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PRESIDENT'S MESSAGE

It's hard to believe that we are already one month into the academic term. I am looking forward to my 2016/17 term as President and working with the AFPC Executive Director, Board of Directors and Councillors. It is an exciting period as pharmacy education continues to be transformed. Did you know that 50% of Canadian pharmacy faculties / schools / colleges are now offering an entry-to-practice Pharm D program? And this figure is continuing to rise.

AFPC as an organization is also transforming. Here are some examples:

A change in leadership will occur. After 6 years as Executive Director, Harold Lopatka will be retiring at the end of 2016. Under his leadership, AFPC has successfully conducted collaborative education initiatives, implemented an on-line learning management system for student education, maintained positive relationships with various national organizations, implemented a redesigned website, and maintained a favorable financial position. AFPC has been very fortunate to have Harold in this role, and we wish him well in retirement. Thankfully, he will stay until a replacement is hired and oriented. The search for a replacement has begun, with the intent of finding a replacement by early 2017.

There has been significant growth in special interest groups (SIGs). This is a strong indicator that AFPC is

successfully engaging members to share and collaborate on specific best practices. The pharmacy experiential programs of Canada (experiential education SIG) was established in 2006. In the past two years the following SIGs have been created: program evaluation, program assessment, informatics, and skills lab instructors. It is anticipated that another SIG, medicinal chemistry, will be launched in the coming year. I would encourage others to consider forming SIGs (American Association of Colleges of Pharmacy – AACP – has 21 SIGs).

AFPC continues to work with other national health and education organizations. Recent examples include: (1) partnership with Canada Health Infoway to advance the integration of digital and e-health curricula, (2) involvement in a National Patient Safety Consortium and (3) engagement with Health Canada about the opioid crisis in Canada, resulting in participation in a national summit and an AFPC initiative on pharmacy education about this topic. Please see the Executive Director's update in this newsletter for more information about AFPC activities since the last newsletter.

AFPC continues to partner with other pharmacy organizations to deliver the Canadian Pharmacy Education and Research Conference (CPERC). This partnership is intended to maximize the conference value for attendees. Partnerships have included the Canadian Pharmacists Association (CPhA), Canadian Society for Pharmaceutical Sciences (CSPS), and AACP. In 2017, AFPC is partnering with CPhA for a joint Canadian Pharmacists Conference/CPERC from June 2-5, 2017 in Quebec City. AFPC will hold 1 extra day of education either before or after the conference. Please plan to attend and note these dates in your calendar.

Please contact me if you have suggestions or comments.

All the best to you.

Ann Thompson
AFPC President 2016-2017

EXECUTIVE DIRECTOR'S CORNER

HIGHLIGHTS

- Annual AFPC business meetings held May 31 and June 1 (voting members, Board of Directors, Councils, faculty members).
- Process launched to revise AFPC educational outcomes.
- 2016/17 AFPC awards program information available on website.
- External funding received for Pharmacy Educator Informatics Network.

GOVERNANCE

Board of Directors -The Board of Directors annual meeting was held May 31, 2016. The items addressed were: approval of 2015 audited financial statements, discussion regarding the Executive Director succession plan, 2017-19 AFPC strategic plan, request from Arab pharmacy educator organization, and the 2016/17 Board of Directors nominations. M. Coughtrie, K. Wasan, X. Gu (interim), J. Lefebvre and D. Edwards were nominated as the Council of Deans 2016/17 Board of Directors members. A. Thompson, J. Kellar, G. Leclerc, T. Jurgens, and C. Dillon were nominated as Council of Faculties voting committee Board members. The 2016-17 Board Executive members are A. Thompson (President), D. Edwards (Vice President), J. Lefebvre (Treasurer), and M. Coughtrie (Past President).

Council of Faculties - The Council of Faculties voting members' annual meeting was held May 31, 2016. The following items were discussed: standing and SIG committee reports; project updates; Council nominations for the 2016/17 Board of Directors; plans for 2017 CPERC; presentation on educational research and scholarship; and the 2017-19 AFPC strategic plan. The 2016/17 Council of Faculties voting members are C. Dillon, T. Jurgens, J. Methot, G. Leclerc, J. Kellar, C. Richard, I. fan Kuo, E. Krol, A. Thompson, and P. Gerber. A. Thompson is the Council of Faculties Chair and G. Leclerc is the Vice Chair.

Council of Deans – The Council of Deans held an interim meeting June 25, 2016. The agenda included the following topics: advocacy plan, research funding, pharmacist manpower planning, pharmacists without borders (Canada), educational research and scholarship, and pricing for CPhA e-subscriptions. The 2016/17 Council of Deans members are L. Bishop (interim), S. Mansour, J. Lefebvre, L. Lalonde, D. Edwards, H. Boon, X. Gu (interim), K. Wasan, N. Davies, and M. Coughtrie. K. Wasan is the Council of Deans Chair and H. Boon is the Vice Chair.

The Council of Deans made a written submission to the [Panel](#) for Canada's Fundamental Sciences Review. The federal government initiated review will assess the program machinery that is currently in place to support science and scientists in Canada.

ADMINISTRATION

2015 Annual Proceedings – The [2015 annual proceedings](#) are posted on the AFPC website.

Executive Director search – Ads for the AFPC Executive Director position have been placed on a number of websites and publications. In addition, information about the opportunity has been sent to key leaders in national pharmacy and not-for-profit organizations. Applications are being received and reviewed. Please see the [AFPC website posting](#).

2017 AFPC Annual Budget – The process for preparing the 2017 annual budget has been initiated.

The budget will be reviewed at the November 2017 Board of Directors meeting.

PROGRAMS SERVICES PROJECTS COMMITTEES

Awards – Thanks to the 2016 Award co-sponsors: Merck Canada, the Pharmacy Examining Board of Canada (PEBC), the Canadian Foundation for Pharmacy (CFP), Pfizer and Janssen.

The 2016 AFPC award winners were recognized at the awards banquet held in Vancouver, BC on June 1, 2016. Congratulations to the 2016 award winners (see below).

Congratulations to our 2016 AFPC Award winners:

AWARD	WINNER	FACULTY /SCHOOL /COLLEGE
New Investigator Research Award	Mark Harrison	British Columbia
Pfizer Research Career Award	Shirley Wu	Toronto
Janssen Award for Innovation in Education	Derek Jorgenson	Saskatchewan
National Award for Excellence in Education	Jean-François Bussières	Montreal
Pharmacy Examining Board of Canada Award for Excellence in Research or Innovation in Assessment of Competence	Anne Marie Whelan	Dalhousie
Canadian Foundation for Pharmacy Graduate Student Award for Pharmacy Practice Research	Robert Pammett	Saskatchewan
Merck Canada Ltd. Postgraduate Pharmacy Fellowship Award	Katherine Koroluk	Toronto
Graduate Student Research Award	Warren Viricel	Montreal
Pharmacy Student Research Poster Award (1 per faculty)	Marilyn Sun Naif Alujhani Pedram Rafiei Divna Calic Nyasha Gondora Chesarahmia Dojo Soeandy Anna Cieślak Marc-André Renaud Mia Losier Waseem Abu-Ashour	British Columbia Alberta Saskatchewan Manitoba Waterloo Toronto Laval Montreal Dalhousie Memorial

The best national poster award winners were Waseem Abu-Ashour and Miao Yan Sun; the Whit Matthews award winners were Mia Losier and Nyasha Gondora. Also, congratulations to Nese Yuksel (Alberta) who was named the 2016 Canadian Pharmacist of the Year.

The [2016/17 Awards booklet](#) is now posted on the AFPC website. Please note that the awards committee reviewed the current AFPC student awards and for 2016/17 only 3 student poster award winners will be selected for attendance at the 2017 conference. The first deadline for AFPC awards program submissions is January 15, 2017. This deadline applies to the following awards: CFP Pharmacy graduate student award for pharmacy practice research, Merck Graduate pharmacy fellowship, AFPC New investigator award, and Pfizer Research career award. Please promote these awards to your colleagues.

Education - A focus group of 10 faculty members (1 from each faculty) was conducted to collect information about the 2010 educational outcomes. The results from the focus group affirmed the educational outcomes were valuable and highly used. Some minor revisions were identified. A copy of this [focus group](#)

[report](#) was distributed to Councillors and is posted on the AFPC website.

A request for proposal (RFP) was sent out to external consultants to conduct the review of the educational outcomes. The project is scheduled to occur over the period of October 2016 to April 2017. Through this work the 2017 version of the AFPC Educational Outcomes will be prepared. In addition, the consultant will prepare a user reference manual for the 2017 AFPC Educational Outcomes.

Communications – Rebecca Law will be stepping down as the AFPC newsletter editor (the September / October 2016 edition will be her last). Rebecca has done this work as a volunteer for approximately 18 years. She is stepping down from this position. Her contributions have been significant and will be missed. AFPC is searching for a replacement volunteer.

The [faculty member information / welcome letter](#) was sent out to new faculty members. Also, this letter has been translated into French. Please note that you must log in to the AFPC website to view this letter.

