

# **Graduate Collaborative Program in Neuroscience**

## **Annual Report 2003-2004**

**July 1, 2003 to June 30, 2004**

This was the 17<sup>th</sup> year of the Program in Neuroscience. During this period the program continued to grow in size. Dr. Jonathan Dostrovsky remained as director. Professor John Yeomans served as acting director from January 1, 2004 to June 30, 2004 during the Director's six month sabbatical leave.

The Program Committee was expanded this year to include a representative from the Toronto Western Research Institute and the Krembil Neuroscience Institute (see below under "Program Funding"). Dr. Shoichet replaced Dr. Winslow as the representative of the Institute of Biomaterials and Biomedical Engineering. The current members of the committee are listed in **Appendix 1**.

During the past academic year 60 new graduate students were accepted into the program and 48 students graduated. This brought the total of students registered in the program to 121 at the end of the year. Further details regarding the students in the program (gender, breakdown by degree and department, and list of students who graduated) are provided in **Appendix 2**. During this year an additional 16 faculty joined the program bring the total to 161. A listing of the current faculty members by primary graduate department is provided in **Appendix 3**. Additional details are available on the program website at: [www.utoronto.ca/neurosci](http://www.utoronto.ca/neurosci).

### **Distinguished Lecture Series**

The program organized 12 lectures in the Program in Neuroscience distinguished lecture series this year and these are listed in **Appendix 4**. Many of these were co-sponsored with member departments and institutes. Two of the lectures were funded by the endowed Raymond and Beverly Sackler Distinguished Visiting Neuroscientist fund. All students in the program are required to attend at least 75% of these lectures (attendance is monitored).

### **Poster day**

Two Poster Days took place during 2003-2004 because the 2002-2003 Poster Day was cancelled due to SARS.

### **PIN Poster Day 2003**

Poster Day 2003 took place on September 30, 2003 in the Stone Lobby of the Medical Sciences Building. Forty-three posters were presented and 140 people attended.

Geoff Burnstock of the Department of Anatomy and Developmental Biology, University College London, UK was the distinguished lecturer. He lectured on "Purinergic signalling in the nervous system".

Twenty-one judges (PIN faculty members) participated in the judging of the posters.

### **PIN Poster Day 2004**

Poster Day 2004 took place on Thursday, April 29, 2004 in the Alumni Lounge of the Medical Sciences Building. Forty-six posters were presented and 134 people attended. This year undergraduate students from Undergraduate Neuroscience Program also presented posters.

Dr. Joe Tsien of the Department of Molecular Biology, Princeton University was the distinguished lecturer. He lectured on "Integrated analysis of memory processes in the brain".

Thirteen judges (PIN faculty members) participated in the judging of the posters.

### **Support of the Undergraduate Neuroscience Program.**

PIN continued to support the undergraduate neuroscience program as well as the Neuroscience Association of Undergraduate Students (NAUS) by 1) including their web pages and links on our website, 2) hosting and funding the undergraduate students' posters at our annual poster day, 3) providing modest funding support for the NAUS meeting.

### **Brain Bee and Brain Awareness Week**

#### **Brain Bee 2004**

The Collaborative Program in Neuroscience (PIN) hosted the 6th annual neuroscience competition for High School students on Tuesday afternoon, February 3, 2004. Nineteen students from 7 different Toronto schools took part in this oral competition modeled after a "spelling bee". The first place winner was Andrea Daly from Bishop Allen Academy, second prize went to Julia Ponomaryov also from Bishop Allen Academy and in third place was Jennifer Bates from Michael Power/St. Josephs High School.

The winner of our local contest, Andrea Daly, took part in the 6th International Brain Bee (IBB) competition organized by the University of Maryland in Baltimore on March 19 and 20 where the winners from 40 other local University-sponsored competitions participated. In the past, two U of T winners also won first place in the IBB.

The U of T competition is organized by Professor Jonathan Dostrovsky, Director of PIN, with the help of PIN members Drs. Karen Davis and Mary Pat McAndrews assisted by PIN graduate students and the program administrator. The PIN student presentations organized by Dr. McAndrews were the highlight of the day. The presentations provided the high school students with an excellent overview of the many types of research being done by PIN graduate students. We are grateful to the Institute of Neurosciences, Mental Health and Addiction (INMHA / CIHR) for their financial support.

