VOICE OF THE PHARMACY STUDENT

VOLUME 15 ISSUE 3

THE MONOGRAPH

THE MONOGRAPH

EDITORS-IN-CHIEF
NUSRAT AMIN
BONNIE NGHIEM
monograph@uoftpharmacy.com

1T4 REPRESENTATIVE
JUSTIN SARACENO
1t4monographreps@gmail.com

1T5 REPRESENTATIVE
LINDA LEE
1t5monograph@gmail.com

1T6 REPRESENTATIVE
NATHAN WONG
1t6.pharmacy.monograph@gmail.com

1T7 REPRESENTATIVE
SEIWON PARK
seiwon.park@mail.utoronto.ca

STAFF WRITERS
SANDRA WOOD
ARMAN ZERESHKIAN

PHOTOGRAPHY
EDRIC PAW CHO SING
STEPHANIE WONG
pharmakon@uoftpharmacy.com

GRAPHIC DESIGN
ANNA CHAN
SOPHIA LI

PRINTED BY
THE LEARNING ACHIEVEMENT CENTRE
www.tlac.ca - 525 UNIVERSITY AVE.

UPS Corner

Hey Pharmacy!

First off, congratulations on surviving a tumultuous midterm season! It was definitely a tough couple of weeks but we made it and are now approaching the home stretch for the fall semester!

It's been an extremely lengthy term but there have definitely been many highlights this past month. This year's Charity Week was a tremendous success as we were able to raise $4910 to support the various class charities. Also, we hope you enjoyed the extraordinary night of dinner and dancing at the beautiful Winter Wonderland themed Semi-Formal! Special thanks goes to both the Charity Week and Social Committee for organizing these fabulous events.

We'll be kicking off the new year with Professional Development Week (PDW) from January 8-11th in Vancouver so for all of you who are going, let's represent and show the other pharmacy students from across Canada what we're all about!

Lastly, we want to wish the best of luck to the 1T4s who will be going out on their SPEP rotations starting in January. We appreciate the mentorship that you've given many of us over the years and hope you all have wonderful experiences at your placement sites.

Happy Holidays Everyone!

Duke Boampong & Jennifer Ma
President & Vice President 2013-14
Undergraduate Pharmacy Society

Editors' Note

Dear Monograph Readers,

As the students of PB throw on their jackets and put on their toques to get ready for the upcoming winter, they also put on their game face to tackle the harsh reality of final exams in the Great White North. With all our pains, our wits, our endeavours - let us go forth!

This issue's theme is "Emerge" - a fitting one with which we present to you our very first, much awaited "Great Monograph Hunt", wonderfully organized by Nathan Wong, our 1T6 representative. So get your thinking cap on, and follow the trail of clues (see pg. 19)!

You may be struck, as we are, by the amazing cover artwork of Anna Chan & Sophia Li, 1T5. We also present, once again, news from the world of PB, its inhabitants, and what lies beyond our doors; pieces on health-care & society - where we explore future drugs; and snapshots of student life and leisure. Catch up with Bill Wilson as he imparts sound advice to students on page 8! To continue the thread from Septembers issue, read up on the next chapter of Arman Z.'s nail-biting story on page 18.

And that is what the Monograph is all about, sharing with you the real side of pharmacy students and professors and their journey. We hope you all enjoy this month's content because it reflects you, the readers.

Should you have any comments, suggestions, or submissions, please e-mail us at: monograph@uoftpharmacy.com.

Remember: The Monograph is YOUR voice, only louder.

Nusrat Amin & Bonnie Nghiem
The Monograph Editors 2013-14

CAPSI Column

CALL for CAPSI National Nominations!

Have you been searching for a way to get involved? Do you want to work with students from pharmacy schools across the country and help make a difference for students and your profession? CAPSI's National Council is now accepting applications for their Executive Council Positions!

The seven positions include:

President Elect
- 3 year term: President Elect/ President/Past President
- Main duties: to supervise, coordinate and play a primary role in several CAPSI projects and initiatives.
- FUN FACT: Our very own Amber-lee Carriere is just finishing her President Elect position and will soon transition to President!

Executive Secretary
- 1 year term
- Main Duties: To compile the meeting agendas, record meeting minutes, plan and organize CAPSI National elections.

VP Communications
- 1.5 year term
- Main Duties: Responsible for public relations between CAPSI and various other organizations associations, pharmaceutical companies; acts as resource for local CAPSI representatives for CAPSI awareness and promotion.

VP Education
- 1 year term
- Main Duties: Responsible for the coordination of the National Competitions of CAPSI. This includes reviewing, updating, and distributing the rules and regulations of the various competitions. Also responsible for coordinating the Award of Professionalism.

Finance Officer
- 1 year term
- Main Duties: Deposit & carry out all banking activities for CAPSI National; maintain an accurate, detailed & current record of CAPSI National transactions throughout the year.
- Formulate an annual budget, based on the previous year's resources and expenditures

International Pharmacy Students' Federation (IPSF) Liaison
- 2 year term – transition from IPSF Liaison to Student Exchange Officer
- Main Duties: Act as liaison to the International Pharmaceutical Student's Federation, and be its link to CAPSI. Introduce, implement, and co-ordinate the various IPSF projects for the current year.

CAPSIL Editor
- 1 year term
- Main Duties: Co-ordinate & prepare the three annual issues of The CAPSIL, the association's bilingual newsletter.

Council members will be elected at PDW 2014 in Vancouver, BC this year. If you're not going to PDW 2014 that's OK, you can still submit an application.

Here is what you need to do:
1) Submit a signed nomination form (available from your local CAPSI Senior or Junior Representative)
2) Prepare a curriculum vitae (CV) and letter of intent detailing the candidate's qualifications, goals and reasons for seeking the position
3) Deliver a five-minute speech during the Election Proceedings at PDW (any candidate that cannot attend PDW must submit a five-minute videotaped speech)

The deadline to submit is December 31st, 2013!

CAPSI is a great council to be a part of and is a great way to get involved! As an added bonus you get the chance to attend PDW and CPhA conferences throughout the year as this is when our general meetings take place.

Alysha Prata & Aarti Patel
Sr. CAPSI Rep & Jr. CAPSI Rep
torontosr@capsi.ca & torontojr@capsi.ca

Hear ye, hear ye!
If you've been planning to submit something, please note that there are only 2 remaining issues: January/February and March/April.
Contact your class Monograph representative at any time - don't miss your chance this year!
But wait - there's more! Lucky contributors will receive Tim Hortons cards. Details to follow soon!

PHARMACY ATHLETICS

This month, athletics hosted the **Annual Curling Bonspiel**. We enjoyed warm beverages and Timbits before heading over to the ice. The turnout was great, with the 1T5s being the highest in attendance and winning this event of the Robax Cup! It was a fun and unique experience and we would like to thank those that came out!

In intramural news, starting with **Co-ed, Ultimate Frisbee** finished 1st in their pool earning a spot in the play offs but was defeated by UTSC in the quarterfinals. Our **volleyball team** dominated their pool and finished 1st. They've persisted and fought their way through the playoffs and we'll be cheering them on during the finals on Wed. Nov. 27!

Our **Co-ed Football** team kicked of their season by winning their first game against Dentistry. Although, the other team defaulted we appreciate those who made the time and effort to attend a late Saturday game. We encourage others to come to their upcoming games, no past experience necessary.