2016 Annual Conference (CPERC) – CPERC 2016 “Building the future of pharmacy: We are the agents of change” was held June 1-2 in Richmond, BC. The conference was operationally and financially successful. There were 7 educational sessions, 14 concurrent sessions and 60 poster presentations. There were 128 registrants for the conference. Special thanks to our 2016 CPERC sponsors: Innovative Medicines Canada (Platinum), Teva Canada (Platinum), BD Canada (Gold), Shoppers Drug Mart / Loblaw (Gold), Pfizer Canada Inc (Silver), Pharmasave (Bronze). [Presentation slides](#) are available on the AFPC website. [Poster abstracts](#) are also available on the AFPC website. In addition, the [2016 conference program](#) is posted on the website.

Informatics SIG – L. Bishop, M. Pearson and H. Lopatka gave a presentation entitled “Informatics peer leader network: A model for integrating pharmacogenomics into pharmacy curricula” at the 2016 AACP annual conference.

Additional external funding has been received through Canada Health Infoway to enable AFPC to continue to advance the integration of digital and e-health into curricula. The strategic objectives of the project are: 1) to build the capacity and ability of the pharmacy educator network to increase digital and e-health integration and related curriculum change, and 2) to continuously improve the quality of the e-resource to allow for relevant and valid teaching / learning about digital and e-health. For more detailed information about the project, please see the Pharmacy Educator Informatics Network article that follows in this edition of the newsletter (p. 35-36).

Canadian Pharmacists Association (CPhA) – Regular briefings between AFPC and CPhA management staff are continuing. Monthly CPhA updates are being sent out to AFPC faculty members who are licensed pharmacist members of CPhA. A number of AFPC representatives attended the June 2016 Thought Leadership Summit. A [report](#) about the summit proceedings is available on the CPhA website. A top priority emerging from the summit was to establish a pharmacy research hub at the CPhA.

Our management team members, L. Bishop, M. Rocchi, D. Pipa and H. Lopatka, participated in a Joint Collaborative meeting with the Academic Faculty Associations for Medicine, Nursing and Pharmacy to share information about strategies and to discuss opportunities for collaboration.

Experiential education (PEPC) – PEPC is continuing to work on the 4 action priorities: making the grade, teaching and learning models, partnership development, and recruitment and retention. [Certina Ho](#) is the current chair of PEPC. The Vice Chair is Andrew Tolmie (Waterloo).

For additional information about the recently completed CanExEd project, please see the article that follows in this edition of the newsletter (p. 37-38). AFPC representatives will be participating in a CPhA webinar in October 2016, promoting and highlighting the current directions being taken in experiential education.

Program evaluation / assessment SIGs – These SIGs are continuing with monthly webinars about assessment. For additional information about these sessions please contact [Gilles Leclerc](#). Also, for information about the program evaluation activities, please contact [Ken Cor](#).

Skills lab SIG – This SIG is continuing with regular webinars. The focus of the webinars is to profile individual faculty skills lab activities. For information about these sessions please contact [Cynthia Richard](#) or [Teri Charrois](#).

A joint AFPC / CPhA Pharmacy Workforce Planning Committee has been established. The mandate for the multi-stakeholder working group is to conduct research, develop recommendations, and advise on key issues related to the development of a modern pharmacy workforce planning model for Canada. The committee has met 2 times. Presentations were made to the committee by representatives from CIHI, US pharmacy manpower centre, and PEBC. It is anticipated that a new model for pharmacy workforce planning in Canada will be developed by fall/winter 2017.

OTHER

Canadian Patient Safety Institute (CPSI)/ National Patient Safety Consortium (NPSC) – The Executive Director attended the CPSI Annual meeting and the NPSC September meeting. AFPC is a member organization of the NPSC. NPSC has developed an [integration patient safety action plan](#) to make meaningful progress in patient safety across the country.

In one priority area, medication safety, a [check list](#) for patients and families has been developed in collaboration with ISMP. The [list has 5 questions](#). The list and its implications to pharmacists should be included in the curriculum.

In addition, CPSI published a significant report “[Never events in hospital care](#)”. The report has received significant national and international attention. "Never events" are patient safety incidents that result in serious patient harm or death, and are preventable using organizational checks and balances.

International Pharmaceutical Federation (FIP) – FIP is holding a [global conference](#) on pharmacy and pharmaceutical sciences education on November 7-8, 2016 in Nanjing, China. The FIPed vision statement, Professional Statements on Pharmacy and Pharmaceutical Sciences Education, and work force development goals will be discussed. A Canadian delegation will be attending.

Health Canada – Opioid Crisis - Health Canada is planning a conference and summit about the [opioid crisis in Canada](#). This conference is being planned for the middle of November and is part of the Health Minister's strategy and plans regarding the opioid crisis in Canada. In response to the Minister's call to action, AFPC is developing a pharmacy education action. The action will entail an environmental scan of current faculty approaches to educate students about this topic and the development of competencies for use in pharmacy education. A faculty member working group has been established to conduct this activity.

ACKNOWLEDGEMENT OF 2016 SPONSORS

AFPC would like to acknowledge the following 2016 Sponsors for their generous contributions:

Canadian Pharmacy Education & Research Conference Sponsors

Innovative Medicines Canada – Platinum Sponsor

Teva Canada – Platinum Sponsor

BD Canada – Gold Sponsor

Shoppers Drug Mart – Gold Sponsor

Pfizer Canada Inc. – Silver Sponsor

Award Sponsors

Merck Canada Ltd. – AFPC / Merck Postgraduate Pharmacy Fellowship Award

Canadian Foundation for Pharmacy – AFPC / CFP Graduate Student Award for Pharmacy Practice Research

Pharmacy Examining Board of Canada – AFPC / PEBC Award for Excellence in Research or Innovation in Assessment of Competence

Janssen Inc (J&J Shared Services) – AFPC / Janssen Award for Innovation in Education

Pfizer Canada Inc. – AFPC / Pfizer Research Career Award



Executive Director
AFPC

FROM THE EDITOR

This is the last newsletter where I officially serve as your Editor, thus I wanted to say a fond farewell. It was in 1998 when I started serving AFPC in this volunteer position and after 18 years it is time for me to step down. Over these years, I have met many colleagues and made many friendships from across the country. I will miss you – including many of you who have retired. I have seen our AFPC newsletters evolve from a 7-8 page printed and mailed out version to the current 25-40 page electronic version complete with multiple photos and weblinks. Our newsletter, aptly called *AFPC Communication*, has been a consistent means of sharing and archiving AFPC news and happenings at Canadian universities. It will continue to serve our members under new editorship.

Rebecca M. Law, AFPC Editor (1998 – 2016)



FACULTY SPOTLIGHT: DALHOUSIE UNIVERSITY

GENERAL FACULTY NEWS

Canadian Council of Accreditation of Pharmacy Programs (CCAPP)

We are very happy to report that our BSc in Pharmacy program was awarded Full Accreditation for a three year term, 2016-2019, following our on-site visit that took place November 23-25, 2015.

The College of Pharmacy welcomes Dr. Alice Aiken as Dean of the Faculty of Health Professions

Dr. Aiken's career has been defined by her diverse experiences and dedication to service. As a former officer in the Canadian Forces, an accomplished professor and academic administrator, a practicing physiotherapist and a co-founder of the Canadian Institute for Military and Veteran Health Research (CIMVHR), Dr. Aiken has the broad perspective and leadership ability to guide the Faculty of Health Professions through an era of exciting transformation.

A Dalhousie graduate in Physical Therapy, Dr. Aiken brings a vision for her alma mater that positions the Faculty of Health Professions as a regional and national leader in health care reform.



New Fall Break for Dalhousie Students

The fall term of 2016 will see the institution of a November break week at Dalhousie University. Pharmacy students will have no classes during the week, which will fall around November 11th annually. Some adjustments have been made to the academic schedule to accommodate this, including an earlier start date for classes on the Tuesday following Labour Day.

Promotions

Drs Remi Agu and **Kerry Goralski** were promoted to Full Professor. **Heidi Deal** became Associate Director, Undergraduate Education and University Teaching Fellow while **Kim Sponagle** was appointed Associate Director, Student Affairs and University Teaching Fellow. **Dr Natalie Kennie-Kaulbach** was promoted to University Teaching Fellow and **Lisa Walker** to Senior Instructor.

Dr Duff's legacy to the College of Pharmacy, Dalhousie University and the Profession of Pharmacy

Kindness – that's the first word that comes to mind when **Susan Mansour** describes the legacy of Dr. J. Gordon Duff. "He would financially help students at risk of dropping out of the Pharmacy program because they couldn't afford it," says the Director and Associate Professor of the College of Pharmacy. "Any time he visited the College in his later years, he'd always ask, 'How can I help?' He wanted to ensure the College was in good hands for the future."

