



# Department of Psychiatry Newsletter



March 15, 2006 Volume 5 Issue 1

## Update from Department Head

Dr. Athanasios Zis

### Results of January 2006 CIHR competition

Dr. Brian MacVicar (Basic Neuroscience) received a grant of \$ 730,000 over a period of 5 years to pursue his studies on the role of calcium signaling in astrocytes and its effects on cerebral blood flow.

Dr. William Piper (Behavioural Science) received an operating grant of \$135,000 over a period of two years to explore the mechanisms of underlying composition effects in group therapy for complicated grief. It was ranked first among 27 applications.

Dr. Weihong Song (Basic Neuroscience) received approximately \$ 370,000 over a period of three years for his studies on the role of presenilins and secretases in APP processing and Alzheimer's Disease pathogenesis. He also received \$50,000 for a pilot project aimed at elucidating the role of the DSCR1 gene which has been linked to Schizophrenia.

### Other Distinctions & Awards

Dr. Steven Taylor (Behavioural Science) was the recipient of the BC Psychological Association's 2005 Scientist-Practitioner Award.

The Society for Sex Therapy and Research (SSTAR) Health Professional Book Award Committee announced that the winner selected for the first award to be presented at the SSTAR 2006 Annual Meeting is Dr. William Maurice (Emeritus) for his textbook "Sexual Medicine in Primary Care".

### BC Leading Edge Endowment Fund Chair in Depression Research: Dr. Allan Young

On November 18, 2005 BC Premier Gordon Campbell and UBC President, Dr. Martha Piper announced the appointment of Dr. Allan Young as the new BC Leadership Chair in Depression Research and Professor of Psychiatry (Clinical Neuroscience). Dr. Young obtained his medical degree from the University of Edinburgh Medical School in 1984 with Distinction in Psychiatry. He pursued specialist clinical training in Psychiatry and research training including an MSC (University of Edinburgh) and a Ph.D. from the University of Oxford. Prior to coming to UBC he was Professor of General Psychiatry and Director of Psychiatry at the School of Neurology, Neurobiology and Psychiatry at the University of Newcastle upon Tyne and Head of the Academic Mental Health Unit and Honorary Consultant at Royal Victoria Infirmary at Newcastle upon Tyne. His research and clinical work focuses on depression in general and bipolar disorder specifically. A consummate clinician, he is well versed in clinical, translational and laboratory research. He will join a strong team of clinicians and scientists at the Mood Disorders Centre of Excellence at UBC Hospital, led by Drs. Raymond Lam and Lakshmi Yatham.

### International Relations

In December 2005 a CIHR delegation led by Dr. Alan Bernstein, President, Canadian Institute of Health Research and which included Dr. Weihong Song visited Beijing, China for signing a Joint Research Funding Program with the National Nature Science Foundation of China. In the context of this agreement partnerships have already been established and memoranda of understanding have been signed between the Beijing Institute of Technology and the UBC Institute of Mental Health and Brain Research Centre and between Peking University, Tsinghua University, Fudan University and Central South University and the UBC Graduate Program in Neuroscience. Dr. Weihong Song has played a key role in initiating and creating the opportunities which led to each of these developments.

Dr. Alaa El-Husseini (Basic Neuroscience) was appointed as a member of the founding committee of a Conference consisting of seven prominent personalities from different scientific, artistic and literary fields from around the world, for the purpose of establishing fruitful collaborations between Arab immigrant scientists and the Qatar Foundation. The Qatar Foundation for Education, Science and Community Development is a private, nonprofit organization, founded in 1995 by his Highness Sheikh Mozah Bint Nasser Al-Missned. It aims at developing the human potential in Qatar and the Arab world in the fields of education, scientific research and community welfare.

### Administrative appointments and resignations

Dr. Patrick Smith, recently appointed to the rank of Clinical Associate Professor will assume the leadership of the newly created Division of Addiction Psychiatry. He was recruited to Vancouver by the Provincial Health Services Authority (PHSA) as Senior Advisor, Mental Health and Addictions. Dr. Smith obtained his Ph.D. in Clinical Psychology from the University of Nebraska followed by further training at the University of Canterbury (NZ) and Yale University. He previously held appointments at the University of Arkansas and the University of Toronto where he served as Head of the Addiction Psychiatry Program and as Vice President of Clinical Programs at the Centre for Addiction and Mental Health (CAMH).