Last but certainly not the least we would like to congratulate our **Basketball** Division Two team for winning the title this term against Massey! Thank you for all those who came out to watch and cheer on our players.

In **women's sports**, our **Soccer** team struggled to find players this term but the team held their own and managed to never default a game. Great effort for the ladies that consistently came out and we hope to see you back for the winter term in varsity dome for indoor soccer.

Women's **Volleyball** played a strong season finished 2nd in their pool and advanced to the semifinals. Sadly, the season just wrapped and we faced a tough loss against Dentistry in the semi finals. We'll get 'em next season ladies!

The **combined Pharmacy/Medicine/Law hockey** played a great season to finish 3rd and we wish them luck in the playoffs. Look for out the newest addition of a co-ed hockey team in the winter term for those girls interested in playing.

The **men's hockey** team battled through the regular season and secured a spot in the playoffs. Good luck to them and we hope to see you back on the ice in January and for the OPA Cup.

Men's **soccer** played an amazing season and finished third in their pool for play offs. Our team fought hard but was eliminated in the first round of playoffs against University College.

Our **Basketball** team played a phenomenal season going undefeated and finishing 1st in their pool. They persevered in through the playoffs to win the championship title against St.Michael's College!

The **Volleyball** team played yet another strong season and made their way back to the finals against Dentistry. This team has shown great athleticism and has now won the championship title for four terms in a row!

Female Athlete of the Month: Jennifer Shin (1T4)
She has been dedicated volleyball play and is a crucial part of the women's team throughout the past couple of years! Congratulations and we wish her good luck as she moves on to her SPEP rotation

Male Athlete of the Month: Komail Nadeem (1T7)
This rookie showed an amazing performance and played in three intramural teams, helping his teams advance to the finals and winning a championship all in one day.

Kevin Yang
Male Athletics Director
athletics@uoftpharmacy.com

Hazel Gamboa
Co-ed Athletics Director

1-MINUTE READ:
5 THINGS YOU NEED TO KNOW

"1 Minute Read" is a list of recent things happening in healthcare that have an impact on the world of Pharmacy.

1) The Ontario government implemented a three-year strategy to strongly encourage health-care workers to get their flu shot. Two years into the strategy, the number of health-care workers getting vaccinated remains stuck at 51% for hospital employees and 75% for long-term cares homes.

2) November is National Diabetes Awareness Month. Type 1 Diabetes and Type 2 Diabetes are the leading causes of kidney failure, new cases of blindness, and non-traumatic lower-limb amputations among adults in Canada.

3) Currently, the authority to pull problematic drugs off the market does not belong to Health Canada, but lies in the hands of pharmaceutical manufacturers and distributers. Presently, Health Canada can only suggest that a drug be withdrawn, and even then it can take years before a change is made.

4) The Ontario Pharmacists Association has just launched a new website. Check out *www.opatoday.com*.

5) On October 10th, 2013 the Ontario government introduced Bill 117, Enhancing Patient Care and Pharmacy Safety (Statute Amendment) Act, 2013. If passed, the bill will give OCP the authority to inspect, oversee and license public and private hospital pharmacies.

Jaspreet Shokar
Treasurer, Logistics Director

Check out all "1-Minute Read" articles at www.soape.ca!

SOAPE
UNIVERSITY OF TORONTO

Students for Optimizing and Advocating Pharmacy Endeavours

Drug Pipeline *the future of pharmacy*

By JUSTIN SARACENO, 1T4 Monograph Rep

Keep your eyes peeled for some of these pharmaceuticals as they continue to make their way through the clinical trial process and onto pharmacy shelves.

Bitopertin *(suggested trade name: Pscyhedup)*

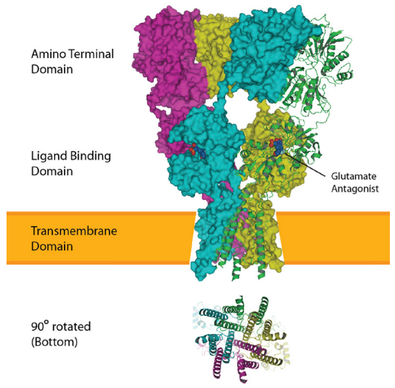
Bitopertin is the first molecule to be developed for use in schizophrenia that essentially acts as an "SGRI" ("serotonin-glycine reuptake inhibitor") by inhibiting glycine transporter type 1 (GlyT1).

Along with glutamate, increased levels of glycine within the synaptic cleft leads to stimulation of NMDA receptors. NMDA receptor dysfunction has emerged as a target of interest following the observation that users of phencyclidine (PCP) exhibit both positive and negative symptoms of schizophrenia.

Bitopertin is expected to be used as add-on therapy to treat negative symptoms or potentially poorly controlled positive symptoms. The drug is currently going through Phase III trials and isn't expected to reach market until 2016.

Perampanel *(Fycompa)*

Watch out for perampanel following its approval by Health Canada earlier this year for use in partial onset seizures, the most common seizure type seen in people with epilepsy. Its mechanism of action is believed to be mediated by antagonism of the AMPA receptor, thereby limiting the effects of the excitatory neurotransmitter glutamate.

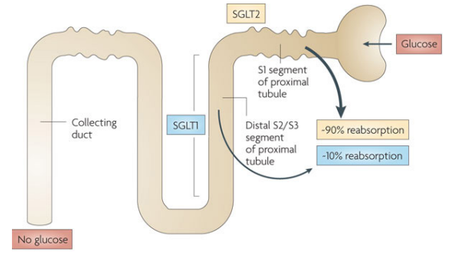


Compared to placebo, perampanel was shown to be effective in reducing seizure frequency in patients not adequately controlled on their current therapy, and is therefore indicated for use in refractory partial onset seizures. Similar to other anticonvulsants.

Perampanel is associated with several CNS adverse effects such as dizziness and drowsiness. It also contains a black-box warning for serious neuropsychiatric events, such as aggression, paranoia and homicidal thoughts in patients without pre-existing psychiatric disease.

Canagliflozin *(Invokana)***, Empagliflozin** *(suggested trade name: SweetPee)*

The " gliflozins" constitute a novel class of diabetes medications that work in the kidneys by inhibiting the sodium-glucose cotransporter 2 (SGLT2) in the proximal renal tubule.



PICTURE FROM CHAO & HENRY. NAT REV DRUG DISCOV. 2010;9:551-559

This transporter is responsible for reabsorbing glucose following its filtration through the kidney for excretion in the urine.

By inhibiting SGLT2, canagliflozin has been shown to lower blood glucose levels; however, evidence on clinical outcomes, like reducing cardiovascular disease, is lacking. The FDA is requiring several post-marketing surveillance studies to determine its effect on cardiovascular outcomes and long-term safety.

Empagliflozin also has a large clinical trial currently in progress to examine cardiovascular outcomes. Based on Phase III data, the most common adverse effects associated with this class of medications is an increase in bacterial and fungal genital infections.

Concerns have also arisen following the rejection of dapaglifozin (Forxiga) by the FDA due to increased risk of bladder and breast cancer. Forxiga has been approved by the EU.

Are you interested in writing about the future of pharmacy or health technology? What about pharmacy practice issues? Contact your class Monograph rep for more information on how you can get involved.

