

## INPHARMATION UPDATE

Canadian Society of  
Hospital Pharmacists  
Alberta Branch



Société canadienne des  
pharmaciens d'hôpitaux



# July 2023

Issue 62

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## Mark Your Calendars!

### CABS 2023

## OCTOBER 20 - 22

**Follow us on Facebook, Twitter, and Instagram!**

[www.facebook.com/cshpab](http://www.facebook.com/cshpab)

[www.twitter.com/cshp\\_ab](http://www.twitter.com/cshp_ab)

[www.instagram.com/cshp\\_ab](http://www.instagram.com/cshp_ab)



# President's Message

Greetings from CSHP-AB,

I've been in the President's chair for almost 9 months and during that time I've had the pleasure of working with some wonderful people. Council has used their time to develop programs and events to make CSHP membership beneficial to its members. I want to highlight some of the work Council has been doing:

- Our Education Committee has turned out some great events including talks on leadership and pharmacists working in the emergency department. These events continue to be well attended.
- The Research Committee has a mentorship program in place to support new researchers.
- The Communications Committee produces amazing newsletters where you can find information about the latest events and clinical pearls.
- The provinces involved in producing and supporting the Banff conference have met and discussed the future of this fabulous event.
- Council has agreed to adopt a 'planet friendly' approach to any events we host. We will be looking at ways to reduce our impact on the environment and still provide top-notch education and leadership.

It's also the time of year to say farewell to our residents and welcome in a whole new group. This is an exciting and stressful time for our new residents, but I know they will get an exceptional experience and acquire new knowledge and skills.

I'd like to take a moment and say THANK YOU to anyone who has precepted a student or resident. Precepting is a significant part of the work that we do and it's easy to feel like that work isn't recognized. The last few years have been stressful and many of us are still trying to recover. On behalf of CSHP-AB I want to say THANKS. Thanks for supporting the students that struggle, for discussing therapeutic topics and cases, for asking and answering many questions, and for contributing to the identity and professionalism of new pharmacists.

If you read my last message, you'll know I'm a strong advocate for self-care. As Margaret Gray once told me, "You have to put your oxygen mask on first". I hope you have time off this summer to rest and recharge.

Regards,  
Cathy Biggs

*Catherine Biggs*

President, Vision Portfolio  
CSHP Alberta Branch  
[catherine.biggs@ahs.ca](mailto:catherine.biggs@ahs.ca)



# RESIDENCY UPDATES

## Congratulations to the 2022-23 Alberta Pharmacy Residents on the completion of their year!

**Calgary Zone:**  
Megan Hopkins, Zac Kronbauer,  
Cody Thompson, Lena Makortoff



**Cancer Care Alberta:**  
Christina Watts,  
Julian Hopwood-Raja



### Preceptors of the Year

**Nikki Blosser  
Rahul Sahajpal  
Kevin Thai  
Brendan Woods**

Thank you to all of our amazing preceptors for all their hard work this year!



### Project Defense Awards

*\*kindly sponsored by Fresenius Kabi*

**Christina Watts  
Lena Makortoff**



**Edmonton Zone:**  
Akshita Chandok, Anthony Kapelke



**Central Zone:**  
Jesalyn Clarkson, Alexi Yuzwenko



# RESIDENCY UPDATES

## Congratulations to the 2022-23 Alberta Pharmacy Residents on the completion of their year!

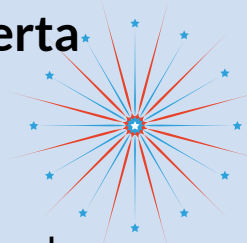
**Cardiology (Year 2)**  
Theresa Eberhardt



