

Pharmacy Phile

University of Waterloo School of Pharmacy

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President and VP's Address

The summer is finally here! It is a moment that most students have been waiting for and traditionally has been an extremely fun term to be in school. It's hard to believe that there is less than a month of school left. The term has been an exciting one thus far, with welcoming the Rx2021 class back from a short break and the Rx2020 class back from their first co-op experience. The FIFA World Cup has added to everyone's excitement and the students have undoubtedly been busy with the fantastic variety of events hosted by SOPhS clubs.

The month of May saw both the Rx2021 and Rx2020 cohorts come together for the very first time. SOPhS started off the term with a fantastic "Beginning of Term" event hosted by the

President and VP's Address (OPA) in Muskoka, a perfect getaway from the city for students. Students enjoyed talks, the trade show, networking events, as well as got opportunities to go swimming, canoeing, paddle boarding, and much more! It was fantastic to see a record number of Waterloo pharmacy attendees at this year's conference.

June proved to be one of the most exciting months of the year and started off with two fantastic conferences. The Canadian Pharmacists Association (CPhA) held their annual conference in New Brunswick, which allowed students a great opportunity to see Canada's east coast, while attending multiple educational talks and networking events. The second conference was hosted by the Ontario Pharmacists Association

Along with multiple midterms and tests, there were also multiple events held in June. Therapy dogs graced the school with their presence and proved to be some much needed stress relief for students. A Mock OSCE was also held for all students that were interested, providing students with a great experience to test their knowledge and counselling skills. SOPhS Athletics also hosted a trip to Toronto to cheer on Toronto's Blue Jays.



SOPhS and we are excited to continue walking in excellence as they did during their term. Stay tuned folks, it has been a hot summer and we intend to ensure that the fall and winter terms remain hot for students at Waterloo

A massive thank you is extended to Naushin Hooda and Paul Bal's dedication, innovation, care, and hard work over their term as President and Vice-President. They introduced a variety of events and facilities that students are undoubtedly grateful for. We appreciate what they did for

pharmacy.

*- Tarun Fernandez & Alice Xu
President & Vice President*



CAPSI Corner

Where is our summer going!?! How has it been two months since the beginning of term! I feel that most of us have been wondering the same thing lately, but not to worry because CAPSI has some exciting events in store for its members.

What better time to kick off OTC week than after a long weekend? OTC week started Monday July 2nd, which kicked off with our OTC themed social media challenge. Lots of great responses have been received over the last few days, and it's always interesting to see what everyone comes up with!

CAPSI also held our annual OTC Mock OSCE Wednesday July 4th. We had a great turnout from the Rx2021 class giving



participants the opportunity to apply and practice their OTC knowledge. Remember when it comes to OTC's – brushing up on your SCHOLAR/HAMS is always the way to go!

On Thursday July 5th, we will be hosing Trivia night at Taste at the Tannery at 6 PM. Come out for free food, OTC themed trivia, and socializing. Plus it's kind of like studying... or at least that's what I'm telling myself.

While OTC week may end Friday, the fun isn't over yet! Join CAPSI at our annual charity beach volleyball tournament on Friday July 14th at Bobby

O'Briens for some fun in the sun! This year's proceeds are going to CANFAR (Canadian Foundation for AIDS Research)

Lastly, take a look at pictures from last year; these are events you really don't want to miss! Hope everyone has a great remainder of their summer whether you are in school, on co-op, or finishing clinical rotations!

- *Blake Houle*

CAPSI Sr Representative



OPA Conference 2018: Connecting the Dots

This year, the OPA Conference ran from June 7th to 9th. The weekend event was filled with education sessions, student presentations, networking and socials, all within the beautiful picturesque setting of the Deerhurst Resort.

UW had an amazing turnout this year with almost 50 students from all four years coming together at the conference. Furthermore, we had great representation in student research as 9 of the 12 selected student speakers are from UW and our very own Kristina Kozlovksy (Rx2018) won the student research presentation competition!

