FROM THE CHAIR’S DESK

Dear MIMM members,

The landscape of research funding is changing. The resources available to carry on cutting-edge research are limited and the competition to obtain these limited resources is at an all-time high. What can we, as a Department and as a Research Centre, do to ensure that vital cutting-edge research proceeds without interruption?

To answer this question, we (MIMM and MDTC) have put in place three initiatives that will provide resources to support research programs. These are 1) the Radcliffe Collaborative Research Funds; 2) the Radcliffe Bridge funding program; and 3) the MDTC fund. These funds provide up to $ 20,000 each for a variety of research projects extending from collaborative projects to bridge funding in-between grant competitions. To obtain more information about these programs, please contact Maria Babiak at our AEC. We continue working to increase the funding base of these programs as well as exploring new sources of research funding.

Financial resources are essential for our research. However, the drive to explore novel research questions that aim at solving fundamental problems is equally important and, in my opinion, even more important. For that, we all, faculty and trainees, have plenty of opportunities at McGill: from the best and brightest trainees to star professors and researchers, from intense data clubs to exciting seminars. So, please make sure that you participate in these and other initiatives, engage your colleagues and come up with the next Nobel-caliber research project. We will do our best to ensure that you get the resources!

Yours in service,

Quim

TEACHING

MIMM Career Day, the third annual event convened (October 2, 2014) by Drs C. Krawczyk and S. Gruenheid, featured a panel of seven experts who spoke about their professional activities beyond science at university. Three speakers were master’s graduates and four were doctoral graduates; all are Montreal-based. The morning-long session in our seminar room included a business analyst and a lawyer; a principal scientist and a director/consultant at small biotechnology companies; the director of biology at a major pharmaceutical company; the manager of a pre-clinical research program; and a scientist/immunologist. Significantly, three speakers received their academic training through our department.

Their presentations were varied and their styles indicated the signature of their personalities. All spoke of their inner voice that moved them to explore their own strengths and motivations to pursue their careers. Tellingly, their years
post-university have taken multiple twists and turns, not straight forward, full of rewards and also disappointments. The highs and lows of graduate studies were mirrored by their professional stories.

The impact of this annual event is far-reaching. Graduates often recount such events having influenced times and places along their own career paths.

We extend highest appreciation to the organizers for having recruited the seven speakers and for showing their commitment to the value of networking on behalf of our current graduate students.

J.W. Coulton

A CANADIAN FIRST: THE SMALL WORLD INITIATIVE AT MCGILL

As a U1 student last year, I became interested in the prospect of research and began volunteering in Dr. Gruenheid’s lab last winter, which I then continued with a summer 2014 job position. Early in the summer I helped pilot a project called the Small World Initiative (SWI), a program that originated at Yale University. The idea is to use crowdsourcing for antibiotic discovery with standard laboratory techniques that can be easily implemented in any teaching laboratory course. The project was started as a way to combat the rise of antibiotic resistant bacteria. By discovering natural novel antibiotics being produced by microbes within our own soil, a simple concept has potentially huge implications. McGill University is the first school in Canada to adopt this program into a curriculum, a notable achievement for both McGill and our department.

Having sampled soil from right here in Montreal, microbial samples were diluted, isolated, and screened for antibiotic production by visualizing zones of inhibition on agar plates against standard Gram positive Bacillus subtilis and Gram negative Escherichia coli. Once antibiotic production was observed, the microbial isolates were subjected to multiple biochemical tests, including motility and hemolysin production assays, and 16S rRNA sequencing for species determination. Overall the project was convincingly successful, with a 14% hit rate for antibiotic production, 8 isolates out of 56, which were identified and characterized.

