

Volume 19, Issue 2 2017-2018

MONOGRAPH

The Voice of the Pharmacy Student



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The Monograph would not be made possible without our dedicated team of writers and readers like you!



Happy
Holidays!

Midterms are over, and as you cram for final exams, we bring to you the second issue of the Monograph. Flip through the pages for some great articles by your peers, newly including features about what's happening in PB. Thank you Pharmakon for constantly clicking away and providing us with amazing memories to cherish!

We were very impressed by everyone's Disney knowledge last issue! Although all the entries correctly answered the questions, Dana Shan was the lucky winner. Congrats!

For this issue, we're teaming with Pharmakon for a special contest. Fill out your respective class' questionnaire on page 30 to influence this year's yearbook. We will be giving out four \$5 gift cards to SECOND CUP, one for each class! Don't fret 1T8's - submit your completed Sudoku for a chance at the prize. As hard copies are limited, feel free to print the contest from our site and submit it.

A huge welcome to Michael Vu, who will be joining our Layout team!

Visit us at: monograph.uoftpharmacy.com, or use the QR code.

Enjoy reading, and we look forward to your submissions in the future!

Ersilia and Narthaanan
The Monograph Co-editors
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UPS ADDRESS

Hello Pharmacy!

Congratulations on surviving this Fall Semester! From the adventure-filled Phrosh week, to the party-all-night Boat cruise, and the most recent breathtaking Phol-lies talent show (kudos performers, volunteers, MC's, and Events Directors Cindy and Samuel) - our semester has been nothing but incredible!

A huge shoutout to all the student leaders of varying clubs and councils who have taken the time to plan various activities for us! The amount of student involvement within our Pharmacy community should be recognized and appreciated.

Most notably, UPS has been hard at work taking further steps to address key issues that are affecting our student body this year. The Dean's Town Hall was a huge success because of your ongoing support and feedback! Your opinions matter, and we want to make sure that your voices are heard! Be on the lookout for the both the Dean's and Town Hall meeting minutes!

With all of these events to look forward to, we hope that you enjoy what is left of this semester! Remember to eat, sleep, and take a break from studying this exam season! If you ever need anything, feel free to message us - even if it is for course/exam advice!

Wishing you all the best for your upcoming exams!

And, wishing you and your families a happy holiday! Stay safe and warm!

Steven and Onella
UPS President and Vice-President
ups@uoftpharmacy.com

UPCOMING...

THIS SEMESTER

- INTRAMURAL FINALS: if you get a chance, checkout some of our finalist intramural teams as they face off other faculties. GO Pharmacy!

NEXT SEMESTER

- PDW in Edmonton (January)
- Pharmacist Awareness Month (March)
- OPA Hockey Cup (March)
- Semi-Formal (March)
- Ontario Pharmacy Students Integrative Summit (March)
- Elections!!



Phollies



When we were called onto the stage on the night of Phollies, one of us blanked out on stage and the other did not appear at all. The experience of standing on a stage with everyone's gaze on you was nerve-wracking to say the least. One might think that the talented performers whom willingly signed up to go on stage would be a lot different compared to two UPS Events Coordinators (whose job description most definitely did not include being on stage). However, performers were not immune to nervousness as we found out backstage—some were warming up their voices or instruments, and others were going through their dance routine one last time. Despite this, every single act that evening was spectacular, and as organizers we could only look back in awe at how amazing each performer was.

Talent is abundant in Pharmacy and students across all four years of study showcased their wide-ranging talents at this year's Phollies. The 2Ts injected new talent into Phollies as seen with Eisha's hip hop dancing, Peter's mesmerizing performance of the "Interstellar Theme" on piano (a personal favorite musical score of mine [Sam]), Kyle's hilarious stand-up comedy, and Borar's physics-defying yo-yo tricks. Amongst the upper years, many talents returned to Phollies and delivered great per-

2017



performances once again, including Sophie's beautiful harp rendition of "Clair de Lune", Faraz and Shaan's magnificent performances on both the saxophone and piano, Katie's contemporary dance with "Chains" by Nick Jonas, and Jessie's powerful dancing that we all know and love. Lastly, how can we forget the two student groups that bring outstanding performances year after year, ADR and choir. Phollies made it apparent to us that Pharmacy students can do a lot more outside of just studying and counseling patients!

We would like to thank all the people that made Phollies possible. Thank you to all the performers for sharing your talents, Julia and Wendy for being the entertaining and lovely MCs, the tech booth and back-stage volunteers, rT9 class council for providing hot food, our sponsors at Aerochamber, and most importantly to the audience for your support.

Cindy Zhang and Samuel Chan
Events Co-directors
events@uoftpharmacy.com

Class of 1T8

Linda Yang, 1T8



This year, the 1T8 class hosted a BBQ for the 2017 Charity Week to raise money for the CAMH Foundation. To prepare for the BBQ, our class VP, Joel Thomas used his elbow grease and spent over four hours cleaning the grills and our class secretary Sara Tawadrous picked up a large selection of specialty toppings. Some of these toppings at our do-it-yourself station included nacho chips, hot peppers, flaming hot Cheetos, Sriracha sauce, hummus, olives, Thousand Island dressing, seaweed, wasabi, and teriyaki sauce. As a result of their hard work, as well as everyone else on class council, we sold out all the beef (halal), chicken, and veggie burgers as well as the beef hot-dogs. Thanks to everyone who came out to the BBQ!

CHARITY WEEK

Class of 2T0

Julia Liu, 2T0

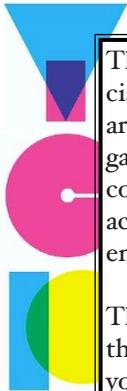


Charity Water is non-profit organization bringing clean and safe drinking water to people in developing countries. Currently 663 million people live without clean water, which is nearly 1 in 10 people worldwide. Charity Water works with local experts and community members to find the best sustainable solution in each place. For example these may include a well piped system, a BioSand Filter, or a system for harvesting rainwater. Clean water reduces death from dirty water, war, time and distance required to reach clean water and keeps children in school especially girls. This organization provides transparent financial reports annually. Private donors cover operating costs so 100% of donations will fund the water projects. For more information, you can visit <https://www.charitywater.org>.

This year, the 2T0 council hosted carnival games, including pill counting, a pill jar, and a Spin the Wheel board to win amazing prizes! And of course, what is a carnival without some delicious popcorn for sale? The goal of \$150 was exceeded, so as charity week came to an end on Friday, students came together to see Dr. Crandall and Dr. Dubbins pie each other!

Class of 1T9

Josephine Ho, 1T9



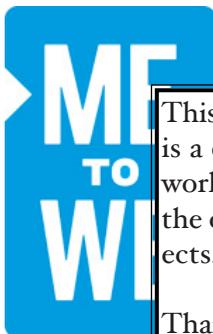
This year, the 1T9s once again showed their compassion and generosity throughout charity week, especially on Day 3 for the 1T9 activities. On that Wednesday morning, the PB Atrium was filled with the aroma of fresh samosas that warmed the stomachs of students and staff. Accompanying this was the 1T9 garage sale where there were books, games, jewellery, and even a bike wheel on sale. Finally, students could show their support through the online class council auction too. Students bid on their peers for activities like a sweet Raptors game, a pizza making party, and even a karate/self-defence lesson! The enthusiasm and support from the faculty allowed us to raise \$2206.50 for the Young Carers Program!!

The 1T9s chose to support the Young Carers Program again this year because of its impact on youth and their overwhelming gratitude from last year's donation. Young Carers is an organization that supports youth aged 5-18 who are in a caregiving role for a family member/relative with chronic illness, disability, addiction, mental illness, or a language barrier. In Canada, 12% of children and youth are young carers. These youth support their family through personal care, practical care (such as cooking, cleaning, housework), and emotional care.

2017: A SUCCESS

Class of 2T1

Julian Wong, 2T1



This year, the 2T1 class voted to raise money for the charity "ME to WE". ME to WE is a charity that aims to empower and positively impact the lives of people across the world. The charity has helped develop hundreds of impoverished communities through the charity's support for healthcare, education development, and water sanitation projects.

Thanks to the strong support and enthusiastic participation of the class, the 2T1's were able to host multiple successful events – which included a noodle bar sale and class council auction. A big 'thank you' goes to the 2T1 class council for their hard work, and especially our VP Yifan for organizing a rewarding and enjoyable Charity Week!

PHARMACY

Athletes of the Month

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Johnny Pharmacy picked up right where he left off last year making a huge impact in pharmacy athletics. As a co-captain on the men’s flag football team and member of the coed team, John is a top receiver and always a go-to target when the team needs a big play. John also played on the pharmacy softball team where he locked down the left side of the infield while picking up some clutch hits. Where John makes his biggest impact is on the ice. With well over a point-per-game average in his pharmacy hockey career, John is a player to watch for in the upcoming men’s and coed hockey playoffs, and not to mention at OPA Cup in March.