On the Radar: Comprehensive Economic and Trade Agreement (CETA)

On Friday, October 18, Prime Minister Stephen Harper signed a historic free-trade agreement between Canada and the European Union (EU). Some industries, such as fisheries and mining, have lent their support for the projected result of keeping tariffs down and thus stimulating imports and exports between Canada and Europe. However, certain other industries are more wary of what may lie ahead - including the potential success of rival European wineries and dairies.

The Comprehensive Economic and Trade Agreement (CETA) can be viewed as analogous to the North American Free Trade Agreement (NAFTA) which was ratified between Canada, the United States , and Mexico on January 1, 1994.

Leading up to Oct. 18, talks had been ongoing for some time with our transatlantic neighbours. It will take an estimated 1.5 years for the full implementation of CETA. Several Canadian industry sectors may be significantly affected, including agriculture and forestry (the "bread-and-butter" of Canadian exports), fisheries, and manufacturing. One other sector that could undergo major changes: the pharmaceutical industry.

Interestingly, the effect of CETA on the Canadian pharmaceutical industry is viewed differently between manufacturers of innovator drugs and those of generics. The Canadian Generic Pharmaceutical Association (CGPA) raised concerns that the trade aggreement "will be costly to payers, provinces, companies that pay, and individuals who pay for their own medicines," according to Jim Keown , CGPA president. He is referring to the 2-year patent extension for which, after CETA comes into full effect, brand-name companies may apply due to approval delays. This extensions is intended to account an influx of products into the market on either end of the trade agreement.

The point of contention is that allowing this time extension on patent coverage and data exclusivity would result in a longer wait before generics - less costly alternatives to the brand names - can be introduced onto the market. However, the Research Based Pharmaceutical Companies (made up of over 50 brand-name companies) disagree, citing Canada's regulated drug pricing system (CDR? PMPRB?) would keep prices from escalating from their current levels. One detail to note is that the EU was not granted all the requests that had been made to the Government of Canada, such as a patent extension beyond 2 years in duration.

Expert observers of this trade agreement have also expressed reservations about the possible impact upon Canadian innovator companies and also the long-held ties between our industry and that of U.S.-based companies. With a greater presence of European-manufactured drugs on the market (including European versions of generic drugs). There is not doubt, however, that rising drug costs continues to be a major concern in Canada, with expenditure quickly overtaking available resources in both public and private drug plans.

Some have also pointed to the increased motivation that provinces may take from this issue, into working out pricing models with drug companies. Indeed, North American companies may have further incentive to compromise on costs in light of the fact that certain drug prices are priced lower in some European countries (give example, stats). CETA could furthermore strengthen trade partnership with the various countries of the E.U., with potential interest in setting up sites by European drug manufacturers.

The average consumer, as mentioned, is not expected to feel the consequence of CETA implementation during the 1.5-year interval that remains. Indeed, elimination of tarifs may not simply mean cheaper European drugs. In the absence of the right market forces, companies may simply absorb the first profit margins. Only time will tell just how far-reaching the impact of CETA will be.

With files from Gov. of Canada Action Plan; Toronto Star
http://www.actionplan.gc.ca/en/content/ceta-aecg/canada-eu-trade-agreement

In conversation with
William "Bill" Wilson

Call me "Bill". This is the typically affable introduction one receives upon meeting Mr. William Wilson, Director of Pharmacy at Mount Sinai Hospital (MSH) and a long-time lecturer at the Leslie Dan Faculty of Pharmacy.

There is a blend of leadership and connectedness that is discussed in his courses on pharmacy management and put into practice in his daily work as director of the MSH inpatient pharmacy department. Bill's role is to steer the department with vision and support towards short- and long-term goals and strategic planning for the services it provides. Drug distribution continues to be a core function of the department, and the director is responsible for assuring quality and efficiency in the daily pharmacy operations which are under the direct supervision of the Pharmacy Manager.

PICTURE FROM BBB ARCHITECTS

A director's role also includes being the external face of the department, with a considerable amount of networking and meetings with hospital executives and various committees from the different units and other areas of the hospital, such as occupational health and safety.

The one constant in his work regimen? "Get a very early start and check e-mails!" Otherwise, the day's agenda will vary according to department activities, issues to resolve (such as the array of drug recalls and shortages in recent months), budget planning, and of course, meetings. In keeping track of all his roles, he is mindful of the different needs that those he oversees may require - from the clinical practice leaders in the Department, to the students that Mount Sinai Pharmacy hires every summer and fall.

By working in a pharmacy - regardless of setting - students get a hands-on learning experience "about drugs and how they affect patients; how to connect with and learn from pharmacy mentors and their role in healthcare" Another key domain is understanding why safe drug distribution and documentation are important, as they relate to patient safety within the appropriate context of patient care, whichever pharmacy setting you may ultimately end up in.

As with many practicing pharmacists, Bill supports the experiential model for students, which incorporates didactic learning side by side with application through clinical hours. Aside from curricular requirements, however, pharmacy students (especially those in their first year of the program) would do well to try any meaningful pharmacy experience as early on as possible.

Working experiences as a student lay the foundation for understanding the healthcare system and what one's role(s) might be within it. The commitment to quality care comes with strengthening interdisplinary working relationships in order to further patient care. Bill highlights that other departments at MSH (such as General Medicine, Surgery, Critical Care, Neonatal Intensive Care) have all come to greatly respect and trust the pharmacists from the department. "It speaks to their expertise and commitment, that deep level of trust and respect shown towards them overall," he explains.

Indeed, while visiting professionals who tour the new pharmacy facilities - opened in May 2012 on the newly renovated 18th floor - are impressed, he believes what is "more significant is how other departments are impressed with our pharmacists. They are reputable and valued as part of the team."

The MSH inpatient pharmacy department was originally located in the basement stores area (traditionally a common practice in hospital design), eventually moving to the 15th floor with an oncology satellite and a neonatal/labour & delivery satellite. The most recent move has brought the neonatal/L&D satellite back into the main pharmacy department, while the oncology pharmacy satellite remains within the oncology ward for reasons of proximity and the special and highly regulated nature of chemotherapy preparation.

Whether or not it can be seen as a symbolic rise from the basement to the 18th floor, Bill prefers to elaborate, instead, on the progress that has been made by the pharmacy profession as a whole. He notes that the Canadian Society of Hospital Pharmacists was quite a fledgling organization when he came into practice after graduation. At the time, pharmacists completing hospital residencies were scarce.

"In the beginning [in hospital pharmacy], pharmacists were not on the floors, we were in the basement [doing dispensary work] and there were really no technicians. Organized technicians were a later phenomenon. Since then, the pharmacy profession has evolved beyond the distribution system. But to clarify, pharmacists should never really move completely away from the distribution system" even while expanding on their contributions in more cognitive, clinical domains. "At the end of the day, you have to know how the drug gets to the patient and if there is a problem, we need to know where and how it happened."

It is crucial to work within an ethical framework that requires taking responsibility in team-based care. The provision of care is not relegated only to the physician's diagnosis and prescribing role, or the nurses' in patients' day-to-day care. Future pharmacists will need to be more aware than ever of the roles of the different healthcare professions. "Once you get the pharmacists out onto the floors - they sell themselves. Each pharmacist tailors their practice to their area, be it surgery, medicine, cardiology... My role is to encourage and envision [along with the leadership] but the success is due to the pharmacists and their capabilities."

