

## INPHARMATION UPDATE

Canadian Society of  
Hospital Pharmacists  
Alberta Branch



Société canadienne des  
pharmaciens d'hôpitaux

HAPPY  
**New Year**  
2021



**January**  
**2021**  
Issue 47

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# News from CSHP National

## Ian Creurer, CSHP-AB Branch Delegate

As of the Annual General Meeting held in Fall 2020 (held virtually), the following individuals form the CSHP Executive for this year:

President-Elect – Shirin Abadi (BC) | President – Zack Dumont (SK)  
 Past-President – Tania Mysak (AB) | Treasurer – Tamar Koleba (BC)  
 Chief Executive Officer – Jody Ciufu (ON)



### CSHP Member Survey 2020

In keeping with the decision to survey members more frequently, the 2019 survey was followed up in Fall 2020. With a strong 24% response rate, this provides information that will be used to inform strategy, programming and marketing. Branch Councils have also received Branch specific results. Overall results will be shared with all CSHP members.



### CSHP National Financial Position

The 2019/20 year ended with a deficit of \$232,000, slightly better than the budgeted deficit of \$282,000.

Update on Strategy Toward Sustainability: We are part way through the three year cycle of deficit budgeting. This is a co-investment strategy, with funds coming from National, Branches, and affiliated board reserves. The goal is to transform CSHP into a relevant, thriving, and financially sustainable organization that is more member-driven and offers more programs, services, educational opportunities and relevance to today’s generation of members, supporters and students.

With respect to pandemic-driven circumstances, CSHP investments recovered significantly in the latter part of the year, and a government-sponsored wage subsidy program was implemented at the CSHP National office.



### CSHP National Membership

Membership year 2019-20 ended with 3150 members (2755 regular members, 349 student supporters, 39 pharmacy technicians and 7 individual supporters). This is a decrease compared to 2018-19 of 139, or 4%. Efforts to grow membership are a key aspect of the Strategy Toward Sustainability.



### CSHP National Staffing Changes

Several layoffs, as well as reductions in hours and hiring deferrals, were undertaken to reduce operating expenses. This was in keeping with the Strategy Toward Sustainability, but was also in response to unique pressures arising from the pandemic.



### CSHP Strategic Plan and Committee Restructuring

A CSHP Strategic Plan for 2020-2023 was developed and provided to Branch Councils to support alignment of Branch level activities with national priorities.

Two new standing committees have been formed: Pharmacy Practice Vision, and Education and Development. Many previous committees were either incorporated into these, or in some cases, dissolved and replaced with a mechanism for the striking of expert working groups on specific issues or policies. In addition, networks have been established for Presidential Officers, Membership, and Students.



### CSHP Pandemic Resources

CSHP pandemic-related Practice Support Network (PSN) and webinars have seen a large increase in interest and activity.



During this past year, hospital pharmacy has experienced many challenges and changes to what were once normal events, including the cancellation of the 2020 Banff Seminar at the start of the pandemic. The 2021 Banff Seminar Planning Committee is excited to be back and welcomes you to our virtual “Triple Crown” of Canadian hospital pharmacy conferences taking place from **March 20-27, 2021**. We are combining the Banff Seminar, the Harrison Pharmacy Management Seminar, and the Professional Practice Conference into a week-long virtual conference,

## “Together: Canada’s Hospital Pharmacy Conference 2021.”

Join us for hours of accredited learning, including keynote speakers and poster presentations, an exhibit hall, social events, and more from the comfort of your own home during this once in a lifetime opportunity. The Banff Seminar Planning Committee will be hosting the events on Saturday March 20th, including a presentation from our keynote speaker, Lisa Belanger, who will share insights from behavioral science research and how this can be applied in the workplace to optimize the performance, productivity, and innovation of leaders and teams.





The week-long program will include a combination of live and pre-recorded events to provide excellent educational opportunities that will fit into everyone's schedules and learning needs. As well, unique platform features will allow participants the ability to socialize with other attendees and access leadership and management sessions that may have previously been inaccessible due to time or geography. There will be more information released in the CSHP weekly newsletters as well as full details coming on the [conference website](#).