Watch out for Alex’s soccer kick! As captain of the Women’s Soccer Team along with Meiko (rT8), Alex was one of the four female soccer players who represented U of T Pharmacy in the 2017 Soccer Cup against Waterloo. She has been a dedicated soccer girl for every single season during her time in Pharmacy school. She’s the perfect surf and turf gal. In addition to being a superstar on the turf, she has been a Pharmacy Innertube Water Polo player, a Women’s Flag Football player, and an Ultimate Frisbee player during her time here at PB. Stay tuned as Alex and her girls head into battle as they begin playoffs.

Many consider Joe to be one of the nicest guys in pharmacy, but he also loves competition and excels in athletics. Joe is a key member of the men’s and coed flag football and basketball teams. On the court, Joe is a power forward that takes the ball to the hole, but can also spot up and shoot in the defender’s face. On the football field, he uses his size and agility to blow past defenders and lock down the cornerback position. Keep an eye on Joe second semester as he makes a *splash* in the pool playing water polo.



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Daniela “Don’t call me Deion Sanders” Fernandes plays on Women’s and Coed Flag Football, Coed Basketball, Volleyball and Softball teams for this 2017 Fall Season. She has been an active intramural athlete ever since she joined pharmacy in 2016. Daniela may be small, but her compete level is mighty. She is never afraid to get down and dirty, and dive into a wet field with the football. She also never hesitates to take on the role of captain for occasional basketball games when requested. Watch out for Daniela’s cannon of an arm on the dodgeball court next semester.





UPS Curling Bonspiel 2017

*Why should you get your husband into curling?
It is the only way to get him to sweep the house!*

It was a great night of sweeping, sliding, and falling for Pharmacy students with the U of T Varsity Curling Team! You are not a true Canadian until you give this sport a try.

The class with the highest attendance goes to the class of 2T0, for the second year in a row! Another point towards the UPS Cup, congratulations!

Great Intramural Season!

Congratulations to all of our Pharmacy teams that made it into the intramural playoffs. Watch out for news about any upcoming Championship games on our Facebook page. Which of our teams will bring home the T-shirt this season???

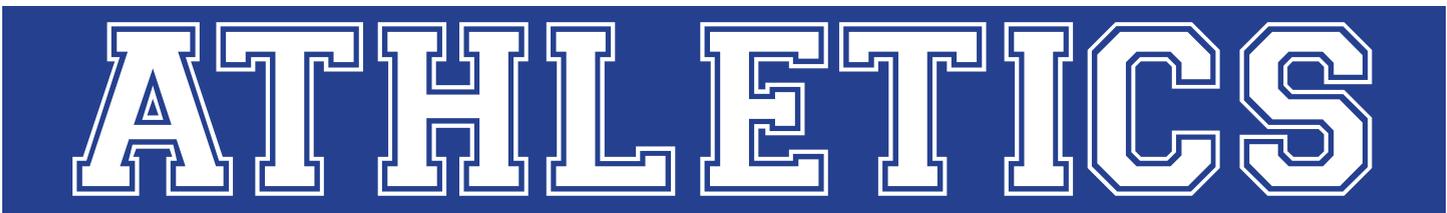
Women's Flag Football
 Men's Flag Football
 Coed Flag Football
 Coed Div 1 Volleyball

Men's Div 2 Volleyball
 Women's Div 1 Volleyball
 Women's Div 2 Volleyball
 Coed Basketball

Men's Div 2 Basketball
 Men's Open Basketball
 Women's Soccer
 Men's Hockey
 Coed Hockey

We encourage all pharmacy students to come out to the Championship games to show the other faculties how much love we have for our players! Pharmacy students who come out to a Championship game as a supportive fan will gain 1 UPS point per Championship game.

Sylvia and Andrew
Sr. and Jr. Athletic Representatives
athletics@uoftpharmacy.com



Capsi Corner

Thank you to everyone who came out to participate in CAPSI competitions during October! This month was truly a success and it wouldn't have been possible without all of our participants. Our CAPSI Council and the judges were extremely impressed by all the student talent – it was definitely a rewarding and fun experience for all those involved!

We are excited to announce the winners of our 4 major CAPSI competitions:

- Patient Interview Competition (PIC): **Samier Kamar - rT8**
- Over-the-Counter (OTC): **Steven Shao - rT9**
- Student Literary Challenge (SLC): **Vincent Nguyen - rT9**
- Compounding Competition: **Jessie Kajorinne, Nicole Flowers, Julia Liu, and Maddie Hannah - 2To**

We would also like to announce **Jasneet Dulai - rT9** as the winner of this year's Guy Genest Passion for Pharmacy Award!

Didn't get to participate in the competitions but still want to be able to test your pharmacy knowledge? CAPSI's Pharmafacts Pre-Bowl is just around the corner! Teams of 4 will be using their clinical and practical pharmacy knowledge to compete for a spot to represent UofT nationally at Professional Development Week (PDW)!

This year PDW is being held in Edmonton, Alberta from January 10-13, and the theme is "Fueling our Future." Highlights of this year's PDW include: a tropical soirée gala, motivational speakers, social night, outdoor skating, a Western Carnival, and much more! Didn't get a chance to sign up for PDW 2018? It's not too late! Contact Nisha (torontosr@capsi.ca) or Rachel (torontojr@capsi.ca) ASAP to reserve your spot!

The CAPSI National Executive Council Elections will also be held at PDW, but you do not have to be attending the conference to apply for a position! If you are interested, contact Nisha or Rachel for more information!

Thank you everyone for an amazing CAPSI competition month! We hope everyone is getting excited for what's to come!

Nisha and Rachel

Sr. and Jr. CAPSI Representatives



U OF T SLC SUBMISSION

PHARMACISTS OUT OF THIS WORLD

Vincent Nguyen, 1T9

With the rapid advancements in technology, there is constant talk about space travel, particularly exploration of planets further than our moon. Elon Musk has been the forefront of human colonization on Mars. His company, SpaceX, is currently working on a spacecraft that will be fast and efficient enough to travel to Mars. It is said that the spacecraft can also be used for travel on Earth, which can allow future individuals to travel anywhere on the planet in under an hour. Musk hopes that the first launch will be approximately five years from now. If the launch is successful, four spacecrafts will be going to Mars in 2024, two of which will have crews in them. This begs the question: will pharmacists be involved in the colonization of Mars?

Pharmacists at NASA

Pharmacists have been working with National Aeronautics and Space Agency (NASA) since the beginning of the century, so pharmacist involvement in the colonization of Mars is inevitable. Tina Bayuse was the first pharmacist to work for NASA and now she is leading a team of four at the Johnson Space Center (JSC) in Houston. Bayuse was always interested in space travel as a child, but it was not until attending a presentation about how drugs may function differently in space than on earth that her interest was really sparked in this field and encouraged her to collaborate with NASA. She obtained a pharmacy rotation in Houston's pharmacology lab and worked on drug monographs of the space shuttle medical kits. This led to the creation of the first pharmacist position within NASA.

At NASA, pharmacists mainly focus on preparing "convenience" and "contingency" medical kits for astronauts at the International Space Station. The main difference between the two kits is that the convenience kit contains medicines that one would usually take on a trip, while the contingency kit is stocked for emergencies and contains items like antibiotics and cardiac life support. Pharmacists decide what goes into the kit, and then pack them into the flight kits.

The ways that medications work in space may be more than a little different than the ways in which they work here on earth. The pharmacists at NASA have to choose medication based on volume and mass, which is sometimes problematic with some formulations such as soluble powders and liquids. Additionally, pharmacists have to think about how astronauts take their medications in space. For instance, using an injectable in an emergency is out of the question if they are using a space suit. Lastly, there are a lot of unknowns in space, including how the medication will react to radiation outside of Earth's orbit. This is where the role of the pharmacist will be a crucial aspect of space travel.

Future Involvement

With humans traveling to Mars as early as 2024, it is evident that more pharmacists will be needed in the NASA team. Traveling to Mars is far different from traveling to the International Space Station; one trip involves leaving Earth almost indefinitely to an unknown land, whilst the other allows humans to easily return. Preparing medical kits for Mars will have to factor into the long-term potential risks, which may prove to be a lot more difficult than short-term risks. Pharmacists will have to think about diseases or disorders that may arise later in life and prepare adequately for those. Additionally, pharmacists have to think about how space travel affects a person and their vulnerability to certain diseases or side effects to medications as well.

Pharmacists are presently and will continue to be crucial to space travel, especially when colonization on Mars occurs. Once that happens, there will potentially be a large influx of humans wanting to travel to Mars, not just astronauts. Pharmacists will be there to ensure the safe travel of humans to Mars and eventually, pharmacists will be out of this world and on Mars as well.