In speaking of his own trajectory in pharmacy, Bill notes that transitioning into a managerial position involved a learning curve, just as new experiences do. But he accepted the fact that there would be less clinical time while in a manager's chair "because that's where I wanted to be." Working towards a specific position should be motivated by the realization that it is the setting that you want to work in and which suits you - not perfectly, which is an unrealistic expectation. Even an 'ideal job' has its downside. For Bill, an ongoing aspect is the inevitable fact that as director, "everyone wants a piece of you. You eventually learn about really structuring time for others."

That might have a great deal to do with the fact that there are staff pharmacists, interns, technicians, students, several hospital units, a panel of hospital executives and board members - with only one pharmacy director and only so many hours in a day. What happens then, in a room full of pharmacy directors? One wonders how the conversations would run.

Bill explains: "There are a lot of issues we share with each other. It helps to get a lot of matters resolved" in connecting with other directors' experiences. Some topics that come to mind?

1. Accreditation: the new medication management standard
2. OCP to inspect pharmacy drug compounding (Oct. 2013)
3. Drug shortages
4. Technician training and OCP registration
5. Medication Reconciliation
6. Hospital funding & drug use

Often, it is looking ahead to changes that in the works for the profession and the healthcare system. As Bill says, "It will take collaboration with others [pharmacists and healthcare professionals] to keep promoting and moving forward to achieve our full scope of practice."

The Training

- BSP, University of Saskatchewan
- Residency at Toronto General Hospital
- Locum (6 months) at the Addiction Research Foundation (today , part of CAMH)

Career Highlights

- Staff Pharmacist, North York General Hospital
- Supervisor, Prescription Services, Toronto General Hospital
- Sunnybrook Health Sciences Centre
- Director of Pharmacy, Mount Sinai Hospital, 1993 to present
- Lecturer at the University of Toronto Faculty of Pharmacy, 1984 to present
- Courses: PHM214, PHM459

Soundbites

On the dynamics of an interdisplinary healthcare team:
"As soon as you focus on the patient, your work becomes very important and you play off on each other's skill sets. Sometimes, we may get too focused on, 'I am the [*insert healthcare role here*].' "

On starting out as a pharmacy student:
"Get any pharmacy experience - or a variety of them - as soon as possible!"

On pharmacy in a nutshell:
"Pharmacy is a patient-focused clinical profession supported by drug distribution. Patient safety is the key."

External Affairs & UPS Present:

The External Affairs Student Writing Award

Two annual awards which recognize students who promote and raise awareness about opportunities offered by OPA and CSHP (1 award for each organization)

Criteria:
•Be an active student member of either CSHP or OPA
•Submit an article to the Monograph, between September and April, about a service provided by the organization that you are a member of. Examples include conferences, CE events, social events, etc.

Award value:
•1 year membership in the organization
•Plaque with your name on it presented to you by a CSHP or OPA member at the UPS awards night in April

Questions? Contact *external@uoftpharmacy.com*

A Measure of Sweetness

Diabetes Clinic Q & A with NIHAL ABBAS, 1T5

Nihal is a 3rd-year pharmacy student with a special interest in diabetes care. This past summer, she assisted with two different pharmacy-based clinics geared toward patients with diabetes on insulin or antihyperglycemic medications. Nihal juggles volunteer hours with the Canadian Diabetes Association (CDA) along with part-time work at a hospital outpatient pharmacy.

Monograph: Tell us about your involvement in these diabetes clinics.
Nihal: One was at a Rexall location, focusing on reviewing HbA1C values and medication management with patients. While the pharmacist-intern was doing the clinical work with the patient, I helped draw up blood samples for the HbA1C machine. [To promote the clinic], we had flyers and posters. There were so many people coming in, interested to get their values checked.

The other clinic was held at a Loblaws and was more appointment-based. As the EPE-2 student there, I called patients on file who were on diabetes medications, especially for a number of years, to tell them about the clinic where we'd talk about their medications; basic signs & symptoms & complications of diabetes; exercise & nutrition. Diet & nutrition was a major reason why patients wanted to come.

The surrounding area has a lot of seniors in the population. Many had been on their meds for 10 years or more ; they were already familiar [with the regimen] and wanted to know about other ways to help control their condition.

How significant of an impact do you feel the clinics made on patients?
One patient at the Loblaws diabetes clinic was very newly diagnosed with diabetes and had come to our pharmacy with a metformin prescription. He had a blood glucose monitor and didn't know how to use it, and was just so overwhelmed. So I explained to him how to use the monitor. We also talked about blood glucose, the levels & complications to look for.

He called us back the next day, [telling us] "I got so much information about diabetes, about diet & nutrition" (the clinic also had a dietician present) and how important that was in [controlling] the condition itself. It was so nice knowing that we had made such a difference for him.

Another example of a clinic patient: already on metformin and newly prescribed gliclazide. She lives by herself and is very well-educated, well-informed. She'd read up everything on gliclazide and knew about the side effect of hypertension and what it could do to her, telling us, "I absolutely cannot take this medication, I might faint with nobody there to take care of me. I couldn't live being so insecure all the time. Tell me what to do!"

So the pharmacist counseled that gliclazide is the least risky medication in that class of medications, with the least risk of causing hypertension. As the patient was still very concerned, the pharmacist sent a Pharmaceutical Opinion about Janumet to her physician, who disagreed and still preferred the gliclazide. So we then counseled the patient on taking it in the nighttime instead of daytime. Eventually, we all achieved something that would work for the patient. Just taking that time to help and reassure, it really impressed her.

It probably also gives patients more motivation, the fact that someone took the time to help.
Absolutely, it definitely helps to know where their condition is going to take them, and how to prevent it from becoming worse. In terms of providing information, the CDA website has information brochures in just about every language. There's a recipe section with "what to eat" or "not eat", and "how to eat it". What's really nice is that they mention that diabetes patients don't have a "set type of food". It's not that there's a separate kind of food for diabetes patients and then for everyone else.

So, is that a significant misconception about diabetes?
It is a huge misconception. [The goal is] to not to isolate people with diabetes. Really, what all of us "should" eat is for a healthy lifestyle – which is also what a diabetes patient should eat. It's a myth – but something that we do tend to think – that no diabetes patients should ever eat carbs, sweets. It's not [necessarily true], they can eat [these things] but the portions have to be right. At the right amount that anyone should eat, for any individual who wants a healthy lifestyle.