Dr. Elliot Goldner & Dr. Charlotte Waddell resigned their appointments with UBC to join Simon Fraser University. As a result the Division of Mental Health Policy & Services and MHECCU have now become defunct. All contractual obligations with the BC Ministry of Health and Health Canada have been or are in the process of being transferred to SFU. In the future, information pertaining to the contracts can be obtained by contacting Mr. Cyril Lopez at 604-268-7771.

## Event Calendar



### **'Frames of Mind'**

A Department of Psychiatry sponsored Mental Health film series held at the **Pacific Cinémathèque** 1131 Howe Street, Vancouver  
Tickets : \$8.50 (7.00 students) at the door or on-line at [www.cinématheque.bc.ca](http://www.cinématheque.bc.ca)

### **March 15, 2006 7:30 p.m.**

'This Beggar's Description'

Director: Pierre Tetrault

Discussant: Pierre Tetrault

### **April 19, 2006 7:30 p.m.**

'The Devil and Daniel Johnston'

Director: Jeff Feuerzig

Discussants: Mr. Luke Meat & Dr. H. Karlinsky

### **Teaching Hospital /Division/Program Education Rounds**

Information /details available at :

[www.psychiatry.ubc.ca/cme/rounds/](http://www.psychiatry.ubc.ca/cme/rounds/)

### **Other Activities**

#### **March 30, 2006**

Annual Research Day—Detwiller Theatre 8:30-3p.m.

Clinical Faculty Meeting ,University Golf Club

6:00– 7:00 pm

Awards & Dinner—University Golf Club

7:00 pm

Info: 604 822 7610

#### **May 4—7, 2006**

3rd Annual Frames of Mind Mental Health Film Festival

Pacific Cinematheque

Info: 604-822-7610

#### **June 9, 2006**

5th Annual UBC Dept of Psychiatry Clinical Day Conference

UBC at Robson Square

Info: 604-822-7301

*In our December 2005 update on the UBC Institute of Mental Health, we indicated that the Institute would be sponsoring a dialogue on the determinants of mental health with the His Holiness the Dalai Lama on April 6, 2006. Due to scheduling conflicts this event has now been moved to September 9, 2006.*

**Editor - Dr. Harry Karlinsky**

**Managing Editor - Michelle Purcell**

This newsletter is published quarterly as a vehicle to promote communication within the UBC Dept. of Psychiatry as well as with its wider community. Feedback and suggestions for invited submissions can be forwarded to the Editor at [harryk@telus.net](mailto:harryk@telus.net).

## Division of Basic Neurosciences—Research Update

Dr. Steve Vincent

*Editors Note: This report highlights some of the exciting recent discoveries made by researchers in the Division of Basic Neuroscience of special interest to Alzheimer's disease, Huntington's disease and drug addiction. Stay tuned for further research updates from other Divisions and Programs within the department.*

A series of recent papers published in *The FASEB Journal* by Weihong Song, his graduate student Xiulian Sun, and their colleagues has shed new light on the processing of the amyloid precursor protein, and the formation of amyloid plaques in Alzheimer's disease and Down's Syndrome. Amyloid  $\beta$  protein ( $A\beta$ ) is the principal component of neuritic plaques in Alzheimer's Disease (AD).  $A\beta$  is derived from  $\beta$  amyloid precursor protein (APP) by the  $\beta$ - and  $\gamma$ -secretases. Beta-site APP cleaving enzyme 1 (BACE1) has been identified as the major  $\beta$ -secretase. BACE2 is a homolog of BACE1. The *BACE2* gene is on Chromosome 21, which is trisomic in Down's syndrome, and has been implicated in the pathogenesis of AD. However, the function of *BACE2* in  $A\beta$  generation is controversial. The research from Dr. Song's laboratory indicates that despite being homologous in amino acid sequence, BACE2 and BACE1 have distinct functions and transcriptional regulation. BACE2 is in fact not a  $\beta$ -secretase, but processes APP within the  $A\beta$  domain at a site downstream of the  $\beta$ -secretase cleavage site. This argues against *BACE2* being involved in the formation of neuritic plaques. Since BACE2 is almost undetectable in brain tissues and BACE2 antagonized the action of BACE1 on APP processing, up-regulation of BACE2 in neuronal cells may be one potential strategy in AD therapy. Dr. Song's laboratory is currently investigating the pharmaceutical potentials of inhibiting BACE1 and/or potentiating BACE2 for Alzheimer's disease treatment.

For her work on the BACE enzymes, Xiulian Sun was a recent recipient of the CIHR Institute of Aging Age Plus Award, which recognizes excellence in research on aging carried out in Canada. It is awarded monthly to the author of a published, scientific article on aging, and is primarily aimed at graduate and postdoctoral students and residents from all disciplines, working in the field of aging.