## **University of Toronto Brain Day 2004**

Brain Day is one of the ways in which the University of Toronto participates in Brain Awareness Week, which is sponsored by the International Society for Neuroscience. Brain Day 2004 was held on March 11 when a grade seven class from Lord Elgin Public School in Ajax visited the university to learn about the structure and function of the human central nervous system. The day is hosted by faculty members in the Division of Anatomy, Department of Surgery, and the activities are planned and carried out by volunteer members of NAUS, the Neuroscience Association for Undergraduate Students. This year we were joined by Think First, an organization dedicated to brain and spinal cord safety.

The students were divided into small supervised groups which rotated through a number of stations where they learned about the anatomy of the human brain and spinal cord, the major senses, taste and smell, touch, vision, and hearing and measured their own muscle power. After lunch, which was sponsored by Think First, the class listened to a presentation on brain and spinal cord safety. This was followed by an opportunity for the students to build their own "helmet" to protect a raw egg. The helmeted eggs were dropped to the floor by noted neurosurgeon Dr. Charles Tator, to see how effective the various helmet designs were.

### **Program Funding**

During this year PIN was successfully able to increase its funding from member departments and obtain new funding from hospital based research institutes and other research units to replace the SGS funding for the PIN program administrator which was discontinued this year. In addition to support from the member departments, PIN is now also supported by:

#### University of Toronto Faculties:

Arts and Science  
Dentistry  
Pharmacy

#### University Research Centres

Centre for Addiction and Mental Health  
University of Toronto Centre for the Study Pain

#### Hospital based research units:

Brain and Behaviour Program at the Hospital for Sick Children  
Samuel Lunenfeld Research Institute at Mount Sinai Hospital  
Wasser Pain Clinic at Mount Sinai Hospital  
Toronto Western Research Institute  
Krembil Neuroscience Program at Toronto Western Hospital

PIN member Departments

Biochemistry,  
 Dentistry,  
 Institute of Biomaterials and Biomedical Engineering,  
 Institute of Medical Science,  
 Laboratory Medicine and Pathobiology,  
 Molecular and Medical Genetics,  
 Pharmaceutical Sciences,  
 Pharmacology,  
 Physiology,  
 Psychology,  
 Rehabilitation Science,  
 Speech-Language Pathology,  
 Zoology

**New Website**

Towards the end of this year we signed a contract with Puravidia to re-design our website. The new site is expected to be completed within the next few weeks. The URL will remain the same ([www.utoronto.ca/neurosci](http://www.utoronto.ca/neurosci)).

**Summary of other services and activities**

1. Prepare and distribute monthly calendar of neuroscience seminars at U of T.
2. Prepare and distribute monthly newsletter.
3. Maintain website.
4. Maintain a list of all neuroscience courses and courses with neuroscience content at UofT.
5. Maintain membership in the Association of Neuroscience Departments and Programs.
6. Respond to phone, email and written requests for information about neuroscience at U of T.
7. Provide certificates of completion for graduating students.
8. Advertise jobs and requests for jobs.
9. Sponsored a symposium on: "In Vivo Gene Transfer in Adult Brain" on Friday, January 30, 2004 3-6pm.

**Appendix 1: List of committee members**

J.O. Dostrovsky, PHYSIOLOGY (Dir.)  
 W.M. Burnham, PHARMACOLOGY  
 P. Carlen, INST. MED. SCIENCE  
 L.F.De Nil, SPEECH LANG. PATHOL.  
 M. Fehlings, KREMBIL NEURO. CENTRE, UHN  
 Z. Jia, PHYSIOLOGY  
 D. Lovejoy, ZOOLOGY  
 S. Nag, LAB. MED. PATHOBIOL.