Banting & Best Diabetes Centre
UNIVERSITY OF TORONTO
UNIVERSITY OF TORONTO
LESLIE DAN FACULTY OF PHARMACY
Canadian Diabetes Association

Diabetes Awareness Month

Fast Facts

- ***November is Diabetes Awareness Month***
- Insulin was discovered in 1921 by Frederick Banting & Charles Best, at U of T; Banting & Best Diabetes Centre is named in their honour
- Researchers into genetic basis & molecular mechanisms of endocrine regulation & therapy in diabetes at the Leslie Dan Faculty of Pharmacy: Profs. C. Cummins, L.P. Kotra, P.I. Lee, P. O'Brien, M. Piquette-Miller, S.X.Y. Wu
- ***New Canadian Diabetes Association Clinical Practice Guidelines 2013***
- Estimated 3.1 million Canadians with diabetes in 2013; may reach 4.2 by 2020
- High-risk micro- & macrovascular complications
- Recent years have seen the rise of "gliptins" in antihyperglycemic drugs. Example: sitagliptin (Januvia) & sita./metformin (Janumet). Latest on market (approved in 2011) is linagliptin (Trajenta)
- Novel drug mechanisms being investigated, including "gliflozins" which target Na+/Glucose co-transporter in proximal renal tubule (***see Justin S.'s article, pg. 7!***)

Canadian Diabetes Association: www.diabetes.ca http://www.diabetes.ca/documents/get-involved/Diabetes-Canada-at-the-Tipping-Point-Policy-Backgrounder.pdf
Banting & Best Diabetes Centre: www.bbdc.org
U of T: pharmacy.utoronto.ca/research/researcher_search_tool
University Health Network: http://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Pages/diabetes.aspx
Canadian Institutes of Health Research: http://www.cihr-irsc.gc.ca/e/13521.html
U.S. National Institutes of Health: http://health.nih.gov/search_results.aspx?terms=Diabetes

Study Havens

By LINDA LEE
1T5 Monograph Rep

It's that time of the year again! The dreaded December exam period before the holidays and freedom! As a U of T student for almost 7 years now, I can say I know almost every library on the campus. At Robarts Library, I got tired of sitting in the dungeon-looking building all day. Studying there may be necessary sometimes for serious cramming business but I missed seeing the outside world and breathing fresh air.

So I went to look for a study space spot that would be a little bit happier. From my vast searches I'd like to share with you some of my 'prime' studying spots outside of PB.

Panera Bread (322 Yonge St)

Panera is a café located a block north from Yonge and Dundas (near Eaton Centre). This is a great place both for individuals and those who study in groups. The interior is quite cozy and the 2nd floor has various table sizes with comfortable chairs and couches, perfect for sitting for a long time. I've seen many other students studying at this café with a lunch or coffee, probably because this place is so close to Ryerson.

Background music and the normal hustle and bustle of a café add to this type of studying environment. The best thing about this place for me is the great food and coffee. Their broccoli cheddar soup in a bread bowl and chai latte are my favourite. The downsides to this spot are limited electrical outlets (you will see some along the wall) and the wifi, which can be very slow.

(If you are a type of person who likes to study with little bit of background noise and good coffee, Aroma Espresso Bar is another great place that you should try.)

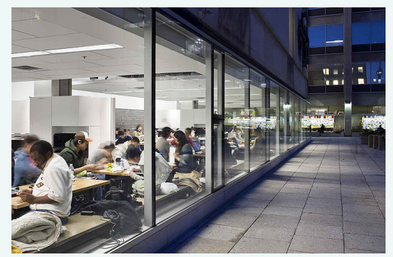
The Rotman School of Management Building (105 St.George St.)

Sometimes when my mind is not yet ready for serious cramming at Robarts, I make a detour and stop across St. George St. at the Rotman School of Management. This is a new building with pink and black decor and some pretty cool facilities, with a real fireplace and café on the 1st floor lobby. Even if you don't plan to study there, take a quick tour of this building to compare it with PB.

I like to go up to the 3rd floor where there is an open space lounge area with rows of long tables. There are electrical outlets beside each table, and if you need coffee, there's the Second Cup two floors down. This place is usually quiet except when a group of business or MBA students sit around you and discuss their projects. Usually, I don't mind them talking, because I don't understand what they are talking about anyway.

Sidney Smith (100 St. George St.)

Sidney Smith is a main hub for the faculty of Arts and Science at U of T. This building has big study lounges which can be seen from the east and the west of the building through the windows. This study spot has good wireless internet and there are many power outlets underneath each table.



There is a cafeteria and Tim Horton's in the basement, and a Second Cup is near the main entrance. Sid Smith stays open until late (10:30pm on weekdays) and it's usually quiet in the morning and evening but the noise level varies depending on the time of the day due to students rushing through.

Stopping Crime
by Repairing Broken Windows?

By SANDRA WOOD, 1T7

I told a friend I was thinking of writing about the Broken Windows Theory. Later in our conversation, it finally dawned on him that I wasn't going to be writing about the shattered glass on the second floor in the Pharmacy Building. This made me realize how prevailing theories in criminology can influence the political sphere in terms of city planning and infrastructure development, yet remain unknown to the general public. One of these paradigms is the Broken Windows Theory.

Broken Windows Theory (BWT) gained momentum in the 1980s with the revitalization of the New York subway system. Previously, the New York subway system was experiencing declining revenues and increasing concerns as a "breeding ground" for crime, with its "neglected appearance", ridden with litter and graffiti. According to the BWT, an area with features such as broken windows, pollution and general environmental disshevelment function as a prime location for crime to take place. Indeed, the New York subway system was notorious for vandalism and public drunkenness among other misdemeanors.

The BTW contends that areas that appear dilapidated signify little surveillance in the area, indicating that misbehaviour is tolerated. This ultimately discourages the public from frequenting these locations. Thus, fewer potential witnesses allows for crime to easily take place. Consequently, with the rejuvenation of the New York subway system through the removal of these unsettlingly displays of unkemptness and by making the area publicly appealing, were encouraged to utilize the subway system, presumably resulting in less crime. This theory makes the main assumption that crime occurs when the offender believes they are able to make the infraction without being reprimanded.

Perhaps this can also be applied to the new TTC subway trains. The new trains are definitely more visually appealing, with bright lights and a refreshed, clean look. This would encourage more people to use the subway system. In addition, the train itself is not sectioned into individual carts like the older models. I would argue that this can be viewed as a crime deterrent measure. If a crime were to take place, more people would be able to see it happen which in turn may deter someone from committing a crime in the first place.

The BWT theoretically seems like a sound claim. However, there are some reservations I hold regarding the use of BWT in city planning and infrastructure development. One of the major concerns is the disregard for delving into the consideration of the underlying root causes of crime; in other words, why people commit crime in the first place. I would suggest that it is too simplistic to say that the area itself can compel someone to commit a crime. It is commonly cited that a compounding effect of several individualistic and/or societal factors often trigger criminal behaviour. Such factors include unemployment, poverty, childhood trauma, and untreated mental health issues. The allocation of resources to infrastructure to improve an area aesthetically does not necessarily prevent crime from happening; if anything, it just assigns it to another location.

This leads to another problematic area: the determination of which locations will receive the funding to improve appearances in order to reduce crime. Thus, stratification in the allocation of resources is often noted. Impoverished areas are less likely to receive the maintenance and attention to improve their image, mainly because these areas are not frequented by the general public. Consequently, impoverished areas can be disadvantaged by this paradigm, despite the fact that these areas probably need infrastructure funding the most.

Crime prevention is an intricate challenge and crime itself is probably something that is impossible to eradicate altogether. I can't say I am convinced that the BWT is the ultimate solution to crime prevention...but at least the commute on the subway is a tad more pleasant.

Typhoon Haiyan

By SEIWON PARK, 1T7 Monograph Rep

November 8th, 2013 was a day of unprecedented destruction, wreckage, and death. It was the day of a horrific tragedy that ravaged the Philippines. It was the day that Typhoon Haiyan first moved onto land at Guiuan, Eastern Samar. As a result, there have been 5,209 fatalities across the country and 1,611 people are still missing (as of Nov. 22nd); some even report that the death toll could be as high as 10,000. The Philippines is currently undergoing a massive humanitarian crisis with 4.3 million people displaced - 1 million of whom are children.