**Infectious Disease (Year 2)**  
Teagan Zeggil



## And a warm welcome to the new 2023-24 Alberta Pharmacy Residents!



### Edmonton Zone

William Truong, Anne Truong, Alyssa Hellman, Alex Predy

### Central Zone

Tanvir Matharu, Sydney Klatt

### Cancer Care Alberta

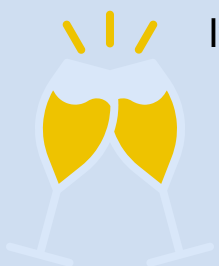
Jared Scharff, Adrian de Boer

### Calgary Zone

Ivy Nhan, Nathan Brandwein, John Choi, Carolina Ghio

### Infectious Disease (Year 2)

Reem Almawed





## Research Committee Spotlight:

# Dr. Kaitlyn Watson

B. Pharmacy (Hons), PhD, GradCertAppPharmPrac, FHEA  
 CIHR Health-System Impact Postdoctoral Fellow, EPICORE  
 Centre, Department of Medicine, University of Alberta



✉ [kewatson@ualberta.ca](mailto:kewatson@ualberta.ca)

🐦 @DrKEWatson

## Please tell us a little bit about your journey in pharmacy and your current role.

I started as a pharmacy technician in rural Australia then went to University of Queensland to complete my Bachelor of Pharmacy (Major in research) and received first class honors. After, I worked in a private hospital as a senior pharmacist on the oncology day unit.

I decided to go back to school and went to the Queensland University of Technology (QUT) for a PhD in the School of Clinical Sciences. I studied pharmacists' roles in crises. For example, taking what is called an "all hazard approach" that includes pandemic, fires, extreme weather events, chemical, biological, radiation, nuclear (CBRN) attacks. I specifically looked at pharmacists from an international perspective to understand globally what pharmacists can do in times of disasters. Subsequently, while completing my studies, I taught at QUT in the pharmacy school while also continuing my clinical practice in the hospital.

In January 2020, I moved to Canada to be a Postdoctoral Research Fellow with the EPICORE Centre, Department of Medicine at the University of Alberta. My first post-doc position was focused on a project that involved creating a hypertension program (the Hypertension Canada Professional Certification Program) and the evaluation of the program through the RxPATH randomized clinical trial.

Now, I am working on my second post-doc position, where I was awarded a Canadian Institutes of Health Research (CIHR) Health-System Impact Fellowship. We are focusing on hypertension management in women. This study is a partnership between Implementation Science experts at the Centre for Implementation, Ottawa Hospital Research Institute and Hypertension Canada.

Soon after moving to Canada, the pandemic hit and I was involved in various COVID studies exploring the impact of the pandemic on pharmacists, evaluating the communication of pharmacy organizations, and theorizing that the pandemic was the spark that has ignited a new pharmacy era.



## What made you move to Canada and more specifically Alberta?

I was interested in continuing to pursue my pharmacy practice research. I met Dr. Ross Tsuyuki when he was visiting my university in Australia and was interested in his work and drawn to Alberta's wide scope of practice for pharmacists. The climate of pharmacy practice here in Canada is very different than in Australia.

## What are the main differences in pharmacy practice in Australia?

I would compare Australia's scope of practice to Ontario. For example, pharmacists administering vaccinations came in after I finished my undergraduate pharmacy degree.

Thinking about emergency supplies, prior to the black summer fires in 2019 that happened across Australia, pharmacists were not able to provide more than 3 day supplies for people. In 2019, the Australia fire season and their state-declared emergency legislation allowed for pharmacists to extend prescriptions in emergencies. Even more recently, Australia is piloting independent prescribing for a few conditions and medications (e.g., UTIs).

### What are your research interests?

I'm interested in social sustainability, prevention of chronic conditions, advocating for pharmacists' roles, and public health. My research in disasters and emergencies has shown the importance of proactive prevention and preparedness. And lastly, using Implementation Science to facilitate positive and sustainable change in our practice.



### How can hospital pharmacists get involved with research?

To get involved in research, I think it's a matter of identifying what is currently not working in your day unit, in your team, or your department. Then taking a systematic approach like using Implementation Science to identify barriers and facilitators for that THING and then applying proven strategies that address those barriers for sustainable change in that area.

