



www.uhntrainees.ca

For information on UHN training courses, scholarships, seminars happening around the city and so much more, visit www.uhntrainees.ca.

Resources for writing a scientific manuscript

Scientists write and publish articles to disseminate their discoveries and convince others of the validity and significance of their experimental results. To succeed, scientists must learn to write clear, concise and persuasive manuscripts. Surprisingly, many research trainees, including myself, receive little or no formal training in manuscript writing. Instead, I learnt through trial and error, by writing and re-writing my manuscripts, bled over by my supervisor's red pen. The ORT has assembled a few resources to help trainees learn how to write better manuscripts faster.



Mattheus Ignatius van Bree [Public domain], via Wikimedia Commons

September 2013

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Click [here](#) to access past issues from our archive.

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1) Content Guidelines

The ORT's Science Writer – Dr. Iris Kulbatski – has generated a set of guidelines for the sections of a scientific manuscript – abstract, introduction, methods, results, discussion/conclusion – to ensure that each contains the appropriate information. Click [here](#) to read the guidelines.

2) Communication Courses at the University of Toronto (U of T) and Ryerson University

The Office of English Language and Writing Support (ELWS) at U of T offers a variety of free, non-credit classes to improve students' written and verbal communication skills. Classes run for 3 to 6 weeks and are available for both native and non-native English speakers, as well as students from different divisions, such as the Life Sciences. Students must be enrolled in a graduate program at U of T to register for ELWS classes.

ELWS offers a class entitled “Understanding the Research Article: Reading Towards Writing (for students engaged in experimental research)” during which students dissect and analyze the components of a research manuscript; they receive feedback on a manuscript they are currently writing; and they tackle technical writing issues frequently encountered when writing a manuscript.

Other classes of interest to trainees include:

Pre-writing Strategies for Developing and Organizing Your Ideas

Academic Conversation Skills

Academic Writing (focused on the essentials, style or grammar)

Writing CIHR or NSERC Proposals

Introduction to Science Journalism

Oral Presentation Skills

Thesis Writing in the Physical and Life Sciences

Becoming a Better Editor



Image courtesy of jscreationzs on FreeDigitalPhotos.net (image ID: 10041287)

Follow this link for more information about the ELWS office and its communication classes:

<http://www.sgs.utoronto.ca/currentstudents/Pages/English-Language-and-Writing-Support.aspx>

The Continuing Education departments at U of T and Ryerson University also offer classes for non-native and native English speakers to improve their written and verbal communication skills, however neither offer specific classes to help write scientific manuscripts. All trainees can register for these classes.

University of Toronto:

<http://learn.utoronto.ca/international-professionals/english-language-courses>

<http://learn.utoronto.ca/courses-programs/business-professionals/courses/communications-2>

Ryerson University:

<http://ce-online.ryerson.ca/ce/calendar/default.aspx?id=5§ion=aoi&aoi=LAN>

3) TPRM Scientific Writing Workshop

For the past two years, the CIHR Training Program in Regenerative Medicine (TPRM) has hosted a writing workshop for trainees titled “Scientific Writing: The Art of Convincing Others”.

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This is a three hour interactive workshop that includes group activities allowing trainees to put what they learn into practice. Trainees learn how to generate a storyboard, write a manuscript and respond to reviewers' comments.

The workshop was created and is facilitated by Dr. Joan Forder, a UHN alumnus who conducted a postdoctoral fellowship in Dr. Michael Tymianski's laboratory (TWRI). In addition to her scientific training, Dr. Forder has worked as an Education Developer and Instructor at different Canadian universities; she has won several awards for her presentation and lecturing skills; and, since 2007, has been running workshops for graduate students, postdoctoral fellows and faculty on presentations, communication skills and teaching.