We look forward to seeing everyone virtually this spring!

Morgan Schultz  
Chair, 2021 CSHP Western  
Branches Banff Seminar



# TOGETHER

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**CSHP Alberta Branch invites you to join us!**

# Online Education Symposium

## February 3, 2021

### **Heart Function Update 2021: How to Fix a Broken Heart 6:30-7:30PM MST**

Symposium  
Sponsored by



**NOVARTIS**  
PHARMACEUTICALS

**Dr. Sheri L. Koshman BSc Pharm, PharmD,  
ACPR, FCSHP**

Associate Professor of Medicine, Division of Cardiology  
Coordinator, Advanced (Year 2) Pharmacy Residency, Cardiology

**Dr. Jonathan Howlett MD, FRCPC**

Clinical Professor of Medicine, Department of Cardiac  
Sciences Foothills Medical Centre & University of Calgary

**Click [HERE](#) to Register**

CSHP Alberta Branch invites you to join us!

# Online Education Symposium

February 3, 2021

## **Social Determinants of Health: How COVID (and other diseases) Exploit Inequality**

**7:30-8:30PM MST**

Symposium  
brought to  
you by

Canadian Society of  
Hospital Pharmacists  
Alberta Branch



Tony Nickonchuk, BSc. Pharm  
Alberta Health Services

**COMPLIMENTARY** for CSHP Members

\$20 for Non-CSHP Members

**Click [HERE](#) to Register**

## Evidence-Based Medicine for Treating Coronavirus-19 Disease (COVID-19)

# Bamlanivimab

Brought to you by the CSHP-AB Research Committee



## Indications

Treatment of adults and pediatric patients 12 years of age or older with mild to moderate coronavirus disease 2019 (COVID-19), who weigh at least 40 kg and who are at high risk of progressing to severe COVID-19 illness and/or hospitalization.



## Authorized for use

by Health Canada for treatment of COVID-19 on November 20, 2020



## Efficacy

Authorization of bamlanivimab under the COVID-19 Interim Order was based on an interim analysis of the BLAZE-1 Phase 2 randomized, double-blind, placebo-controlled clinical trial studying bamlanivimab for the treatment of subjects with mild to moderate COVID-19 who were NOT hospitalized. Approval was not based on achieving the primary study endpoint of Day 11 viral load reductions, but instead, the secondary endpoints of decreased hospitalizations or emergency room visits within 29 days of treatment. This included patients considered high risk of developing severe disease.



## Mechanism of action

neutralizing IgG1 monoclonal antibody directed against the SARS-CoV-2 spike protein



## Safety

The treatment-emergent adverse events (TEAEs) occurred in a similar proportion of patients treated with placebo compared to bamlanivimab, with the majority of TEAEs being graded as mild to moderate in all study arms with no apparent differences observed. Important associated adverse reactions included infusion reactions, hypersensitivity reactions and, potentially, anaphylactic reactions.



## Use

Bamlanivimab 35 mg/mL solution for infusion. The recommended dose is a single infusion of 700 mg to be administered as soon as possible after a positive test for COVID-19 and to be administered within 10 days following the onset of clinical signs and symptoms of infection. An authorization under the COVID-19 Interim Order is recommended for the indication of treatment of adults and pediatric patients 12 years of age or older with mild to moderate COVID-19, who weigh at least 40 kg and who are at high risk of progressing to severe COVID-19 illness and/or hospitalization. Bamlanivimab should not be used in patients hospitalized with severe COVID-19 respiratory disease.

## Evidence-Based Medicine for Treating COVID-19

**Remdesivir (Veklury®)**

Brought to you by the CSHP-AB Research Committee

**Authorized for use**

by Health Canada on July 26, 2020

**Indications**

Treatment of coronavirus disease 2019 (COVID-19) in adults and adolescents (aged 12 years and older with body weight at least 40 kg) with pneumonia requiring supplemental oxygen.