J. Roder, MOL. MED. GENETICS  
 B.J. Sessle, DENTISTRY  
 M. Shoichet, INST. BIOMAT. & BIOMED. ENG.  
 E. Stanley, CELL. & MOL. BIO. DIV., TWRI  
 W. Trimble, BIOCHEMISTRY  
 D. van der Kooy, ANAT. CELL BIOL.  
 M. Verrier, REHAB. SCI.  
 J.W. Wells, PHARMACY  
 J.S. Yeomans, PSYCHOLOGY

## Appendix 2: Students enrolled in the Program in Neuroscience

### 1a) Enrolment:

	Applicants	Acceptances	New Enrolment
<b>Master's</b>	40	40	40
<b>Ph.D.</b>	20	20	20
<b>Total</b>	60	60	60

### b) Total Enrolment (as of Aug. 6, 2004):

	Part-time	Full-time	Female	Male
<b>Master's</b>	0	56	35	21
<b>Ph.D.</b>	0	65	31	34
<b>Total</b>	0	121	66	55

### c) Number of students from each participating department or faculty:

Department or Faculty	Master's	Ph.D.	Total
Biochemistry	0	1	1
Dentistry	4	4	8
Institute of Biomaterials and Biomedical Engineering	0	0	0
Institute of Medical Science	16	15	31
Laboratory Medicine and Pathobiology	3	3	6
Molecular and Medical Genetics	1	2	3
Pharmaceutical	1	5	6

Sciences			
Pharmacology	4	5	9
Physiology	20	7	27
Psychology	0	20	20
Rehabilitation Science	6	0	6
Speech-Language Pathology	0	2	2
Zoology	1	1	2

**2a) Number of students graduating in 2003-2004:**

<b>Master's</b>	<b>Ph.D.</b>	<b>Total</b>
25	23	48

**b) Median time to completion (in months):**

<b>Master's</b>	<b>Ph.D.</b>
20	56

**c) List of Master's and Doctoral Theses of students graduating in 2003-2004:**

**Master's theses:**

**IMS:**

Student: Alun Ackery  
 Supervisor: Michael Fehlings  
 Thesis Title: "Neuroprotection Following Acute Spinal Cord Injury Through Inhibition of the Fas Apoptotic Pathway"

Student: Jason Belkas  
 Supervisor: Rajiv Midha  
 Thesis Title: "Biomechanical properties, biocompatibility, and nerve regeneration through a synthetic hydrogel nerve tube"

Student: Eduard Bercovici  
 Supervisor: O.Carter Snead  
 Thesis Title: "Serotonin Modulates AY-9944 Induced Atypical Absence Seizures via the 5-HT2A receptor activation"

Student: Sharon Morong  
 Supervisor: Carol Westall  
 Thesis Title: "Sweep Visual Evoked Potentials in Children with West Syndrome before and during Vigabatrin Treatment"

Student: Shannon O'Donnell  
Supervisor: Maureen Dennis  
Thesis Title: "Cortical Thickness of the Frontopolar Cortex in Typically Developing Children and Adolescents"

Student: Amparo Wolf  
Supervisor: Mikulis, D. / Fomazzari, L.  
Thesis Title: "Functional MRI of Olfactory Identification in Mild Cognitive Impairment"

### **Laboratory Medicine and Pathobiology:**

Student: Geoffrey Caines  
Supervisor: Isabelle Aubert  
Thesis Title: "The role of polysialic acid in the outgrowth of embryonic septal neurons"

Student: Meredith Kierstead  
Supervisor: JoAnne McLaurin  
Thesis Title: "The Effect of In Vivo Administration of Inositol on Alzheimer's Disease Pathogenesis in the TgCRND8 Mouse."

Student: Peter Mente  
Supervisor: Catherine Bergeron  
Thesis Title: "Alteration in the Metabolism of Alpha-Synuclein Leads to Aggregate Formation in Dementia with Lewy Bodies"

### **Pharmacology:**

Student: Claudia Perez Cruz  
Supervisor: W. MacIntyre Burnham  
Thesis Title: "Anticonvulsant Actions of Deoxycorticosterone in Infant Rats"

### **Physiology:**

Student: Roberto Cordella  
Supervisor: Jonathan Dostrovsky  
Thesis Title: "Rhythmic and synchronous firing of thalamic bursting cells in awake patients"

Student: Daniela Fenili  
Supervisor: Umberto De Boni  
Thesis Title: "Same-cell, high-resolution tracking of nuclear and cytoplasmic

fluorescent signals in live transfected cerebellar neurons"

Student: Chris Fordyce  
 Supervisor: Lyanne Schlichter  
 Thesis Title: "K<sup>+</sup> channel activity underlies microglial neurotoxicity and tyrosine Phosphorylation"

Student: Hilda Gonzalez  
 Supervisors: Jonathan Dostrovsky and Milton Charlton  
 Thesis Title: "Use of digitized image analysis for evaluation of neurogenic inflammation and the effect of modulatory agents."