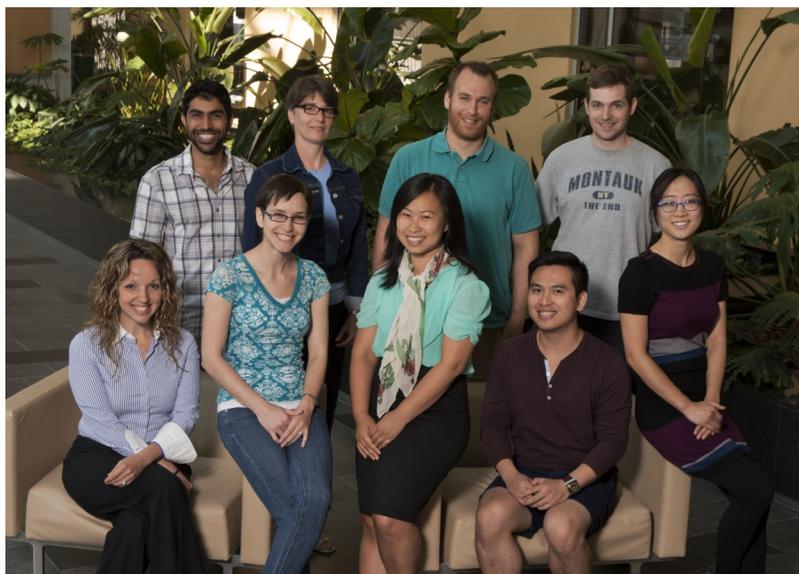
The 2014 TPRM Scientific Writing Workshop is scheduled for winter 2014 and will be announced and promoted in the ORT Times.

Author: Carrie-Lynn Keiski, PhD, Interim Coordinator, Office of Research Trainees

July 2013 ORT Travel Award Program



The ORT is proud to announce that the following UHN trainees have been selected to receive an ORT Travel Award. These financial awards were created to help send trainees to international conferences, to present their research. Upon their return, awardees write a report to share what they learnt at the conference with our readers. Stay tuned for the latest research in neuroscience, vascular biology, stem cells and molecular imaging!



July 2013 ORT Travel Awardees—back row, left to right: Arash Farhadi, Dr. Julie Trudel, Joshua Dian, Peter van Galen; front row, left to right: Dr. Amanda Steiman, Dr. Dannie Bernard, Dr. Lan Thi Hoang Dang, Henry Cheng, Cynthia Luk.

July 2013 Awardees

Dr. Julie Trudel (OCI)
Dr. Cynthia Luk (TGRI)
Iran Rashedi (OCI)
Henry Cheng (TGRI)
Dr. Paula van Wyk (TRI)
Dr. Lan Thi Hoang Dang (TGRI)
Dr. Fernando Angarita (TGRI)
Dr. Dannie Bernard (OCI)
Diana Frasca (TRI)
Luka Srejec (TWRI)
Dr. Nardos Tassew (TWRI)
Dr. Amanda Steiman (TWRI)
Lindsay Tetreault (TWRI)
Dr. ManTek Yeung (OCI)
Peter van Galen (OCI)
Joshua Dian (TWRI)
Isuri Weerakkody (OCI)
Arash Farhadi (OCI/Techna)
Yu-Jia Shiah (OCI)

trainees awarded scholarships

Canadian Institutes of Health Research Awards

Every year, the Canadian Institutes of Health Research (CIHR) awards hundreds of scholarships to support trainees conducting a broad array of research projects in the health sciences—anything from elucidating the proteins implicated in a signalling pathway, to improving health services or identifying new environmental factors that contribute to a particular health outcome in a defined population. These awards are given to trainees who demonstrate an exceptional aptitude for research and a high potential to become future leaders in their areas of study.

Click on the project title to read abstracts from UHN trainees that were selected for a CIHR Award in this past competition.



Jiani Yin – MSc candidate in Dr. Benjamin Neel’s lab (OCI)

Award: Frederick Banting and Charles Best Canada Graduate Scholarship

Project Title: [Cellular and Molecular Mechanisms of Cardiac Defects in Noonan Syndrome-Associated RAF1 Activating Mutants](#)



Dr. Jennifer Tomaszczyk – postdoctoral fellow in Dr. Robin Green’s lab (TRI)

Award: CIHR Fellowship - Priority Announcement: Traumatic Brain Injury

Project Title: [A Clinical Intervention to Improve Long-term Brain and Cognitive Functions After a Serious Traumatic Brain Injury](#)

Dr. Jessica Yue from Dr. Tony Lam’s lab (TGRI) was awarded a CIHR Fellowship and the Bisby Prize for being the highest ranked candidate in the Fellowships - Post-PhD (FPP) competition. Dr. Yue was also selected for a Postdoctoral Fellowship from the Canadian Diabetes Association (CDA).



Dr. Jessica Yue – postdoctoral fellow in Dr. Tony Lam’s lab (TGRI)

Project Title: [Sensing Nutrients in the Brain Stem](#)



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Other Scholarships

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Vanier Canada Graduate Scholarships were created by the Canadian government to encourage the best Canadian and international trainees to undertake their doctoral studies in Canada. Vanier Scholarships are awarded to students working in all fields of research including the social sciences, humanities, natural sciences, engineering and health. UHN trainee **Brittany Rasmussen** was awarded a 2013 Vanier Scholarship and was also selected for a doctoral scholarship from the Canadian Diabetes Association.