Xiulian Sun

A pair of recent papers from Alaa El-Husseini's laboratory in collaboration with Michael Hayden of the Centre for Molecular Medicine and Therapeutics, has provided

novel insight into the pathogenesis of Huntington's disease. Alaa, together with graduate student Kun Huang and their colleagues have found that a protein called HIP14, and previously found to be associated with the huntingtin protein, is a neuronal palmitoyl transferase. In neurons, modification by the lipid palmitate regulates the trafficking and function of signaling molecules, neurotransmitter receptors and associated synaptic scaffolding proteins. While the importance of palmitoylation in neuronal protein trafficking and synaptic function is well documented, the neuronal enzymes (palmitoyl transferases) involved in this process have been eagerly awaited. This finding is the first to define a neuronal enzyme involved in palmitoylation and trafficking of multiple neuronal proteins. More recently, they have revealed that HIP14 regulates the palmitoylation and trafficking of huntingtin, the protein mutated in Huntington disease. They have also revealed that altered palmitoylation of huntingtin induces abnormal protein aggregation and results in protein misfolding and the formation of inclusion bodies, one of the common defects observed in Huntington's disease.

For her work on HIP14, Kun Huang received the *Brain Star Award*, from the CIHR Institute for Neuroscience, Mental Health and Addiction. These awards are based on a research article recently published (during the past six months) as first author by a trainee (MSc, PhD, PDF, residents) in any Canadian university, hospital or research institute. They serve to recognize the excellence of research done in Canada by graduate students, post-doctoral fellows, and residents in all fields and disciplines covered by the Institute.



Kun Huang

Dr. El-Husseini is a UBC Distinguished University Scholar, a MSFHR Scholar and a CIHR New Investigator. His research is supported by the EJLB Foundation, Neuroscience Canada, High Q foundation, MSFHR and the CIHR.

Finally, a recent paper in *Science* by Karen Brebner, a Research Associate in Dr. Phillips' laboratory, resulting from a collaboration with the laboratory of Dr. Yu-Tian Wang (Department of Medicine) has received much attention. It is well known that repeated exposure to drugs of abuse such as amphetamine, cocaine and nicotine can lead to long-lasting changes in the strength of synaptic transmission in mesocorticolimbic regions of the brain. Using new synthetic peptide inhibitors of a specific type of synaptic plasticity – the long-term depression (LTD) of excitatory neuro-

transmission – this team of investigators has identified molecular components of a neural adaptation that might underlie drug craving in addicts. In particular, enhanced LTD of glutamatergic transmission in the nucleus accumbens has been identified as a neural correlate of behavioural sensitization to cocaine. Now this team has provided insights into the molecular mechanisms that underlie LTD in the nucleus accumbens and the expression of behavioural sensitization to amphetamine. A membrane-permeant form of peptide blocker of the GluR2 glutamate receptor was used to target LTD in the nucleus accumbens of freely moving rats. The peptide blocked the expression of amphetamine-induced behavioural sensitization, raising the interesting question of whether GluR2-dependent glutamate receptor endocytosis is involved in the intensification of drug craving seen in human addicts with repeated drug exposure. The researchers propose that such peptides could also provide a basis for the development of drugs to treat the maladaptive neural adaptations associated with drug addiction.



Dr. Karen Brebner

tion. This work was supported by a \$1.5 million grant from the NeuroScience Canada Repair Program.

## Articles:

Sun X, Tong Y, Qing, H, Chen C-H, and Song W. Increased BACE1 Maturation contributes to Alzheimer's Disease pathogenesis in Down Syndrome. *FASEB Journal*, in press.

Li, L, Zhou, W, Tong, Y, He, G, Song, W. Control of APP processing and  $A\beta$  generation level by BACE1 enzymatic activity and transcription. *FASEB Journal*. 20:285-292, 2006.

Sun, X, Wang, Y, Qing, H, Christensen, MA, Liu, Y, Zhou, W, Tong, Y, Xiao, C, Huang, Y, Zhang, S, Liu, X, Song, W. Distinct transcriptional regulation and function of the human *BACE2* and *BACE1* genes. *FASEB Journal* 19:739-749, 2005.

Huang K, Yanai A, Kang R, Arstikaitis P, Singaraja RR, Metzler M, Mullard A, Haigh B, Gauthier-Campbell C, Gutekunst C-A, Hayden M, El-Husseini, A. Huntingtin interacting protein HIP14, is a palmitoyl transferase involved in palmitoylation and trafficking of multiple neuronal proteins. *Neuron* 44: 977-986, 2004.

