxi App Tec Animal Care Committee, in accordance with current national guidelines regarding animal welfare.

**Results:** ID/ED: at PND56~70, rats were trained with 7 discrimination steps, 8 media and 8 odors for 4 days. Compared to vehicle treated rats, neonatal PCP rats exhibited significant deficits in re-engaging attention to a new cognitive set. The deficit was reversed by Modafinil but not Haloperidol. PPI: PND 56 (45 days post PCP injection), rats developed significant deficiency in the ability of a sensory event to suppress a motor response.

**Conclusions:** Our data suggest that in a rat model of schizophrenia, the executive ability and the ability of a sensory event to suppress a motor response were significantly impaired. The executive deficient could be reversed by Modafinil but not by Haloperidol. The results were similar to what have been reported in schizophrenia patients, suggesting the behavioral measurements in this animal model were highly translatable to the symptoms of schizophrenia patients.

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