Student: Rhain Louis  
 Supervisor: Richard Stephenson  
 Thesis Title: "Development and Validation of a Computer-Based Sleep-Scoring Algorithm"

Student: Mike Peterson  
 Supervisor: Dianne Broussard  
 Thesis Title: "Development of a method for inactivation of cerebellar flocculus region neurons using the ampa-kainate antagonist CNQX and the effects of inactivation on motor memory in the vestibulo-ocular reflex"

Student: Kunjumon Vadakkan  
 Supervisor: Umberto De Boni  
 Thesis Title: "Clustering of centromeric domains in cerebellar Purkinje neurons and granule neurons is chromosome-specific and cell-type specific"

### **Psychology:**

Student: Darren Kadis  
 Supervisor: Mary Lou Smith  
 Thesis Title: "Language representation in children with medically intractable epilepsy: Findings from extraoperative stimulation mapping, intracarotid sodium-amobarbital procedure, and functional magnetic resonance imaging"

Student: Vivian Koval  
 Supervisor: Maureen Dennis  
 Thesis Title: "Comprehension of facial emotion and facial display rules in children with Spina Bifida"

Student: Katherine Krpan  
 Supervisor: Stuss, Don / Dawson, Deirdre  
 Thesis Title: "Executive Function and Coping at One-Year Post Traumatic Brain Injury"



(TBI)"

Student: Jodi Pawluski

Supervisor: Liisa Galea

Thesis Title: "Primiparous rats, but not multiparous rats, exhibit dendritic atrophy in CA1 and CA3 pyramidal cells of the hippocampus"

Student: Shannon Skov-Rackette

Supervisor: Sara Shettleworth

Thesis Title: "Spatial Learning through Exploration"

### **Rehabilitation Science:**

Student: Ewa Niechwiej

Supervisor: Molly Verrier

Thesis Title: "Processing of visual information in the functional field of view: The effects of stimulus, task and motor response on latency and accuracy of performance"

### **Speech-Language Pathology:**

Student: Christina de Rivera

Supervisor: Julie Mendelson

Thesis Title: "The Effects of Antioxidants on the Temporal Processing Speed of the Aged Rat"

Student: Denise Leung

Supervisor: Pascal van Lieshout

Thesis Title: "The influence of proprioception on speech in adults and children"

### **Ph.D. Theses:**

#### **Anatomy and Cell Biology:**

Student: Colleen Dockstader

Supervisor: Derek van der Kooy

Thesis Title: "Pharmacological and Genetic Manipulations Reveal the Opposing Roles of the Dopamine D2 Receptor and Tegmental Pedunculopontine Nucleus in Opiate and Ethanol Motivation"

#### **IMS:**

Student: Valerie Caraiscos

Supervisor: Beverly Orser

Thesis Title: "Tonic GABA(A) Receptors in Hippocampal Pyramidal Neurons and their Sensitivity to General Anesthetics"

Student: Chris Feeney

Supervisor: Peter Pennefather

Thesis Title: "Astrocyte functioning in pathophysiological states: free radical production and mitochondrial dysfunction during oxidative stress and oxygen-glucose deprivation"

Student: Conor Gallagher

Supervisor: Michael Salter

Thesis Title: "Nucleotide-mediated intracellular and intercellular communication in spinal astrocyte"

Student: Suneil Kalia

Supervisor: Andres Lozano

Thesis Title: "The Cloning and Characterization of S<sub>Nam11</sub>: a Modulator of Hsp70 and Parkin which Promotes Dopaminergic Neurodegeneration"

Student: Lorraine Kalia

Supervisor: Michael Salter

Thesis Title: "The Role of PSD-95 in the Regulation of Src within the NMDA Receptor Complex"

