McGill University
Integrated Program in Neuroscience
Retreat 2010 Program

September 20-21, 2010
At the:
Centre Mont-Royal, Montreal
The McGill University
Integrated Program in Neuroscience
Retreat 2010 Program

September 20-21, 2010
Centre Mont Royal
2200 Mansfield Street, Montreal H3A 3R8

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Sponsors and Acknowledgements

• The McGill University Integrated Program in Neuroscience would like to thank the MNI Centre of Excellence for Commercialization and Research (CECR) for funding the IPN Retreat 2010.

• Additional funds were received from the following sources:
  o Cedarlane Laboratories Canada
  o Microscopy Imaging Analysis Cellavie
  o Sigma-Aldrich
  o Perkin-Elmer

• The IPN would also like to thank the following groups and individuals:
  o Marc Meloche, MNI: Retreat registration and additional programming.
  o GSAN/IPN students for organising social events and providing volunteers.
Retreat Events

Keynote and Closing Talks – Salon Mont-Royal 2 (4th floor)

Keynote Talk:

“Behaviour and the Epigenome.”

Dr. Moshe Szyf, Department of Pharmacology and Therapeutics, McGill.

10:15 – 11:20 a.m. Monday Sept 20th

Closing Talk:

"Busting NeuroMythology: How NeuroEngineering Reveals Some Curious Properties of the Axon and Synapse, or, We Are Only as Good as our Tools Will Allow."

Dr. David Colman, Director: Montreal Neurological Institute.

2:30 – 3:30 p.m. Tuesday Sept 21st
Retreat Events

Scientific Sessions – Salon Mont-Royal 2 (4th floor)

**Session 1: “Neurophysiology: Decoding the Machine Language of the Mind.”**
Coordinator: Dr. David Ragsdale, Montreal Neurological Institute.
11:35 a.m. – 12:35 p.m. Monday Sept 20th

**Session 2: “Neuroscientific Approaches to the Study of Human Communication.”**
Coordinator: Dr. Vincent Gracco, Centre for Research on Language, Mind and Brain.
2:15 – 3:15 p.m. Monday Sept 20th

**Session 3: “Brain Mapping and Beyond: New Methods in Functional Brain Imaging.”**
Coordinator: Dr. Alain Dagher, Montreal Neurological Institute.
4:40 – 5:40 p.m. Monday Sept 20th

**Session 4: “Current Topics in Neuroinflammation.”**
Coordinator: Dr. Samuel David, Centre for Research in Neuroscience.
8:55 – 10:00 a.m. Tuesday Sept 21st

**Special Session: Computational and Mathematical Modeling in Neuroscience**
Coordinator: Dr. Doina Precup, Computer Science Department.
1:30 – 2:30 p.m. Tuesday Sept 21st
Retreat Events Continued
Poster Sessions – 3rd and 4th Floor Foyers

Posters should be set up between 8:30 and 9:30 a.m. on Monday Sept 20th. Please put up posters before picking up your registration badge. Poster boards are 8 ft wide by 4 ft high; posters should be smaller than these dimensions.

Presenters with poster numbers ending in A should be at their posters during Poster Session A and the first hour of Poster Session A+B.

Presenters with poster numbers ending in B should be at their posters during Poster Session B and the second hour of Poster Session A+B.

Posters MUST be taken down by 4:00 p.m. on Tuesday Sept 21st. You may lose your poster if the poster boards are collected after this time and you haven't removed it.

**Poster Session A:**
12:40 – 2:10 p.m. Monday Sept 20th (Lunch will be served during this time)

**Poster Session A+B:**
5:40 – 7:40 p.m. Monday Sept 20th (Beer, wine and soft drinks will be served during this time)

**Poster Session B:**
12:00 – 1:25 p.m. Tuesday Sept 21st (Lunch will be served during this time)
Rapid Round Robin / Speed Networking
– Salons Cartier 1 and International 1 (3rd floor)

Rapid Round Robin / Speed Networking Session:
3:20 – 4:35 p.m. Monday Sept 20th (Coffee will be served during this time)

Click picture below to see video footage shot from last year’s Retreat:

It should be common knowledge by now that the most effective way to make that breakthrough, find that collaborator, land that job or clinch a sale is through networking. Find out what your fellow IPN scientists are up to, or what the latest product the vendors are offering at the Retreat’s Speed Networking Session. In 2009, the event proved to be very popular and even received press attention in the Montreal Gazette’s University City Blog. Many of the shyest people ended up enjoying the session the most. Feedback from exhibitors was also quite positive.