For example, I am providing a webinar series for the American Society of Health-System Pharmacists (ASHP) (American equivalent of CSHP), on Implementation Science and how to implement the new medication safety standards that they have. So, I like to start with what's not working in the system and understand why it's not working.

Another thing I would add is that I recognize, for pharmacists wanting to get involved in research, that research or solving a problem is one piece of a large clinical load and job requirements that they likely have. So, I would suggest partnering with researchers like myself or outsourcing to help with that.

### What are the biggest challenges as a researcher?

I think the biggest challenge in research is funding. We must have funding to be able pursue some types of projects and it's a very competitive environment. There's only so much money in research and everyone is doing exciting projects, but not everyone can get funded. Second, partnering with the right people in the community and the health system that are closest to the problem. Thirdly, dissemination and implementation of the findings to close the practice to evidence gap.

### Have you found any strategies to overcome those challenges?

For the dissemination challenges, I like to use the Implementation Science principles to address it. Instead of a passive diffusion of evidence, I like to take a proactive approach to implementing the evidence and help people closest to the work, to give them the tools and resources.

[For] partnerships, I'm still new to Canada, but I am working to increase my network, connections, and collaborations across the health system and the different pharmacy groups both within Canada and abroad.



### With the Alberta wildfires, what are your comments on how pharmacists have played a role and what do you see changing because of the wildfires?

The wildfires have shown again how a reactive approach to a disaster or emergency is not enough. Pharmacists are amazing, they step up in the face of crises, both in the community and the hospital in helping with evacuations, staffing, being available, and fulfilling their roles like prescribing. But what I think the wildfires have shown again, is that we need to be proactive and start thinking ahead for these events and pharmacists' roles. On the back end of COVID, we should have been collectively gearing up for wildfire season, but the healthcare professions and healthcare system are so burnt out. Perhaps what we can learn from the wildfires, is preparing for the next disaster that will mostly impact Alberta. How can we test our healthcare system and our pharmacy department to respond. Simple things like updating the "call tree" in case the hospital might need to notify staff to come in as the hospital department is expecting "x" number of patients. This is what I do in my consulting business, Disaster Pharmacy Solutions. You can learn more at ([www.disasterpharmacysolutions.org](http://www.disasterpharmacysolutions.org)).



### Would you like to share anything else about your speciality in disaster management?

I am willing and able to help people if they are interested in getting prepared. Testing their department or teams' response and building their disaster plan. We specialize in providing education and training using hypothetical scenarios.

### From all your experiences with your education, your post-docs, and research experience, what is the best piece of advice you have received?

Make your career what you want it to be.



Find what you are **interested in** and what you are **passionate** about and **follow it**.



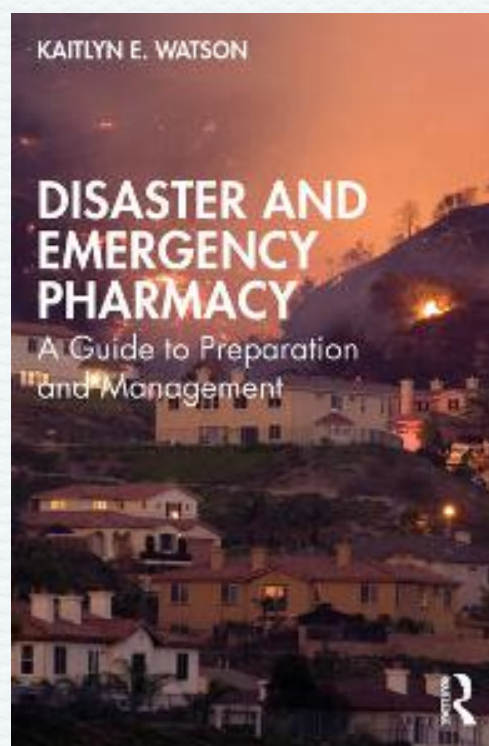
### Any future projects or plans you would like to share with the readers?