References:

1. Slezak, M., & Solon, O. Elon Musk: SpaceX can colonise Mars and build moon base. *The Guardian*; 2017 [cited 13 October 2017]; Available from: <https://www.theguardian.com/technology/2017/sep/29/elon-musk-spacex-can-colonise-mars-and-build-base-on-moon>
2. Page, E. How Tina Bayuse became the first pharmacist at NASA. *The Pharmaceutical Journal*. 2016 [cited 13 October 2017]; Available from: <http://www.pharmaceutical-journal.com/careers/career-profile/how-tina-bayuse-became-the-first-pharmacist-at-nasa/20200530.article>

BLOOD DISASTERS

Elaine Nguyen, 2T1

We asked for your most embarrassing period stories, and picked the top 5 anonymous submissions. Enjoy!

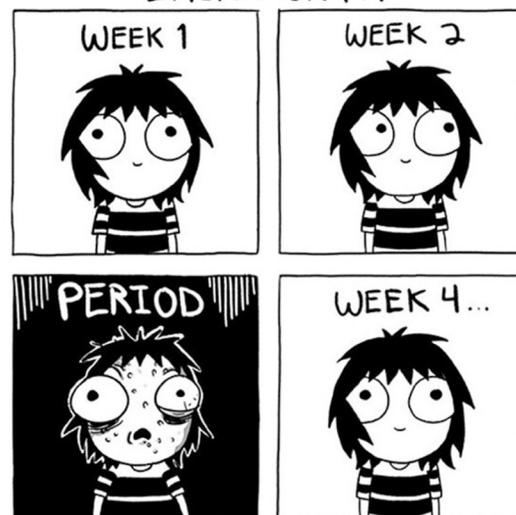
1. One of my favorite TA's in undergrad was a really chill guy. I once swung by during his office hours to ask a quick question and sat on the corner of his desk during our session. Turns out I had sat on one of the midterms he was marking, because when I got up, half the test was soaked with blood! I felt so sorry, but he just laughed it off. A week later, he comes up to me to tell me that he tried to convince the student who wrote the test that the giant stain was just juice that he had spilled LOL [2T1]

2. I come from a pretty awkward family, and my parents never gave me talks about puberty or sex. I got my period when I was 11 years old at a family gathering and freaked out when it happened. I was super embarrassed and didn't want my mom to know because I thought she going to be upset with me. When we got home, the first thing I did was try to get rid of my blood-stained underwear. I didn't have the option of throwing it in the garbage because my mom often filters through our trash, and there was no way I would be able to flush it. 11-year-old me thought I could get away with simply hiding the underwear. I took an empty toilet paper roll and stuffed my underwear into it, and then stuck it deep into the cupboard underneath the bathroom sink. I think I was able to hide the fact that I was having periods from my family for around 6 months, and then one day, I heard my brother shriek from the bathroom. In a panic, my whole family ran to his aid to see what had happened. He swung the bathroom door open and threw my 6-month-old bloody underwear onto the ground, and my whole family gawked in horror. Definitely one of my most embarrassing experiences! [2T1]

3. I had a class during high school where everyone lines up to have a mini feedback session with the teacher. It was my turn, and I hadn't gotten the chance to change my pad throughout the whole day. NEVER had a pad-overflow situation till that day. After I finished my session, I got up from the stool to let the person in line behind me sit, and he just stands there and stares at the stool all weird. I turn around and see that there's blood all over the stool. My teacher is also in shock, getting all flustered and awkward and starts stuttering at me. I get SUPER embarrassed and make a really lame excuse like "it's just juice from my backpack, it's not what you think it is!" I then had to run to the bathroom and grab paper towels to wipe up the stool in front of my whole class while trying to fool everyone with my horrible cover-up (can guarantee no one believed me). [1T9]

4. Got my first period during a karate class. Take a moment to envision that. [2T1]

MY APPEARANCE THROUGHOUT EACH MONTH

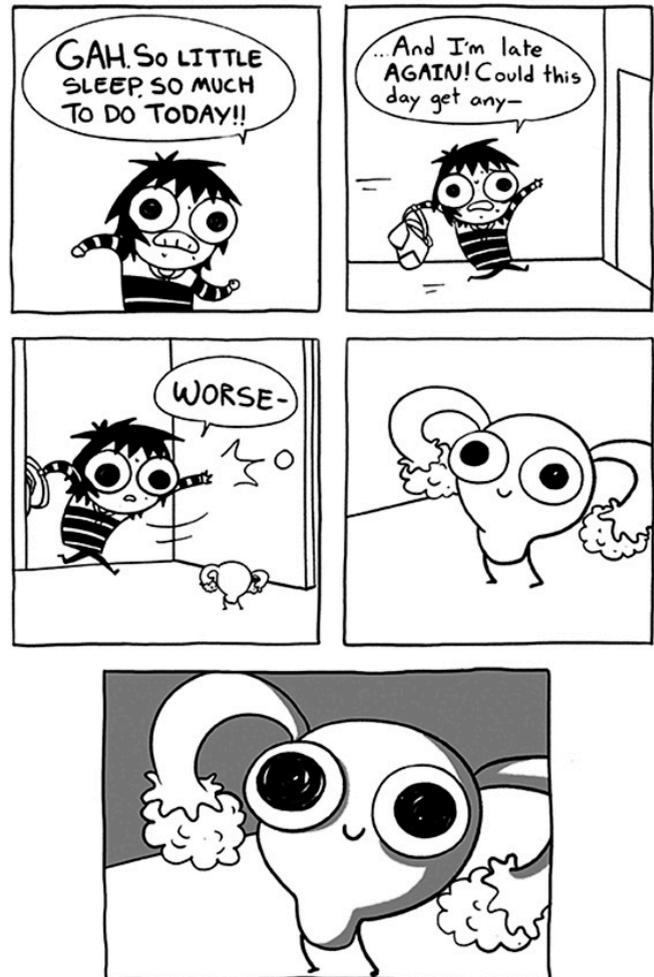


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CLUB'S CORNER • PSWH

5. It was midterm season of winter 2017. I had 3 tests coming up in the same week, and my period hit me just the weekend before this madness, so I was feeling a million times worse. Following my typical study routine, I pick up some Korean takeout and find my usual spot at my favorite library, which is made up of small coffee tables lined up in a narrow hallway. The chairs at this spot are awesome because they're like mesh office seats that give off a bouncy, rocky feeling. Anyways, I'm trying to get deep into the grind, but it's a little hard because I keep feeling my flow periodically spike – which, for any guys reading this, gets really uncomfortable (feels like you're wetting yourself uncontrollably). The person to my right gets up from their table and leaves, and then the two tables to each side of me are vacant. A pair of students come up and split off into each table. During that hour, I notice from the corner of my eye that they keep glancing in my direction, which makes me somewhat uncomfortable after a bit. Another hour of this passes, and I can keep feeling my flow doing its thing, so it seems like it's time for me to change my pad – so I pack my stuff up. I get up, the two guys look at me again, and I start to walk away. I can almost guarantee that every girl, at some point in their life, has experienced the mortification of seeing blood stains on their chair after they get up. But, I cannot describe to you how petrifying it was to see that, because my chair was mesh, there wasn't a splotchy stain at all – instead, there's bright red puddle underneath my seat. I'm watching in horror as the last strain of blood clinging to the mesh drips into the puddle. I grab a napkin from my bag and awkwardly wipe it up as hastily as possible as the two guys next to me glance over, probably stifling laughter. I pretty much bolt out of the library after. Imagine that – a girl at the library is sitting at her table while blood is dripping from her onto the floor below her. [2T0]

Bonus: I asked my boyfriend to get me pads, and he bought adult diapers... [2T0]



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<https://www.facebook.com/PSWHToronto/>

WHAT CAN I DO WITH A HOSPITAL RESIDENCY?

Narthaanan Srimurugathan, 2To

Perhaps the obvious answer is that a hospital residency program enables one to work in a hospital. However, not all hospitals require pharmacists to have completed a residency program. In fact, CSHP Ontario branch president and Regional Director of Pharmacy Services and Chemotherapy at the Huron Perth Healthcare Alliance and the Alexandra Marine and General Hospital Ryan Itterman said that the last few pharmacists he's hired had not completed a residency program. Although a hospital residency program may not be the only path to hospital pharmacy practice, it does offer several other advantages.

Residency Research Project

Residents will complete a research project over the course of the program. It's a pivotal component that allows individuals to ask clinical questions and answer them systematically. It allows residents to develop unique skills including study design, data collection, data analysis, and written and oral communication. Usually, the project explores pharmacokinetics, a clinical study, pharmacy practice or pharmacy education. Residents then have the opportunity to present their work in various conferences such as the annual Residents' Research Night hosted by the Metro Toronto division of CSHP. Often, this is a resident's first exposure to research and the acquired skills will shape the individual's hospital practice in the years to come. Some individuals may choose to pursue postgraduate studies, such as a Masters or PhD program based on their residency research project.

Drug Information

Drug Information is typically a mandatory rotation in a residency program. Although an integral part of

any pharmacist's practice, drug information pharmacists specialize in providing drug information to pharmacists, physicians, nurses, and the public. For example, drug information pharmacists may evaluate the stability of drugs, modify the hospital formulary, and draft relevant medical policies and procedures. As drug information pharmacists work in a variety of settings, such as hospitals, information resource centres, and government sectors, individuals may choose to work in any of such settings upon completion of a drug information rotation.