How to Speed Network:
The room will be divided into two sections, and people with odd numbered registration badges will be on one side; even numbered registration badges on the other. You pair up with a random person, introduce yourself and talk about your work, interests etc. After 10 minutes, one of the pair, decided among you switches to the other side of the room and meets someone new. Switch business cards, earmark interesting posters or exhibitors to visit later, but most of all have fun. If you’re super shy, meet new people with a fried or two in tow!
Retreat Events Continued

Skillsets Workshop for IPN Supervisors –
“Best Practices in Supervising Graduate Students: Being a Good Supervisor in a Highly Competitive Environment”
– Salon International 2 (3rd floor)

**Skillsets Workshops: Concurrent Sessions for Students and Supervisors**, including new student orientation.
10:00 a.m. – 12:00 p.m. Tuesday Sept 21st

IPN has teamed up with Skillsets to provide a workshop for IPN Professors. Attend this session to see how you can be an even more effective graduate student supervisor!

**SKILLSETS** is an initiative by Graduate and Postdoctoral Studies and Teaching and Learning Services. Skillsets offers a suite of workshops for graduate students, post-doctoral fellows and faculty, which will complement the research training provided by the students’ academic experience at McGill. Workshops will provide more general transitional/professional skill development opportunities recommended for training High Quality Personnel.

**Themes covered by Skillsets Workshops:**

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<th>Teaching Competence</th>
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Retreat Events Continued

Orientation and Skillsets Workshop for First Year IPN Students
– Salon Cartier 2 (3rd floor)

**Skillsets Workshops: Concurrent Sessions for Students and Supervisors, including new student orientation.**

10:00 – 10:30 a.m. Tuesday Sept 21st
New Student Orientation.

10:30 a.m. – 12:00 p.m. Tuesday Sept 21st
Skillsets Workshop on Integrity and Ethical Conduct for New Students.

This 2-hour session is mandatory for all new IPN students.

During the first 30 minutes, IPN Directors, Josephine Nalbantoglu and David Ragsdale will give an introduction to what you can expect in the years ahead as an IPN graduate student.

The second part of this session will be a workshop by Skillsets on ethical conduct as a research scientist. Training in integrity and responsible/ethical conduct is a requirement for all IPN students.

Year 2 IPN students who missed previous similar workshops must also attend this session.

**SKILLSETS** is an initiative by Graduate and Postdoctoral Studies and Teaching and Learning Services. Skillsets offers a suite of workshops for graduate students, post-doctoral fellows and faculty, which will complement the research training provided by the students’ academic experience at McGill. Workshops will provide more general transitional/professional skill development opportunities recommended for training High Quality Personnel.
Retreat Events Continued

IPN/McGill Career Planning Service (CaPS) Workshop and Panel:
Non-academic Careers for Neuroscientists – Salon Mont-Royal 2 (4th floor)

CaPS/IPN Workshop: Panel on non-Academic Careers for Neuroscientists:
Coordinator: Lorna MacEachern, CaPS.
Chair: Dr. Louise Proulx, VP Research and Development, Vertex Pharmaceuticals (Canada) Inc.
Panellists: Dr. Daniel Auld, Senior Director Business Development, Cetero Research.
Dr. Michael Haber, Project Officer, Health Canada.
Dr. Eleanor Duff, Senior Director, Medical Content, Aptilon.

3:45 – 5:45 p.m. Tuesday Sept 21st

Career choices (or perceived lack of) are often at the forefront of a scientist’s concerns. This session is designed to demonstrate that the traditional path from Ph.D. to post-doc to Professor is not the only one available. To prove it we have Dr. Louise Proulx and three live former Neuroscience students and/or post-docs, all of whom are successfully employed in non-academic careers.

Panel Format:
Ms. Lorna MacEachern from the McGill Career Planning Service (CaPS) will give a brief overview of their services offered by CaPS workshops to help you pursue jobs outside academia. Lorna will invite Dr. Proulx to give a talk about her career path, after which our three other panelists will briefly introduce themselves and how they got to where they are currently.

We will then open the way for the Retreat attendees to ask any of our four guests questions, e.g. about their specific choices, challenges they faced etc.

Additionally, we are soliciting questions for the guests by emails in advance. The career biographies of the guests are included below. Please feel free to email specific questions before the Retreat to Joe Makkerh. Include whether the question is aimed at (a) specific panelist(s), or all of them. If you wish to remain anonymous when the question is read out, please state this also.
Dr. Louise Proulx, VP Research & Development, Vertex Pharmaceuticals (Canada) Inc.