Throughout his career until his passing in December 2014, Dr. Duff demonstrated an incredible commitment to pharmacy practice and education, and to Dalhousie. He helped establish the College of Pharmacy, served as its first Director (1961-1972) and continued on as a faculty member until 1990. He led and served on several professional organizations, including the Canadian Foundation for Pharmacy and the Canadian Pharmaceutical Association. He established the J. Gordon Duff Pharmacy Museum to preserve the history of the profession. Dr. Duff was recognized for his pioneering work with Centennial Pharmacist honours from the Canadian Pharmacists Association and an honorary Doctor of Law from Dalhousie. Over the years, Dr. Duff contributed to the College and to the Dalhousie University Archives. But a \$1.5+-million gift to Dalhousie in his will has created a lasting legacy of support for both.

"It was overwhelming," says Mansour of Dr. Duff's generosity. "To know that someone had the best interests of the College at heart, he demonstrated that he really saw us as family."

Dr. Duff's bequest provides vital funding for existing and new scholarships, and for an emergency fund, to ease the financial challenges of pursuing degrees, particularly at the graduate level. He also committed

substantial funds for the Dalhousie Pharmacy Endowment Fund, which will promote related research throughout the Maritimes. "He's really supported the pharmaceutical science mission of the College," says Mansour. "And these scholarships give students vital support throughout their studies, including for living expenses."

Michael Moosberger was delighted that Dr. Duff made a contribution to the Archives as well. "It was important to him that the papers of significant faculty members be maintained and accessible to professors and students for their education and research," says the Associate University Librarian Research and Scholarly Communication, and Dalhousie University Archivist. "The cost of processing archival material is pretty substantial, and these funds will enable us to do the important work we do."

Funds were also earmarked to establish a Chair in Pharmacy Administration, which will further benefit the student and broader pharmacy community. In the meantime, Dr. Duff's bequest is already making a difference, funding research and scholarships, while encouraging all who knew him to follow his lead. "He's raised awareness among the Dalhousie community of how legacies large and small can make a difference. It's inspired students and faculty to think about doing similar things to help the College." (*Written by Mark Campbell, Dal Magazine Spring 2016*).



College of Pharmacy collaboration with School of Social Work Community Clinic (SWCC)

The Dalhousie School of Social Work Community Clinic (SWCC) was opened in St Paul's Church Hall in Halifax in June 2014, with initial funding from the Dalhousie University DALVision – Academic Innovation Fund and a partnership with St. Paul's Anglican Church. The clinic has also received funding from the Nova Scotia Department of Labour and Advanced Education; the Dalhousie University School of Social Work and private donors.

The Dalhousie University College of Pharmacy (COP) currently supports SWCC through the in-kind provision of pharmacist services.

The clinic began with a social work case management platform to support clients not fitting traditional support settings or not yet connected to existing social service agencies. The School of Social Work also wanted to create a teaching clinic to support the development of student case management skills for complex cases within a social justice based interprofessional practice environment. The clinic was initially staffed with two social workers offering holistic and evidence-based case management, and supervision of rotations and field placements for Social Work students. Following a demographic review of clients served over the first year of operation the SWCC Advisory Board invited the College of Pharmacy (COP) to join the clinic. In December 2015 the clinic relocated to a larger space inside Veith House – a well-established community organization hub located in the north-end of Halifax.

Sleepwell Nova Scotia

The program was initiated through discussion and collaboration within the Drug Evaluation Alliance of Nova Scotia. Members of the alliance have recognized the growing amount of evidence that shows the negative impact of medications used for sleep, but also understand the need for an alternative therapy to provide to patients living with insomnia. These discussions led to the creation of Sleepwell NS. The program is administered through Dalhousie Continuing Pharmacy Education. The collaborative responsible for the development of Sleepwell NS includes Dalhousie Continuing Pharmacy Education, Drug Evaluation Alliance of Nova Scotia, Drug Evaluation Unit Capital Health Authority, Canadian Agency for Drugs and Technologies in Health, Dalhousie Faculty of Medicine

Pharmacists at the Clinic

One COP pharmacist (**Harriet Davies**, Coordinator of Clinical Education) was oriented to the SWCC in October 2015. Pharmacist case meetings with clients, in collaboration with Social Work, began in January 2016. A second pharmacist (**Diane Harpell**, Coordinator of Dalhousie Continuing Pharmacy Education) was oriented into the clinic in February 2016 and a third (**Dr. Andrea Murphy**, Associate Professor) was integrated in May 2016. Elective pharmacy student learning opportunities began in the summer of 2016. A pharmacist attends the clinic every Tuesday morning on a regular rotating schedule to meet new clients and take part in pharmacy and interprofessional case rounds. Pharmacists meet clients by appointment at the clinic or in the community. Six third year pharmacy students completed an elective community pharmacy rotation interprofessional activity at the clinic this past summer. A clinical pharmacy student volunteer opportunity will be piloted this fall.

Integration of other Professions in the Clinic

Social Work hosts regular Bachelor of Social Work (BSW) undergraduate student and Master of Social Work (MSW) post-graduate clinical rotations at the site. The SWCC has firm plans to expand the complement of health professionals and students who will be involved with this interprofessional teaching clinic. The clinic will be offering elective service learning experiences to second year medical students this fall. Occupational Therapy will place students on introductory clinical rotations at the clinic in January 2017.

(Contributed by Harriet Davies, Coordinator of Clinical Education)

Continuing Professional Development, Nova Scotia Department of Health and Wellness, and Medication Info Share.

Sleepwell Nova Scotia helps people manage their insomnia without relying on sleeping pills. The Sleepwell Nova Scotia project team is made up of physicians and pharmacists who are interested in helping people with insomnia get their sleep back without the use of sleeping pills. Through various promotional activities including the "Sleepwell NS kit", the program aims to direct patients to the Sleepwell NS website (<http://sleepwellns.ca/site>) where they can learn about methods to address insomnia before turning to medications.

Sleepwell Nova Scotia was developed based on significant evidence that shows that, often, the risks of using medications to treat insomnia well outweigh the benefits. Sleepwell Nova Scotia has been highlighted at recent medical and pharmacy conferences as well as through news and radio programming.

Recently, a presentation about Sleepwell NS was included as part of the Innovation Series at the 2016 Canadian Pharmacists Association Conference. Additionally, a webinar is scheduled as part of the

Dalhousie Faculty of Health Profession's Summer Health Institute. This webinar will introduce the Sleepwell concept to various health professionals who support patients living with insomnia. The Sleepwell team continues to promote this program. Currently, the team is awaiting the results of an NSHRF Development/Innovation grant competition where support for Sleepwell is being considered.

(Contributed by Diane Harpell, BSc(Pharm), MBA, Dalhousie Continuing Pharmacy Education)

The Progress Exam at the College of Pharmacy: 18 years of experience!

In 1997, the undergraduate program at the College of Pharmacy, Dalhousie University transitioned from a lecture-based curriculum to a unique outcomes-based integrated hybrid problem-based learning (PBL) curriculum. At the same time, we developed and implemented the only comprehensive multiple choice question (MCQ) Progress Exam (an assessment method that measures knowledge acquisition and retention at specific time points throughout the curriculum) in Canada.

The Progress Exam has been administered annually at Dalhousie since the 1997-1998 academic year, with a Progress Exam Working Group responsible for oversight of the exam. All students are required to write the Progress Exam to proceed to the next year of the program, however no mark is recorded on their transcript. The two hour, 100 MCQ, closed-book Progress Exam is written each year on the first Tuesday following the end of the Year 4 PEP rotations, with all students writing the same exam at the same time. Mean scores for the entire Progress Exam as well as for various sections are calculated for each student, each cohort and all four years combined. Students are provided electronically with their individual score and their ranking within their own cohort.

In 2015 a theory-of-change approach to evaluation was used to complete a comprehensive review of the progress exam. This evaluation provided evidence that the Progress Exam did successfully achieve four of the original seven objectives of the Progress Exam.

Specifically, a research study comparing the lecture-based and PBL curricula provided evidence that the knowledge learned by the students in the two curricula did not appear to be different.

Evaluation of results demonstrated that students' knowledge not only improved but was retained as they progressed through the four years of the curriculum. Additionally, the Progress Exam provided students with an opportunity to write a comprehensive MCQ exam prior to the PEBCs. One objective that was not achieved was that students did not agree that the Progress Exam was an incentive for learning. Evidence was not so clear with regard to two other objectives. Although the blueprint for the Progress Exam reflected content taught in the curriculum, students did not agree that the Progress Exam was addressing areas of importance to pharmacy. Similarly, students did not think the Progress Exam helped them to understand how well they were doing overall, despite being provided Progress Exam results annually and having the opportunity to review their individual exam. The results from this review will be used by the Progress Exam Working Group and the Curriculum Committee to make informed decisions to improve the Progress Exam.

(Contributed by Dr Anne Marie Whelan, Associate Director Program Evaluation)

Awards

The AFPC Pharmacy Examining Board of Canada Award for Excellence in Research or Innovation in Assessment of Competence was presented to **Dr Anne Marie Whelan** at the 2016 CPERC conference.



Dr. Whelan receives award from Dr. John Pugsley, PEBC

Dr Tannis Jurgens was selected by the Class of 2016 to receive the Dr Jessie I MacKnight Teaching Award for the College of Pharmacy. The presentation was made by graduating class presidents at the Convocation Brunch on May 31, 2016.