Brittany Rasmussen – PhD candidate in Dr. Tony Lam's lab (TGRI)

Project: [Dissecting the Intestinal Cholecystokinin Signaling Pathways that Regulate Glucose Production](#)

The Canadian Diabetes Association (CDA) uses the Charles H. Best Research Fund to support scientists and trainees conducting research to improve the prevention, treatment and management of diabetes. This year, 19 trainees were selected to receive CDA Personnel Awards, including three from UHN: Dr. Jessica Yue (see CIHR Fellowships awardees), Brittany Rasmussen (see Vanier Canada Graduate Scholarship awardees) and **Tharini Sivasubramaniyam**.



Tharini Sivasubramaniyam – PhD candidate in Dr. Minna Woo's lab (TGRI)

Project Title: [Investigating the Ways in Which Fatty Liver Causes Atherosclerosis](#)



APPLICATIONS ARE NOW BEING ACCEPTED FOR THE NOVEMBER 2013 TRAVEL AWARD COMPETITION!

The Office of Research Trainees is pleased to offer a limited number of travel awards to enable UHN graduate students and postdoctoral fellows to attend national or international conferences.

DEADLINE: November 1, 2013 for conference participation between January—April 2014 (inclusive)

Download the eligibility criteria and application requirements [here](#).

latest and greatest trainee publications



Effects of Adult Neural Precursor-Derived Myelination on Axonal Function in the Perinatal Congenitally Dysmyelinated Brain: Optimizing Time of Intervention, Developing Accurate Prediction Models, and Enhancing Performance. Ruff C.A., Ye H., Legasto J.M., Stribbell N.A., Wang J., Zhang L., Fehlings M.G. 2013. [Journal of Neuroscience 33\(29\):11899-11915.](#)

The ability of stem cells to treat the injured or diseased nervous system has shown significant promise in various preclinical models. However, it is not clear what mechanisms underlie this positive effect. Loss of function following central nervous system (CNS) injury and disease results from damage to both neurons and oligodendrocytes (the cells which produce the insulating myelin sheath that is essential for efficient electrical conduction). The adult mammalian brain has a reservoir of neural precursor cells (NPCs) in the subventricular zone (SVZ), which have the potential to produce all three major cell types of the CNS: neurons, oligodendrocytes, and astrocytes.

A recent study by Ruff and colleagues (2013) examined the remyelination potential of adult mouse SVZ NPCs transplanted into the brain white matter tracts of postnatal day (P) 0, P7, and P21 myelin-deficient “shiverer” mice. The shiverer mouse is a useful model for studying demyelinating diseases as well as CNS disorders in which myelin loss secondary to neuronal damage contributes to pathology and loss of function.

The authors demonstrated that when NPCs are transplanted into shiverer mice they preferentially differentiate into oligodendrocytes. The transferred NPCs exhibit anatomical and functional integration *in vivo* and are able to produce myelin that insulates nerve cell axons and improve signal conduction, compared to controls. Mice that received NPCs also had an improvement in resilience to ischemic insult, which is particularly applicable to the understanding of ischemic injury in the perinatal brain. Overall, this study provides novel evidence of the mechanisms underlying the anatomical integration and functional improvement following transplantation of adult mouse SVZ-derived NPCs into the dysmyelinated perinatal brain.

Dr. Ruff’s research is supported by the Ontario Stem Cell Initiative, NeuroDevNet, the Ontario Brain Institute and the Stem Cell Network.

ORT spoke with Dr. Ruff, a postdoctoral fellow in Dr. Michael Fehlings’ lab (TWRI) to ask a number of questions about her latest publication. Click on the questions to read her responses.

[1. Do you think you would see similar results in a different model, for example, an *in vivo* model of spinal cord injury?](#)

[2. With regards to nervous system repair, where do you see the stem cell field 10 years from now?](#)

[3. What is your career path and how did you choose it?](#)

Author of this summary: Dr. Iris Kulbatski, Science Writer, ORT

focus on training

Focus on training: Canadian Institutes of Health Research (CIHR) Training Program in Regenerative Medicine

This month, ORT is featuring TPRM, a strategic training program that benefits trainees at UHN and elsewhere.