I am about to go to ASHP's mid-summer meeting to deliver a disaster workshop to test their hospital pharmacy plans during a crisis. It's a disaster training workshop looking at medication safety. The exciting and interactive part is we give disruptors throughout the scenario that provides consequences to the participants based on their previous decisions, just like in real-life.

### Do you have any book recommendations?

Read my book! The book is a foundation and introduction to disaster and emergency pharmacy. It provides the definitions, terminology, and language around disaster management, that is important to

know in terms of being relevant in where pharmacy sits. Then it goes through the disaster management cycle prevention, preparedness, response, and recovery and how pharmacy roles fit. The book includes existing experts (e.g., disaster management, healthcare, pharmacy) and their experience and opinions on pharmacists' involvement. The interviews are written as a narrative and conversation to make it a pretty light and easy read.



### To end it off, what are your hobbies that you enjoy in your free time?

I like exploring Canada, specifically the Rockies. Enjoying nature and going for walks. Close to home, I like to bake and spend time with my daughter and dog. I also like to travel. I'd love to see Europe and South Africa. Most of my travels these days are going back to Australia to see family or travelling to conferences.

## Let's Connect

If you'd like to contact Dr. Kaitlyn Watson:

✉ @DrKEWatson

✉ [kewatson@ualberta.ca](mailto:kewatson@ualberta.ca)

Do you, or someone you know, want to be interviewed for Spotlight?

We are interviewing Pharmacists, Pharmacy Technicians, and Pharmacy Assistants who make a difference. If you would like to be interviewed or would like to nominate someone to be interviewed, please submit your request to:

[caitlyn.rozmahel@albertahealthservices.ca](mailto:caitlyn.rozmahel@albertahealthservices.ca) and [lynnea@ualberta.ca](mailto:lynnea@ualberta.ca).





# Faculty Update



**Dr. Christine Hughes** has been appointed as the Dean of FoPPS from July 1, 2023 to June 30, 2028.



**Dr. Brenda Hemmelgarn**, Dean of the Faculty of Medicine and Dentistry, has been appointed as the Dean and Vice-Provost of the College of Health Sciences for a five-year term effective July 1, 2023.



Congratulations to the **University of Alberta Pharmacy Class of 2023!**



**Andrea Michaud** has joined the faculty as an Experiential Education Coordinator, and will work closely with **Linh Hang** administratively. Her portfolio will include supporting the PharmD for Practicing Pharmacists.



# short & snappy

-A CLINICAL OVERVIEW

## Watch your step! Stepping Down from IV to PO Beta-Lactam Antibiotics in Patients with Bacteremia

Cody Thompson  
Pharmacy Resident, Calgary Zone

In patients with bacteremia, intravenous (IV) antibiotics are routinely started due to their ability to reach adequate plasma concentrations quickly and their high bioavailability compared to oral (PO) antibiotics [1,2]. However, stepping down from IV to PO antibiotics is associated with a reduced workload for nursing and pharmacy staff, lower risks of complications related to peripheral IV catheters, improved patient comfort, and reduced overall healthcare costs [2]. The efficacy and safety of stepping down to PO fluoroquinolones (FQ) and trimethoprim-sulfamethoxazole (TMP-SMX) has been more clearly established, whereas there is not as much evidence surrounding the use of beta lactams (BL). The practice of stepping down to oral BL is not consistent across Canada. A systematic review and meta-analysis was performed comparing BLs to FQs and TMP-SMX for the treatment of gram-negative bacteremia [3]. The most common BLs used were amoxicillin 1000 mg q8h and amoxicillin-clavulanic acid 875/125 mg q12h [3].

**Clinical Question:** Is IV to PO step down with beta-lactam antibiotics as safe and effective as FQ or TMP-SMX for the treatment of gram-negative bacteremia?