Drug Distribution

Although there are now established pharmaceutical industry residency programs, completion of a hospital residency can be a valuable asset to work in pharmaceutical industry. The comprehensive therapeutic skills developed through hospital practice is advantageous to understand pharmacodynamics, patient values, and real-world application of pharmaceutical products. Moreover, residents often complete a drug distribution and/or sterile preparations rotation, which provides individuals with an understanding of the manufacturing and packaging of drugs. Individuals who enjoy this aspect of the residency program may consider industrial practice thereafter.

A hospital residency program enables pharmacists to develop their therapeutic skills and become a leading healthcare professional. It is often said that the accelerated one-year program is the equivalent of 3-5 years of community hospital practice. However, apart from the plethora of clinical and therapeutic skills developed during the year, a hospital residency program may inspire individuals to pursue opportunities other than clinical pharmacy as well.



Like our Facebook page to receive updates about CSHP events and for more information about the practice of pharmacy in hospitals

<https://www.facebook.com/cshputoronto/>

CLUB'S CORNER • *Feature Clubs*

Healthcare Toastmasters

Arash Rezaeian, 1T9

Healthcare Toastmasters is a 2-year-old club at the Faculty of Pharmacy with the purpose of developing exceptional communicators and the leaders of tomorrow. Membership has grown year-over-year thanks to world-class motivational speakers such as Mark Bowden and Mike Lipkin, as well as local talents such as Mike Sullivan. More recently, our club collaborated with SOAPE in order to emphasize the role of public speaking in advocating for the pharmacy profession. The event included pharmacists from the three main areas of pharmacy: community, hospital, and industry. Among the panelists were Peter Tolios from head office at Shoppers Drug Mart, Mirjana Chionglo from AMGEN, and fellow Toastmaster Henry Halapy

from St. Michael's Hospital.

In terms of what our members do, Healthcare Toastmasters provides members with the opportunity to present prepared speeches, participate in group meetings, and develop their improvisation skills. Members are constantly encouraged to step out of their comfort zone and Healthcare Toastmasters provides a safe space for public speaking and personal growth. The aim is to not only improve on our public speaking, but also to maximize our strengths



to become better pharmacists upon graduating from the Faculty of Pharmacy.

Pharmacy Students for Antimicrobial Stewardship Society

Narthaanan Srimurugathasan, 2T0

Did you know that half of antimicrobial use is inappropriate? With increasing episodes of resistance and a lack of new antimicrobials, the importance of stewardship is far more pronounced today than it has been in the past. The goal of antimicrobial stewardship is to ensure patients get the right antimicrobials, at the right time, only when they need it. PSASS is part of a national organization that supports a multidisciplinary approach to stewardship by collaborating with students from Medicine, Nursing, Dentistry, and Veterinary Medicine.

Stewardship Pharmacist), Mirando So (UHN Stewardship Pharmacist), and Linda Jorgoni (Stewardship Nurse) this month. The panelists presented their opinions and approaches to antimicrobial stewardship, followed by a panel discussion with pharmacy and medicine students. It was a great opportunity to start working in an interdisciplinary team to achieve a common goal!



Are you committed to antimicrobial stewardship? You can take the Antibiotic Wise pledge today: <http://antibioticwise.ca/take-the-pledge/>. Still not convinced? Stay

tuned for more PSASS events next semester!

As part of World Antibiotic Awareness Week, we held a panel discussion featuring Mark McIntyre (UHN

HEADLINES IN HEALTHCARE

HOW THE HIGH-DOSE INFLUENZA VACCINE CAN IN-FLU-ENCE FUTURE FLU SEASONS?

Linda Yang, rT8

Low vaccination coverage

According to Statistics Canada, the flu vaccination rate of those over 65 years old has increased between 2003 and 2013-2014 in the Atlantic and Prairie provinces. Ontario has been an exception to this, as the rate of vaccination has decreased here. In seniors over 65 years old, 67% had received the flu vaccination in 2003 compared to 64% in 2013-2014. Both of these vaccination rates are also lower than the target of 80% set by Canada's National Advisory Committee on Immunization (NACI).

High burden of flu

In addition to the inadequate number of older adults receiving the flu vaccine, the majority of older adults above 65 years old are particularly vulnerable to the flu due to immunosenescence. 90% of influenza-related deaths occur in older adults and even if the patient survives, it may be followed by disability. Every year, there are approximately 175,000 flu-related emergency department visits, 12,200 flu-related hospitalizations, and 3,500 flu-related deaths in Canada with seniors comprising the majority of these cases. Therefore, seniors who contract influenza can be a high burden on the individual, society, and the healthcare system alike.

Can High-Dose influenza vaccine be a solution?

Since 2009, the High-Dose vaccine has been available in the United States to seniors. During the 2015 flu season, approximately 50% of seniors over 65 who were given flu shots received the High-Dose. According to the Canadian Immunization Guide Chapter on Influenza, and Statement on Seasonal Influenza Vaccine for 2016-2017, the NACI "...concludes that there is evidence that High-Dose trivalent inactivated influenza vaccine for older adults should provide superior protection compared with the standard dose intramuscular vaccine." To demonstrate superiority, a double-blinded RCT found that High-Dose was 24.2% more effective than the standard dose. In addition, there was a 17.7% reduction in serious cardio-respiratory events, a 39.8% reduction in cases of pneumonia, a 24% reduction in congestive heart failure, and a 6.9% reduction in all-cause hospitalization compared to a standard dose vaccine.

Another study conducted together by the Food Drug Administration (FDA), Centre for Disease Control (CDC), and the Centers for Medicaid and Medicare Services (CMS) has also demonstrated a reduction of probable influenza by 22% and a reduction in emergency room visits by 22%.

What about the Number Needed to Treat (NNT)?

Some students have voiced the opinion that while High-Dose is more effective than the regular standard dose by 24.2%, the NNT is equal to 217. This means that it requires a little over 200 people to get vaccinated in order to prevent one case of flu. However, we must remember that vaccinations are different than other drugs on the market. With other medications, only those with the disease state are treated. However, with vaccines, everyone in a population can be treated. When millions of people are given the vaccine, the number of people who are saved overall from the flu vaccine may be greater than taking chronic medications that are covered by ODB. In addition, flu vaccines require at most one injection per year, whereas chronic medications are required to be taken on a daily basis.

In the long-run, the health care dollars spent on chronic medications may be more expensive than getting one flu shot in the year. Therefore, even though some medications may have a lower NNT than High-Dose, the number of lives saved and the amount of health dollars spent can be just as comparable. We should keep in mind that the NNT does not account for the burden of the disease and the associated healthcare related costs such as hospitalizations.

High-Dose: A cost savings option

Unlike drugs and other healthcare interventions, vaccines are one of the only cost-savings options in the healthcare system. In a cost-utility analysis of High-Dose, the authors demonstrated that in Canada, the High-Dose influenza vaccine "...is expected to be a less costly and more effective alternative to SD [Standard Dose], driven by a reduction in hospitalizations." For this reason, in addition to many of the aforementioned reasons, the Ontario government will be covering the High-Dose influenza vaccine for the elderly during the next flu season in 2018.

References:

1. "Flu Vaccination Rates In Canada" (2017). Statcan. <http://www.statcan.gc.ca/pub/82-624-x/2015001/article/14218-eng.htm>.
2. Monto, AS., et al. (2009). "Influenza Control In The 21st Century: Optimizing Protection Of Older Adults". *Vaccine* 27 (37): 5043-5053.

HEADLINES IN HEALTHCARE



DO PROBIOTICS HAVE A ROLE IN THE PREVENTION OF A CLOSTRIDIUM DIFFICILE INFECTION?

Farhat Hossain, 2To

The discovery of antibiotics was instrumental in reducing patient mortality associated with bacterial infections. Prior to the discovery of antibiotics, people suffered from staphylococcal, streptococcal, gonorrhea, and syphilis infections. However, the initial popularity of antibiotics among prescribers led to complications, a common one being antibiotic resistance. For this reason, prescribers now exercise more caution when giving these agents to patients, yet paradoxically undergoing this therapy allows for proliferation of a bacteria known as *Clostridium Difficile* (*C. Difficile*).

Infection with this bacteria causes individuals to experience characteristic symptoms such as diarrhea or loose stools, abdominal pain, abdominal cramps, and a fever. The more severe form of infection is also able to present as blood and mucus in the stool. 1-3% of all people are asymptomatic carriers of *C. Difficile*. Antibiotics that are associated with an increased risk of contracting *C. Difficile* infection are clindamycin, ciprofloxacin, cephalosporin, and fluoroquinolones.

