

NEUROSCIENCE NEWSLETTER

PROGRAM NEWS

UPCOMING PIN DISTINGUISHED LECTURES – FALL 2007

Please check <http://www.utoronto.ca/neurosci> for updates.

Tuesday, October 16, 2007 4pm

SUSAN RESNICK, National Institutes of Health

Title: TBA

Leslie Dan Pharmacy Building, 144 College St., Rm B150

Wednesday, December 5, 2007 Time: TBA

MATT WILSON, Department of Brain and Cognitive Sciences,
Massachusetts Institute of Technology

Title: TBA

Location: TBA

Thursday, December 6, 2007 4pm

HERTA FLOR, Central Institute of Mental Health, Clinical and
Cognitive Neuroscience, Mannheim, Germany

Title: TBA

Medical Sciences Building, Rm 3153

PIN FACULTY NEWS

New Book

PIN faculty member **Karen Davis** (IMS) has just published a new book aimed at high school students. It is entitled: "New Techniques for Examining the Brain", published by Chelsea House and available for purchase online at amazon.ca

It is part of a book series called Gray Matter and the first half of the series is now available in the Toronto Public Library system so Dr. Davis' book should be in Toronto Public libraries soon.

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Program Committee Members

J.O. Dostrovsky / PHYSIOLOGY (Dir.)	J. Peever / CELL AND SYSTEMS BIOLOGY.
W.M. Burnham / PHARMACOLOGY	J. Roder / MOL. MED. GENETICS
P. Carlen / INST. MED. SCIENCE	B.J. Sessle / DENTISTRY
L.F. De Nil / SPEECH LANG. PATHOL.	M. Shoichet / INST. BIOMAT. & BIOMED. ENG.
Z. Jia / PHYSIOLOGY	M. Lewis / HUMAN DEVELOPMENT AND APPLIED PSYCHOLOGY
N. Kabani / MEDICAL BIOPHYSICS	W. Trimble / BIOCHEMISTRY
M. Lewis / HUMAN DEVELOPMENT AND APPLIED PSYCHOLOGY	J.W. Wells / PHARMACY
S. Nag / LAB. MED. PATHOBIOL.	J.S. Yeomans / PSYCHOLOGY
	K. Zabjek / REHAB. SCI.

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e-mail: p.neuroscience@utoronto.ca.

<http://www.utoronto.ca/neurosci>

Office Hours: Wednesdays - 1:15pm-4:30pm;

Thursdays - 8:45am-4:30pm; Fridays - 8:45am-4:30pm

New Faculty

We are pleased to announce that **Dr. Andrew Baker** of the Institute of Medical Science, **Dr. Jay Pratt** of the Department of Psychology, **Dr. Yana Yunusova** of the Speech-Language Pathology Department and **Dr. Karl Zabjek** of the Departments of Physical Therapy and Rehabilitation Science have joined the PIN faculty.

Dr. Baker's research interests are:

Using in vitro and in vivo models of neurotrauma (including but not limited to axonal stretch injury and fluid percussion injury) my laboratory explores novel mechanisms of white matter deterioration and impaired cellular calcium homeostasis. Certain projects revolve around a disruption of intracellular signalling downstream of calcium permeable glutamate receptors, while others focus on mechanisms of white matter injury in the cerebellum and corpus callosum following forebrain trauma. Methods used in the laboratory include: animal models of brain trauma, cellular models of mechanical trauma, electrophysiology, western blotting and coimmunoprecipitation, immunochemistry, calcium imaging, and measurements of functional outcome following neurotrauma.

Dr. Baker can be reached at: RM 7086 Bond Wing, 30 Bond Street, St. Michael's Hospital, Toronto, ON M5B 1W8 Tel: 416-864-5510; Fax: 416-864-5512; e-mail address: bakera@smh.toronto.on.ca

Dr. Pratt's research interests:

Our lives are dominated by a continuous cycle of perception and action. Within this cycle is a constant need for selection; selecting specific portions of the visual field to attend or look at (thereby determining what we perceive) and selecting specific responses (thereby determining what actions we perform). This need arises because the visual field contains far more information than we can process at any given moment and the range of actions possible to perform any given task can be immense. Further complicating the issue is that some of the forces underlying selection are reflexive and automatic in nature while others can be initiated and controlled volitionally. Understanding the selection processes and mechanisms of the attention, oculomotor, and manual motor systems is at the center of my research. My main lines of research examine (a) the operation of the visual attention system, (b) how eye movements are selected, planned and controlled, (c) the role of attention in both eye and manual actions, and (d) how aging affects such issues as the allocation of attention and the planning of eye and manual movements.