A huge congrats to Kristina as well as all of our student presenters: Daniel Archibald (Rx2018), Ashley Bancsi (Rx2019), Mohamed El Sheikh (Rx2019), Naushin Hooda (Rx2019), Simond Lieu (Rx2019), Chris Voss (Rx2019), Katarina Vuckovic (Rx2019) and Injeong Yang (Rx2019).

Thank you to everyone who came to represent our school, the school spirit was definitely felt by all. Next year, OPA and CPhA will be joining

together for the 2019 conference in Toronto! Hope to see you all there!

- *Louis Wei*

OPA Student Representative

OPA Experience 2018

This year I attended the OPA conference at Deerhurst in Huntsville. I went to talks about marijuana, interpreting lab values, harm reduction and even gave a 3 minute presentation about my PHARM 401 project. I've attend other conferences like PDW and I liked that the OPA conference gave you enough time to explore the resort and Huntsville.

The best thing about this year's OPA conference was the people. Yes, I learned a lot at the conference but what I'll remember most is the time I spent with my professors, the University of Waterloo's faculty and my fellow students. The events were arranged such that there was enough time to get to know my fellow pharmacists and I would consider it a great networking event, even though that's not why I went. I went to be surrounded by people positive

about pharmacy. Every day you hear things like budget cuts and negativity surrounding pharmacy. It was great to see people actually wanting to make a change and taking steps towards things like expanded scope and safer medication practices. I walked away from the conference feeling refreshed and ready to practice. Think about this conference like a spa weekend getaway for pharmacists. I would strongly encourage anyone to go to next year's conference.

- *Chris Voss, Rx2019*



CSHP - Sepsis

By: Kelsey-Ann Prior (Rx 2020)

One of the ways the body responds to infection is by releasing immune chemicals into the circulatory system. These immune chemicals can spread throughout the body to cause an inflammatory response. This inflammatory response is known as sepsis. Often sepsis can be difficult to diagnosis as it presents like many other medical conditions. A few symptoms include: fever, chills, confusion, rash, increased heart rate and breathing.¹

When this response becomes overwhelming the blood can clot and leak out of the vessels. This cascade of negative events causes organs to receive less blood than usual reducing the amount of oxygen and nutrients to them.¹ The loss of blood and nutrients is detrimental to the body as it can lead to organ failure and loss of limbs, a condition called septic shock.

Bacteria most commonly cause infections that lead to sepsis, however viruses and fungi may also be the culprits. Children, elderly patients, and immunocompromised individuals are at a higher risk of contracting this condition, as their immune system is not as developed as others.

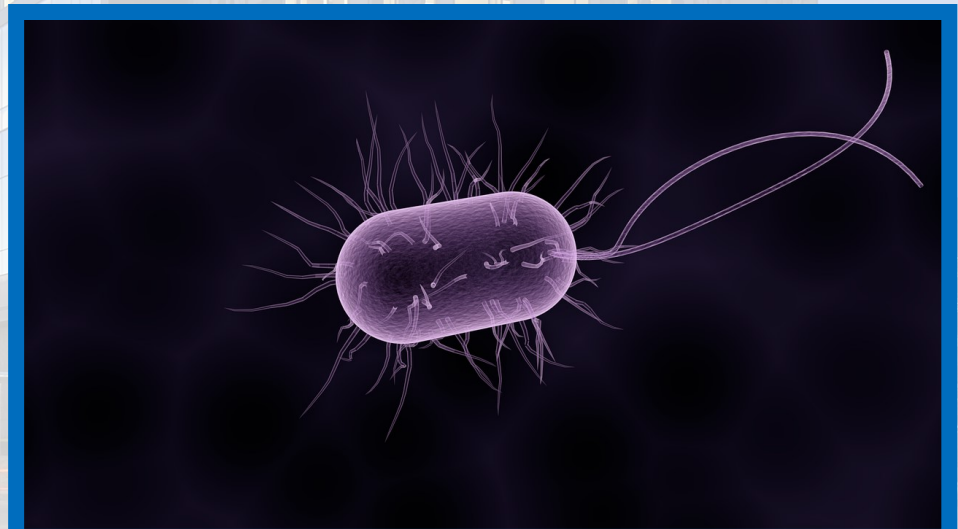
Sepsis can be hospital-acquired. This happens when contaminated medical instruments come into contact with the bloodstream. This is how microbes infect the body leading to the mass immune response.