When an individual undergoes antibiotic therapy, there is disruption of normal protective intestinal microbiota leading to decreased competition for limited resources, which in turn results in overproliferation of *C. Difficile*. This increased growth of *C. Difficile* bacteria releases a toxin that produces changes in the gastrointestinal epithelium, leading to the aforementioned symptoms. The current treatments to treat the mild to moderate form of this infection are metronidazole and vancomycin. Despite this treatment, *C. Difficile* is associated with a high relapse rate (15-30%) due to resistance and normal flora microbiota recovering more slowly than the *C. Difficile* bacteria. More recent treatment involves a newly approved antibiotic called fidaxomicin, but there is still a 15% relapse rate with it. Additionally, a promising therapy known as fecal microbiota transplantation aims to repopulate the normal microflora of the patient's gastrointestinal tract and is associated with a 90% success rate.

The measures taken to prevent this infection include disinfecting contaminated surfaces and washing

hands frequently. There has been an interest as to whether the use of probiotics is able to prevent occurrence of a *C. Difficile* infection. Probiotics are live microorganisms that can provide potential health benefits to a patient if they are taken in sufficient quantities. A recent meta-analysis of current probiotic trials aimed to identify whether probiotics were efficacious in prevention of a primary *C. Difficile* infection. This hypothesis is based on the observation that when lactobacilli are ingested, they stay in the colon and therefore can compete with the *C. Difficile* bacteria. In these studies, two randomized controlled trials looked at the probiotic *Saccharomyces boulardii* in combination with *L. acidophilus* CL1285, *L. Casei* LBC80r and *L. rhamnosis* CLR2 (Bio-K+). It was found that there were fewer cases of *C. Difficile* infection in those taking the probiotic compared to the placebo group. There is conflicting evidence in the literature which suggest that probiotics are not effective, however when examining these studies it is important to take into consideration that not all strains demonstrate probiotic therapeutic efficacy. Another variable that is important to consider is the point during antibiotic therapy when a probiotic should be initiated. Despite this evidence, the Infectious Diseases Society of America and the European Society of Clinical Microbiology and Infectious Diseases do not recommend probiotic use as a preventative measure for a *C. Difficile* infection.

It can be difficult to differentiate between the side effects of this drug and a *C. Difficile* infection. When counselling patients, a more conservative treatment approach may be to advise them to notify the pharmacist when they first begin to experience these symptoms and then recommend changing the antibiotic if appropriate to the prescriber. Since probiotics are a commonly kept over the counter at the pharmacy (certain strains are kept behind the counter). Therefore, as a pharmacist it is important to consider the strain of probiotic that a patient should take as well as the timing and duration that they should be taking it for in relation to the duration of their antibiotic treatment.

References:

- Centers for Disease Control and Prevention (1999). Achievements in Public Health, 1900-1999: Control of Infectious Diseases.
- Yacyshyn, B. (2016) Pathophysiology of *Clostridium Difficile* Associated *Difficile*. Clinical Update - Advances in *Clostridium Difficile* from Digestive Disease Week. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5114514/pdf/GH-12-558.pdf>



BERNIE SANDERS SPEAKS AT UOFT

Julian Wong, zT

News of Bernie’s stop in Toronto brought much excitement to the student population. During his 2016 presidential campaign, Sanders received a lot of support from young Americans due to his positions on issues such as education, the economy, and the environment. As a strong advocate for healthcare reform, his support for a universal health care system generated a lot of publicity for his campaign – and a similar amount of buzz among Canadians as well. This was evidenced by the tremendous demand for tickets to his speech. The event was hosted at Convocation Hall and available for free to the public. Within one minute, the 1,600 seat venue was sold out.

Bernie’s arrival at UofT also sparked the interest of several influential Canadians. Ontario Premier Kathleen Wynne, recently elected NDP leader Jagmeet Singh, and former NDP leader Ed Broadbent were among those in attendance. Dr. Danielle Martin, a strong proponent of Sanders’ presidential campaign, was also present and co-headlined the event by leading a discussion with Bernie on his goals for health care reform. Dr. Martin famously advocated for Bernie Sanders’ position on healthcare at a U.S. senate hearing in 2014. The video of the hearing has since gone viral with over 1.5 million views on YouTube.

The Talk

The audience responded with frequent applause throughout Bernie’s speech as he explored reasons for success in the Canadian system and failure in the American system. The Senator traced back to the work of former Saskatchewan premier Tommy Douglas and the early development of the Canadian health care system. Sanders used this as an example to describe his beliefs on enacting change in government.

“Real change happens from the bottom on up. All of you know that change never takes place easily.”

Sanders continued by describing the importance of the American people in leading the movement, and how they are the ones responsible for asking the uncomfortable questions.

Bernie was also very critical of the current American political climate, stating that a small amount of wealthy Americans are able to pressure policymakers into pushing a specific political agenda. In this situation of unfairness, Bernie told the audience to “stand together and tell these oligarchs that this planet belongs to all of us.”

HEADLINES IN HEALTHCARE

Although Bernie offered a lot of praise for the Canadian health care system, he also identified a few areas for improvement. Long wait times, insufficient prescription drug coverage, and lack of dental care were some examples of the issues brought up by Sanders, adding that, “Any physician will tell you that dental care is part of health care.”

In his talk, Senator Sanders brought up many interesting points for discussion, including his rationale for endorsing universal healthcare. Throughout his speech however, he seemed to indicate that Canadians were in a position to criticize the American system. By titling his event “What the U.S. can learn from Canadian Health Care”, Sanders may have tried to pander to the audience’s sense of pride in the Canadian healthcare system. By repeatedly explaining how health care was superior in our province, Sanders seemed to avoid many of the “uncomfortable questions” concerning Ontario’s universal health care system. Other than briefly mentioning the need for shorter wait times, access to medication, and dental coverage, Sanders did not spend much time offering a two-sided argument for Ontario’s situation. For instance, in 2015, Ontario became the “world’s most indebted sub-sovereign borrower”, with more than double the debt of California but only one third of the population. Many of this debt can be attributed towards



health care spending, with approximately 38.1% of the 2017 budget going towards the health sector. Although Sanders’ fight for universal health care may lead to less risk and cost for the individual consumer, it can be argued that the cost is pushed onto the government and society as a whole. As of 2017, Ontario is projected to have accumulated \$311 billion of debt and will plan to spend 8.2% of its entire budget on interest payments. Even though Bernie likely had the agenda of promoting his Medicare for All bill, it seems that he did not use his speech to offer an objective evaluation of Canadian healthcare.

All in all, Bernie’s visit to UofT was a welcome one as it gave Canadians the opportunity to understand his opinions on healthcare and politics. Being an influential figure in American politics, his increasing support and continued fight for universal healthcare will likely benefit many working and middle class Americans if successful. It is clear that a lot has to be done in the American healthcare system and universal coverage is likely a step in the right direction. In his speech, Sanders was very effective in emphasizing his goals and supported all of his claims with convincing objective evidence. Altogether however, Bernie’s speech may have been even more impactful if he spent more time considering the challenges and consequences of Ontario’s system today.

References:

1. “With Twice The Debt Of California, Ontario Is Now The World’s Most Indebted Sub-Sovereign Borrower.” Financial Post, 2015, <http://business.financialpost.com/news/economy/with-twice-the-debt-of-california-ontario-is-now-the-worlds-most-indebted-sub-sovereign-borrower>.
2. “2017 Ontario Budget - Chapter 6, Section B.” 2017, <https://www.fin.gov.on.ca/en/budget/ontariobudgets/2017/ch6b.html#ch6b1>.
3. “Ontario Debt: Province Of Ontario Consolidated Debt Portfolio & History.” Ontario Finance Authority, 2017, http://www.ofina.on.ca/borrowing_debt/debt.htm.
4. Brown, Dexter. “So Much To Be Learned’: Bernie Sanders Commends Canada’s Health Care.” CBC News, 2017, <http://www.cbc.ca/news/canada/toronto/bernie-sanders-us-canadian-healthcare-1.4377480>.
5. Denton, Jack. “Bernie Sanders Speaks At Con Hall.” The Varsity, 2017, <https://thevarsity.ca/2017/10/30/bernie-sanders-speaks-at-con-hall/>.
6. Clark, Natalie. “Who Got To Feel The Bern?.” The Varsity, 2017, <https://thevarsity.ca/2017/10/30/who-got-to-feel-the-bern/>.

INTERVIEW WITH FRANCINE*

INTERVIEW • *Clinical Assessor*

* Note: The name of the pharmacist has been changed upon his/her request for privacy.

Grace Athanasiadis, rT9

I was fortunate enough to sit down with Francine*, a pharmacist at the Exceptional Access Program (EAP) within the Ontario Public Drug Programs branch at the Ministry of Health and Long-Term Care. I asked her a few questions regarding her work as a pharmacist within the provincial government.

Grace (G): Tell us something interesting about yourself.

Francine (F): As a pharmacist, I have worked in many different settings before coming to EAP. I worked in retail, and became a pharmacy manager for some time. I also worked in long-term care for a number of years, which I enjoyed for a few reasons. First, you had the complete profile of a given patient, allowing you to do more for them, such as adjusting a warfarin dose based on their INR—something that isn't usually possible in the community/retail setting. Also, in long-term care, you supply homes all over Ontario, therefore you get used to the prescribing pattern of physicians from outside your immediate location. Lastly, you have many pharmacists working together—close to 30—unlike other settings where you are often the only pharmacist. I also worked in various clinics, such as a geriatric clinic, where I performed many house visits. I therefore had many different pharmacy experiences before coming to EAP.