Dr. Pratt can be reached at: Dept. of Psychology, 100 St. George Street, Toronto, ON M5S 3G3. Tel: (416) 978-4216; Fax: (416) 978-4811; e-mail address: pratt@psych.utoronto.ca

Dr. Yunusova's research interests:

Dr. Yunusova's research interests are in the area of speech motor control and acquired motor speech disorders (dysarthria). During her graduate studies, she was a research assistant at the X-Ray Microbeam Laboratory studying articulatory kinematics, speech acoustics and intelligibility in speakers with dysarthria. She continued her research training as a post-doctoral fellow in the Speech Production Laboratory at the University of Nebraska – Lincoln, where she used a 3-D electromagnetic articulography, Motion Capture system and aerodynamic techniques to study speech production in patients with Amyotrophic Lateral Sclerosis (ALS). Currently Dr. Yunusova's research interests focus on kinematic characteristics of normal and disordered speech, kinematic and acoustic correlates of speech intelligibility and issues of disordered speech motor control. She is interested in different aspects of speech production as they relate to theory, diagnosis and treatment of dysarthria in adults with neurogenic conditions including amyotrophic lateral sclerosis, Parkinson disease, and multiple sclerosis. She teaches a course on motor speech disorders and a course on augmentative alternative communication.

Dr. Yunusova can be reached at: Department of Speech-Language Pathology, Rehabilitation Sciences Building, University of Toronto, 160 - 500 University Avenue, Toronto, ON M5G 1V7. Tel: 416-978-6890; Fax: 416-978-1596; e-mail address: yana.yunusova@utoronto.ca.

Dr. Zabjek's research interests:

Dr. Zabjek's research involves understanding the neuromusculoskeletal factors that influence functional mobility (gait and postural control) with a focus on changes that occur during development and from neurologic and musculoskeletal disorders. His research applies a mixed methods approach that includes the measurement of electromyography, electroencephalography, kinematics (motion capture) and kinetics to understand anticipatory and reactive mechanisms of balance control and gait. Dr. Zabjek is an Assistant Professor in the Department of Physical Therapy, Scientist at Bloorview Kids Rehab, Adjunct Scientist at the Toronto Rehabilitation Institute, and an Associate Researcher at the HSFO Centre for Stroke Recovery.

Dr. Zabjek can be contacted at: Rehabilitation Sciences Building, University of Toronto, 160-500 University Avenue, M5G 1V7. Tel: 416-978-5072; Fax: (416) 946-8562; e-mail address: k.zabjek@utoronto.ca or kzabjek@bloorview.ca

NOTICE TO GRADUATING STUDENTS

Please notify the PIN office upon your graduation to ensure that you will receive the notation "completed Collaborative Program in Neuroscience" on your degree transcript as well as a separate certificate suitable for framing from the PIN office to indicate that you have completed the program's requirements. Please let the office know the address you wish your certificate sent to and please also send us your thesis title. If you have transferred from a Master's degree to a Ph.D., please notify the PIN office.

OTHER U of T NEUROSCIENCE NEWS

International Ocular Blood Flow Symposium

October 13, 2007
Sutton Place Hotel
955 Bay Street

The keynote speaker is Professor Ferid Murad, Nobel Prize Award 1998. Please go to:
<http://events.cmetoronto.ca/website/index/OPT0706>
for more information.