The Canadian Institutes of Health Research (CIHR) is Canada's health research funding agency. In 2002, the CIHR implemented the Strategic Training Initiative in Health Research (STIHR), inviting experts in various fields to design programs and apply for this training grant (further information on STIHRs can be found [here](#)). The Training Program in Regenerative Medicine (TPRM) was one of the top ranked grants out of 51 training programs funded. The TPRM includes approximately 50 Principal Investigators from across Canada working in all aspects of regenerative medicine, stem cell research, tissue engineering, transplantation and ethics including:

- **Dr. Michael Fehlings, TWRI**
- Dr. Samuel Weiss, University of Calgary
- Dr. Michael Rudnicki, University of Ottawa
- Dr. Duncan Stewart, Ottawa Health Research Institute
- **Dr. Shaf Keshavjee, TGRI**
- Dr. Connie Eaves, Director of Terry Fox Laboratory in Vancouver
- **Dr. Heather Ross, Director Heart Transplantation and Heart Failure, TGRI**

Primarily, the funds from these STIHR grants are used to provide stipends to awardees in these training programs. The TPRM has distinguished itself by developing several educational programs in addition to providing student stipends.

Annually, the TPRM offers its students scientific and professional workshops, with topics that have included seminars on scientific writing and development of presentation skills. The jewel of the TPRM, however, is the Regenerative Medicine graduate course (MSC7000Y), offered through the University of Toronto in the Faculty of Medicine's Institute of Medical Sciences. Internationally renowned speakers, many of them leading experts in their field, are invited to lecture on multiple aspects of regenerative medicine. Students report this as being one of the best courses they have taken in graduate school. A recent graduate explains: "This course is well programmed and has great flow. It's my favourite course. All the speakers were world-class experts in regenerative medicine and the webcasting was great."

The course is offered via distance learning by webcast at participating universities across Canada. It has also partnered with other institutions outside of Canada, and is being webcast to a growing number of sites. Students in India and Panama view the course through the efforts of the Nichi-In Centre for Regenerative Medicine (NCRM). As well, TPRM has partnered with Cairo University to provide the course to medical students in Egypt. Collectively, 84 students across the world watch the lectures online (2012-2013).



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At year-end, course participants in Canada present their research to peers, mentors, and principal investigators at the Annual Regenerative Medicine Symposium (ARMS). Over the years, the symposium has included career mixers, debates on regenerative medicine, town-hall meetings, and guest talks by distinguished lecturers. Beginning in 2011, the TPRM also began hosting a journal club in the course, wherein students meet weekly to present and discuss articles drawn from all aspects of regenerative medicine.

The TPRM also offers a summer training program for students who are beginning their research careers. Historically, the summer program has incorporated a number of wet-lab workshops developed in partnership with industry, including: Centrifugation with Beckman Coulter; Filtration and Western Blotting techniques with Millipore; Real Time PCR with Roche; 2-D Gel Electrophoresis and Quantitative Western Blotting techniques with Bio-Rad; and an Introductory Cell Tissue Culture Techniques course with Corning and Fischer offered in the summer and during the year.

Through its funding opportunities and unique curriculum, the TPRM helps educate students, postdoctoral fellows and health professionals, across Canada and internationally in regenerative medicine.

More information on the program can be found at www.regenmedcanada.com

Funding for the TPRM has also been generously provided by Novartis Canada, Roche, and Astellas Pharma Canada Ltd.

Written by David Smookler, PhD

Dr. Smookler thanks Dr. Heather Ross (TGRI), Dr. Gary Levy (TGRI) and Anna Cocco (TPRM Program Coordinator) for their assistance in the preparation of this article.

ORT spoke to a few trainees about their experience with TPRM program and how they benefitted from it.

Jeff Kiernan, a Ph.D. candidate from the Institute of Biomaterials and Biomedical Engineering at U of T, is a trainee in the TPRM program. Under the supervision of Drs. William Stanford and John E. Davies, Jeff is testing whether cell-based therapies can treat age-related osteoporosis in a mouse model.



What makes TPRM unique? TPRM brings together both clinical and basic scientists in an environment that helps carry discoveries from the lab bench to the clinic. Although based out of Toronto, TPRM reaches across Canada through the involvement of a diverse core of mentors located at major universities and research hospitals in the country. At the end of the course, students from across the country are brought together for a symposium, facilitating knowledge sharing and collaborations that would otherwise be unlikely.