G: What interested you to go into the field of pharmacy?

F: My first exposure to pharmacy was in high school. I signed up to be a volunteer at a hospital and they sent me to the pharmacy department. I found it very interesting, and it inspired me to apply to pharmacy for university. I ended up getting in, and the rest is history. What keeps me interested in the field, however, is the joy and fulfillment one can find through all the different jobs available to a pharmacist.

G: Describe a typical day of work for you

F: Assessments are the backbone of an EAP pharmacist. I assess requests from physicians—who are inquiring on behalf of their patient—for [Exceptional Access] coverage of a medication [that is otherwise not covered under the Ontario Drug Benefit program]. Each week, as a pharmacist, you are assigned to a different role. This week I am on the STAT-RUSH queue. This means I am assessing requests for drugs that are deemed to be more urgent, and therefore assessed more quickly. This includes, but is not limited to, requests for various anti-infectives, palliative care therapies, or cancer drugs (oral, not injectable). You may also be assigned to other queues such as Rush, Biologics, or Hospital Discharge, and these rotations can change on a weekly basis. There are also problem rotations, which means you take escalated calls from patients, doctors or claim coordinators, who have placed a request to the EAP. When you first

start out, you only do EAP assessments, but as you gain more experience, you acquire more responsibility. I have recently been trained on assessing drugs for rare diseases. I am new to it, and have just been doing it for a few months, therefore I am still learning about the different diseases. Even if you have been here for a few years, you are still learning new things everyday.

G: What is the most rewarding aspect of your job?

F: You feel you are actually making a direct difference in the patient's care. A lot of what I have learned as a pharmacist has come from retail, and that experience has helped me in all the roles I have taken on since. Here [in EAP], however, I find my work directly impacts the patient, more than in other roles I have been in. I found that often in other roles I had to take an extra step to make a difference in a patient's care. This is something I greatly appreciate as an EAP pharmacist.

G: What are the most challenging and/or stressful aspects of your position?

F: I would say that sometimes it is to answer questions either from the requesting physician, patient, or reimbursement coordinator [often regarding their requests that were not approved]. It is difficult not because we do not know the answer, but because we are looking at the scenario from a different perspective. For example, from a clinical pharmacist perspective, you likely prefer to dispense the original brand-name biologic, such as Neupogen, compared to its second-entry biologic comparator Grastofil. But when a clinician looks at safety and efficacy, they do not look at the pharmacoeconomic aspects regarding the coverage of the drug. This is a very important part of EAP. A lot of these drugs do have a Health Canada approval; therefore, it is justified to give to the patient, but it is not necessarily justified from a pharmacoeconomic perspective. EAP holds this pharmacoeconomic perspective, while also being guideline-based. The program [EAP] exists for a number of reasons, including to regulate the use of drugs that have the potential for overuse or misuse, for off-label use, and because of the high cost of certain drugs. I would therefore say that this is the most challenging part of the job—this difference in perspectives.

G: Where do you see yourself in 10 years?

F: Hopefully still within Ministry. I have been here [at the ministry] since April 2015, so for about two and a half years now. I want to learn as much as possible, and this could take years—there is a lot to learn! Also, there are always new drugs added to EAP—another reason the learning doesn't stop. After I stop learning anything new, that is when I would want to move on to something else. I want to continue learning for as long as I can.

THE AGE OF SEQUELS

Joseph Correia, 2To

Making a quality sequel to a movie can be a challenging endeavor. Based on examining the review aggregator Rotten Tomatoes, out of the last 36 sequels released so far this year, 9 of them have received a higher score than their predecessor, while 27 of them received a lower score. While I am certain this type of analysis has no chance of meeting the criteria for a valid study in our research methods class, I thought it was a quick way to test out the prevalence of this concept. So why is this case? Is it just difficult to capture the nostalgia we sometimes hold close to our hearts while watching the original?

This topic sparked my attention after watching *Kingsman: The Golden Circle*, which (both in my opinion and in the opinion of the majority of reviewers) is far less superior than the original *Kingsman: The Secret Service*. I could not figure out why this was the case since *The Golden Circle* was funnier, there was more intense action, the plot was equally ridiculous, and some really cool new characters were introduced. However, after puzzling over this, I decided to re-watch *The Secret Service* and I noticed that everything that I really liked about it was over-emphasized by director Matthew Vaughn in the sequel. Taking all of the things the audience loves about an original and amplifying them for the sequel may seem like a good idea at first, but the reason this strategy doesn't guarantee the creation of a better sequel is because films are always more than the sum of their parts. It's not just about the action or the comedy, but how these two components of the film blend with each other and the film as a whole.

A more sensible approach may be to use what was set up in the previous films and move it in a new direction either tonally or narratively, instead of just "improving" the original. For example *Logan*, a sequel in the X-men series, surpassed every film before it despite being the 9th film in the series. Among other things, it did this by blending a comic-book movie into the Western genre, making it feel unique despite audience members having seen the character onscreen numerous times. It also used the opportunity of having a character that the audience knows so much about to create a character-study revolving around how the events of the previous films have shaped his life. This adds so much depth to the character of Logan that it retroactively adds something to all of the films that came before it. I believe some directors are forgetting that making a sequel to a good movie doesn't mean reiterating what was good about the first one. It means using the first film as a foundation while still trying to come up with new ideas that allow a sequel to stand on its own. Hopefully, Hollywood executives will realize this sooner than later so we can see a resurgence of legendary sequels like *The Godfather Part II* and *The Dark Knight* once again!




 An illustration of Ash Ketchum, a young boy with black hair wearing a red and white cap, a blue vest over a white shirt, and blue pants, kneeling on a dirt path in a lush green forest. He is looking down at Pikachu, a yellow, mouse-like creature with red cheeks and a lightning bolt on its back, who is sitting on the ground. The background shows rolling green hills and blue mountains under a clear sky.

POKÉMON THE MOVIE: I CHOOSE YOU!

Edward Ho, 2T0

On Sunday November 5, 2017, I was fortunate to attend one of the two-day screenings for *Pokémon the Movie: I Choose You!* as part of a media-only exclusive. Having grown up with this franchise through collecting the cards, playing the games, and pretending to be a Pokémon trainer in real life, there will always be something about Pokémon that lies deep within my heart and childhood memories. Although the franchise itself has vastly expanded to approximately 802 species from the initial 150 original creatures, this is one franchise that will continue to grow among the next generation.

This particular movie is the 20th of its kind, and as usual, revolves around the main protagonist since the very beginning, Ash Ketchum. Unlike many of the other movies that involve the supporting characters from the current television series, this movie goes on a complete tangent from the norm. Based on an alternate timeline, the major events of the first few episodes of the first season of the television series are recreated within the first few minutes of the movie; there onwards, new characters are introduced. Although pleasant to the current story, these new characters are displeasing to the nostalgia that was initially presented. Side note: Pikachu is still Pikachu after all these years.

Midway through the movie, I felt as if old ideas were trying to be rehashed to bring out something new but it was terribly executed, resulting in the complete opposite. Admittedly, I did have higher expectations from this particular franchise, but was let down by the lack of creativity that was originally presented in the first two movies of its kind. The most memorable, perhaps most nostalgic factor that I was hoping would overall embody

the movie, was only towards the end, where old faces were re-encountered that may very well have been in this movie for the sake of appeasing audience members such as myself. However, I should not be surprised with how the movie was presented, and with the directorial choices in what to include. As with any franchise, movies are used to promote the present state of any given timeline; that being said, this movie certainly did a wonderful job in promoting the newest games of Pokémon Sun and Moon.

In conclusion, from a creative perspective, this movie is a hit or miss as it appeases marketing quotas and the younger generation, but from a nostalgia standpoint, there are definitely areas that could have been improved. Yet as the generation is shifted again to a younger audience, this shift is more than expected in order to achieve what is necessary to grow a business. For me, the main highlight of this movie would be the complimentary exclusive card that is available for those who have attended either the November the 5th or the 6th screening of this two-day event at select theatres.

I will forever be looking forward to additional movies in this series. Although I know they will not be able to match the nostalgia of the past, they are something I would highly recommend if one were to introduce an individual to the franchise and its overall series.

Rating: B-



ENTERTAINMENT • *Movie Review*

THOR 3: RAGNAROK REVIEW: A HELA GOOD TIME

Kyle Yuen, 2T1

In the midst of midterm season and with impeccable timing (that was sarcasm), Marvel has blessed us with the latest entry into the Thor trilogy of movies and the Marvel Cinematic Universe as a whole. Featuring our favourite Norse God of Thunder, Thor (Chris Hemsworth), he goes on an epic and very colourful adventure to stop the end of Asgard, harkened by the return of Hela, the Goddess of Death (Cate Blanchett).