Hearing Voices Conference (Sponsored by The Hospital for Sick Children and the University of Toronto)

October 15, 2007
St. Andrew's Conference Centre
150 King Street West
Toronto, ON

Hearing Voices: The Utilization of Qualitative Research in Early Psychosis will focus on international qualitative research that reveals the voice of young people affected by psychosis, their families and the practitioners who serve them. Given the growing interest in moving qualitative research findings into practice, the

utility of qualitative health research findings in first episode psychosis will be featured. Innovative methods of knowledge translation and exchange will also be highlighted.

We have opened registration for Hearing Voices: The Utilization of Qualitative Research in Early Psychosis. The registration form and symposium details can be found at <http://www.sickkids.ca/communityhealth/section.asp?s=Hearing+Voices+Conference&sID=20589>

OTHER NEUROSCIENCE NEWS

Neurosciences & Mental Health (NMH) Research Program at The Hospital for Sick Children presents: Plasticity in the Developing Brain

Friday, September 21, 2007
Hollywood Theatre (SickKids Auditorium)
Rm1246 –Elm Wing, 555 University Ave

8:30 am – 8:55 am - Coffee Break in the Rotunda

8:55 am – 9:00 am - Welcome by Michael Salter, MD, PhD & Douglas Cheyne, PhD

9:00 am – 9:50 am - "Large-scale network changes in human learning and memory"
Randy McIntosh, PhD, Assistant Director & Senior Scientist, Rotman Research Institute

9:50 am –10:20 am - "Synaptic plasticity during the critical period of development"
Lu Yang Wang, PhD, Neurosciences & Mental Health

10:20 am –10:40 am - Coffee Break in the Rotunda

10:40 am –11:10 am - "Anatomical imaging of learning and memory"
Jason Lerch, PhD, Physiology & Experimental Medicine

11:10 am –11:40 am - "Functional imaging of the frontal lobe function"
Margot Taylor, PhD, Neurosciences & Mental Health

11:40 am –12:30 pm - "In vivo imaging of neuron-glia interactions in mouse models of neurological disorders"
Phil Haydon, PhD, Professor, Department of Neuroscience, School of Medicine, University of Pennsylvania

12:30 pm –1:30 pm - Lunch in the Garden Terrace, Atrium, The Hospital for Sick Children

Please contact Marie Bomba to RSVP by September 14, 2007
Phone: (416) 813-8945 Email: marie.bomba@sickkids.ca

S.E.E - Seizures and Epi Education Program

Epilepsy Ontario is pleased to present this award winning program for

all people concerned with epilepsy. The dates are October 27 and 28, 9am to 6pm each day at the Novotel Toronto North York. Dr. Robert J. Mittan, PhD is a clinical neurophysiologist. He has been recognized by the International Bureau for Epilepsy and the International League Against Epilepsy for his outstanding contributions to the world wide struggle against epilepsy. He has presented the S.E.E. conference to over 30,000 people in the U.S., Australia, New Zealand and Canada.

Part 1 covers the medical aspects of understanding epilepsy, diagnosis, getting the best seizure control possible, first aid and what does the future hold. Part 2 covers the social and emotional aspects such as psychological problems of epilepsy, family aspects of epilepsy, social aspects of epilepsy, epilepsy on the job and resources: finding help.

Everyone is welcome – the cost of \$94.00 for the two day conference covers only the refreshments. Epilepsy Ontario is sponsoring the venue and speaker fees. For further information and registration visit www.epilepsyontario.org or telephone 800 463 1119.

POSITIONS AVAILABLE

USA

POSTDOCTORAL POSITIONS

Postdoctoral Training Position: Cognitive Neuropsychology of Memory Rutgers University -Newark

The Memory Disorders Project at Rutgers University -Newark seeks to hire a postdoctoral fellow who has strong prior training in (1) experimental design of human learning and memory experiments and (2) statistics and data analysis of same. No prior neuroscience background is required.

This postdoctoral training fellowship will train the candidate in a broad range of new methods in cognitive neuroscience of memory, especially relating to neuropsychological assessment and evaluation of memory and cognitive function in clinical populations including Parkinson's, Huntington's, dystonia, drug addiction, schizophrenia, depression, Mild Cognitive Impairment, and Alzheimer's disease.