Collaborative Research Team: College of Pharmacy and Nova Scotia Health Authority (NSHA)

The research team shown in the attached picture conducted a point-prevalence study across 16 acute care Nova Scotia hospitals surveying benzodiazepine (BZD) and sedative hypnotic drug (SHD) use. The goal was to characterize use of BZD/SHDs in Nova Scotia Acute Care facilities in order to determine targets for quality improvement in the use of these agents across the acute care setting on a provincial basis. The research also helped to establish a collaborative network between Dalhousie College of Pharmacy and the Nova Scotia Health Authority for other research projects going forward. The study was funded by the Drug Evaluation Alliance of Nova Scotia

Shanna Trenamen received a travel grant from the Training Team of the Canadian Network for Observational Drug Effect Studies, funded by CIHR, to attend the International Conference on Pharmaco-epidemiology in Dublin.

Mia G. Losier (Class of 2017) won the Whit Matthews Award at this year's AFPC conference for her poster titled: Point Prevalence Survey of Antimicrobial use at the Queen Elizabeth II Health Sciences Centre in Halifax, Nova Scotia. Other authors included **Megan E. Harrison, Emily K. Black**, Heather L. Neville, B. Lynn Johnston, Kim A. Abbass, Kathryn L. Slayter, and **Ingrid S. Sketris**.

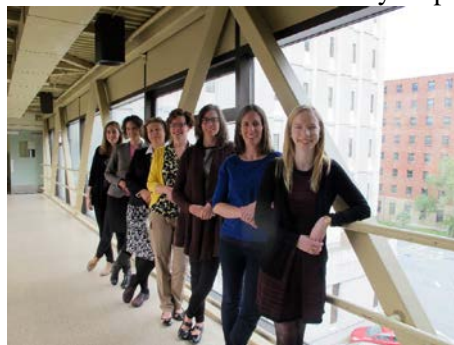
Sara Rehan (Class of 2017) received a student travel grant from the International Society for Pharmaco-epidemiology.

Nicholas Relja, K. Goralski's MSc graduate student, received a stipend from the Cancer Research Training Program over two years. **Jeanna MacLeod, D. Jakeman's** MSc graduate student, received a stipend from CIHR for one year. James Marsh, **D. Jakeman's** incoming graduate student received a stipend over two years from the Nova Scotia Graduate Entrance Scholarship.

Grants

Drs. Susan Bowles and Jennifer Isenor are part of a team that received grant funding from the Drug Evaluation Alliance of Nova Scotia (DEANS) and the VP Innovation and Research, Nova Scotia Health Authority/IWK Health Centre to complete a point prevalence survey on benzodiazepine and sedative hypnotic drug use in Nova Scotia hospitals.

(DEANS), the NSHA/IWK Office of Innovation and Research as well as the NSHA Pharmacy Department.



F-B: Mia Losier (Student), Melissa Gehrig, Dr. Laura Minard, Heather Neville, Dr. Susan Bowles, Dr. Jennifer Isenor and Jennifer Pitman (student), Ellen Penny (not pictured)

Publications

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MacKenzie M, Zed PJ, Ensom MH. Opioid Pharmacokinetics Pharmacodynamics: Clinical Implications in Acute Pain Management in Trauma. *Ann Pharmacother*. 2016 Jan 5. pii: 1060028015625659

Yeung, PKF. Importance of gender effect in cardiovascular pharmacology (Editorial). *Cardiovasc Pharm Open Access* 5: e130 (2016 in press)

Wilby KJ, **Black EK**, Austin Z, Mukhalalati B, Aboulsoud S, Khalifa SI. Objective structured clinical examination for pharmacy students in Qatar: cultural and contextual barriers to assessment. *EMHJ* 2016;22(4):251-7.

Presentations

Price SL, Reeves S, Andrews C, **Davies H**, Harman K, Sutton E, Almost J, Khalili H, Sim SM. Exploring Early Professional Socialization Across Five Health Professions. Canadian Association for Health Services and Policy Research. May 2016, Toronto Ontario. (Poster)

Price SL, Reeves S, Andrews C, **Davies H**, Harman K, Sutton E, Almost J, Khalili H, Sim SM. Exploring Early Professional Socialization Across Five Health Professions. All Together Better Health VIII. September 2016, Oxford United Kingdom. (Oral)

Rothfus M, **Sketris I**, Helwig M, Traynor R, and Stewart SA. Determining the citation impact of the Canadian Network for Observational Drug Effect Studies (CNODES) publication: Methods and outcomes. Annual Conference of the International

Society for Pharmacoepidemiology, Aug 2016, Dublin, Ireland. (poster)

Walsh KA, Hill-Taylor B, Stewart S, Hayden J, Stephen Byrne S, **Sketris IS**. Effectiveness of the STOPP/START Criteria: A Systematic Review of Randomized Controlled Studies. Poster presentation at the 32nd International Conference on Pharmacoepidemiology & Therapeutic Risk Management, Dublin, Ireland. Aug 2016.

Sketris I, Hill-Taylor B, **Black E**, Carter J. Using Health Services Administrative Data to Determine Adherence to the STOPP Criteria: Examples from Nova Scotia. Oral Presentation at Our Future is Aging: Current Research on Knowledge, Practice and Policy. Mount Saint Vincent University, Halifax, NS. June 2016.

Invited Presentations

Dr. Jennifer Isenor was invited to present on a 4 member interprofessional panel with Shannon MacDonald, Hui C, Dubé E. Panel on Factors that Influence Vaccine Hesitancy: Convenience. Impact of pharmacists as vaccine providers on increased access to vaccination services or enhanced convenience of services for clients. Public Health 2016. Sheraton Centre Toronto Hotel, Toronto, ON. June 14, 2016.

Drs. Ellen Hickey and **Jennifer Isenor** were invited to present on behalf of the Maplestone Collaborative Learning Centre Research Committee at the 6th Annual

Northwood Research Symposium, held in Dartmouth, NS on May 13, 2016 on The Ripple Effects of Interprofessional Education in Long Term Care Settings.

Dr Pollen Yeung was an invited keynote speaker at the Hypertension and Health Care 2016 meeting in Toronto, August 2016. He gave a presentation on "ATP metabolism in the red blood cells as potential biomarker for post exercise hypotension and cardiovascular protection".

STUDENT NEWS

In October, the Dalhousie Student Pharmacy Society (DSPS), in collaboration with Dalhousie CAPSI, the College of Pharmacy and Dalhousie University, decided to include female contestants in their "Mr. Pharmacy" competition, making Dalhousie the first university in Canada to include females in this event. They renamed the event "Pharmacy's Finest" and Dalhousie became the first school to send a female winner to the national competition at PDW. This coming year several other Pharmacy schools plan to follow suit and invite females to compete in their competition.

This year the DSPS made some much needed renovations to the Burbidge student lounge. These renovations were made possible by a generous donation from Dr. J.G Duff as well as a grant from Dalhousie.



Pharmacy Student Research Exchange with Robert Gordon University School of Pharmacy & Life Sciences, Aberdeen, Scotland

The College of Pharmacy was pleased to be able to continue the pharmacy student research exchange program this past summer with two Class of 2019 students travelling to Aberdeen, Scotland. **Kathleen MacMillan** and **Carl Mopoho** spent two weeks in Aberdeen hosted by RGU professors Dr. Vibhu Paudyal and Dr. Anita Weidmann. The students visited hospital and community pharmacies, and learned about Scottish pharmacy practice programs including independent prescribing, the minor ailments program, medication reconciliation and antimicrobial stewardship. One of the highlights for the students was learning about independent prescribing. They were taken under the wing of Pharmacist Valerie Sillito, an independent prescriber who runs her own asthma/COPD/emergency contraceptive clinic in Aberdeen. We look forward to hosting RGU students at Dalhousie University next summer.



L-R: Carl Mopoho, Dr. Anita Weidmann, Kathleen MacMillan and Dr. Vibhu Paudyal

UNIVERSITY OF ALBERTA

Faculty News

The Faculty officially has started a Double Degree program with the School of Pharmacy at the University of Sao Paulo in Brazil. One graduate student from Brazil does his/her research at the University of Alberta for six months and a returning student from U of A will conduct research in Sao Paulo for a similar period of time. The Sao Paulo student, Lis Monteiro, started her six-month research here on August 31, 2016.

Publications

Congratulations to **Dr. Sherif Mahmoud** who authored the following publication:

Antiepileptic Drug Removal by Continuous Renal Replacement Therapy: A Review of the Literature. Clin Drug Investig (2016). doi:10.1007/s40261-016-0457-0, <http://link.springer.com/article/10.1007%2Fs40261-016-0457-0>

Awards

Graduate student **Faruque Chowdhury** won best research paper award from the Canadian Pharmacists Journal for her systematic review of the scope of research on pharmacists prescribing in Canada. More recently, Faruque won best pharmacy practice research poster presentation award at the Canadian Pharmacy Association's (CPhA) national conference in Calgary. She focused on how pharmacist prescribing fits in family physicians' practice in Alberta.