Dr. Proulx holds a Ph.D. in physiology from Université Laval and pursued postdoctoral studies at the Karolinska Institute in Stockholm. She has close to 30 years experience in research and science management. During her time in academia, she focused her efforts on prostate and breast cancer at the Centre hospitalier de l’Université Laval. Following that, she took over scientific positions of increasing responsibilities, notably as Vice President, Scientific Affairs at Hoechst Marion Roussel Canada, and Vice President, Therapeutic Product Development at BioChem Pharma Inc. She was later Vice President, Business Development of Genome Quebec and Vice Principal Research at McGill University. She then returned to the pharmaceutical industry where she has been Vice President, Product Development at Topigen Pharmaceuticals Inc. and ViroChem Pharma Inc. She is now Vice-President, Research and Development, at Vertex Pharmaceuticals (Canada) Incorporated. Dr. Proulx has been a member of several boards of directors over her career including the National Research Council of Canada. She is currently a member of the board of directors of GeminX Pharmaceuticals, Diagnocure Inc., Alethia Biotherapeutics, Genome Quebec, Canadian Foundation for Innovation and Université de Montréal.

Daniel Auld, Ph.D., Senior Director Business Development, Cetero Research.

Dan completed his PhD in 2001 with Remi Quirion at the Douglas Hospital Research Centre, where his thesis concerned neurotrophins and modulation of the basal forebrain cholinergic system. Convinced that academia was the way for him, he pursued his first PDF at the Centre Université de Montréal’s Centre de Recherche en Sciences Neurologiques (CRSN) with Richard Robitaille, where he looked at interactions between neurotrophins and elements of the frog neuromuscular junction. In 2003, he continued his PDF training with Phil Barker at the MNI, studying p75, LINGO and other protein interactions. Although enjoying research and science, Dan decided that he wanted to experience a non-academic world, and so joined Painceptor Pharma Corp in 2004. Staring as a Research Scientist for a tailor made position investigating small molecule modulation of NGF receptor binding, he soon became Group Leader of the NGF Discovery Research team. At the end of 2006, Dan again decided that he wanted to try different and joined Cetero Research (a clinical Contract Research Organization) as Associate Director, Business Development. Dan now holds the positions of Senior Director of Business Development and Senior Scientific Liaison at Cetero Research.
IPN/McGill Career Planning Service (CaPS) Workshop and Panel: Non-academic Careers for Neuroscientists – Salon Mont-Royal 2 (4th floor)

Eleanor K. Duff, PhD. Senior Director, Medical Content, Aptilon

Role: Facilitates the creation, review, approvals, and implementation of all pharmaceutical brand-related, digital medical content
Responsibilities: Management of the production team responsible for the creation and review of all copy and graphics associated with our contracts. Management of the client Medical/Legal/Regulatory approvals process and appropriate submission process to the FDA. Responsible for ensuring creation and approvals for all brand-related content, within the timeline and budget constraints of each contract.
In short: In the fight between good and evil (medical and marketing), I supply the voice of reason and solutions towards compatibility.

Michael Haber, Ph.D., Project Officer, Health Canada.

In mid 2009, McGill’s Career Planning Service (CaPS) invited students to submit applications for a unique Health Canada recruitment campaign allowing recruiters to offer ‘on-the-spot’ jobs. Within 2 weeks of submitting his application, Mike was interviewed, offered a job and given 6 months to complete his degree. Without any prior interest or knowledge of the public service and without a background in agriculture or environmental science, the decision to leave academia and start a career in the nation’s capital was a difficult one. As it turns out, it was likely the best decision of his professional career. Since accepting the offer, Mike moved to Ottawa where he has settled down, started a family and has been working as a project officer at Health Canada’s Pest Management Regulatory Agency. Over the past year, Mike has been leading the Canadian portion of the NAFTA US-Canada Grower Priority Database, a project focused primarily on resolving Canadian grower-identified trade barriers (when a product is available for use in one country but not another).

Education: Mike has a Ph.D. in Neurological Sciences studying neuron-glial interactions in the hippocampus (supervised by Dr. Keith K. Murai); a M.Sc. in Neurological Sciences studying protein-protein interactions in Parkinson’s disease (supervised by Dr. Ted Fon); a Graduate Certificate in Biotechnology; and a B.Sc. in Physiology. He has also completed various workshops provided by Health Canada including: The Art of Negotiation (2 days); Facilitating Small Groups (3 days); Policy and Regulations 101 (1 day); How Government Works (3 days) and Project Management for Results (3 days).