Student: Jen Mandzia

Supervisor: Sandra Black

Thesis Title: "Functional MRI of encoding and retrieval in Mild Cognitive Impairment: Functional and Structural Neuroimaging Correlates"

Student: Michael Salman

Supervisor: Maureen Dennis

Thesis Title: "Saccades and saccadic adaptation in children with spina bifida and arnold-chiari type II malformation"

Student: Raewyn Seaberg

Supervisor: Derek van der Kooy

Thesis Title: "Mammalian brain development: The role of distinct neural stem and progenitor cells from embryonic neural induction to adult neurogenesis"

Student: Eve Tsai

Supervisor: Charles Tator

Thesis Title: "Mechanisms Of Locomotor Recovery After Spinal Cord Repair With Peripheral Nerves, Fibroblast Growth Factor 1, And Fibrin Glue After Complete Spinal Cord Transection In The Adult Mammal"

Student: Peter Turrone

Supervisor: Remington, G. Nobrega, J.

Thesis Title: "The Role of Dopamine D2 Receptor Occupancy in the Rodent Model of Tardive Dyskinesia"

### **Pharmaceutical Sciences:**

Student: Mohammad Ali Eghbal

Supervisor: Peter Pennefather

Thesis Title: "Chemico-biological interactions of sulfide and organosulfur compounds"

Student: Paul Park

Supervisor: James Wells

Thesis Title: "Co-operative and oligomeric potential of the M2 muscarinic cholinergic receptor"

### **Physiology:**

Student: Lincoln R. Kim

Supervisor: Bruce Pomeranz

Thesis Title: "Role of Sympathetic Post-Ganglionic Neurons in Cutaneous Wound Healing in *Rattus norvegicus*"

Student: Ahmad Muinuddin

Supervisor: Nick E. Diamant

Thesis Title: "Control of esophageal body and lower esophageal sphincter contractility: Regional differences in esophageal smooth muscle."

Student: Elad Sagi

Supervisor: K.H. Norwich

Thesis Title: "Sensory Uncertainty as a Measure of Loudness"

Student: Kirsten Wentlandt

Supervisor: Peter Carlen

Thesis Title: "Modulation of Central Nervous System Gap Junctions"

### **Psychology:**

Student: David Bush  
 Supervisor: Franco Vaccarino  
 Thesis Title: "Corticotropin-releasing factor mediates the suppressing but not the facilitating effects of footshock on progressive-ratio cocaine self-administration."

Student: Shayna Rosenbaum  
 Supervisor: Morris Moscovitch  
 Thesis Title: "Investigations of Remote Memory for Topographical and Autobiographical Information: Evidence from Functional Magnetic Resonance Imaging and Amnesic Patients"

Student: Dwight Tapp  
 Supervisor: N. William Milgram  
 Thesis Title: "Inhibitory Control, Concept Abstraction, and Maintenance and Manipulation Processes: Executive Dysfunction and Frontal Lobe Cortical Atrophy in a Canine Model of Aging"

Student: Christine Till  
 Supervisor: Joanne Rovet  
 Thesis Title: "Visual functioning following prenatal exposure to organic solvents"

### **Speech-Language Pathology:**

Student: Arpita Bose  
 Supervisor: Pascal van Lieshout  
 Thesis Title: "Speech motor control in aphasia"

Student: Catriona Steele  
 Supervisor: Pascal van Lieshout  
 Thesis Title: "Kinematics and Coordinative Dynamics in Normal Human Swallowing"

## **Appendix 3 Program in Neuroscience Faculty**

There are currently 161 PIN faculty. Sixteen new faculty joined the Program in Neuroscience in 2003-2004. The faculty are listed below according to their department of primary appointment. Some faculty have cross appointments with one or more other graduate departments.

### **Anatomy and Cell**

#### **Biology:**

Kalnins, Vitauts I.  
 Van Der Kooy, Derek

### **Biochemistry:**

Callahan, John W.  
 Gurd, James W.  
 Lingwood, Clifford  
 MacLennan, David H.

Moscarello, Mario A.  
 Reed, Jutta K.