Figure 1. Odds ratios for all-cause mortality

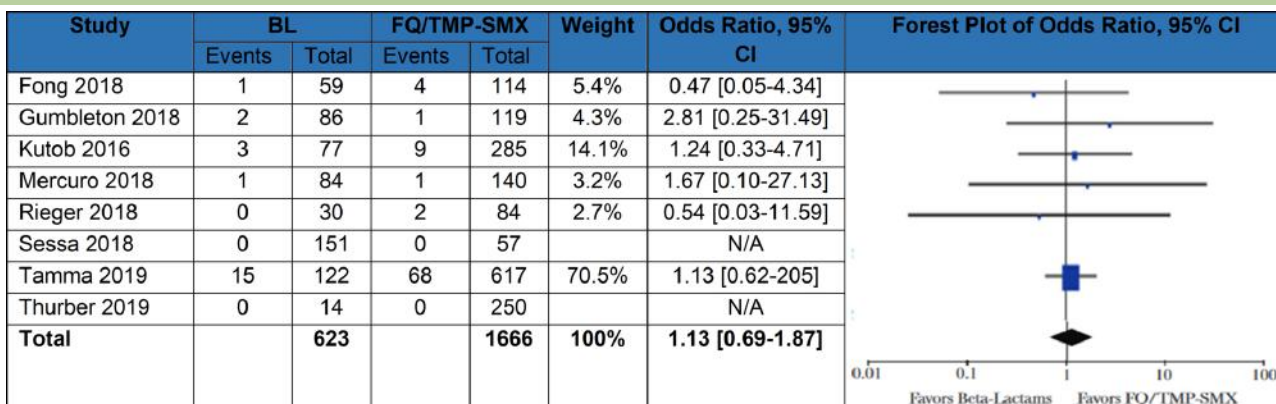
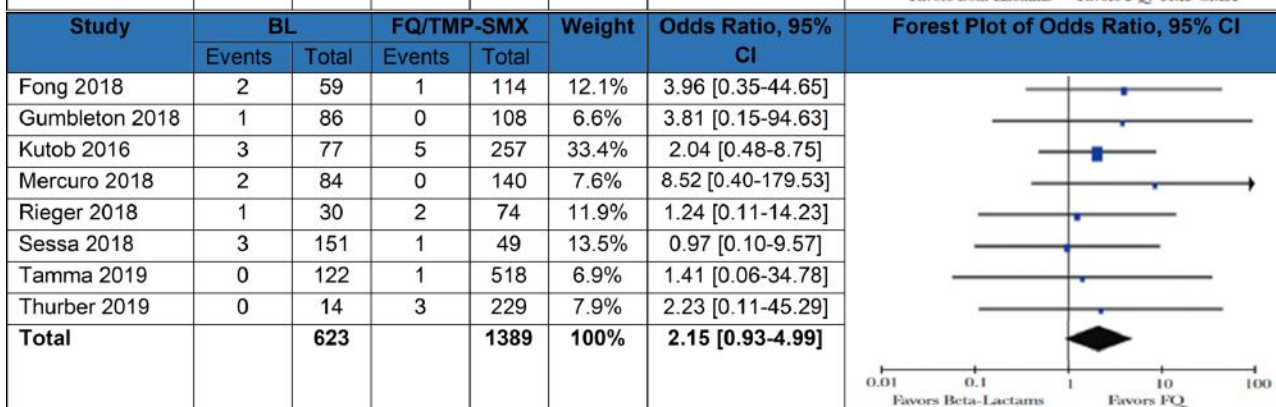


Figure 2. Odds ratios for recurrent bacteremia



**Bottom Line:** The use of oral beta lactam antibiotics after at least 3 days of IV antibiotics seems to have no statistically significant differences in rates of all-cause mortality or recurrent bacteremia when compared to fluoroquinolones and TMP-SMX. However, the follow up period for most studies was only 30 days, whereas the general consensus seems to be to follow up for at least 90 days following the treatment of gram-negative bacteremia. Regardless of which agents are used to step down, individual patient factors should always be considered when making these clinical decisions.