The most prominent quality of the film is the colour and tone, featuring a very retro and stylish backdrop from which our story unfolds. Backed by techno beats and Led Zeppelin's "Immigrant Song", our hero's journey is very bright and silly despite the cosmic horror of what is at stake. One of the greatest things about the movie is that it feels like a combination of the high fantasy of Lord of the Rings melded with the sci-fi disposition of Tron in a sleek and seamless product that does well to combine the two contrasting genres. You have your fighting with magic and swords, juxtaposed with settings of post-apocalyptic and futuristic technology. Surprisingly enough, it works beautifully. You'd be hard-pressed to find another experience like this.

The humour of the film also serves as one of the main highlights, with it easily topping the charts among Marvel's silliest movies. It does not take itself too seriously despite mighty ramifications on the universe. Thor's eternal thick-headedness combined with the antics of our favourite trickster Loki (Tom Hiddleston), favourite green smasher Hulk (Mark Ruffalo), and Jeff Goldblum doing his thing as a new character (and a personal favourite of mine) serve to dish out many laughs. It's hysterical when the characters play on typical film tropes or just

outright embrace them to the point of hilarity.

Ultimately, the humour, tone and action sequences are the film's strongest points; it is easily the best in the Thor trilogy. Thor 3: Ragnarok does, however, suffer from the Marvel Cinematic curse of predictability as a product of serving as one part in the entire universe. It's best to not think too much behind the profoundness of the film because you won't find much. But the stylishness of the whole product is enough to generate great superhero fun, and that's all we really need and expect from the MCU.

Pros:

- Great humour
- Really cool action sequences
- Visual stylistics and colour
- Good use of continuity (Nods to old Avengers and Thor movies)
- Hela is a unique villain
- Hulk, Jeff Goldblum and Loki
- Led Zeppelin

Cons:

- Somewhat weak resolution
- Plot predictability
- Maintaining continuity for the universe really limits the possibilities

Rating: 8/10, pretty good and a not Thor-rible experience.

MOVIE GUIDE: FIVE FALL FILMS

Rajiv Rampersaud, 2T0

In a season where movies such as *Justice League* and *Star Wars: The Last Jedi* will draw large audiences and dominate the box office, it is also nice to acknowledge films which may be lesser known but still worth the watch. After this year's Toronto International Film Festival, certain films stood out as crowd-pleasers, captivating moviegoers with their unique storylines, memorable characters, and overall charm. Here are five of those films, for your consideration:

1) *Call Me By Your Name*

Cast: Timothée Chalamet, Armie Hammer

Based on the book of the same name by André Aciman, 'CMBYN' follows the relationship between 17-year-old Elio (Chalamet) and doctoral student Oliver (Hammer) as it blossoms over the summer of 1983. Each year, Elio's father, an archeology professor, invites an academic house guest to the family's villa in Italy to assist with research. This time, the guest is a handsome American man named Oliver whose carefree attitude is considered unusual by Elio and becomes the subject of considerable humour at first. Despite initial differences between them, Elio and Oliver grow close to each other as they find common ground in their Jewish background, sexuality, and appreciation for the Italian landscape. 'CMBYN' has been praised for its depiction of young summer love amid the process of growing up. Featuring strong performances from its lead cast and a notorious peach scene, this movie is not to be missed.



Above:

2) *I, Tonya*

Cast: Margot Robbie, Sebastian Stan, Allison Janney

Harley Quinn puts on a pair of ice skates and becomes professional figure skater Tonya Harding (Robbie) in this dark comedy based on true events. 'I, Tonya' explores the investigation surrounding the incident which led to the end of Tonya Harding's career. Tonya and her husband Jeff (Stan) were involved in hiring a man to break the leg of Harding's competitor, Nancy Kerrigan, during the 1994 National Figure Skating Championships. Tonya's involvement in the act led to her lifetime ban from competition, ending her Olympic prospects and creating a media frenzy when news broke that such a tour-de-force in figure skating became a convicted felon (Harley Quinn returns!). Alongside her blunt mother (Janney) who appears to do more harm than good, Tonya tries to clear her name in a movie that blends humour and drama into one wildly entertaining package.

3) *Lady Bird*

Cast: Saoirse Ronan, Laurie Metcalf

While sitting in a moving car with her mother nagging at her to attend community college instead of living away from home, Christine McPherson (Ronan) opens the car door and throws herself out. Christine is an ambitious, outspoken high school senior yearning for a different life than the mundane one in her hometown of Sacramento, California. Frustrated with the constraints of Catholic school, she seeks opportunities on the U.S. east coast where there are Ivy League universities and a chance for greater success. However, Christine's dreams are hindered by her academic struggles, troubled social life, and a mother (Metcalf) who turns out to be just as opinionated as her. 'Lady Bird' is a coming-of-age film which takes an amusing look at the various measures a teenager will take to make her dreams come true. It also offers a special look at a turbulent mother-daughter relationship, including its explosive, funny and tender moments – all of which are captured seamlessly by solid performances from Ronan and Metcalf.



Above (from left to right): 'The Disaster Artist', 'Three Billboards Outside Ebbing, Missouri', 'Lady Bird'

4) **The Disaster Artist**

Cast: James Franco, Dave Franco, Seth Rogen

James Franco directs and stars in this movie about a movie, and not just any movie – one of the worst movies ever made! 'The Disaster Artist' looks at the making of 'The Room', a notoriously awful film which has become one of the most beloved cult classics of all time. Based on the memoir of the same name, the film follows Greg Sestero (Dave Franco) as he moves to Los Angeles and collaborates with his new friend Tommy Wiseau (James Franco) on the making of their own film about a love triangle. With the help of script supervisor Sandy Schklair (Rogen), Tommy brings his bizarre visions of the project to life. 'The Disaster Artist' follows the outrageous moments throughout the production of 'The Room'. Featuring a cast of surprise celebrities, this film is sure to make you laugh while raising some eyebrows. Though based on one of the worst movies ever made, it can be considered one of this year's best.

5) **Three Billboards Outside Ebbing, Missouri**

Cast: Frances McDormand, Woody Harrelson, Sam Rockwell

Do you know that one person who doesn't take 'No' for an answer? In 'Three Billboards', that person is Mildred Hayes (McDormand), a grieving mother who becomes frustrated with the lack of progress in the search for her daughter's killer. To draw attention to her cause, Mildred has three billboards installed just outside the town which question the actions of the local police force and attracts bitterness from various town residents including Chief Willoughby (Harrelson) and Officer Dixon (Rockwell). Mildred refuses to take down the billboards, resulting in a feud that grows bigger every time someone challenges her. 'Three Billboards' is more than just a story about a mother's dissatisfaction with the police force – it's also a film about resilience in times when you're told to give up. It won the top prize at TIFF, where it was voted as the audience favourite. It could very well end up being your favourite too!

References:

Announcing the TIFF '17 Award Winners. (2017). Toronto International Film Festival. Retrieved November 4, 2017, from <http://www.tiff.net/the-review/tiff17-award-winners/>

<https://i.ytimg.com/vi/qmNxpNsQsGM/maxresdefault.jpg>



OUR FAV MUSIC OF 2017

We share the new music that was on non-stop repeat this year in our lives. - collected by Michael Vu, 2T1

Prom King

by Skylar Spence



What - In a departure from his previous style as an artist known as Saint Pepsi, Skylar Spence delivers refined future-funk/vaporwave-inspired dance tunes for groovin'. Funky yet cognizant of contemporary tastes, Prom King is perfect for those who enjoy nostalgic tunes with modern production values.

Sounds - Featuring groovy bass lines, guitar melodies, and self-recorded vocal samples, he creates a futuristic sound while appreciating disco and boogie in a cohesive style. Generally, it's pop-ballad lyrics on top of a driving melody, as well as some self-digs on his past persona: "I slowed some music down and called myself an artist".

Listen while... - driving (not distractedly) and/or feeling some nostalgic late-night vibes.

Stand-Out Songs - Fiona Coyne (driving guitar, soft feeling on top), Fall Harder (wholesomeness, nostalgic), Can't You See (bouncy).

Type this into YouTube - "skylar spence prom king"

- Kyle Yuen, 2T1 -

Kyoumen no Nami 鏡面の波 or A Wave on the Mirror's Surface

by YURiKA



What - Opening theme song of a new anime this season called Houseki no Kuni (Country of Jewels, localized as Land of the Lustrous).

Sounds - Light and fleeting. The multitude of disjointed lines seem to contrast each other, yet they are done so beautifully.

Listen while... - taking a break, feeling unproductive, or questioning the meaning of life.

Stand-Outs - Saxophone and strings.

Type this into YouTube - "kyoumen no nami"

- Jenny Feng, 2T1 -

Pretty Girls Like Trap Music

by 2 Chainz



What - On Pretty Girls Like Trap Music, 2 Chainz delivers a well-crafted and cohesive album that stands out from the current wave of mumble rap. With features from artists such as Jhené Aiko, Migos, Nicki Minaj, Travis Scott, and of course, Drake, PGLTM is an enjoyable listen from start to finish and my unequivocal favourite hip hop album of 2017.