Typhoon Haiyan may possibly be the biggest storm in the history of mankind to ever hit land. With winds as high as 380kph and waves up to 6 feet tall, it is a colossal cyclone that wreaked havoc on the east coast throughout much of Leyte and Samar islands, destroying cities and towns – even washing away some areas completely. The typhoon also inevitably caused landslides and flooding, which extended for 1 km inland on the east coast of the province. One of the hardest hit cities was Tacloban City, the capital of the province of Leyte, where Haiyan left behind a path littered with destroyed buildings, uprooted trees, and piles of cars. In particular, the Tacloban City Convention Center, which was serving as an evacuation shelter, was flooded and as a consequence, many of those who were taken refuge there were taken by surprise by the sudden attack and were drowned or injured.

There has been a significant amount of delay in delivering relief services. Up until November 13, six days after the typhoon struck, only 20 percent of the affected population in Tacloban City was receiving aid. The slow relief efforts can be attributed to the lack of communication; in fact, many remote towns in Leyte and Samar are deprived of any type of aid. It can also be attributed to the power outages, debris- filled roads, damaged vehicles, and a lack of personnel; despite aid being flown into local airports, most of it unfortunately remained there as roads remained closed. As a result of slow relief efforts, and out of sheer desperation and frustration, survivors resorted to violence and crime, breaking through fences and rushing planes, looting stores and malls, and attacking and stealing relief from relief trucks, further adding to the chaos.

Clearly, survivors are lacking basic requirements for life: food, water, shelter and medication. These can cause further problems, such as the spread of disease. The most important point is that the suffering of the survivors should not be underestimated. With lack of access to clean water, some residents were forced to dig up water pipes and boil water in order to survive. Medication was yet another critical issue: hospitals in Tacloban were either shut down or only partially operating, which meant that most of the nearly 2,000 people injured in the city did not receive necessary medical assistance. Journalists in Tacloban say the stench of death from piles of debris, upturned vehicles and remnants of what once were homes indicate that bodies remain trapped underneath.

The harsh reality is that the Philippines are faced with the enormous and gruelling task of rebuilding their homes, their communities, and their cities – their entire lives. Overall, 1 million houses were totally or partly destroyed, infrastructure and agriculture were massively damaged, and the Philippine economy likely suffered US$14 billion of losses. Fortunately, the Philippines do not have to undertake this task by themselves: aid has been pouring in from all corners of the world. For instance, the World Bank raised almost $1 billion to support relief and reconstruction, and Canada is one of two dozen governments who have sent aid to the Philippines ($40 million). And on November 18th, the government of the Philippines launched an online portal, called the Foreign Aid Transparency Hub (FaiTH), that provides the public a transparency view of the aids received by the government from the international community.

However, it's not just countries and international agencies that have the power to help those devastated by Typhoon Haiyan. Donations can be made to the Canadian Red Cross, UNICEF, World Vision, or the Typhoon Relief Fund: the Canadian government will match donations made to registered Canadian charities providing aid to the Philippines.

i.e. VS. e.g.

By DAVIN SHIKAZE, 1T4

I don't claim to be a great writer. As a matter of fact, my PCAT English scores indicate that I would benefit greatly from some sort of ESL class. But there is one thing I do know: the difference between i.e. and e.g..

Maybe some of you already know the difference, and if that is the case, I must apologize. You just wasted 10 seconds reading this intro, and those are 10 seconds you will never be able to get back. Ever. For those of you still with me, please continue reading, as I see many professors confuse these two bad boys all the time. So let's get on with this.

The abbreviated letters 'i.e.' is Latin for *id est* or 'that is'. Think of 'i.e.' as another way of saying 'in other words' or 'equals'. The following statement is INCORRECT: There are many things to do in the winter, i.e. ice skating, snowboarding, and snow fishing. This statement is incorrect because there are many more things to do in the wintertime other than just ice skating, snowboarding, and snow fishing. It is not an exhaustive list. This is where 'e.g.' should have been used.

The abbreviated letters 'e.g.' is Latin for *exempli gratia*, or you can think of it as 'for example'. There are many things to do in the wintertime, e.g. having a snowball fight, going curling and making snow angels.

The next time you catch a mistake, you can swirl your brandy cglass, point your nose ever so slightly up and to the left and declare, "I do say Watson, this person's use of the English language is slightly less than that of a junior high school student's, *id est*, quite elementary."

This year, the Toronto Christmas Market is open Friday November 29th to Sunday December 15th.

By JANE LEE, 1T6

The holiday season is just around the corner and what better way to celebrate and get into the holiday spirit by taking a stroll down the cobblestone path of the distillery district and seeing what ***Lowe's Toronto Christmas Market*** has to offer!

It makes for a wonderful, romantic date night under the magical, lighting of the festive decors of the 45 foot White Spruce Christmas tree, or just to hang out with your friends in the beer garden, enjoying a mug or two of German beer.

What is a Christmas Market?

Christmas markets are street markets that celebrate the traditional sights, sounds, tastes, and scents of Christmas and occur during the 4 weeks preceding Christmas. These Christmas markets date back to the late-middle ages, originating from Germany and are now held all over the world. They celebrate the festive season with seasonal foods such as decorated dried plums, candied toasted almonds, and soft gingerbread cookies along with drinking, traditional singing, and dancing.

Beer Gardens & Holiday Drinks

Beer gardens with heated patios are located throughout the Christmas market for people to lounge around and enjoy holiday beverages like mulled wine, beer, cider, hot rum, cocktails, handcrafted beer and more. On select dates, you are able to sample a variety of Scotch Whiskey at the William Grant & Sons' Hospitality Lounge; various rum, liqueur and brandy at the PMA Hospitality & Winter Warmer Lounge; and Ontario VQA wines at the Wine Country Ontario Sampling Lounge.

Street Vendors

If you stroll down the Christmas market, will find you traditional handcrafted gifts such as handmade ornaments, candles, hand-painted nesting dolls, folk artistries, mitts, hats, etc. Not to mention the smell of warm baked salted pretzels with artisanal mustards, Swiss hot chocolate with marshmallows, cinnamon glazed nuts, Oktoberfest sausages and the spice of mulled wine. The street vendors here at the Christmas market will give you a nostalgic feel of a traditional European Christmas.

Santa's Elves Sing-Along

A daily interactive show where you can find adults and children singing and dancing along to the Christmas classics with Santa's elves.

Caroling & Carolers

What better way to enjoy the start of holidays than to join the Candy Cane Carolers in singing your favorite Christmas carols. Sheet music is handed out for those who want to join.

If you decide to come and check out this beautiful, European-inspired Christmas market, be prepared to dress for the weather and be prepared for crowd and limited parking spaces, as the market will be bursting with people wanting to enjoy the holidays rediscovering the magic of Christmas.

STUDENTS IN SNAPSHOTS

"Rebels with a Cause." Take a glance at just a few of the interesting student groups in & around PB for 2013-2014!

Pharmacy Dragon Boat: Pain Killers

Est. 2012
Captain: Suming Feng
Assist. Capt. Int.: Chi Zhang
Assist. Capt. Ext. Mike Oh
Head trainer: Gemma Leung

Purpose
a) Provide an opportunity for students at the Faculty to learn & compete in the sport of dragon boat;
b) Encourage physical fitness, well-being & teamwork among all students
c) Increase the public profile & promote a good image of the Faculty and pharmacy profession

Come out on Wed. Nov. 27, 9am-5pm, for our Bake Sale!