Sepsis can also be caused by pre-existing infections that enter the bloodstream and spread throughout the body.

Pharmacists play a large role in the treatment of sepsis. The Surviving Sepsis Campaign (SSC) suggests that broad-spectrum antibiotics delivered within the first hour of recognition reduce the rate of patient mortality. Since patient outcomes are higher when antibiotics are used sooner, broad coverage must be used, as waiting for test results to narrow down the infection would cause harm

to the patient. Pharmacists aid in intervention selection by suggesting broad coverage therapies with double-coverage for gram-negative microbes, fungi, anaerobic organisms, atypical organisms, or resistant gram-positive organisms.²

A few benefits of hospital pharmacists in the treatment of sepsis include: reducing adverse drug reactions, recommending order and rate of antibiotic treatment, antimicrobial compounding, creating loading and maintenance doses, and selecting empiric interventions.² Typically hospital pharmacists have a role in antimicrobial stewardship in order to reduce antibiotic resistance however treatment failure in sepsis is linked to a increased patient mortality rate.²



CSHP - Sepsis

By: Kelsey-Ann Prior (Rx 2020)

According to the Sepsis Alliance of America, there are many ways to personally prevent this deadly condition. Cleaning any breaks in the skin as quickly as possible and inspecting the area for infection is a good start. Treating infections as soon as they occur is another great way to prevent sepsis, as it can prevent the spread of the infection into the bloodstream. It is key to follow the directions exactly for any prescribed medication, as it will increase the effectiveness of the therapy.³ Lastly thorough hand washing is always important in the prevention of infection.

A few benefits of hospital Sepsis can be a very deadly condition, killing people every year. With a quick response time and the many benefits offered by hospital pharmacists we can stride to control this condition before it spreads and becomes fatal.



References:

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Co-op Chronicle

By: Katarina Vuckovic (Rx2019)

Co-op setting: TerrAscend Corp.

TerrAscend is a biopharmaceutical and wellness company that focuses on bringing cannabis products, brands and services to the global marketplace. TerrAscend is the parent company to Solace Health and Solace Health Network. Solace Health is TerrAscend's licensed producer of medical cannabis while Solace Health Network is a network of healthcare practitioners and patient educators that focus on educating patients about cannabis, its use and the role cannabis plays in their overall health.

Tell us about the roles and responsibilities you took on in your co-op placement.

My role at TerrAscend as a pharmacy student mainly revolves around project work. I was involved in developing treatment guidelines for cannabis, representing the brand at various conferences and tradeshows, as well as collaborating with other professionals in the field on designing unique cannabis strains. Currently, I am working on projects related to cannabis legislation and cannabis compounding.

What lessons were you able to take from the previous school term(s) and utilize while on co-op?

One of the more valuable lessons that I took from the school term was the ability to interpret primary literature and apply those findings to my work (shout-out to IPFC4). Working on an independent study (PHARM401) also

helped refine my research skills so that prepared me well for my co-op. Communications class (PHARM127) taught me to always pay attention to my audience and adjust my vocabulary accordingly. This was especially important when creating documents for patients vs creating documents for other health care professionals and industry professionals.

What were some personal highlights during your co-op placement?

Although there were many highlights during my co-op term, a couple stand out in particular. In pharmacy school we talk a lot about collaborating with other healthcare professionals, however we rarely talk about collaborating with other industry professionals so working in the cannabis industry was a unique opportunity to work with other teams. I had the chance to work on projects with patient educators, nurses, marketing, business development, medical sales, and growth & cultivation which gave me a new perspective in seeing how other teams tackle projects and their thought processes.

In school we learned that cannabis can be used for chronic pain and cancer-

associated nausea and vomiting, however cannabis is currently being used by patients for a variety of conditions such as HIV/AIDS-associated anorexia/weight loss, irritable bowel syndrome, epilepsy, muscle spasticity, multiple sclerosis, Tourette's syndrome, dementia, glaucoma, traumatic brain injury or intracranial hemorrhage, anxiety, depression, sleep disorders, PTSD and many more. Learning about the level of evidence and application of cannabis to each condition was a unique learning opportunity this co-op provided me with.