Since the summer, Dr. Gruenheid has officially adopted the SWI program as the primary curriculum for the MIMM 212 lab course based on the work done over the summer. The course has thus far proved to be a resounding success with over 2,500 microbial isolates that have already been screened for antibiotic production, a testament to the power of crowdsourcing when compared to the 56 screened over the course of the summer. Currently the students in MIMM 212 are in the process of characterizing the microbes that gave positive results.
The results obtained over the summer were organized and composed into a poster that was entered and displayed in the McGill Faculty of Science Undergraduate Research Conference early in October. Currently the poster is on display in the Duff building C-floor outside the teaching labs.

Although the SWI project has already taken off with a boom, I believe there is still much to be done and I hope to help further the project in the years to come, including actual isolation and identification of the antimicrobial agents.

Of course, everything done this summer was done with the generous help of everyone in the Gruenheid lab, including Dr. Gruenheid, Lei Zhu, Eugene Kang, Natalie Giannakopoulou, Travis Ackroyd, and Mitra Yousefi.

Tyler Cannon, MIMM U2

Publications


Fritz J.H., Nod-like receptors have a grip on stem cells. Cell Host Microbe, 15(6):659-61 (2014)


SOTO RIFO, Ricardo; Valiente-Echeverría, Fernando; RUBILAR, Paulina; Garcia-de-Gracia, Francisco; Ricci, Emiliano; LIMOUSIN, Taran; Decimo, Didier; Mouland, Andrew; OHLMANN, Theophile, 2014, HIV-2 genomic RNA accumulates in stress granules in the absence of active translation, Nucleic Acids Research, in press.


**FACES OF EXCELLENCE**

Jean-Mathieu Leclerc, Post-doctoral Fellow

How long have you been with the Department?

I have been working in Dr Le Moual lab since November 2013, and I was officially registered as a post-doctoral fellow in April 2014.

What is your job description (short biography)?

I did my PhD studies in Dr France Daigle lab at Université de Montréal and I studied the regulation of iron homeostasis in the bacteria Salmonella. I had the opportunity to work on bacterial physiology in Dr Hervé Le Moual lab as a post-doctoral fellow since the beginning of the year. My project focuses on the role of the two-component systems in the virulence of the mouse pathogen Citrobacter rodentium.

What do you look forward to when you come to work every day?

I like interacting with my colleagues, and I like that each day in the lab is different, with new ideas and experiments to achieve my project.
Duff Biobar Updates

BioBar Hours
The operating hours for the BioBar this fall, will be between 8-12 and 1-4.

Don’t forget the Biobar Stocks Useful Lab Supplies such as:
- Kleenex;
- Bleach;
- Gloves;
- Paper Towels;
- Etc.

At competitive price! Please visit our website for the Biobar list of company. For more information, please visit Tom (RM-514, tom.ringer@mcgill.ca, 514-398-3920).

If you would like to get a list of products available at the BioBar, please contact Tom Ringer at tom.ringer@mcgill.ca.

ANNOUNCEMENTS


Dr Claudia U. Duerr, postdoctoral trainee in the laboratory of Dr. Jorg H. Fritz, was awarded a Careers in Immunology Fellowship by the American Association of Immunologists.

Dr Saleh’s lab was featured on TV (Tele Quebec and TV5) as part of the show “Le Code Chastenay” for their recent work on mechanisms of tolerance to influenza infection.

There is a binder in RM-511 containing postings. Do not hesitate to come and look at it if you are looking for your next job.

Student Affairs Advising

Jennifer DiMassimo Office Hours

- Mondays 2 - 4 p.m.
- Wednesdays 10 a.m. - 12 p.m.
- By appointment.
INTERNATIONAL SYMPOSIUM ON HUMAN IMMUNITY AND THE MICROBIOME COMING TO MONTREAL IN 2015.
As a result of a partnership between Cell Press (Elsevier) and the CIHR Human Immunology, we are proud to announce the celebration of an International Symposium on Human Immunity and the Microbiome in Health and Disease coming up in September 27-29, 2015. For further information, [click here](#).

You are all encouraged to submit any news, grants, papers, awards, pictures, or items that you want to include to our monthly newsletter. We will be happy to share them with the rest of the department. You can email them to office.microimm@mcgill.ca.