The LMPost is a bimonthly LMP e-newsletter created by grad students for grad students at UTSG. It features news, articles, and announcements about student and academic life, both on and off campus. By including upcoming events, student talent and alumni spotlights, career development and volunteer opportunities, successful grads and transfers, etcetera, we hope to engage all LMP graduate students across the various research locations.

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STARTUP SPOTLIGHT: BENCHSCI

Have you spent hours optimizing antibody protocols? Are your lab mates tired of you asking, “Do you think this is just background signal?” Is your lab spending more on antibodies than anything else? If you answered yes to any of these questions, then worry no more! BenchSci aims to end your antibody problems.

Created by a group of University of Toronto graduates, including LMP alumni Tom Leung, BenchSci is an online database that helps you find the best antibody for your application. The platform is unique as it uses machine-learning software to retrieve antibody information from relevant publications.

The BenchSci software is very user friendly. You can comb through data on different antibodies for an antigen of interest from hundreds of publications in just a few clicks, and apply filters to narrow your search by application, such as flow cytometry, western blot, immunofluorescence, and etcetera. There is currently a user rating system, but the BenchSci team also plans to include a forum for users to share protocols. The BenchSci blog also hosts company updates and thought pieces for scientists.

Winner of the BrightLane 2016 Entrepreneur Award, BenchSci will be available to UofT students as of January 10th, 2017, as well as other select Canadian Universities including York and Ryerson. So, next time you need to find an antibody, consider using BenchSci to save your lab funds, and your sanity!

ALUMNI SPOTLIGHT: TOM LEUNG

Tom Leung completed his PhD in the Department of Laboratory Medicine and Pathobiology in 2016. As part of Dr. Rod Bremner’s lab, Tom studied epigenetics, focusing on the inheritance of repression by the Polycomb complex during cell replication. Today, he is a co-founder and Chief Scientific Officer of BenchSci, and we were lucky enough to speak with him earlier this month.

LMPOST Did you always want to be a scientist when growing up?

Tom I wanted to become a medical doctor when I was growing up. I have always taken a keen interest in biology and the workings of the human body. In the middle of my undergraduate degree, I became more and more interested in Microbiology and Virology. This drove me to start my MSc with Dr. Martha Brown after I finished my undergraduate degree.

L What moment made you realize the need for a database like BenchSci?

Tom Approximately half way through my PhD, I was planning a Western blot experiment that would involve the detection of a dozen different proteins. While I was looking for antibodies for the experiments, I became more and more frustrated since I had been sitting at my desk for hours looking for validation for the antibodies I was planning to buy. At that point, I was thinking to myself, wouldn’t it be great …

INTERVIEW CONTINUES ON NEXT PAGE
... if there was a database out there where I could just enter the protein I am interested in and then immediately find all figures produced by commercial antibodies against that protein. I started to look around online and realized such a thing does not exist, at which point I wanted to build such a database myself.

How did your time in LMP prepare you for starting your own business?

During my time in LMP completing both my MSc and PhD degrees, I learned one very important thing as a research scientist, which is critical thinking. This does not just apply to others, but more critically, to myself. As a scientist, you always question and rethink your data and results. During the course of building your startup, your ideas will be questioned numerous times by others, it is important to always question yourself whether or not the solution or value you are bringing to the table is a good one, or if there are ways it can be further improved and perfected.

What does your role as Chief Scientific Officer entail?

Essentially, I am responsible for all things life science and biology related during product development, from backend data collection logic to frontend user interface search mechanics. While I am not directly involved in the coding (which is done by our brilliant computer engineers), I design the scientific reasoning behind the code.

What are your thoughts on future career options for new graduates?

It is true that the traditional career options for PhD graduates are research scientist positions either in academic or industry labs, but with UofT providing excellent support and nurturing for new ideas and startups, I believe it would be great if PhD candidates would think about entrepreneurship as one of their career options (Maurice, our Community Architect, wrote a very good article for students who are thinking about startups, read more here). In a strange way, a startup is a lot like research; it is a repeating cycle of frustrations and trial-and-error. While it is definitely not a traditional and straightforward career option, it will definitely be a very exciting one.