Legislation behind medical cannabis was also really interesting as it allowed me to understand some of the technicalities and problems medical cannabis patients commonly run into. For example, prescription medications are not taxed however cannabis is still taxed despite needing prior doctor authorization and using it to treat a medical condition. I'm hoping this changes in the future as more evidence and primary literature on the therapeutic effects of cannabis comes out.



What were some barriers or challenges that you encountered?

One of the biggest challenges in working with cannabis is the lack of quality primary literature. There is some literature available, however the methodology is questionable and there is a lack of standardized cannabis doses or strains. For example, studies often do not specify the THC/CBD ratio, type of cannabis strain (indica/sativa/hybrid), how much cannabis was used and how often, cannabis terpene profiles, etc.

This makes it quite difficult when evaluating the study and makes it hard to evaluate the results when the interventions are not standardized. Designing quality clinical trails with standardized cannabis doses is essential in using cannabis as a medicine.

Does one day in particular stand out to you?

The first day of work. I came into work for 9:15 am as instructed and as I was walking to the office I received a text from my fellow classmate Yue Gao that the office smelled very strongly of cannabis. This was a bit confusing to us as we were under the impression that cultivation occurred offsite at another location, not at the same site as

our office. However, once we officially they ever get the chance and it defi-



met with our preceptor she gave us an overview of our day. She said we were going to go on a tour of our growing facility as they wanted us to have an understanding of how cannabis is grown as a whole. Touring the cultivation facility was an amazing experience. The facility was filled with rooms of cannabis plants that were growing almost as high as the ceiling and the master grower explained processes behind growing such as hydroponics, use of pests vs pesticides, what 'organic' cannabis entails, terpenes, etc. He also explained terpenes were the reason cannabis strains had differ-

ently was not the first day I was expecting!

What was the biggest lesson you learned from co-op?

Cannabis is a complex plant. There is a lot more to cannabis than just THC and CBD. There are over 100 different cannabinoids. Cannabis also contains terpenes which are also thought to have therapeutic benefits in conditions such as inflammation, pain, muscle spasms, anxiety, insomnia, stress, depression and many more. It's very exciting to be working in the cannabis industry.

Any words of wisdom to fellow students?

Be open to every opportunity that presents itself. When I was starting pharmacy school I never thought I would have the chance to work for a licensed producer of medical cannabis and I never anticipated how much I would enjoy working in this field. Take every opportunity you get through co-op and clinical rotations and embrace it, because you never know where it will take you.




SOPhS Communications



Have an opinion about our expanded scope of practice? Experience something on co-op that you'd like to share?

SOPhS encourages you to submit an article for the Pharm Phile newsletter! Submissions can be sent to pharmsoc@uwaterloo.ca by the end of every month for inclusion in the next edition!

SOPhS 6 Week Calendar

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	July 1	2	3	4	5	6	7
Week 2	8	9	10	11	12	13	14 CAPSI Beach Volleyball
Week 3	15	16 Yoga Session	17 Costco Lunch&Learn	18 Town Hall Meeting	19 Aerochamber Din- ner&Learn	20	21 SOPhS Beach Day
Week 4	22	23 CAN + PPAG Paint Night Fundraiser	24 Sanofi Pasteur Din- ner&Learn Mock OSCE	25 Last day of lectures	26 SafeTALK Training Ses- sion	27	28 OPhiG— Light the Night Walk FIRST DAY OF EXAMS
Week 5	29	30	31	August 1	2	3	4
Week 6	5	6	7	8	9	10	11 LAST DAY OF EXAMS

SOPhS Calendar Notes: Please note that event dates may be subject to change Contact SOPhS if you are unsure of an event date. You may also find this information on the SOPhS Google Calendar (<http://tinyurl.com/jo3awk7>). If you would like to add an event to the SOPhS calendar please email the SOPhS secretary at secretary@sophs.ca.