As with last year, we will be competing in races at Milton & Centre Island.

Pharmacy Choir

Est. 2005
Directors: Justin Mak & Caitlin Walsh

Purpose: To sing, perform & have fun

Activities: We sang at Phollies & will perform at Arts Night in March & the OPA Cup in April.

We also sang Christmas carols in the Atrium on Nov. 21 to spread some Holiday Cheer.

'First rule of pharmacy choir: Don't talk about choir. Sing about it.'

Pharmacy Students for Cancer Awareness

Est. 2011
Returning Officer: Arman Zereshkian
President: Joann Ban

Purpose: Bring more awareness to the pharmacist's role in cancer care & current cancer research being conducted at the Leslie Dan Faculty of Pharmacy.

Our 2nd Annual Cancer Awareness Week (March 2013) included our very 1st Compounding Competition. We held a Lunch & Learn with an Outpatient Pharmacist & a Social Worker from Princess Margaret Hospital about cancer care interventions in hospital & community settings.

Our Bake Sale was held on Oct. 16th!

Global Medicine Initiative

Est. 2007
President: Larissa Boychuk
VP: Caitlin McIntyre
Advisor: Vicky Yu

Purpose:
a) Promote awareness & education regarding issues affecting health care & medicine access
b) Advocate for health & access to medicines at local, national & global levels
c) Provide social, interactive & professional learning events
d) Facilitate global experience & field work among students at the Faculty of Pharmacy & U of T

We plan to continue our Lunch & Learn series (such as Dr. Jillian Kohler, global medication access & Dr. Doret Cheng, Pharmacists without Borders), fundraise for *CANFAR for World AIDS Day* & our GMI Grant Gala to help promote & fund student initiatives abroad.
'Education, Advocacy & Global Innovation'

The Student's Prayer *to the gods of marks*

By CHOCOLATE BEAR, 1T?

We all have our own gods - and it's not what you think. Your god lies in your priorities, and ever since I was 4 years old I was ruled by 5 gods: The gods A, B, C, D and F.

The gods of high achievers: the gods A and B. The ones who we cry out for every night as we stay up late wishing to read just one more chapter of their sacred textbooks.

The gods of the "good enough": the gods C and D. Nights spent by the dull flame of a computer screen praying that these would be gracious enough to honour us with their presence, even though we know that we should have done better.

And all these times we would pray to be kept out of the hands of the last, most cruel god: the F god. Slipping through the cracks as silent as a whisper leaving pain and devastation in his wake: F.

Waiting for the moment where you can no longer read the sacred textbooks: F.

Tempting us by the warmth and comfort of our beds instead of the cold, ascetic life of study: F.

And so we fought and prayed to these gods; each one requiring his own prostrations and educations and memorizations. All of this to avoid the hell-flames of F. For years these gods ruled our lives.

So we started fighting from the minute we knew how. From the day we were first asked, "1+1". That was our first test. A.
But if we add an decimal? B.
But if we add an integral? C.

And if we add the reciprocal of the infinitesimal, and we don't forget to carry the decimal?
All A's and B's and C's and D's, flying in and out trying to avoid the god of F.

And as we got older our gods changed and took on new faces. New faces of old numbers that once you added them together they still looked the same. Flying high above the river of F we soared, counting our worth in letters. Determining our value in a percentile. Carrying our whole life's meaning on a ranking scale that always seemed to be a losing battle - until the battle drew to a close.

Music ? B
Applied physics? 93%
Pharmacology? C-
Integrated Mathematics of English? B+
Complicated Anatomy of Art? 75%
Historical Review of the Future? A+

And now we've come to the end of our lives of servitude; all of our testing is finally done. No more spending your nights fighting sleep to please your gods. No more missing family events to memorize whole(y) scripture.

The high priest of the last few years of your life hands you a paper and ribbon. Then he asks you one more question.

"Now that you're leaving your gods, now that you're leaving your priests, now that you're leaving your preachers and your scriptures behind; what are you going to do? Now that you can't measure the meaning of your life with a letter or a number; what does your life mean?"

F.

Itadakimasu!

By Phood Junkies

A few years ago, the word “ramen” would give mind to that dry, square of noodles you get out of a bag and throw into some boiling water, add some powder from a little packet in the same bag, and suddenly there’s a meal within 3 minutes. This concept has changed radically as the city of Toronto has been hit with a ramen craze. New ramen stores are popping up all over the downtown core and beyond, all vying for a piece of this newly discovered trend. Ramen has evolved into something with rich broth made from pork or chicken, freshly-made noodles, and luxurious toppings.

Below is just a snapshot at some of the ramen places near the Pharmacy Building for all you phoodies to try out.

Ajisen

Another chain venture located on Spadina, just north of Dundas, this store has been providing ramen for a very long time. This is another store I have yet to try (shocking, I know), but I have heard good things about it. Friends and family have recommended this place to me before, saying it’s good, a claim that seems to resonate with reviews online. While it is not the best ramen ever, it’s definitely a place that Torontonians will or can name when asked about ramen. My only caution is that this is a chain store, and I have heard that they prepare their broths with powder bases, though I cannot confirm this.

Kinton Ramen

Opened by the same masterminds that brought the Guu franchise to Toronto, this is one of the top contenders. Located on Baldwin, the atmosphere, staff, and food all parallel the infamous Guu style. The open kitchen lets you see the staff hard at work, and for a moment, you might forget you’re in Toronto at all, with all the Japanese music and dialogue going on in the restaurant. The noodles have just the right texture, the broth is rich with incredible depth of flavour, and the pork is to die for. They’ve recently introduced chicken-based broth, and serve a limited number of bowls each week, but they sell out fast so you’d better get in line.

Hokkaido Ramen Santouka

Located at the corner of Church and Dundas, this noodle bar is one of my favourites. One of their specialties is the Tokusen Toroniku Ramen, where the usual pork shoulder has been replaced with melt-in-your-mouth tender slices of pork jowl meat, served on the side of the ramen. The soup is rich, complex, and incredibly flavourful, while the noodles have just enough bite to hold their own against the succulent broth. The line-ups can get quite lengthy here, but it’s a must-try.

Kenzo

This ramen joint is a chain store with three locations currently operating in Toronto (Yonge and Wellesley, Bay and Dundas, Bloor and Spadina). While the noodles, broth, and meat may not measure up to the aforementioned stores, Kenzo offers a lower price and unique options like yakisoba, seafood ramen, rice bowls, and takoyaki.

Ramen Raijin

One of the first to bring the concept of chicken-based broth to Toronto, Ramen Raijin is located just west of Yonge and Gerrard. The open kitchen makes for a great show as you watch the chefs making each bowl of ramen right before your eyes. The store is somewhat larger than some of the ones mentioned before, and there are plenty of good reviews for the restaurant. However, I was unfortunate enough to receive a bowl of tonkotsu ramen with black garlic oil that failed to meet any of my expectations. While the noodles were a few degrees better than what I put into boiling water at home, the soup lacked depth, the garlic flavour was nonexistent, and the pork was dry. But this is just an one person’s opinion.

Ryu’s Noodle Bar

Another ramen joint located minutes away from the Pharmacy Building on the delectable Baldwin Street, Ryu’s Noodle Bar seems to be building a double-sided reputation for itself. While I’ve never tried their noodles personally, I have heard and read a number of reviews, many of which often contradict the other. There are some who say it’s not that great, and others who claim it’s the best ramen ever. For these reasons, I urge you to try it at your own risk and judge for yourself. Perhaps in the future, I can provide a more insightful review, but for now, Ryu’s Noodle Bar remains a large question mark on my to-try list.