Yanai A, Huang K, Kang R, Singaraja R, Arstikaitis P, Mullard A, Haigh B, Gauthier-Campbell C, El-Husseini A, Hayden MR. Decreased palmitoylation of mutant huntingtin at cysteine214 leads to disturbed trafficking and enhanced aggregation. Submitted.

Brebner K, Wong TP, Liu L, Campsall P, Gray S, Phelps L, Phillips AG, Wang YT. Nucleus accumbens long-term depression and the expression of behavioural sensitization. *Science*, 310: 1340-1343, 2005.

## Undergraduate Education

Dr. Janette McMillan

Interesting things are happening at the Undergrad teaching level in the Department of Psychiatry!

The current Psychiatry components in the UBC medical school programme are:

1. Brain and Behaviour, in the Foundations of Medicine course (FMED), the nine-week block in Year 2 containing basic Neuroscience and clinical Neurology, Neurosurgery and Psychiatry taught in a mix of lectures labs and PBL cases;
2. Clinical Skills, in the INDE 420 course in Year 2, the basic interviewing skills course with actual patients, taught in small groups over four afternoon sessions.
3. Clinical Clerkship, in Year 3, the six-week placement doing inpatient and outpatient work, emergency and seminar teaching; and
4. Electives/Selectives, in the first half of Year 4, the one-month choices usually of subspecialty rotations often in different cities.

The first wave of expansion for the UBC Medical School has completed Year 1 and is currently in Year 2. Dr. Kerry Jang, in his role as Course Director, reports that FMED has gone smoothly. The students are now beginning their second-year Clinical Skills course under the auspices of Dr. Elton Ngan. They will begin Year 3, the clerkship year, in September 2006.

There are 24 students in the Island Medical Programme (IMP) based in Victoria, 24 in the Northern Medical Programme (NMP) based in Prince George, and 24 more in the Vancouver Fraser Medical Programme (VFMP), based in the Lower Mainland. All the students will earn UBC degrees in collaboration with the University of Victoria and University of Northern British Columbia.

The second wave of expansion, 24 students in the VFMP, is currently in Year 1 and will be starting their clerkship in September 2007.

In anticipation of the expansion for the clerkship in September 2006, we have been piloting rotations at Royal Columbian Hospital (RCH), the IMP, and Richmond Health Services (RHS) and are working on pilots for the NMP and Lions

Gate Hospital (LGH).

Dr. David Bond, succeeded by Dr. Samantha Kelleher, in collaboration with all their colleagues, developed our first pilot in Psychiatry, at RCH. Dr. Harry Karlinsky has done the same for RHS. The RCH and RHS rotations have received excellent feedback and have been incorporated into the "regular" systems taking two students each rotation. The long-standing sites of UBC, Vancouver General and St. Paul's Hospitals will continue to provide experiences for the majority of students.

The IMP and NMP face the challenge of developing their own rotations with the same objectives, exams and evaluation as the current clerkship but with different resources, areas of expertise, and patterns of practice. Dr. Wei Yi Song is the site leader for the IMP. He and a committed group spent many hours planning the best ways to deliver the curriculum. They ran one pilot last year and have just finished a second "polishing" rotation. Dr. Johannes Giede is the site leader for the NMP and he and Dr. Galt Wilson, the NMP Clerkship Director are meeting with Prince George psychiatrists to do the same. The NMP pilot will run in April-May 2006.

As well, the Year 3 committee modelled an experiment in a "rural" clerkship developed from the Adelaide, Australia model and based in Chilliwack. Dr. Betty Tang has spearheaded the Psychiatry teaching in this non-rotation integrated clerkship. The first cohort of students completely this successfully and a second set are at the six-month point.

Thanks to Discipline-Specific Site Leaders (DSSLs) for the preparation of Year 3 expansion: Dr. Andrzej Koczapski (UBC), Dr. Hiram Mok (VGH), Dr. Adam Chodkiewicz (SPH), Drs. David Bond and Samantha Kelleher (RCH), Dr. Wei Yi Song, (IMP), Dr. Harry Karlinsky (RHS) and Dr. Betty Tang and their teams of clinical teachers. Welcome to Dr. Johannes Giede (NMP) and Dr. James Fabian (LGH).