Dr. Nese Yuksel was recently recognized for her clinical work by being named the 2016 Canadian Pharmacist of the Year by the Canadian Pharmacists Association. The

Experiential Education – Preceptor Awards

We are committed to recognizing the important contributions preceptor faculty members make to student learning and development. Under our *Preceptor of the Year* and *Preceptor Recognition Award* programs, we aim to recognize preceptors who provide outstanding contributions to the educational development of future pharmacists.

For the BScPharm program, the following five deserving pharmacist preceptors were awarded *Preceptor of the Year* for 2015-2016.

1. Taria Gouw – Apple Drugs, Bow Island, AB
2. Serena Bains – Stollery Children's Hospital, Edmonton, AB
3. Lorraine Delano – Stollery Children's Hospital,

award was given out on June 25, 2016 at the Association's national conference in Calgary. Read more: <https://www.ualberta.ca/pharmacy/news/2016/june/canadian-pharmacist-of-the-year-award-recognizes-associate-professor-for-clinical-work>.

Dr. Sherif Mahmoud was awarded the Faculty of Pharmacy and Pharmaceutical Sciences - Teaching Excellence Award 2016.

Igor Paiva, graduate student with Dr. Afsaneh Lavasanifar, won the CedarLane Poster Award of Excellence at the 2016 Canadian Society for Pharmaceutical Sciences annual conference in June.

The following team was the recipients of second prize in the Canadian Chapter of the Controlled Release Society (CC-CRS) best poster competition for their poster entitled: **Soleymani Abyaneh H, Gupta N, Gopal K, Lai R, Lavasanifar A**; "Can HIF1 α silencing overcome hypoxia induced conversion of triple negative breast cancer to more tumorigenic and drug resistance phenotype?"

Brenda Oscroft, Administrative Assistant, was awarded the 2016 Award of Merit for her significant commitment and contribution to the Faculty of Pharmacy and Pharmaceutical Sciences.

Tasneem Siyam, graduate student with Dr. Nese Yuksel, received the WCHRI (Women and Children's Research Institute) Patient And Community Engagement Training (PACET) Award.

Edmonton, AB

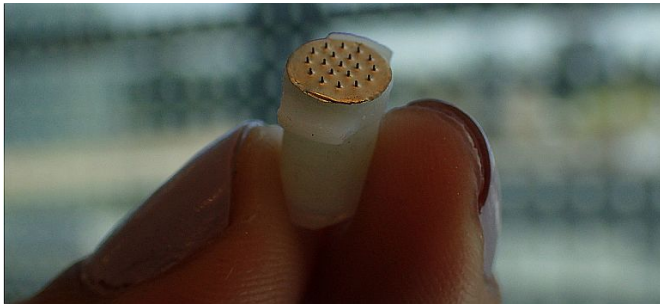
4. Craig MacAlpine – Wal-Mart Pharmacy, Leduc, AB
5. Charles Au – Foothills Medical Centre, Calgary, AB

The PharmD for Practicing Pharmacists program has awarded Matt Mink of the Poison and Drug Information Service (Calgary, AB), as *Preceptor of the Year*.

Additionally, 68 pharmacist preceptors from both the BScPharm and PharmD programs have been nominated to receive Preceptor Recognition Awards for 2015-2016. This student-nominated award program recognizes any preceptor nominated based on the annual theme. This year's theme was "Preceptors providing exemplary feedback to support learning". Congratulations to all our dedicated preceptors!

UNIVERSITY OF BRITISH COLUMBIA

Scientists develop painless and inexpensive microneedle system to monitor drugs



Source: <http://news.ubc.ca/2016/07/25/scientists-develop-painless-and-inexpensive-microneedle-system-to-monitor-drugs/>

Urs Hafeli and **Sahan Ranamukhaarachchi** from the Faculty of Pharmaceutical Sciences were featured in the following story regarding their research in drug delivery and nanomedicine.

“Researchers at UBC and the Paul Scherrer Institut (PSI) in Switzerland have created a microneedle drug monitoring system that could one day replace costly, invasive blood draws and improve patient comfort.

The new system consists of a small, thin patch that is pressed against a patient’s arm during medical treatment and measures drugs in their bloodstream painlessly without drawing any blood.

The tiny needle-like projection, less than half a millimeter long, resembles a hollow cone and doesn’t pierce the skin like a standard hypodermic needle.”

To read the full story visit <http://news.ubc.ca/2016/07/25/scientists-develop-painless-and-inexpensive-microneedle-system-to-monitor-drugs/>

A Q&A With Paul O’Shea, Associate Dean, Research



Photo by Justin Ohata

Earlier this summer, the Faculty welcomed **Dr. Paul O’Shea** in the role of associate dean, research. Dr. O’Shea

COPD epidemic could overwhelm healthcare systems within two decades: UBC study



Credit: Flickr (<https://www.flickr.com/photos/jaseblair/5346277189/>)

Dr. Mohsen Sadatsafavi from the Faculty of Pharmaceutical Sciences was featured in the following story regarding his research in health outcomes and epidemiology.

“Health authorities should brace themselves for an epidemic of chronic obstructive pulmonary disease (COPD) over the next two decades, despite a decline in smoking rates, according to a new study from the University of British Columbia. COPD is a progressive lung disease associated with smoking, air pollution and age. To predict future rates of the disease, researchers conducted forecasting analyses, combining population statistics and health data for the province of B.C. They concluded that between 2010 and 2030, the number of COPD cases in the province will increase by more than 150 per cent—despite decreased rates of smoking. Among seniors over 75 years of age, rates of COPD will more than triple, increasing by 220 per cent. The staggering figures astonished even the researchers.”

To read the full story visit <http://news.ubc.ca/2016/09/19/copd-epidemic-could-overwhelm-healthcare-systems-within-two-decades-ubc-study/>

joined us from the United Kingdom, where he was chair of biophysics at the University of Nottingham for 16 years. He has worked at the interface between the life sciences and physics and chemistry throughout his career. To read the full story visit <https://pharmsci.ubc.ca/news/qa-paul-oshea-associate-dean-research>

Recent Publications

To view our latest publications, visit <https://pharmsci.ubc.ca/research/research-publications>.

Université Laval

FACULTY NEWS

End of studies for the second Pharm.D. cohort

On June 3rd, it was in a friendly cocktail that students, teachers, staff and partners celebrated the completion of studies for the second Pharm.D. cohort. This particular moment highlighted the sustained efforts of the students during their academic career. The Faculty wishes to thank Pharmascience, partner in business, and to congratulate all graduates!

Convocation 2016

Graduates of three study cycles received their diplomas at the Convocation ceremony held on June 11. Dean Jean Lefebvre and professors received all graduates at a cocktail to mark the end of their studies, in the company of their parents and friends.

White coats ceremony 2016

On September 20th this year, 202 Pharm.D. students and French students received their white coat, the symbol of their official entry in the Faculty of Pharmacy, in front of 400 family and friends, teachers/teaching staff and guests of honor. In addition to receiving the coat, the students recited the assertion with the Dean and signed the official book of that assertion. During the ceremony, an original presentation was performed by the General Association of pharmacy students. The evening concluded with a cocktail to socialize and exchange dialogue. A huge thank you to the Uniprix Group, faithful partner of the event.



*White coats ceremony 2016
(photo taken by Jean-François Rivard)*

Welcome to new residents of the Master in advanced pharmacotherapy program

The Faculty welcomes 30 new residents in the Master program in advanced pharmacotherapy. Their training, beginning in September 2016, will be spread out over 16 months.



Master in advanced pharmacotherapy program (photo taken by Sara Hébert)

Hospital pharmacy symposium

On September 24th, the Association des pharmaciens des établissements de santé du Québec in collaboration with Laval University and Montreal University performed a hospital pharmacy symposium for students from both universities. Many hospital pharmacists came to share their practice and passion with more than 100 students.

TEACHERS NEWS

New teachers

Two new teachers joined the Faculty staff: Dr. Isabelle Laverdière and Dr. Denis Soulet.

Dr. Isabelle Laverdière holds a M.Sc. in hospital pharmacy and practiced for 7 years as a pharmacist at the Centre hospitalier universitaire de Québec before returning to school to complete a M.Sc. and Ph.D. in pharmaceutical sciences. She will soon complete her post-doctoral fellow at the Research Institute of the McGill University Health Centre (MUHC) in the laboratory of Dr. Kojla Eppert. Her research interests are particularly relevant in the field of pediatric oncology, where she plans to identify predictors of the efficacy and toxicity of anticancer therapies and assess the impact related to clinical interventions for children receiving treatment for cancer.

Dr. Denis Soulet holds a BA in biochemistry and a Master's from the University of Lyon I. He completed his Ph.D. in physiology / endocrinology at Laval University

and postdoctoral fellow at Lunds University in Sweden. Dr. Soulet is Scholar (Junior 2) FRQS. He runs a laboratory and leads a research team (for several years) at the Research Centre of the Centre hospitalier universitaire de Québec-Université Laval. His research interests are mainly in neuroscience and, more particularly, with respect to the gut-brain axis.