Sansotei

This is a small ramen place located on Dundas (between Bay and University) that makes the ideal lunch option. This place offers a modest menu and some of the best soup around. The tonkotsu broth manages to be complex and wonderfully flavourful while being crisp and light. Pair the soup with hand-made noodles and a small, but satisfying, serving of pork shoulder and you will have a meal that can satisfy any cravings.

Special mention: Manpuku

While not a ramen store, I feel the need to mention Manpuku at some point in this article. Manpuku is actually located on McCaul, just south of Dundas and across from OCAD. It is situated within a food-court and has some incredible udon noodles, rice bowls, and some of the cheapest takoyaki around. This is an excellent option that I highly recommend.

The Pharmacist: Zombie Apocalypse
Chapter 3: Winter is coming

Recap (Part 1 begins in the September edition): Our young hero and his ever-dwindling group of compatriots were almost torn to bits by zombies in an abandoned housing complex when they were saved by none other than Dr. Wells, Junior! They are now on their merry way to a military strategic location only known as GPCR...

It was impossible to see where we were going. My eyes were stinging from the harsh cold winds and onslaught of snow. The blizzard was not letting up and we had to move hand in hand to make sure no one was left behind. We were completely exposed on the open road but at the very least we knew we were safe from the zombies. Their sense of smell would be diminished in such a blizzard.

"How much farther is it?" I yelled at Wells, Jr.
"Not much further now! Only about fifteen minutes out from no man's land," he shouted back.

I wanted to inquire further on this "no man's land" but I could barely talk without getting a mouthful of snow. It was then that we heard the high pitched scream of Tom from behind us.

"What's going on back there?" yelled Wells, Jr.
He was quickly answered by a loud deafening roar.
"RUN STRAIGHT AND DON'T LOOK BACK," yelled Wells, "DON'T CROSS THE BARRIERS."

I started to get up but was knocked over by people rushing past me. The roar sounded again with more screams of agony and pain filling the air. I grabbed onto Allan as he rushed past me, "We have to go get Tom! We can't leave him!"

Allan responded by kicking me in the face and running into the white hazy blizzard. I got up and turned to the direction where I heard the first scream. I started running towards the screams, not even sure which direction I was going to.

Then I saw it. Red piercing eyes. Two by two they surrounded me. Around those eyes, the shaggy fur dripping in blood became clearer and clearer. My legs stood paralyzed in fear as their snarls grew louder and louder in frenzy. It was then that I resigned myself to death.

The shotgun went off and the wolves scattered. "YOU FOOL, WHY DID YOU NOT RUN?" yelled Wells as he grabbed me by the collar and dragged me back. However the wolves would not back off, they regrouped and started to close in on us. Again and again the shotgun went off and the eyes dimmed two by two, but for every set that disappeared two more replaced it.

"What are we gonna do?" I asked Wells, hopelessly.
A dark large mass crashed through the wolves, sending three bodies flying.
"We're SAVED!" I cried, trying to get a better look at our saviour.

That's when I saw the Moose, its naked rib cage dripping with blood, its eyes red and unholy. A putrid smell surrounded it, part of its skull protruding. It was feasting on the dead flesh of the wolf it had just trampled.

Wells grabbed me once more and dragged me in the direction of the military base. As the storm started to die down and we got closer to the barrier, but we saw no one in sight.

"Where is everyone?"

Arman Zereshkian is a fiction writer/pharmacy student from 1T4 who enjoys long walks on the beach, hunting and gathering with his next of kin, and re-enacting various boy band music videos from the '90s.

The Great Monograph Hunt

Rules:
Solve the puzzles below to determine where clues are hidden in PB. Use the clues to figure out the final winning phrase. Some clues are held by professors, so go out there and meet them! Introduce yourself ask them a question, and be aware they may not always be there. The phrase is three words and is something that has to do with pharmacy. You may not need all of the clues, and when you figure it out, email 1t6.pharmacy.monograph@gmail.com with your answer. Correct entries will be entered in a draw and three people will win a $10 gift card from any coffee shop of your choice.

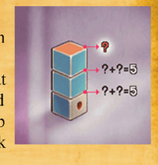
Puzzle #1 Word Search
The remaining letters form the hint!

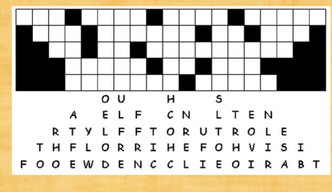
S	H	I	V	U	N	W	O	E	R	E	K	V	C	U
U	P	N	Y	E	L	I	D	C	I	E	D	J	E	R
P	A	H	L	I	N	O	O	N	K	A	F	R	O	U
P	R	A	N	T	N	D	T	E	H	E	U	I	P	P
O	G	L	M	E	R	S	P	D	O	D	F	O	L	R
S	O	E	Y	O	U	R	U	U	P	U	R	Y	S	L
I	N	R	P	R	E	S	C	R	I	P	T	I	O	N
T	O	C	L	U	E	W	X	P	A	E	U	E	D	A
O	M	F	G	R	Z	U	C	S	N	N	Z	J	N	R
R	P	H	A	R	M	A	C	I	S	T	C	P	U	C
Y	J	H	Q	O	P	D	C	R	E	P	V	E	O	O
C	F	D	U	S	X	C	X	U	V	P	Y	V	P	T
G	T	J	U	X	A	E	A	J	X	P	G	I	M	I
L	X	L	B	V	H	A	B	Y	P	G	Z	S	O	C
B	E	T	E	L	B	A	T	S	L	D	M	R	C	C

Capsule
Compound
Inhaler
Insurance
Jurisprudence
Monograph
Narcotic
Ointment
Pharmacist
Prescription
Refill
Suppository
Syrup
Tablet
Vaccine

Puzzle #2 Umpire's Riddle
What does an umpire use to freshen his breath?
When you figure it out, do some exploring here for your clue!

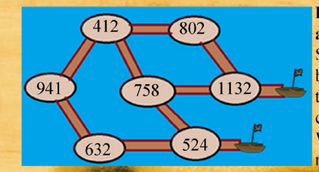
Puzzle #3 Dice Tower
Three normal six sided dice are stacked in a tower, but only one side of the dice is shown: a one. However you do know that the faces of the dice that are touching add up to five, so what number should the top face show? Add 5 to the number and look around that floor!





Hint #4 Fallen Phrase
The letters have all fallen below their spots and scrambled! Put them back in their place and you'll find your hint!

Puzzle #5 Rainy Day Riddle
If it's moist and it's not yours, don't touch it. But what do you think he does when it rains? Visit this prof between these office hours:
M 12-5, T 9-12, W 10-3, T 10-2, F 2-4
(You can find his room # at the bottom of his faculty webpage)



Puzzle #6 Bridges and Islands
Starting at either of the two boats, there is a single island that you can't get to by crossing exactly 6 bridges. When you find it, go to that room for your clue!

Career fair 2013

Charity Week

Chili! Chili! Chili!

Phillies 2013

wait...we were taught by SANTA?

Phillies 2013

Phillies 2013

Winter Wonderland

Ripleys Aquarium