Freelance: Mike is also an experienced freelance scientific illustrator, animator and web designer, providing services to scientists and research institutes since 1999. Visit www.habermdesigns.com for examples of his work.
IPN/GSAN Retreat Social Events – First Night Drinks

Monday 21st September, 8:00 to 11:00 p.m.

Thomson House (3650 McTavish St.): The official McGill University Graduate student house will be the destination for our celebrations. It’s just a five minute walk away. We have reserved the second floor ballroom just for the IPN retreat. Drinks can be bought for very reasonable prices at the bar. All participants are welcome. IPN thanks GSAN funding organising this event.

Directions to Thomson House from the Centre Mont Royal:
Retreat Events Continued

IPN/GSAN Retreat Social Events – Post Retreat Reception

Tuesday 21st September, 6:15 to 8:30 p.m.

Faculty Club 2nd floor Dining Room (3450 McTavish St.):
The Faculty Club, located at 3450 McTavish Street, serves as the social centre for the University faculty and staff community. It’s just a five minute walk away. We have reserved the second floor ballroom just for the IPN retreat. No tickets needed, just bring your registration card for ID. All are welcome. IPN and GSAN thank the MNI for funding this event.

Directions to The Faculty Club from the Centre Mont Royal:
IPN/GSAN Retreat Social Events – Final Party

Friday 24\textsuperscript{th} September, 10:00 pm to 3:00 a.m.

Tonic Club Lounge 2\textsuperscript{nd} (2313 Sainte-Catherine St W at the Pepsi Forum, near Atwater):

As a final post-retreat event, we’ll be meeting in the VIP section of Tonic Club Lounge at 10 p.m. on Friday, September 24th. Free drinks will be provided (courtesy of IPN), and all IPN attendees - plus one guest - are welcome. For tickets, please visit the GSAN booth at the IPN Retreat.

Location of Tonic Night Club:
Retreat Events Continued
Optional* Satellite Workshop on Wednesday 22\textsuperscript{nd} September

Microscopy of Neurons: An Introduction to Light Microscopy Resources at McGill

\begin{center}
\textbf{Wednesday September 22, 2010}
\end{center}

\begin{itemize}
\item \textbf{Lectures 9:00-12:30}  
Stewart Building Rm W4/12
\item \textbf{Equipment Demonstrations 13:30-17:30}  
CIAN Stewart Building W2/3A and W2/9D  
Imaging Facility Bellini 143 and 341
\end{itemize}

\begin{itemize}
\item $50 Registration  
Includes Coffee Break and Lunch
\item Register at ipn.microscopy@gmail.com
\end{itemize}

\begin{center}
\textbf{Special Guest Speaker}
Dr. Pierre Drapeau  
Professor and Chair, Pathology and Cell Biology  
Université de Montréal  
“Studying Spinal Cord Development & Diseases with Zebrafish”
\end{center}

*Please note that there is a $50 charge for this optional workshop. Register by email: ipn.microscopy@gmail.com
Retreat Schedule: Monday September 20th:

- **8:30 - 9:40**: Arrival, Registration and putting up of Posters.
  - 3rd and 4th Floor Foyers

- **9:45 - 10:10**: Welcome and Opening Remarks.
  - Dr. Rémi Quirion, Douglas Mental Health University Institute.
  - Salon Mont-Royal

  - Dr. Moshe Szyf, Department of Pharmacology and Therapeutics, McGill.
  - Salon Mont-Royal

- **11:25 – 11:35**: Break

- **11:35 – 12:35**: Session 1: “Neurophysiology: Decoding the Machine Language of the Mind.”
  - Coordinator: Dr. David Ragsdale, Montreal Neurological Institute.
  - Salon Mont-Royal

- **12:40 – 2:10**: Buffet lunch and Poster Session A.
  - 3rd and 4th Floor Foyers

  - Coordinator: Dr. Vincent Gracco, Centre for Research on Language, Mind and Brain.
  - Salon Mont-Royal

- **3:20 – 4:35**: Rapid Round Robin (Scientific Speed Networking):
  - An opportunity for each delegate to meet 6-10 other individuals for a few minutes each to exchange research interests, ideas etc.
  - Salons Cartier 1 and International 1 (Coffee available)
Retreat Schedule: Monday September 20th continued:

  Coordinator: Dr. Alain Dagher, Montreal Neurological Institute.
  - Salon Mont-Royal

- 5:40 – 7:40: Poster Session A + B (Beer and wine served)
  - 3rd and 4th Floor Foyers
Retreat Schedule: Tuesday September 21st:

- **08:15 – 08:50:** Arrival / Coffee  
  - 3rd and 4th Floor Foyers

- **08:55 – 10:00:** Session 4: “Current Topics in Neuroinflammation.”  
  Coordinator: Dr. Samuel David, Centre for Research in Neuroscience.  
  - Salon Mont-Royal

- **10:00 – 12:00:** Skillsets Workshops: Concurrent Sessions for First Year Students (including Orientation) and Supervisors (“Best Practices in Supervising Graduate Students”).  
  - Salons Cartier 2 and International 2

- **12:00 – 1:25:** Buffet lunch and Poster Session B.  
  - 3rd and 4th Floor Foyers

- **1:30 – 2:30:** Special Session: Computational and Mathematical Modeling in Neuroscience  
  Coordinator: Dr. Doina Precup, Computer Science Department.  
  - Salon Mont-Royal

- **2:30 – 3:30:** Closing Talk: "Busting NeuroMythology: How NeuroEngineering Reveals Some Curious Properties of the Axon and Synapse, or, We Are Only as Good as our Tools Will Allow.”  
  Dr. David Colman, Director of Montreal Neurological Institute.  
  - Salon Mont-Royal

- **3:30 – 3:45:** Break and Poster take down

- **3:45 – 5:45:** CaPS/IPN Workshop: Panel on non-Academic Careers for Neuroscientists.  
  Chair: Dr. Louise Proulx, VP Research and Development, Vertex Pharmaceuticals (Canada) Inc.  
  Panellists: Dr. Daniel Auld, Senior Director Business Development, Cetero Research.  
  Dr. Michael Haber, Project Officer, Health Canada.  
  Dr. Eleanor Duff, Senior Director, Medical Content, Apliton.  
  - Salon Mont-Royal

- **6:00 pm:** Departure for Faculty Club Dining Room Post-Retreat Reception, 3450 McTavish.
**The McGill University Integrated Program in Neuroscience Retreat 2010 Program**

**Wed. Sept. 22nd - Satellite Workshop* on Light Microscopy of Neurons:**

*Please note that there is a $50 charge for this optional workshop. Register by email: ipn.microscopy@gmail.com*

<table>
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<tr>
<th>Time</th>
<th>Lecture</th>
<th>Speaker</th>
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| 9:00-9:30  | Wide field Microscopy & Deconvolution                                   | Dr. Judith Locoste  
Owner/Scientist at MIA Cellover & Microscopy Specialist  
McGill Cell Imaging and Analysis Network (CIAN) |
| 9:30-10:00 | Laser Scanning Confocal & Spectral Imaging                             | Dr. Ian Bates  
Application Specialist  
Carl Zeiss Canada |
| 10:00-10:30| Spinning Disk Confocal Microscopy                                       | Dr. Vincent Pelletier  
Technical Support Consultant  
Quorum Technologies |
| 10:30-11:00| COFFEE BREAK                                                           | Sponsored by Quorum Technologies                                                                 |
| 11:00-11:10| Total Internal Reflection Fluorescence (TIRF) Microscopy                 | Dr. Claire Brown  
Imaging Facility Director  
McGill University Life Sciences Complex |
| 11:10-11:40| 3D Image Processing and Analysis                                       | Mr. Cory Glavinski  
Sales Representative  
Bitplane Inc. |
| 11:40-12:30| Studying Spinal Cord Development and Diseases with Zebrafish           | Dr. Pierre Drapeau  
Professor and Chair, Pathology and Cell Biology  
Université de Montréal |
| 12:30-13:30| LUNCH                                                                  | Sponsored by Carl Zeiss Canada                                                                   |
| 13:30-14:30| Instrument/Software Demonstration Session 1                            | VARIOUS LOCATIONS                                                                                 |
| 14:30-15:30| Instrument/Software Demonstration Session 2                            | 1) CIAN  
Stewart Building – W2/9A & W2/9D |
| 15:30-16:30| Instrument/Software Demonstration Session 3                            | 2) Imaging Facility  
Ballard Building, 148 & 341 |
| 16:30-17:30| Instrument/Software Demonstration Session 4                            | 3) Computer Lab  
McIntyre Medical Building 1101 |