The focus of the research will be on understanding the role of the medial temporal lobe and basal ganglia in associative learning and memory and decision making. Some collaborative work with functional brain imaging studies of normal and patient populations will also be involved as well as related studies of the genetics of variability in learning and cognitive abilities.

Further information on our lab can be found at <http://www.gluck.edu> and additional information on our various research and public programs are at <http://www.memory.rutgers.edu>

The position could begin anytime, either Fall 2007 or January 2008. We are located 20 minutes outside of Manhattan in northern New Jersey, with good public transportation to New York City and throughout New Jersey.

Applicants should send a letter of interest to Professor Mark Gluck at gluck@pavlov.rutgers.edu with a summary of their background, training, and future career interests.

Post-doctoral position in Neuroscience, Mayo Clinic Jacksonville, Florida, USA

A post-doctoral position is available with an immediate start date in the Department of Neuroscience, at Mayo Clinic in Jacksonville (http://mayoresearch.mayo.edu/mayo/research/mcj_neuroscience.cfm), Florida, USA. Research will focus on molecular mechanisms of learning and memory decline and brain pathology in neurodegeneration using animal models. Projects will employ a variety of approaches ranging from brain pathology analyses and mouse genetics to immunohistochemistry and high-throughput behavioural screening. The position will provide a broad exposure to cutting-edge research in translational molecular and behavioral research, as well as productive engagement with the Department research community from diverse disciplines, and thus requires strong initiative and good communication skills.

The successful candidate must have a PhD degree in biological (Biology/Zoology/Molecular biology) sciences, with solid training in neurobiology and a demonstrated record of creativity and independent thinking. Expertise in mouse brain anatomy and molecular biology techniques, as well as interests in animal behaviour, experimental design and multivariate statistics are a plus. Applicants with research interests in mouse models of neurodegeneration are especially encouraged to apply.

A competitive salary and benefits package will be offered to a successful candidate. Mayo Clinic Jacksonville resides on the beautiful intra-coastal waterway that provides great access to fishing and boating. MCJ is only two miles from beaches that also offer numerous outdoor activities such as swimming, surfing, sea turtle watching, and sea kayaking. Cost of living in Jacksonville is quite reasonable with available housing in beach, family, upscale, and historic communities.

Applicants should submit a letter of intent with brief description of research accomplishments, CV, and the names and contact information of three referees to: Christopher Janus, Ph.D., Department of Neuroscience, Mayo Clinic Jacksonville, Birdsall Bld. R215, 4500 San Pablo Rd., Jacksonville, FL, 32224, USA. Tel. (904) 953-6414; Fax. (904) 953-7370; e-mail: Janus.Christopher@mayo.edu.

OVERSEAS

POSTDOCTORAL POSITION

University of Bristol Department of Physiology and Pharmacology

Postdoctoral Neuroscience position in the group of Professor Sally Lawson to study "Spontaneously active nociceptors and spontaneous pain". Funded by the Wellcome Trust.

The project is to determine which types of sensory neurons become spontaneously active and contribute to spontaneous neuropathic or inflammatory pain, how their properties change to contribute to this firing, and how they can be labelled to indicate their ongoing activity. The project combines intracellular recording of spontaneous firing, identification of sensory properties, and immunocytochemical properties of identified neurons. Candidates will have or be about to complete a PhD or similar in Neuroscience or systems physiology or similar. In vivo experience, electrophysiological experience and/or knowledge of the pain field are advantages. Salary dependent on relevant experience. RANGE £27,466 - £40,335

Closing date 9.00 am on Friday 14th September 2007.

Details on University of Bristol website:-

<http://www.bris.ac.uk/boris/jobs/ads?ID=66956>

Also details can be found on jobs.ac.uk website:-

http://www.jobs.ac.uk/jobs/BL241/Postdoctoral_Position/

POSITION WANTED

A brain research engineer with a master from Univ. of Maryland in signal processing applied to analysing bio signals: EEG/MEG/EKG, is looking for a full time staff research position. Extensive experience in algorithm development, statistical signal processing, Matlab, ERP, PCA/ICA, adaptive filtering, VHDL, and others.

Please email me at aenayef@yahoo.com any potential vacancy in your lab.

Nayef Ahmar