Year 4 expansion is a year away, beginning in September 2007. Psychiatry selections are popular with students considering Psychiatry and also with others who wish to round-out or augment their experiences. Some of the Year 3 expansion will use former Year 4 sites and Year 4 is being revised to adapt to the dispersed sites. Please contact Karen Ng if you are interested in providing an elective experience where you practice.

With expansion as the driving force, there has been a lot of evaluation and reassessment of where students should go, what students need to do, what they need to know, what they need to have experienced, how they are evaluated, and how they evaluate us. The Undergraduate Education consists of the DSSLs; Brain and Behaviour Block Director, Dr. Kerry Jang; Clinical Skills Director, Dr. Elton Ngan; Year 4 Director, Dr. Peter Chan; Child Psychiatry rep, Dr. Jacqueline Weiss; student reps, Jessica Luckhurst and Stephen Wu; resident rep, Dr. Muz Chaudhary; myself as Year 3 Director and the programme administrator, Karen Ng. We have been working steadily to articulate these issues. We are planning a one-day retreat to focus and develop tools. I appreciate the dedication of this committee to undergraduate teaching.

Although many of these developments are exciting to be involved in, there are challenges: Our ability to deliver equivalent experiences for all students at very different sites; our ability to compensate clinical faculty equitably and adequately; the potential for disconnection and communication breakdown with many sites involved; the rethinking of didactic versus case-based teaching/learning; and the need to be in communication with local Health Authorities.

### Stay Tuned!

**August 19-22, 2006**

Brain Development & Learning:  
Making Sense of the Science

Info: Adele.Diamond@ubc.ca



# UBC Department of Psychiatry 5th Annual Clinical Day Conference

## Friday June 9, 2006

UBC Robson Square  
800 Robson Street, Vancouver, BC



**Register Online! [www.cpdkt.ubc.ca](http://www.cpdkt.ubc.ca)**

### ▶ Conference Overview

The Fifth Annual Department of Psychiatry Clinical Day will focus on providing updates on a diverse range of psychiatric topics. Participants will have an opportunity to choose from a wide-range of small group workshops for a hands-on practical learning experience. A keynote lecture and plenary talks will round out the day. All presentations will be highly interactive.

### ▶ Target Audience

UBC Dept of Psychiatry Faculty and Residents, Community-Based Psychiatrists, Community-Based GPs, and Family Physicians  
Community-Based Mental Health Professionals

### ▶ Keynote Address

#### The Benefits and Risks of Antidepressants

Dr. Raymond Lam, Head, Division of Clinical Neuroscience, Department of Psychiatry, UBC

### ▶ Invited Speakers & Topics

Highlights of the New CANMAT Guidelines for Bipolar Disorder  
Antidepressants: The Next Generation  
Update on Pharmacological and Non-Pharmacological Treatment of Perinatal Psychiatric Illness  
Interpersonal Psychotherapy for Adolescents: Building a Provincial Community Of Practice  
A Primer in CBT for Patients with Bulimia Nervosa  
Use of Alternative Remedies in the Cross-Cultural Psychiatry Outpatient Clinic  
The Clinical Implications of Recent Work on Prefrontal Cortex Function  
Psychiatry & Art: A Walkabout Tour at the Vancouver Art Gallery  
Limbic Surgery, Deep Brain Stimulation, and the Neuroanatomy of Depression  
The Future of Psychiatric Compensation - Kirby Report Implications  
Risk Assessment and Management of Psychiatrically Ill Patients  
Motivational Interviewing  
The HIV Patient in the Psychiatric ER - What You Need to Know  
The Psychodynamics of Disability Assessments  
Understanding Neuropsychological Testing and Reports  
From the Hospital to the Community: A Gender Program in Transition  
Residents' Workshop: Transition To Clinical Practice - Billing and Other Practical Issues

Dr. L. Yatham  
Dr. A. Young  
Dr. D. Carter, Dr. D. Ryan

Dr. E. Hall, Ms. E. Hathaway

Dr. R. Manley  
Dr. H. Mok/Ms. J. Yeh  
Dr. A. Diamond, Dr. J. Seamans  
Dr. O. Robinow, VAG Docent  
Dr. T. Hurwitz  
Dr. S. Semrau  
Dr. J. Brink  
Dr. S. Kang  
Dr. S. Fitzpatrick  
Dr. S. Wiseman  
Dr. B. Hallam  
Dr. G. Knudson  
Dr. A. K. Bartok, Dr. S. Semrau, Dr. A. Tuka

### ▶ Registration

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By Phone: 604-822-7301 By Fax: 604-822-1727

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