### **Biomaterials and Biomedical Engineering:**

Popovic, Milos  
Shoichet, Molly

**Dentistry:**

Hu, James W.  
Seltzer, Ze'ev  
Sessle, Barry J.  
Yu, Xian-Min

**IMS:**

Abel, Sharon M.  
Black, Sandra E.  
Broussard, Dianne M.  
Brown, Gregory M.  
Carlen, Peter L.  
Chen, Robert  
Christensen, Bruce  
Davis, Karen D.  
Dennis, Maureen  
Diamant, Nicholas E.  
Dubrowski, Adam  
Eubanks, James  
Fehlings, Michael G.  
Harrison, Robert V.  
Hwang, Paul A.  
Kennedy, Sidney H.  
Kennedy, James  
Lozano, Andres M.  
Lu, Wei-Yang  
Maki, Brian E.  
Midha, Rajiv  
Mikulis, David  
Miller, Freda D.  
Moldofsky, Harvey  
Mount, Howard  
Picton, Terence W.  
Rovet, Joanne  
Sharpe, James A.  
Steinbach, Martin  
Tannock, Rosemary  
Tator, Charles, H.  
Tomlinson, David R.

**IMS (continued)**

Tymianski, Michael  
Westall, Carol

Young, L. Trevor

**Laboratory Medicine  
and Pathobiology:**

Aubert, Isabelle  
Bergeron, Catherine  
Boggs, Joan M.  
Johnston, Miles  
Mahuran, Don J.  
McLaurin, JoAnne  
Nag, Sukriti  
Robertson, Janice  
Schmitt-Ulms, Gerold  
Wang, Yu Tian  
Westaway, David  
Yucel, Yeni

**Molecular and Medical  
Genetics:**

Cordes, Sabine P.  
Culotti, Joseph G.  
Kaplan, David R.  
Roder, John  
Zhen, Mei

**Pharmacology:**

Burnham, W. McIntyre  
George, Susan R.  
Grupp, Larry A.  
Hampson, David R.  
Mitchell, Jane  
Nobrega, Jose  
Pace-Asciak, Cecil R.  
Sellers, Edward M.  
Snead, O. Carter  
Warsh, Jerry J.

**Pharmacy:**

Busto, Usua E.  
Henderson, Jeffrey  
O'Brien, Peter J.  
Pennefather, Peter S.  
Wells, Peter G.  
Wells, James W.

**Physiology:**

Charlton, Milton P.  
De Boni, Umberto  
Dostrovsky, Jonathan O.  
Duffin, James  
Feng, Zhong-Ping  
Frankland, Paul  
Horner, Richard  
Hutchison, William D.  
Jia, Zhengping  
Josselyn, Sheena  
Kwan, Hon C.  
MacDonald, John F.  
MacKay, William A.  
Matthews, Stephen G.  
Mills, Linda R.  
Norwich, Kenneth H.  
Orser, Beverley  
Percy, Maire  
Salter, Michael W.  
Schlichter, Lyanne C.  
Skinner, Frances K.  
Stanley, Elise  
Sugita, Shuzo  
Trimble, William S.  
Tweed, Douglas  
Wan, Qi  
Wang, Lu-Yang  
Winslow, James L.  
Wojtowicz, J. Martin  
Zhuo, Min

**Psychiatry:**

Shapiro, Colin

**Psychology:**

Anderson, Nicole  
Anderson, Adam K.  
De Rosa, Eve  
Fleming, Alison S.  
Fletcher, Paul J.  
Grady, Cheryl L.  
Ivy, Gwendolyn O.  
Kennedy, John M.  
Levine, Brian

McAndrews, Mary P.  
 Milgram, N. William  
 Moscovitch, Morris  
 Petit, Ted L.  
 Ralph, Martin R.  
 Regan, David  
 Saint-Cyr, Jean A.  
 Shettleworth, Sara J.  
 Smith, Mary Lou  
 Stuss, Donald  
 Tulving, Endel  
 Vaccarino, Franco J.  
 Yeomans, John S.  
 Zelazo, Philip

**Rehabilitation Science:**

Dawson, Deirdre  
 Green, Robin  
 McIlroy, William  
 Verrier, Molly

**Speech-Language Pathology:**

Bressmann, Tim  
 De Nil, Luc F.  
 Johnson, Carla J.  
 O'Keefe, Bernard M.  
 Rochon, Elizabeth  
 van Lieshout, Pascal

**Zoology:**

Boulianne, Gabrielle L.