**Mechanism of action**

Inhibits RNA-dependent RNA polymerase (RdRp) involved in the replication and transcription of SARS-CoV-2, inhibiting viral replication.

**Efficacy**

At the time of Health Canada's assessment, a total of 24 clinical trials were ongoing worldwide with 2 trials in Canada. The evidence was reviewed by CADTH and last updated on October 22, 2020. (See

<https://covid.cadth.ca/treatment/remdesivir-evidence-review-and-appraisal/>). The evidence for efficacy is difficult to summarize succinctly.

The studies vary in methodology, statistical analysis and were even adapted with changes to the primary outcomes during the trial. Of the four RCTs assessed by CADTH, only the ACTT-1 trial demonstrated a statistically significant reduced time to recovery compared to placebo of 11 (9-12) days vs 15 (7-13) days. On November 20, 2020, the WHO issued a conditional recommendation against the use of remdesivir in hospitalized patients, regardless of disease severity, stating that there is currently no evidence that remdesivir improves survival in these patients.

**Use**

Recommended dosage of remdesivir in patients who are  $\geq 12$  years of age and older and  $\geq 40$  kilograms:

- Day 1 – single loading dose of remdesivir 200 mg given by intravenous infusion
- Day 2 onwards – 100 mg remdesivir given once daily by intravenous infusion

The total duration of treatment should be at least 5 days and not more than 10 days.

**Want more information on COVID-19 Treatments?**

An interactive summary of current evidence on COVID-19 treatments is available via an excellent resource at the BMJ (BMJ 2020;370;m2980):

<https://www.bmj.com/content/370/bmj.m2980>



# Milestone Membership

## 25 Years with CSHP

WE WOULD LIKE TO EXTEND RECOGNITION TO THE FOLLOWING INDIVIDUALS WHO HAVE ATTAINED 25 YEARS OF CSHP MEMBERSHIP THIS YEAR. WE CELEBRATE YOUR COMMITMENT AND PASSION FOR THE PROFESSION OF HOSPITAL PHARMACY!

- Barbara Angel**
- Val Fong**
- Ian Hamilton**
- Christine Hughes**
- Cindy Jones**
- Catherine Lyder**
- Tania Mysak**
- Geoffrey Norris**
- Darren Pasay**
- Cheryl Sadowski**
- Karla Simard**
- Ann Thompson**
- Dianne Veniot**

What does this milestone mean to you?

**Darren Pasay**



"To me, CSHP (and especially AB Branch) has always been about networking and learning with your peers and mentors. Twenty-five years ago, CSHP was the only place for rural hospital pharmacists to gather on a regular basis to share ideas, experiences and learn together."

**Dianne Veniot**



"My past 25 years of being involved with CSHP has been filled with inspirational and memorable moments supporting Hospital Pharmacy team members. From needing to be nimble and efficient in working at a small rural site, to Clinical Practice Leader, and now as Clinical Director in contract management, having CSHP to rely on and guide decisions and interactions has been invaluable. Being involved at the Chapter Chair level, President of Alberta Branch, and Chair of Banff Seminar has allowed me to use my leadership skills and fine-tune those talents in leading our College (ACP) and NAPRA in the Presidential positions. While I find CSHP support in looking for solutions for drug supply issues, training new staff, acting as a bridge for site staff and suppliers, informing budgets with facts and positive numbers, and having dialogue with executive decision makers, it has been the relationships I have built with fellow CSHP members that make the moments notable."

# CSHP-AB Student Column

This past year has presented many challenges for everyone, including the CSHP-AB Student Committee. While adapting to these new challenges, the committee has thus far hosted two events and is working hard to plan more to come in the new year. In March, Cody Thompson was elected to be the CSHP Student Representative and subsequently, chair of the student committee.