Dr Isabelle Laverdière



Dr Denis Soulet

(photos taken by Jean-François Rivard)

"NSERC - Discovery" Grant for two professors of the Faculty

Two assistant professors in the Faculty just received a "NSERC Discovery" grant for their respective research projects.

Congratulations to **Sébastien Fortin** for his project *Characterisation of the Molecular Structure and Function of Topoisomerase in Using Anticancer Agents as Molecular Probes Acting in a New Allosteric Binding-Site* and to **Nicolas Bertrand** for his project entitled *Engineering Functional Nanoparticles Using Libraries of Polymer*.



Dr Sébastien Fortin



Dr Nicolas Bertrand

(photos taken by Jean-François Rivard)

Dr. Edeltraut Kröger received a CIHR synthesis grant

Dr. Edeltraut Kröger, associate professor at the Faculty of Pharmacy, and co-director of the program José A. Morais received a grant on the synthesis of knowledge of Health Research (CIHR). Their research is titled *Health Impacts and Characteristics of Deprescribing Interventions in Older Adults - a systematic review*.

Three professors obtained CIHR grants for projects

The Faculty wishes to congratulate three of its teachers who received funding for their projects from the Health Research Institutes of Canada at the spring competition 2016:

- Dr. Olivier Barbier for his project entitled *Therapeutic Potential of Obeticholic Acid for the Treatment of Advanced Prostate Cancer*.
- Dr. Sophier Lauzier for his project entitled *Enhancing Adherence to Adjuvant Endocrine Therapy Among Breast Cancer Survivors: Pilot study of the S.O.I.E. program*.
- Dr. Frédéric Picard for his project entitled *Modulation and Effects of IGFBP-2 on Brown Adipose Tissue Thermogenesis*.

STUDENTS NEWS

Five teams received recognition for their Exploration Project

On April 20th and 21st, 4th year Pharm.D. students presented their “exploration projects”, major projects on which they have worked for almost a year. There were 65 teams who presented their poster to evaluators, staff, students and guests. The evaluators were impressed by the quality of the projects. Five teams were awarded a distinction for their project. The criteria were the quality of the presentation and usefulness of the project for the community. Congratulations to the winners!

- Project title: *Nutritional Supplements and Pharmacotherapy in Athletes: What should you know?* Students: Marika Alary-Vanasse, Marie-Pier Boudreau Gagnon, Audrey Chabot.
- Project title: *Attitudes and Behavioral Determinants of Seniors and Their Loved Ones Face to Polypharmacy and Deprescription: a review of Joint Studies.* Students: Andrée-Anne Boivin, Philippe Dubois, David Echenberg.
- Project title: *Tools for Integrating the Activity "Prescription Extension" Under Law 41* Students: Jessica Doyon, Audrey Goulet, Gabrielle Racicot.
- Project title: *Application of the Standard Non-Sterile Compounding in Community Pharmacy.* Students: Sabrina Boivin, Stéphanie Tremblay.

- Project title: *Quality Assessment of Medication Reconciliation in Thetford Hospital and Scope in Pursuit of Care.* Students: Valérie Lachance Bouchard, Marie-Christine Sylvain

FRSQ awards

Three students from the Faculty of Pharmacy received funding from the Health Research Fund of Quebec (FRSQ) for the 2016-2017 year. Congratulations to the recipients, which are listed below:

Master program in pharmaceutical sciences:

Mathieu Gagné-Boulet (Research Director: Sébastien Fortin). *Design, Preparation and Evaluation of New Anticancer Agents that Inhibit DNA Repair and Replication Mechanisms.*

Cynthia Lecours (research directors: Marie-Ève Tremblay and Thérèse Di Paolo). *The Mechanisms Involved in the Therapeutic Efficacy of Deep Brain Stimulation Treatment for Parkinson's Disease.*

Ph.D. program in pharmaceutical sciences:

Andrée-Anne Poirier (research directors: Denis Soulet and Thérèse Di Paolo). *Neuroprotective and Anti-Inflammatory Hormone Treatments Modulators of the Enteric Nervous System in Parkinson's Disease.*

Scholarships from the Canadian Institutes of Health Research (CIHR)

Two students of the Faculty have received CIHR funding for 2016. Congratulation to:

- Philippe Bourassa, a Ph.D. student in pharmaceutical sciences, supervised by Dr Frederic Calon.
- Brittany Humphries, master's student in pharmaceutical sciences - pharmacoepidemiology, under the supervision of Dr Sophie Lauzier and Dr Elizabeth Maunsell.

CIHR award for a graduate

Faculty of Pharmacy congratulates Milène Vandal who obtained a postdoctoral fellowship from CIHR to pursue her work on Alzheimer's disease. Ms Vandal is a recent graduate of the Ph.D., which was conducted under the supervision of Dr. Frédéric Calon.

Alzheimer Society of Canada scholarship

Marine Tournissac is the recipient of a doctoral scholarship from the Alzheimer Society of Canada.

New scholarship holder for the FER (Fonds d'enseignement et de recherche)

Congratulations to the five new fellows of the FER for the April 2016 competition!

- Olivier Landry, a student in the Master of Pharmaceutical Sciences (Research Director: Dr Frederic Calon)
- Emmanuelle Doucet, a student in the Master of Pharmaceutical Sciences (Research Director: Dr Pierre Gagnon)
- Laurence Lambert-Côté, a student in the Master of Pharmaceutical Sciences (Research Director: Dr Sophie Lauzier)
- Marc-André Nolin, a student at the Master in Pharmaceutical Sciences (Research Director: Dr Frédéric Picard)
- Adrien Labriet, Ph.D. student in pharmaceutical sciences (Research Director: Dr Chantal Guillemette)

UNIVERSITY OF MANITOBA

Individual Faculty News

Dr. Xiaochen Gu has been named Acting Dean for the College of Pharmacy.

The College of Pharmacy welcomes Dr. Sara Berg as Pharmacy Committee and Practical Assessment Assistant.

Faculty News and Events

The College of Pharmacy presented B.Sc.(Pharm) degrees to 48 students at the annual Welcome to the Profession Ceremony on June 2.

The Program Evaluation Committee, chaired by Dr. Sheryl Zelenitsky, conducted a survey of practicing pharmacists in the province of Manitoba to collect feedback and gauge interest in an Adaptable Pharm. D. program. This was performed in collaboration with the College of Pharmacists of Manitoba. 579 pharmacists out of a possible 1356 responded to the electronic survey. The results are being used to inform the Pharm. D. program development at the College of Pharmacy.

The University of Manitoba Homecoming was held on September 23-25. The Pharmacy Class of 1966 celebrated their 50 year reunion as part of this event. The Class of 1966 is one of the most active classes in the University of Manitoba's history, having created the Pharmacy Class of 1966 Scholarship in 2006. Alumni of this class have personally presented this award to the student recipients since its induction.

As part of orientation for the Class of 2020, first year students from the Rady Faculty of Health Sciences' 5 colleges (Pharmacy, Medicine, Nursing, Dentistry and Rehabilitation Sciences) were placed in interprofessional 'teams.' Their first learning event was a bus tour of the inner city area with stops at various non-profit and community outreach locations, aimed to raise awareness of social determinants of health and opportunities for placements and volunteering. These interprofessional teams will participate in different learning activities over the next two years, learning to work effectively together with different professions for improved patient care.

On September 23 we welcomed 52 new pharmacy students to the College of Pharmacy at the White Coat Ceremony. Students took the Pledge of Professionalism and were presented with their first White Coats by the Class of 1966 alumni.



MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Appointments and Leaves

Dr. Lisa Bishop was appointed interim dean of the School of Pharmacy effective Aug. 1, 2016, until a permanent dean is recruited. Dr. Bishop has replaced Dr. Carlo Marra who had accepted the role of dean of the School of Pharmacy at the University of Otago and is already in New Zealand. For more information, visit the [School of Pharmacy news archives](#).

Dr. Hai Nguyen, appointed Assistant Professor, Tier 2 Canada Research Chair in Health Care Sustainability and Policy Evaluation as reported in the March issue, will be conducting empirical research into health-related behaviours, health outcomes, economic evaluation and policy evaluation. For more information, visit the [School of Pharmacy news archives](#).

General Faculty News

Over 100 players and volunteers gathered on the green of Bally Haly Golf and Country Club to enjoy the summer sun and raise funds for student scholarships and awards and educational initiatives. For more information, visit the [School of Pharmacy news archive](#).

Awards

Mr. Keith Bailey received the School of Pharmacy Alumni Achievement Award at the 2016 Scholarships and Awards Ceremony on September 15, 2016.

Dr. Rebecca Law received the Faculty of Medicine, Discipline of Family Medicine's George Hurley Award in Interprofessional Education at the 2016 Awards Dinner at the Family Medicine Community Preceptors' Meeting on October 21, 2016. The award was in "recognition of the excellence of non-physician teaching contributions" to the MUN Faculty of Medicine's Family Medicine residency training program.



L-R: Dr. Rebecca Law and Dr. Kathy Stringer,
Discipline Chair of Family Medicine

The School of Pharmacy's 2015-16 Annual Report, "Full Spectrum", was released at the opening reception of the Pharmacists Association of Newfoundland and Labrador Annual Conference in September. To view the report, visit the [website](#).