Sounds - Laid back and accessible trap. 2 Chainz recruits a myriad of producers to keep the beats unique throughout the whole album, all while dropping bars that range from braggadocios "my ego is enormous like my crib in California" to wholesome "it's all love, positive vibes".

Listen while... - turning up or winding down.

Stand-Out Songs - It's a Vibe, 4 AM, Good Drank.

Type this into YouTube - "2 chainz its a vibe"

- Jacob Poirier (JP), 2T1 -

BGM 20: Lima

by Various Artists



What - To provide background music (a.k.a. BGM) for their stores, Muji goes around the world recording local musicians. Their 20th stop is in Lima, Peru, featuring "música criolla" which has African, European, and indigenous Andean influences.

Sounds - I don't speak Spanish, so I'm not sure what the singers are saying... but I really enjoy the nimble guitar work, castanets (!) and cajón (box drum).

Listen while... - the sun is out, while studying, doing chores...it's background music!

Stand-Outs - Castanets!

Type this into YouTube - "bgm 20 lima"

- Michael Vu, 2T1 -



As exam season approaches, what better way to deal with all of the stress than with DESSERT! I present to you the “No-Bake Pineapple Cheesecake”. It is an easy recipe that requires no oven. This smooth, rich, not-too-sweet-but-just-right creamy filling will melt in your mouth, leaving you wanting one more bite!

Prep time: 20 mins **Total time:** 6 hours

Required Ingredients:

CRUST

- 1 cup of crushed graham crackers
- 3-4 tbsp. of butter (melted)

FILLING

- 1 can crushed pineapple
- 1 tsp. of vanilla essence
- 3 pkg. Philadelphia cream cheese (softened)
- 2/3 cups of sugar
- 1 tub whipped cream (thawed)

Steps:

1. Mix the crushed graham crackers and butter; press onto the bottom of a 9-inch springform pan to make the crust (Note: Using a springform pan will make it easier to remove the cake from the mould. However, if you are using a regular mould, make sure to grease the pan with some butter prior to adding the graham crackers)
2. Bake the crust at 350 Fahrenheit for 15 mins
3. Remove crust from oven and let it cool down to room temperature
4. Beat the cream cheese and sugar in a large bowl with a mixer until blended
5. Add and mix the vanilla essence
6. Add and whisk in the crushed pineapple and whipped cream
7. Pour mixture over crust and refrigerate for 5 hours or overnight (if possible)

Cheesecake is an easy recipe as there are not many steps involved in making it, but the fridge time is very important. Longer fridge time means that the cake will have more time to settle. This recipe serves about 12 people, which is great when having friends over (or if you want to devour the whole cake by yourself, then I won't blame you). Enjoy!

- ▶ To: Joe Li (2To)-You are an amazing team player and will definitely be an inspiring leader to this world! Your passion really shines through in all your activities and commitments. It is really contagious actually!
- ▶ To: Edward Ho (2To)- Excellent Disney study break contest! We should do a Disney movie marathon!
- ▶ Major love to Mom squad and friends for keeping me sane during second semester. I love you dearly <3
- ▶ Shout out to Anna Taddio for admonishing us and making us feel loved. MOM OF THE YEAR
- ▶ Thanks myself for not going mad during midterms... (or did I? the fact that i'm writing to myself...)
- ▶ Pam! Thank you for the insulin dosing crash course and feeding me!
- ▶ Thanks Mama for always saving us seats <3
- ▶ s/o tina nguyen for bringing a box of donuts for everyone during double labs when we also had two midterms in the same week!!! 10/10 thoughtful human being :)

- ▶ Shout out to the class of 1T9 and the steady diet of lit memes we've had over the years.
- ▶ To: Jane Li (1T7)- for helping me with school work during the third year. Thank you very much and really appreciate it=-
- Quan Zheng
- ▶ To: Lyndsay Torunski (1T9)- Thank You for your AMAZING banana bread and sugar cookies at our football games! They were the best thing ever especially after being drenched in a storm and for two hours. You took the time to bake them for the team during this crazy midterm season and REALLY made our day.
- ▶ To Jessie Kajorinne (2To)- Seeing you study on 2nd floor late at night really motivates me to do more. I have never met a more well-rounded, more talented, and more PRO-ACTIVE and stylish student ever! You are truly an inspiration! I've never once heard you complain about not having enough time - you set a great example for the rest of PB!
- ▶ To Shelby for planning an amazing PGBA launch. You rock!
- ▶ S/O to Hedy Romero from 2To, you make my heart have premature ventricular contractionsnately paid off!

ADVICE COLUMN

Dear Druggist,

Can you negotiate salary fresh out of school?

That's a complex question, but the short answer is maybe.

There are many factors in play. For example, where will you be working? Is it within a large city like Toronto or in a more rural setting? Will you be in community practice, hospital practise, industrial practice, or something else? Have you completed any other credentials, either before or after pharmacy school?

Realistically, the job market for community pharmacists in Toronto is competitive so it may not be in your best interest to negotiate salary. That does not mean you should accept any remuneration for your work. Investigate what the normal salary for the work you will be doing in the city you will be practice at is; if it does not match, negotiating salary is definitely justified. If you were working in a city where there is a higher demand for pharmacists, or where there are more opportunities, it is more suitable to negotiate salary as well.

Completion of other credentials that will aid you succeed in your position is another reason to negotiate salary. Per-

haps you have completed a postgraduate degree, and the skills you have learned will help you market products better. Or, you may be a certified diabetes educator and will be working with a largely diabetic population. In such scenarios, negotiating salary is warranted as well.

It's definitely tough going into a job market fresh out of school. I think it's important to consider your credentials with the pay rate of a working individual with similar credentials. I wish you all the best on your future endeavours!

SY is an enthusiastic community pharmacist working at a local grocery store pharmacy. She is a recent graduate and enjoys taking relief shifts at a variety of retail locations whenever she isn't working at her pharmacy.



STUDYBREAK • *Puzzles***SUDOKU!***Zahra Khan, 1T9*

	6			7			8	
	5						3	
8		3				9		1
			1		6			
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	9						4	
	3			1			6	

GET INVOLVED WITH THE MONOGRAPH!**Shoutouts:**

Do you want to acknowledge someone who has helped you in your classes? Someone who you admire? Perhaps a friend who came through during a time of need? Give them a shout-out on the Monograph using the QR code!

**Dear Druggist Questions:**

Do you have a question for a pharmacist? Are you unsure of who to ask? Do you not have the connections for the response you need? We've got you covered. Ask any question about pharmacy, healthcare, school, or even personal life and we'll have a pharmacist answer it for you. Use the QR code!

**APPE/EPE Anecdotes:**

Thank you to those of you who have submitted a response. We're looking for more submissions as we have something exciting planned for this column! Submit your funny, ridiculous, or even sad memories from your APPE or EPE rotations using the QR code!

STUDYBREAK • *Contest Time*

DEAR YEARBOOK...

It's contest time!

Do you want to have a say in the yearbook? Missed out on joining Pharmakon this year? Well luckily for you, the Monograph and Pharmakon are teaming up for a special contest this month. Share your memories, show your creativity, and make this year's yearbook one to remember.

Fill out the questions for your respective class. There will be a prize for each class! 1T8s, submit the Sudoku on the back!

 Name: _____

Circle one - Year: 1T8 1T9 2T0 2T1 Staff

Email: _____

Class of 2T1

Class of 2T0

Class of 1T9

Please put 1 name for each of the following categories.

Always smiling _____	Most likely to start counting down for Christmas when it's still October _____	Cutest smile _____
Most likely to ask a question in class _____	Mostly likely to win The Voice _____	World traveler _____
Most likely to own a Big Pharma company _____	Most likely to never show up in lectures _____	Hippest instagrammer _____
Most likely to fall asleep _____	Always encouraging and supporting others _____	Most zen during onco class _____
Most extra _____	Most likely to travel the world _____	Life of the party _____
Most likely to become a sugar daddy _____	Most likely to marry someone from Pharmacy when they graduate _____	Most likely to own 4 community pharmacies _____
Best foodie _____	Most likely to become a soccer mom _____	Most likely to go to med school _____
Life of the party _____	Bakes the best cookies _____	Most gains _____
Never seen in class _____	Cutest couple _____	Biggest foodie _____

Please answer the following questions and remember to put your name to be featured in the yearbook!

Best memory of Phrosh week?	Best song to dance to?	Hospital, retail, or industry?
Pizza or burritos?	Favourite memory of the year?	Best place to get cheap cocktails around campus?
Would you rather get straight As, or have the class president dress up as Jynx the pokemon?	All time favourite Christmas song?	What do you do to de-stress?





Behind the Lens



Knox College
- Bailey Hogben, 2To



Paris in Vegas
- Tammy Nguyen, 2To



Arc
- Tammy Nguyen, 2To



Countdown Until Exams!
- Vincent Nguyen, 2Tr



Beginning or End
- Vincent Nguyen, 2Tr