Do you have any advice for students looking to start their own ventures?

Be ready to defend your idea but do not be too attached to your original approach. While your idea might indeed be good and unique, the approach of applying your idea will be very different from how you first envisioned it. Pitch your idea to as many people as you can, you will likely hear many different comments from them, pulling you in different directions, your job is to decide how to harvest the useful comments from all the noise and to make your idea stronger than before.

Check out BenchSci at www.BenchSci.com or on Facebook /BenchSci and Twitter @BenchSci.
NEW GRADS AND TRANSFERS

Congratulations to the following LMP students who have convocated or defended their theses within the past few months, what a fantastic accomplishment! Best of luck with your future endeavors, whether they involve academia, industry, professional development, or simply basking in your newfound freedom!

NOVEMBER CONVOCATION 2016

MSc  |  Meryam Al-waadh  
     |  Katarina Andrejevic  
     |  Dylan Brethour  
     |  Angela Celebre  
     |  Patricia Gali  
     |  Carlo Halnin  
     |  Qingda Hu  
     |  Hyunjin (Christina) Kim  
     |  Jennifer Lee  
     |  Stanley Li  
     |  Danielle Marjoram  
     |  Matthew Taylor  
     |  Tik Nga (Cindy) Tong  

PhD  |  Halil Aydin  
     |  Robyn Elphinstone  
     |  Chan Mi Lee  
     |  Felix Leung  
     |  Ewelina Maliszewska-Cyna  
     |  Natalia (Natalie) Pankova  
     |  Eric Shikatani  
     |  Jonathon Torchia  
     |  Xin (Kevin) Wang  

RECENT DEFENSES 2016

MSc  |  Maurice Pasternak  
     |  Stephie Leung  

PhD  |  Nisha Kanwar  
     |  Alyajahan (Alya) Bhimji  
     |  Xianding (Wayne) Deng  
     |  Patrick Sin-Chan  
     |  Alexander Falkenhagen  

RECENT PHD TRANSFERS 2016

Sept 2016  |  Nathaniel Anderson  
           |  Kyung Ha (Kay) Ku  
           |  Amanda Mohabeer  
           |  Venuja Sriretnakumar  
           |  Matthew Zatzman  

Jan 2017  |  Andrea Weckman  

LMP NEWS

We would like to thank Heather Seto for her support as our interim Graduate Administrator. We wish Heather all the best as the Undergraduate Assistant in the Historical and Cultural studies Department at UTSC!

We would also like to welcome back Ferzeen Sammy, as Senior Graduate Administrator. We are all glad to have Ferzeen back in our department, and look forward to working with her again!
LOL MY THESIS
Celebrate your impending grad by turning your formal thesis title into a funny or ironic version for all to enjoy! Submitted a thesis lately? Contribute to Lol My Thesis at Lmpost.utoronto@gmail.com

“What we thought was probably correct, is probably correct.”
Investigating the Effect of scyllo-inositol Treatment on the Brain in a Mouse Model of Alzheimer’s Disease. –Qingda Hu, MSc

“Memory runs on vessels!”
Impact of Physical Exercise on the Hippocampal Pathology and Cognition in a Mouse Model of Alzheimer’s Disease. –Ewelina Maliszewska-Cyna, PhD

SH*T PIs SAY
Share funny and relatable things supervisors say. They can be funny, outrageous, annoying, or even shockingly strange. Below are real life examples. Care to share? Lmpost.utoronto@gmail.com

“PI asks personal question, expects response. You ask PI personal question, lack of response.”

“You should really apply to this scholarship! Oh... by the way, it’s due tomorrow.”

“My PI expressed interest in an extreme obstacle course and going to a training gym. When showing them options in Toronto, they replied ‘You really just want me to embarrass myself don’t you?!’ ... I was just trying to help!”