The [School of Pharmacy Reunion](#) took place on Saturday, Oct. 15 at Quidi Vidi Brewery in St. John's.

Injections Training continued this Fall, with the next session being offered on Dec. 5. For more information on injections training, please visit the [website](#).

The School was awarded [the Canadian Hard of Hearing Association of Newfoundland and Labrador Community Awareness Award](#), which is given to individuals, service groups, community agencies, businesses or government agencies or departments who are making a contribution to the hard of hearing community in the area of hearing loss issues. The School has contributed via an in-class presentation in creating awareness among pharmacy students about hearing loss with future patients and how to communicate with them effectively.

Grants

Dr. Rebecca Law (PI) received \$28,515 in funding from the Teaching and Learning Framework Fund for a project titled "Who's Teaching Who? Reciprocal Teaching and Learning Between Undergraduate Pharmacy Students and Seniors to Promote Health, Disease Management, and Wellness". The project is a public engagement initiative that connects 4th year pharmacy students with community and nursing home seniors for presentations and dialogue on health and disease topics. Co-investigators are Hoben J, Mercer S, Smith-Young J, Little L, Coombs S, Swamidas M, Heisz K, Chibrikova L and Ou L (Education, Family Medicine, Nursing, pharmacists, seniors, graduates).

Dr. Rebecca Law and a team of interprofessional faculty at Memorial University received \$41,989 in funding also from the Teaching and Learning Framework Fund for a project titled "Measuring the Effectiveness of High Fidelity Simulation in Interprofessional Education to Foster Teamwork Among Undergraduate Nursing, Medicine and Pharmacy Students." Team members are MacDonald S (PI), Manuel A, Dubrowski A, Bandrauk N, Curran V.

Dr. Tiffany Lee received \$1,000 in funding from the Quick Start Public Engagement Grant for a project titled “It takes a village: working together to support the challenges of breastfeeding families living with tongue-tie” to host a public engagement forum on the topic of anklyoglossia and infant feeding. For more information, visit the School of Pharmacy news archives.

Dr. Erin Davis and **Dr. Jason Kielly** received \$20,000 from the TPMI/NL Support Educational Fund to support a new graduate student, Ms. Abigail Turner. This will be funding for two years at \$10,000 per year. Ms. Turner’s project area is “Assessing patient and physician preferences for the pharmacist’s role in physician-assisted dying: A discrete choice experiment.”

Dr. Lisa Bishop and a team of community based researchers received \$12,500 from the Canadian Institute for Health Research for their work, “Addressing Youth Mental Health and Addictions: Developing Community-based Strategies”. The partnership recognizes the importance of youth mental health and wellness, a partnership between healthcare

providers and community representatives with a goal to address youth mental health and wellness in a way that was responsive to the needs of a community. For more information, visit the [School of Pharmacy news archive](#).

Student News

The School of Pharmacy’s first [Undergraduate Student Summer Research Program](#) concluded in September. The goal of the program is to encourage undergraduate students in pharmacy or in any discipline with relevance to pharmacy research to become aware of career options in research. For more information on the program, visit the [School of Pharmacy news archive](#).

The School [welcomed a number of exchange students this semester](#), including Marina de Assis Florentino of Brazil, who has always wanted to study abroad and is interested in exploring expanded scope of practice in pharmacy in Canada as compared with her home country.

MUN CAPSI students took part in the annual CIBC Run for the Cure, raising over \$2,000 towards the cause.

UNIVERSITÉ de MONTRÉAL

Jacques Turgeon appointed Professor Emeritus

For his outstanding contribution to the development and the outreach of Université de Montréal research and teaching excellence, **Jacques Turgeon** was appointed Professor Emeritus in April 2016 during a special meeting of the Université de Montréal Board of Directors.

Dr. Turgeon, a world acclaimed researcher, has contributed significantly to the advancement of pharmacy and research by his work on pharmacogenomics and drug interactions. He is one of the first researchers to demonstrate the role of multiple P450 cytochromes in drug metabolism, leading to the development of a computer software that predicts drug interaction in order to prevent medication side effects. Over the years, the excellence of his research attracted more than \$50 million from various funding agencies. Dr. Turgeon’s work has been highly influential and recognized. He has to his credit 125 peer-reviewed journal publications, 350 research abstracts and 20 professional journal articles.

As Dean of the Faculty of pharmacy from 2000 to 2005 and as Université de Montréal Vice-President Research from 2005 to 2007, he contributed significantly to the development of our institution. He led the development and implementation of the first Undergraduate Pharm. D. Program in Canada and of the Biopharmaceutical Science Bachelor.



Research News

Research Funding

Last year, \$9.8 million was received as research funding from granting agencies and private companies.

News from the Fonds de recherche du Québec en Santé (FRQS)

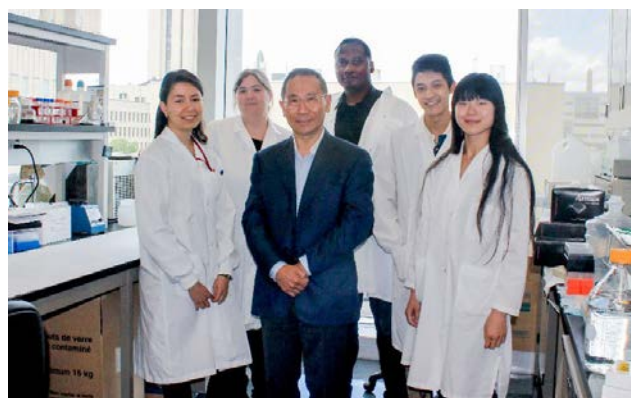
Four of our teachers have distinguished themselves in the last competition of the FRSQ. **Marie Lordkipanidzé**, assistant professor, and David Williamson, clinical professor, have both won a Research Scholars-Junior 1 grant. **Gaétan Mayer**, assistant professor, was awarded a Research Scholars-Junior 2 grant and **Cara Tannenbaum**, full professor, was granted a FRQS Research Chair.



Marie Lordkipanidzé David Williamson Gaétan Mayer Cara Tannenbaum

Important Discovery from one of our Professors

The work of **Dr. Huy Ong**, full professor, and his colleagues on dry macular degeneration has led to the launching of Mperia Therapeutics, a first for Université de Montréal in this area of practice. Launched on June 2nd, the company opens the way for the clinical investigation and eventual commercialization of CD36 receptor ligands in the treatment of dry macular degeneration, for which there is no effective treatment to date and, when untreated, may progress to blindness. Dr. Huy Ong's work may represent a major breakthrough for health care around the world.



Gaétan Mayer Research Scholars-Junior 2

Our new assistant professor, **Gaétan Mayer**, received, for his research project entitled *Functions and regulation of the convertase proprotein PCSK9 in controlling blood lipids and atherosclerosis*, a Research Scholars-Junior 2 grant from the Fonds de recherche du Québec en Santé (FRQS). This study, funded by the Canadian Institute of Health Research (CIHR), is to characterize new factors that influence blood cholesterol levels and the progression of atherosclerosis. New therapeutic molecules that inhibit the PCSK9 action will be characterized and tested in *in vivo* models for the reduction of atherosclerotic plaques.

Graduate Study Enrolment

In 2016, 293 students were enrolled in a Graduate and Post Graduate Studies Program at the Faculty of pharmacy. Numbers by program are below:

- M. Sc. in Pharmaceutical sciences: 31
- Ph. D. in Pharmaceutical sciences: 55
- Postdoc in Pharmaceutical Sciences: 9
- Master program in Advance Pharmacotherapy (Residency program): 42

- Specialized graduate studies in Drug development: 117
- M. Sc. in Drug development (internship or master's thesis): 39

Université de Montréal Best Health Sciences Dissertation Award

The Université de Montréal 2016 Best Health Sciences Dissertation Award was presented to **Jean-Michel Rabanel**, graduate student at the Faculty of pharmacy under the direction of Patrice Hildgen, full professor, and co-director Xavier Banquy, assistant professor. His exceptional dissertation, entitled "Nanostructure polymeric particles: physical, chemical and biological" was recognized for its significant intellectual contribution to the disciplinary field.



New management team for the Master Program in Advance Pharmacotherapy (Residency program)

Since June 1st, and in replacement of clinical professor Marc Perreault, **David Williamson**, clinical professor, and **Anne Julie Frenette**, associate clinical professor, are now sharing the director position of the Master Program in Advance Pharmacotherapy. The Faculty wishes to thank **Professor Perreault** for his exceptional and dedicated commitment for the past nine years. Through numerous projects, he has worked, in partnership with the clinical training sites, in order to provide a stimulating and innovative academic environment for pharmacy residents.



Marc Perreault Anne Julie Frenette David Williamson

UNIVERSITY OF SASKATCHEWAN

General Faculty News

The College has submitted its Self-assessment Report to The Canadian Council for Accreditation of Pharmacy Programs for the evaluation of our Bachelor of Science in Pharmacy and proposed Doctor of Pharmacy programs. CCAPP conducts a site visit October 23-25.