We began this academic year with our annual CSHP Student Symposium to discuss CSHP's role in our profession and highlight the benefits of becoming a CSHP member to students. Dr. Breault, the CSHP Past-President, also spoke about his experience with CSHP and how it has helped him progress in his career and contributed to his success. At the end of November, we hosted our annual "A Day in the Life of a Hospital Pharmacist". This event consisted of four hospital pharmacists from different practice areas discussing their daily practice and then answering students' questions. We took advantage of the online format required this year and for the first time, had a pharmacist who has worked in rural hospital practice and currently works in a suburban hospital practice speak to students as well. Both of these events were open to all Alberta Pharmacy Students' Association members to try and promote the benefits of a CSHP membership to students.

The student committee started advertising for the Host Program at the end of November, which is where hospital pharmacists across the province are matched with CSHP

Student Supporters from the University of Alberta. Students are matched with their host in February 2021, and the program lasts until the end of December. Although students will not be able to visit their hosts' site to shadow, students are still strongly encouraged to participate as this is a wonderful opportunity to develop connections with pharmacists as mentors. While many will be disappointed that shadowing their host is not a viable option this year, virtual meetings and other electronic forms of communication are excellent alternatives! Students involved in this program consistently find benefit from it and we hope as many pharmacists as possible will sign up to be engaged with the future pharmacists of Alberta.

[Click here to sign up as a student or as a host!](#)

Our student committee has already started planning events for the upcoming semester. We still plan on hosting our annual events, but in an online format, while hoping to include a few more virtual events to further expand pharmacy students' knowledge of hospital practice. Stay tuned for future updates from the CSHP-AB Student Committee!

Megan Hopkins  
Student Representative, CSHP-AB  
Communications/Membership Committee

Cody Thompson  
Student Representative, CSHP-AB Branch  
Council Chair, CSHP-AB Student  
Committee

# short & snappy

-A CLINICAL OVERVIEW

## The DOs and DON'Ts of DOACs for Thromboprophylaxis in Cancer Patients

Alisha Shivji  
2019-2020 Pharmacy Resident

**In patients with active cancer without venous thromboembolism (VTE), how can we determine whether direct oral anticoagulants (DOACs) are a safe and effective option to prevent VTE occurrence?**


**Step 1:** VTE risk assessment. The AVERT and CASSINI trials included patients with a Khorana risk of  $\geq 2$  and showed a statistically significant reduction in overall VTE with thromboprophylaxis using DOACs. [1,2]

Patient characteristic	Risk score
<b>Site of cancer</b>	
Very high risk (stomach, pancreas)	2
High risk (lung, lymphoma, gynecologic, bladder, testicular)	1
Prechemotherapy platelet count $350 \times 10^9/L$ or more	1
Hemoglobin level less than $100g/L$ or use of red cell growth factors	1
Prechemotherapy leukocyte count more than $11 \times 10^9/L$	1
BMI $35kg/m^2$ or more	1

**Step 2:** Assess bleed risk and whether patient would fit inclusion criteria of the RCTs. [1,2]

Inclusion criteria	Exclusion criteria
Ambulatory outpatients 18+ years old	Weight $>120kg$ or BMI $>40kg/m^2$
Solid tumor or lymphoma	Renal insufficiency (CrCl $<30ml/min$ )
Plan to start new systemic treatment within 1 week of starting VTE prophylaxis	Primary brain tumor or brain metastases
Expected survival $> 6$ months	Hepatic disease associated with coagulopathy

**Step 3:** Assess safety of initiating a DOAC with a focus on drug interactions. [3]

rivaroxaban or apixaban  potent inhibitors or inducers of P-gp or CYP450 3A4

**Bottom line:** Rivaroxaban 10mg po daily and apixaban 2.5mg po bid showed a statistically significant reduction in overall VTE incidence with no statistically significant difference in all-cause mortality. Studies showed an increase in major bleeding events, clinically related non-major bleeding events, and total bleeding events, but the difference was not statistically significant. [1-4]