**References:**

1. Smith DA, Nehring SM. Bacteremia. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 [cited 2022 Sep 10]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK441979/>
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3. Punjabi C, Tien V, Meng L, Deresinski S, Holubar M. Oral Fluoroquinolone or Trimethoprim-Sulfamethoxazole vs  $\beta$ -Lactams as Step-Down Therapy for Enterobacteriaceae Bacteremia: Systematic Review and Meta-analysis. Open Forum Infectious Diseases. 2019 Oct 1;6(10):ofz364.

# short & snappy

-A CLINICAL OVERVIEW

## Piperacillin/Tazobactam Dosing for Febrile Neutropenia Hematologic Malignancy

Christina Watts  
Pharmacy Resident, Cancer Care

**Clinical Question:** In adult patients with febrile neutropenia (FN) in the context of hematologic malignancy, what dosing regimen of piperacillin-tazobactam is most effective at producing clinical resolution of FN?

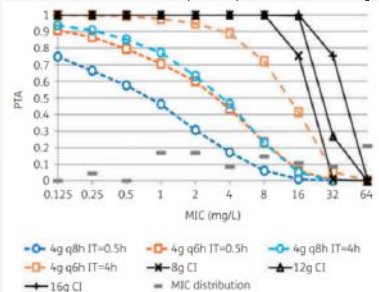
**Background:** Guideline-directed treatment for febrile neutropenia (FN) includes broad-spectrum, antipseudomonal agents: **piperacillin/tazobactam (piptazo)**, cefepime [1]. Prompt, effective treatment is essential to prevent complications and death. Current practice for dosing piptazo utilizes 4.5 g IV q6h infused over 30 minutes (an increase from q8h traditionally used).

**Beta-lactam antibiotics exhibit time-dependent killing [2].** Therefore, bacterial killing is expected at greater than 40-50% time over minimal inhibitory concentration (MIC).<sup>3</sup> Exceeding this threshold is vital to antimicrobial efficacy, especially in neutropenic patients.

**BI** Bolus Infusion  
**EI** Extended Infusion  
**CI** Continuous Infusion  
**CLSI** Clinical and Laboratory Sciences Institute

**MIC Breakpoints (EUCAST)**  
16mg/L - *Pseudomonas aeruginosa*  
8mg/L - *Escherichia coli*,  
*Klebsiella spp.*

Piptazo PK/PD Simulation in patients with Creatinine Clearance (CrCl) of 90 mL/min [4]



pTA - probability of achieving target time over MIC (100% for this model)

Study	Population	Outcomes	Appraisal
Ram et al. <sup>3</sup> 2018 RCT N=123	Hematology Oncology patients undergoing induction or consolidation or stem cell transplant.  piptazo 4.5 g IV q8h:  BI (30 minutes) VS. EI (4 hours)	<b>1° Overall response on day 4</b> (fever resolution, microbiological response, clinical response, no change in antibiotic therapy)  <b>Efficacy: Significantly higher overall response with EI dosing</b>  <b>Safety: No significant differences</b>	<b>Suboptimal Comparator (piptazo q8h)</b>  Composite Outcome – not powered to show differences in individual components  Supportive Care - GCSF (not routinely used in practice)  Did not test piptazo plasma levels  <b>Generalizability: moderate</b> – excluded CrCl<40mL/min, recent antibiotic resistance  <b>Moderate Risk of Bias:</b> open label, but outcome assessors blinded to allocation

**Literature:** Multiple studies suggest that conventional BI dosing of piptazo results in insufficient time over MIC target attainment for important organisms - *Pseudomonas aeruginosa*, *Escherichia coli*, and *Klebsiella spp.* [2,3,4]. However, PK modelling studies suggest EI or CI dosing may produce improved fractional time over MIC target attainment, citing changes in PK/PD parameters, including augmented renal function, increased clearance and volume of distribution similar to changes seen in critical care patients [4]. The most recent literature and CLSI guidelines recommend considering EI dosing to improve target attainment [2,3,4,5].