Brown, Ian R.  
 Brown, Theodore J.  
 Buck, Les  
 Chang, Belinda S.W.  
 Fullard, James H.  
 Lange, Angela B.  
 Lovejoy, David A.  
 Mrosovsky, Nicholas  
 O'Day, Danton  
 Orchard, Ian  
 Roots, Betty I.  
 Stephenson, Richard  
 Stewart, Bryan  
 Woodin, Melanie A.

**Appendix 4: Distinguished Lecture Series 2003-2004:**

1) Wednesday, September 10, 2003 4pm

JOHN McDONALD, Department of Neurology, Washington University School of Medicine

"Repairing the damaged cord: from stem cell to activity-based mechanisms of recovery".  
 Tanz Neuroscience Building, Rm 6

2) The Second Sackler Distinguished Visiting Neuroscientist

Tuesday, September 16, 2003 4pm

DAVID COLMAN, McGill University

"Adhesion molecules in the architecture of nerve and synapse."

Medical Sciences Building, Rm 3153

Reception to follow in Medical Sciences Building, Rm 3227

3) Tuesday, September, 30, 2003 3pm

PIN Poster Day

GEOFF BURNSTOCK, Dept of Anatomy and Developmental Biology, University College London, UK

"Purinergic signalling in the nervous system"

Medical Sciences Building, Rm 2158

4) Friday, October 24, 2003 4:10pm

DR. PETER CARRUTHERS, Department of Philosophy, University of Maryland

"The cognitive functions of language: implications for and from aphasia"

Sidney Smith Hall, Rm 2117

- 5) Wednesday, October 29, 2003 11am  
DR. LAMBERTO MAFFEI, Vice-President of the Italian Academy of Science  
"The Molecular Basis of Plasticity in the Mammalian Visual System"  
Hospital for Sick Children Main Auditorium (Room 1246)
- 6) Tuesday, November 25, 2003 4pm  
INA WEINER, Dean, The Gershon H. Gordon Faculty of Social Sciences,  
Tel Aviv University, Israel  
"The latent inhibition model of schizophrenia"  
Ben Sadowski Auditorium, 18th Floor, Mount Sinai Hospital, 600 University Avenue
- 7) Thursday, December 11, 2003 4pm  
ALLISON DOUPE, Department of Physiology, University of California  
"What Songbirds can Teach Us about Vocal Learning and Basal Ganglia Function"  
Koffler Institute for Pharmacy Management, 569 Spadina Ave., Room 108
- 8) Friday, January 23, 2004 4:15pm  
DR. CHARLES CZEISLER, Harvard Medical School  
"Circadian Rhythms, Sleep and Cognitive Performance"  
University College, 15 King's College Circle, Rm 140  
Reception to follow in University College, Rm 240
- 9) Friday, February 27, 2004 4 pm  
The Third Sackler Distinguished Visiting Neuroscientist  
TERRY SNUTCH, University of British Columbia Biotechnology Lab  
"Voltage-gated Calcium Channels: From Mammals to Worms and Back Again"  
Medical Sciences Building, Rm 3153  
Reception to follow in Rm 3231
- 10) Wednesday, March 10, 2004 4 pm  
RUSSELL FOSTER, Head of the Department of Integrative and Molecular  
Neuroscience,  
Imperial College School of Medicine, London, England  
"Novel Photoreceptors Within the Vertebrate Eye"  
Sidney Smith Building, Rm 2117
- 11) Thursday, March 25, 2004 4 pm  
DR. HOLLY CLINE, Cold Spring Harbor Lab, Cold Spring Harbor, New York  
"Multiple mechanisms of activity-dependent circuit development in vivo"  
Hospital for Sick Children, Main Auditorium (Rm 1246, Elm Wing)
- 12) Thursday, April 29, 2004 3 pm  
PIN Poster Day  
DR. JOE TSIEN, Department of Molecular Biology, Princeton University  
"Integrated analysis of memory processes in the brain"  
Medical Sciences Building, Rm 2172