### References

- Carrier M, Abou-Nassar K, Mallick R, et al. Apixaban to prevent venous thromboembolism in patients with cancer. *N Engl J Med.* 2019;380(8):711-719.
- Khorana AA, Soff GA, Kakkar AK, et al. Rivaroxaban for thromboprophylaxis in high-risk ambulatory patients with cancer. *N Engl J Med.* 2019;380(8):720-728.
- Key NS, Khorana AA, Kuderer NM, et al. Venous thromboembolism prophylaxis and treatment in patients with cancer: ASCO clinical Practice guideline Update. *J Clin Oncol.* 2019;15(12):661-664.
- Wang Y, Wang M, Ni Y, Liang Z. Direct oral anticoagulants for thromboprophylaxis in ambulatory patients with cancer. *Hematology.* 2020 Jan;25(1):63-70. doi: 10.1080/16078454.2020.1719726. PubMed PMID: 31984870.

# short & snappy

-A CLINICAL OVERVIEW

## Combination of Pregabalin and Gabapentin for Treatment of Neuropathic Pain

Oleksandr Baran  
2019-2020 Pharmacy Resident  
Preceptor: Duane Bates

**Clinical question:** Is there any evidence to support use of pregabalin as an adjuvant for neuropathic pain in a patient already on gabapentin?

**Review of evidence:** Gabapentinoids (gabapentin and pregabalin), TCAs (amitriptyline, nortriptyline) and SNRIs (duloxetine) are typical first-line treatment options for neuropathic pain. [1] Combination treatment is often needed, as less than half of patients respond to a single drug. [2,3]

Despite pharmacologic similarities of gabapentinoids, both have been used together in clinical and research settings. **Published evidence on their concomitant use is limited and weak.**

- Retrospective chart review of 24 pediatric burn patients: some improvement in patient-reported pruritus and pain after addition of pregabalin after the maximum gabapentin failure dose of 28.1±18.3mg/kg/day. [4]
- Case report: 76 y.o. female treated for palliative neuropathic pain (CrCl 15 ml/min) with PO hydromorphone (unspecified dose) and pregabalin 150 mg PO BID (no response to and frequent falls with SNRIs and fentanyl which were discontinued); was prescribed gabapentin 100 mg PO daily with further titrations to gabapentin 200 mg PO daily and pregabalin 25 mg PO daily; presumably optimal pain relief (no reported method of effectiveness measure) and no adverse effects. [5]
- Gabapentin and pregabalin may have a synergistic effect in the treatment of neuropathic pain that could lead to lower doses needed with less adverse effects. [6] However, there is **no literature to support this.** [7] Although speculative, some PK and PD parameters may play a role in presumed synergism: [8]

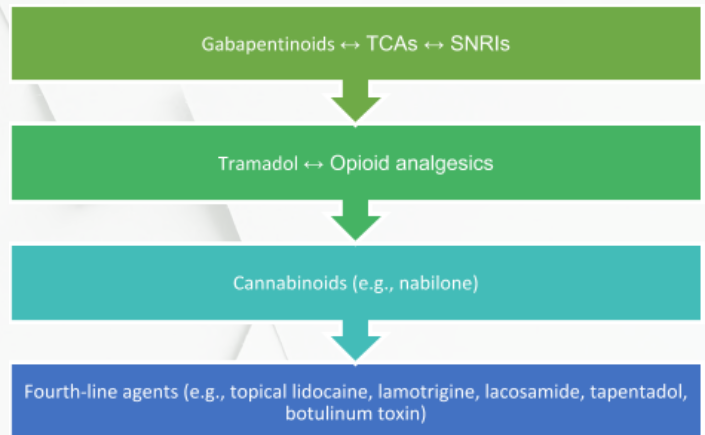


Figure 1. Algorithm for the pharmacologic management of neuropathic pain. Adapted from Moulin et al, 2014

Gabapentin	Pregabalin
Saturable absorption with slower peaking of action; F inversely proportional to dose	More linear kinetics and quicker absorption than gabapentin
No hepatic metabolism, similar t <sub>1/2</sub>	

### Use caution when combining

- Additive adverse effects: peripheral edema, somnolence, fatigue, ataxia [9,10]
- Use of gabapentin or pregabalin with opioids has been associated with a dose-related increase in respiratory depression and opioid-related mortality. [10,11,12]
- There is no reported optimum ratio of gabapentin and pregabalin that could be prescribed; therefore, doses have to be established based on intensity of patient's pain, comorbidities and other medications.