**Future Research:** BEATLE Trial. Investigating clinical outcomes EI dosing of piptazo, meropenem, and cefepime for FN [6].

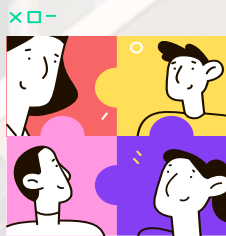
**Conclusion:** Although there is limited evidence for changes in clinical outcomes at this time, clinicians in this specialty could consider adopting EI dosing for piptazo to improve the surrogate marker: time over MIC target attainment. Researchers should confirm the above data through larger studies with more appropriate comparators and outcomes. Barriers to implementing EI dosing may include IV access, Y site incompatibilities, and concerns over residual drug left in infusion pumps.

References

- Zimmer AJ, Freifeld AG. Optimal Management of Neutropenic Fever in Patients With Cancer. J Oncol Pract. 2019;15(11):24-34. doi:10.1200/JOP.18002692.
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# Call for Volunteers: 2023-24 CSHP AB Council and Committee Positions



Want to give back to your profession?  
 Interested in building on your skills and learning?  
 Looking to create connections and work with a great group of people?  
**Consider volunteering for the CSHP Alberta Branch!**  
 Are you already volunteering with us and looking for the next step?  
 Are you looking to develop your leadership skills?

*Then consider taking on a council role position as a chairperson or executive member!*

We are now accepting applications for volunteers on all of our various committees and on our Alberta Branch Council. The positions will start in October 2023. Each committee and council position offers something different, so [take a look here](#) for their descriptions!

**Ready to submit your name?**

For committee member positions:

[Click here to fill out the Committee Volunteer Form.](#)

For council member positions:

[Click here to fill out the Council Volunteer Form.](#)

**Submit your volunteer forms by July 31, 2023.**

If you would like to learn more about the committees and positions, or have questions about the nomination process, please feel free to contact [ginny.cummings@ahs.ca](mailto:ginny.cummings@ahs.ca)!

## Council Positions

**AWARDS COMMITTEE VICE-CHAIR**

**COMMUNICATIONS COMMITTEE VICE-CHAIR**

**EDUCATION COMMITTEE VICE-CHAIR**

**MEMBERSHIP COMMITTEE VICE-CHAIR**

**PAM COMMITTEE VICE-CHAIR**

**RESEARCH COMMITTEE VICE-CHAIR**

**SECRETARY**

**TREASURER**

## Committee Member Positions

**AWARDS COMMITTEE**

**COMMUNICATIONS COMMITTEE**

**EDUCATIONAL SERVICES COMMITTEE**

**MEMBERSHIP COMMITTEE**

**PHARMACY APPRECIATION MONTH COMMITTEE**

**RESEARCH COMMITTEE**

Canadian Society of  
Hospital Pharmacists  
Alberta Branch



Société canadienne des  
pharmaciens d'hôpitaux

## Get ready for CABS 2023 this fall!



### Call for Volunteers – Banff Seminar Committee 2023-2024

Are you interested to give back to your profession, develop leadership and management skills, and work with a group of highly motivated and committed individuals? Consider volunteering with the CSHP Banff Seminar planning committee!

After the successful Together conferences of the past 3 years, the Banff Seminar is back! We are recruiting all volunteer positions for this year's committee, which will start meeting in August. There is something for everyone!

If you are interested in volunteering or want more information, email [theresa.eberhardt@ahs.ca](mailto:theresa.eberhardt@ahs.ca). We can't wait to work with you!

Currently Recruiting: Vice-Chair, Treasurer, Registrar (2 positions), Education (3 positions), Fundraising/Industry (2 positions), Publications/Promotions