How has your involvement with TRPM helped you develop as a scientist? While taking the regenerative medicine course that is offered by the program, I was able to learn a great deal about the state of regenerative medicine today. My PhD training as a Biomedical Engineer taught me a lot, but I had considerable knowledge gaps in my understanding of clinical research and practices. The program has helped me overcome these gaps—I now understand the current bottlenecks faced by transplant physicians within the field of regenerative medicine today.

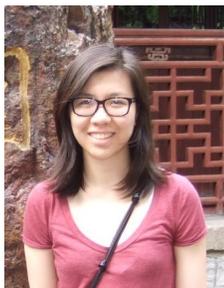
How important is this initiative for the advancement of research at UHN? Toronto has a rich history of innovation in the field of transplant medicine, with pioneering work in the field of stem cell research being carried out throughout the region. UHN also runs one of the top transplant centres in North America.

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Therefore, it only makes sense that a cutting edge research entity be present to drive innovation in regenerative and transplant medicine. Clinicians and scientists working together to unlock the potential of regenerative medicine is key to the development of successful therapies. The TPRM also works to educate the public about all the great innovation that is occurring in Toronto.

In the summer of 2012, Flora Huang, an undergraduate student in Health Sciences at McMaster University, participated in the TPRM summer training program.



What made the TPRM summer training program unique? We were offered practical training sessions in a variety of new techniques and assays. The program also exposed us to a diversity of stem cell research fields, providing opportunities to conduct both clinical and basic science research. I also found that the small size of the program made the experience more personal as I was able to receive more direct help from mentors and supervisors.

How has your involvement with TRPM helped you develop as a scientist? My experience at the TPRM summer program has fuelled my interest in the fields of medicine and stem cell research. The exposure to basic wet lab methods was very important to me as it equipped me with skills not provided by undergraduate studies and made it easier for me when I started working in other labs. The TPRM also gave me the confidence to conduct research as an undergraduate student and to effectively communicate my research to others.

Success—UHN Trainees moving on to new positions!

The ORT would like to congratulate Dr. Paula van Wyk (TRI) and Dr. Evan Lind (OCI), postdoctoral fellows at UHN, who have recently secured faculty appointments and will be starting their own research groups.



Trainee: Dr. Paula van Wyk
PDF Supervisor: Dr. Katherine McGilton (TRI)
New position: Assistant Professor, University of Windsor, Windsor, Ontario

To read more about Dr. van Wyk and her research click [here](#).



Trainee: Dr. Evan Lind
PDF Supervisor: Dr. Pamela Ohashi (OCI)
New position: Assistant Professor, at Oregon Health Science University, Portland, Oregon

To read more about Dr. Lind and his research click [here](#).



UPCOMING EVENTS & FUNDING CALENDAR:

09/26

MITACS STEP

Effective Networking

This half-day workshop is designed by industry experts to provide insight and interaction along with the know how to build and stabilize business relationships through effective networking. Click [here](#) for more information

10/08

TGRI Research Day

This event is a celebration of TGRI achievements in basic and clinical research and an opportunity to promote interdepartmental collaborations among researchers. TGRI Research Day is open to all Scientists, Clinician Scientists, Trainees, and TGRI Staff. Click [here](#) for more information.

10/21

Standard Operating Procedure (SOP) Workshop

In this 3.5hr SOP workshop you will learn about the requirements and benefits of an SOP, the structure and content of an SOP, the lifecycle of an SOP and writing tips. You will also learn about the tools available to you at UHN. Visit the UHN Community Calendar for more information.

10/24

2013 Canada

Gairdner Award Recipients Lectures

This year's Gairdner award recipients will be delivering public seminars in the McLeod Auditorium at UofT. All are welcome. Follow this [link](#) to see the seminar schedule and speaker list.

QUESTIONS?

Please contact:

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FOOD FOR THOUGHT

Seoul Food Co. is a small take-out joint that serves an array of Japanese and Korean inspired dishes, including bulgogi cheeseburger and poutine dressed with caramelized kimchi. My favourite item on the menu is the make-your-own bibimbap, a Korean comfort food consisting of rice, vegetables, and grilled meat, mixed in a chili-based sauce. When assembling your bap bowl, you can choose your grain (white rice, brown rice or quinoa), your veggies, your protein (tofu or meat - grilled or slow-cooked) and your sauce (miso-, soya- or chili-based). A great accompaniment a bap bowl, is the kimchi flight, consisting of three samples of kimchi fermented for different lengths of time – 1 day, 2 weeks and 3 months.



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"Piled Higher and Deeper" by Jorge Cham www.phdcomics.com