CLAMPS DIGEST – UPCOMING EVENTS

JANUARY
- LMP Soccer starts up again this week (week of Jan 9th)
- Trivia Pub Night, Jan 16th at 5:00 PM at O'Grady’s
- LMP Skating at Nathan Philips Square

FEBRUARY
- Raptors vs Charlotte Hornets, Feb 15th at 7:30 PM
- Wine and Cheese Night

See CLAMPS members for more details on these great events!
This year’s LMP Holiday Party was hosted at The Chaz in Yorkville. The evening was full of music, fun, and an amazing view of the downtown core. Photography courtesy of Filippe Zhang.
LMPubs: FiLOMENA GROSSO

Title  Suppression of Adenovirus Replication by Cardiotonic Steroids, Journal of Virology

Supervisors  Dr. Martha Brown and Dr. Alan Cochrane

Quick summary The paper summarizes the observation that a class of compounds, cardiotonic steroids, is able to inhibit adenovirus infection. This is important as there is no approved treatment for adenovirus infections.

L How long did the project take?
F About 3-4 years, taking into account work contributed by a previous project student, as well as my previous work in the lab as a research assistant.

L Do you have a favourite figure?
F In the paper, there’s a western blot showing that pre-treatment with our compounds in combination with treatment after infection can ablate early protein expression...in other words, if you treat before and after infection you can prevent the infection at the earliest point of the replication. I remember seeing the first blot of this experiment and I was in total shock! I remember running to tell someone, anyone! Every time I see that blot, I think of that moment.

L What was the biggest time delay of your work?
F Getting replicates of the qPCR data together. I had to optimize my assay from scratch, which took a long time. After that, getting the replicates in was difficult—doing the experiment meant infecting late at night and harvesting DNA early the next morning. Time courses suck.

L What are the stress relieving activities that got you through the writing process?
F Working out, Netflix (A MUST).

L Any funny mishaps?
F Maybe not funny, but annoying. I think people can relate to forgetting to put an antibody in a western blot because they lost track of time. I will also say that I’m almost certain that during one night in the lab I experienced a ghost encounter.

L Do you have any suggestions for other students in the writing process?
F If you’re anything like me, I hate writing. It’s boring and frankly easy to put off. What really helped me is to just get a really good night’s rest the night before and head into the lab with the goal of writing “x”. Whether “x” is a section, editing or a figure. To be honest, I wasn’t hugely involved in the writing, but I was in charge of the figures and overall messages we wanted to send. The advice still applies. I would blast music I absolutely love and gets me in a happy/fun mood and found that I’d be having fun doing something I didn’t really enjoy. Think about the eventual endpoint, how great it will be to be finally be done and you’ll find the motivation you’re looking for!

L Is there anyone you’d like to thank?
F I’d like to thank all the members and supervisors in both my labs for their guidance, patience and help. My parents deserve a huge thanks for their constant understanding and support. I really couldn’t do anything without them.

To share a publication and be featured in LMPubs contact us at lmpost.utoronto@gmail.com.
THANK YOU!

We would like to sincerely thank Christine Kreutzer, Harry Elsholtz, Rama Ponda, and Heather Seto for their advice, help, and support throughout the conception of the LMPost.

CALL FOR SUBMISSIONS

The LMPost is always looking for submissions from LMP students and alumni, including opinion pieces, be it related to student and campus life, academic and non-academic issues, career development, upcoming events and volunteer opportunities.

FOR READERS

Letters to the editor can be sent to lmpost.utoronto@gmail.com and should be 300 words or less, and may be edited for conciseness and, or clarity. The LMPost reserves the right to edit, alter, publish, or refuse to publish, anything submitted for publication.

All contributions, comments, suggestions, or complaints should be sent to lmpost.utoronto@gmail.com, including submissions for Lol My Thesis, Sh*t PIs Say, and LMPubs.

The views and opinions expressed in the LMPost newsletter do not necessarily reflect the official views of the Department of Laboratory Medicine and Pathobiology, or the Confederation of Laboratory Medicine and Pathobiology Students (CLAMPS).

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Thank you!