**Bottom Line:** Combination of pregabalin with gabapentin could be a 4th line option in the treatment of neuropathic pain if adequate trials of other guideline-recommended treatment options fail.

**Abbreviations:** TCA - tricyclic antidepressants, SNRIs - serotonin-norepinephrine reuptake inhibitors, PK - pharmacokinetic, PD - pharmacodynamic, DVT - deep vein thrombosis, CrCl - creatinine clearance, t<sub>1/2</sub> - elimination half-life, F - bioavailability, CR - controlled release, PO - orally, TID - three times daily, HS - at bedtime, T2DM - type 2 diabetes mellitus, HTN - hypertension, RA - rheumatoid arthritis, OA - osteoarthritis, y.o. - years old

[References](#)

# Fresenius Kabi Continuing Education Travel Grant Winners

Generously sponsored by:  **FRESENIUS KABI**  
caring for life

*The Continuing Education Travel Grant is awarded via random draw to two Alberta Branch members each year.*

*Here's how the 2020 recipients used their grants!*

The Fresenius Kabi Travel Grant allowed me to fund my attendance and travel to the University of South Carolina in Columbia, SC for a live session training in penicillin-allergy skin-testing (PAST). This, in combination with a formal examination component, has provided me with the skill and special exemption through ACP to perform skin-tests in Alberta, the first pharmacist with this in their scope of practice. Armed with this ability, I have been able to contribute to the South Health Campus (SHC) Obstetrics & Gynecology clinic as an allergy-testing clinical liaison for penicillin allergy in women in their 3rd trimester who require Group B Streptococcus prophylaxis, have been able to contribute to Bugs & Drugs as a contributor and editor on the beta-lactam allergy content, and have been the project lead in the development of a systematic beta-lactam allergy de labelling initiative at the University of Alberta. In this initiative, I will be able to offer clinical penicillin-allergy skin-testing services to inpatients. This truly has had a significant impact on my practice and has opened many doors for exciting new practice and research opportunities.

**Jackson Stewart**

**Gloria Mary Maydaniuk**

Future medicines initiatives pursued through my work at the University of Alberta Research Faculty in Medicine, Pharmacy and Pharmaceutical Sciences have been one of the greatest privileges of my career. This year the challenges of the pandemic have unfortunately impeded travel and our opportunities to learn in a common team. Award funds, thus, we utilized to purchase textbooks to support some of my work in adding to lecture materials in Biotechnologies for Pharmacy Students in the third and other years of the University of Alberta Pharmacy Program. This material was then further disseminated for lecture and examination purposes. I am honoured to be recipient of such a knowledge endowing award that I hope will ultimately benefit patients and their families. Many thanks to Fresenius Kabi and the CSHP Team for supporting the initiatives of your members in future medicines, nanotechnologies and research!

*All active members and student supporters are eligible to apply for the Fresenius Kabi Continuing Education Travel Grant.*

*Stay tuned for the 2021 call for applications!*

Canadian Society of  
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## Advanced (Year 2) Residency in Cardiology

### Contact:

Sheri Koshman (coordinator)

[sheri.koshman@ualberta.ca](mailto:sheri.koshman@ualberta.ca)

780-407-1888

### Program aims:

- With a focus in cardiovascular care, to enable residents to practice to full scope, at an advanced level, in the province of Alberta
- Develop skills in teaching, leadership and research
- Skills and knowledge gained as part of this residency will be transferable to other practice environments.

### Application deadline:

Feb 1, 2021

### Program start:

July 2021 (negotiable)

For more detailed info:

<https://www.cshp.ca/alberta-health-services-year-2-program-cardiology-accreditation-pending-status>

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