The University of Saskatchewan invites applications for the Saskatchewan-GlaxoSmithKline Research Chair in Drug Discovery and Development. The competition is currently open; applications will be reviewed beginning December 1, 2016 and the competition will remain open until the position is filled. [Read more.](#)

Over the last few months we've been rebuilding the College website using the new design template developed by the University of Saskatchewan. Work will continue during the fall to improve the new website. The primary goal will be to streamline the content on our program pages to ensure the information is more clear and concise. [Visit the website.](#)

Appointments and Leaves

Dean Kishor Wasan, current CAHS fellow, was elected as secretary to the CAHS board. His two-year term began September 2016. CAHS is the Canadian Academy of Health Sciences and the fellows directory is available at <http://cahs-acss.ca/cahs-fellows-directory/#cid=617&did=1>.

Dr. Susan Whiting has been elected as a fellow to the Canadian Academy of Health Sciences (CAHS). For 40 years she has conducted research on dietary influences on bone health, effectiveness and use of nutrient supplements, the calcium and vitamin D status of

Canadians, and food security in Canada and Ethiopia. [Read more.](#)

On Saturday, June 18, the College held a thank you and farewell for **Dr. Fred Remillard** at Prairie Sun Brewery. Fred has just completed his term as Associate Dean, Research and Graduate Affairs, and will begin his time on administrative leave.

Dr. Jane Alcorn has been appointed Associate Dean, Research and Graduate Affairs in the College of Pharmacy and Nutrition. She is a long time faculty member of the College, with an extensive research background and a wealth of senior level University leadership experience. Dr. Alcorn assumed the duties of this position on July 1. [Read more.](#) [Read more.](#)



Courtney Quiring and **Dr. Jaris Swidrovich** have returned for the 2016-17 academic year as Lecturers in the College.

Jenna Anderson joined the College as the Pharmacy Structured Practice Experiences Coordinator and Instructor on Monday, August 8. [Read more.](#)

Kevin Riffel joined the College as the new Coordinator, Program Evaluation and Assessment, on Thursday, September 1.

Danielle Larocque has been appointed as the first Associate Director of the Continuing Professional Development for Pharmacy Professionals (CPDPP) program. [Read more.](#)



Awards

Congratulations to **Dr. Derek Jorgenson** on receiving the Best Academic Pharmacy Poster Award for his poster on the Medication Assessment Centre at the 76th FIP World Congress of Pharmacy and Pharmaceutical Sciences in Buenos Aires, Argentina.

Dr. Azita Haddadi has been named one of the RBC Top 25 Canadian Immigrant Awards. She was one of 75 finalists from over 600 nominees, and the only person from Saskatchewan. The RBC Top 25 Canadian Immigrants Awards is a peoples' choice award that

recognizes inspirational immigrants who have come to Canada, achieved success, and made a positive difference living here. [Read more.](#)

Congratulations to **Dr. Fred Remillard** who was named Pharmacy Association of Saskatchewan (PAS) Pharmacist of the Year for 2016. The PAS Pharmacist of the Year Award is presented in recognition of a pharmacist who performs an outstanding single deed or long term service, as to bring credit and prestige to the profession of pharmacy. [Read more.](#)



Congratulations to **Dr. Holly Mansell** who received the Provost's Outstanding Teaching Award for the College of Pharmacy and Nutrition.

Dr. Jaris Swidrovich was awarded the Saskatchewan College of Pharmacy Professionals Presidential Citation on Saturday, April 30.

Grants

Dr. Charity Evans (principal investigator), with co-investigator **Dr. David Blackburn** and their colleagues, were awarded \$282,865 over three years from the Canadian Institutes of Health Sciences for their project titled "Medication adherence in multiple sclerosis: a model for other chronic diseases."

Dr. Evans was also awarded \$78,700 over two years from the Saskatchewan Health Research Foundation for her project titled "Establishing the incidence and prevalence of multiple sclerosis in Saskatchewan."

Dr. Anas El-Aneed was awarded a \$15,000 research grant from the Canadian Research Initiative in Substance Misuse (CRISM): Prairie Node along with \$5,000 from the Saskatchewan College of Pharmacists for the project entitled: "Developing Addiction Education Resources for Pharmacists".

Dr. Kishor Wasan was awarded \$119,856 over three years from the Saskatchewan Health Research Foundation for his project titled "Chronic in vivo study of lanthanide compounds in an osteoporosis model (OVX rat) for the treatment of bone density disorders."

Student News

Congratulations to **Brittany Clarke** and **Michele Sheikh** who were recognized as the most distinguished graduates in pharmacy and nutrition. Brittany received the Robert Martin Prize, which is provided by the Saskatchewan College of Pharmacy Professionals in honour of the late Robert Martin, a pioneer pharmacist in western Canada. Michele received the Rutter Medal, which is given in honour and memory of Professor Emeritus Ethel Rutter.



Congratulations to **Katherine Ford** who has been awarded a Master's Award: Frederick Banting and Charles Best Canada Graduate Scholarship by the Canadian Institutes of Health Research. [Read more.](#)

Pharmacy PhD candidate **Ahmed Almousa** was featured as the New Investigator Spotlight in a recent edition of the International Society for the Study of Xenobiotics Newsletter. [Read more.](#)

The CAPSI National meetings took place during the 2016 Canadian Pharmacists Conference, and the University of Saskatchewan had strong representation on the national council, including:

- **Sophie Chatillon**, Finance Officer
- **Caitlin McGrath**, National President
- **Kaitlyn Tress**, Saskatchewan Senior Representative
- **Shivani Trivedi**, Saskatchewan Junior Representative
- **Darren Reithmeier**, CAPSIL Editor
- **Samantha Cunningham** (BSP, 2016), CSHP Liaison

Congratulations to our students who were named to the Huskie Athletics All-Academic Team for the 2015-16 season:

- **Carmen Gorlick**, fourth year nutrition, was named Huskie Athletics All-Academic Second Team
- **Jessica Buettner**, third year pharmacy, was named Huskie Athletics All-Academic First and CIS

Lindsay deBoer was awarded the Dr. Elizabeth Feniak Award for Excellence in Technical Writing. [Read more.](#)

Zeinab Hosseini, Mahasti Khakpour, Adegboyega Lawal, and Sandra Rosero Tapia have been awarded Saskatchewan Innovation & Opportunity Scholarships by the College of Graduate Studies and Research. These scholarships recognize graduate students who are studying in one of the University of Saskatchewan's signature areas and have demonstrated research potential and academic excellence. [Read more.](#)

Congratulations to pharmacy student **Meghanne Rieder** of the Wasan Research Group for being awarded one of the 2016 GlaxoSmithKline National Undergraduate Student Research Program Awards.



Academic All-Canadian Team

- **Bobbi Nicholat**, second year pharmacy, was named Huskie Athletics All-Academic First and CIS Academic All-Canadian Team
- **Mathew Leung**, first year nutrition, CIS Academic All-Canadian Team. [Read more.](#)



C Gorlick

J Buettner

B Nicholat

M Leung

Recent Publications

Alwani S, Kaur R, Michel D, Chitanda JM, Verrall RE, Karunakaran C, **Badea I**. (2016) Lysine-functionalized nanodiamonds as gene carriers: Development of stable colloidal dispersion for in vitro cellular uptake studies and siRNA delivery application. *International Journal of Nanomedicine*, 11 pp. 687 - 702.

Botterill JJ, Nogovitsyn N, **Caruncho HJ**, Kalynchuk LE. (2016). Selective plasticity of hippocampal GABAergic interneuron populations following kindling of different brain regions. *Journal of Comparative Neurology*.

Robles-Escajeda E, Das U, Ortega NM, Parra K, Francia G, **Dimmock JR**, Varela-Ramirez A, Aguilera RJ. (2016). A novel curcumin-like dienone induces apoptosis in triple-negative breast cancer cells. *Cellular Oncology*, 39 (3) pp. 265 - 277.

Edraki N, Das U, Hemateenejad B, **Dimmock JR**, Miri R. (2016). Comparative QSAR analysis of 3,5-bis

(arylidene)-4-piperidone derivatives: The development of predictive cytotoxicity models. *Iranian Journal of Pharmaceutical Research*, 15 (2) pp. 425 - 437.

Lynd LD, Traboulee A, Marra CA, Mittmann N, **Evans C**, Li KH, Carter M, Hategekimana C. (2016). Quantitative analysis of multiple sclerosis patients' preferences for drug treatment: A best-worst scaling study. *Therapeutic Advances in Neurological Disorders*, 9 (4) pp. 287 - 296.

Renoux C, Dell'Aniello S, Khairy P, Marras C, Bugden S, Turin TC, Blais L, Tamim H, **Evans C**, Steele R, Dormuth C, Ernst P, Suissa S, Dormuth CR, Hemmelgarn BR, Teare GF, Caetano P, Chateau D, Henry DA, Michael-Paterson J, LeLorier J, Levy AR, Ernst P, Platt RW, Sketris I. (2016). Ventricular tachyarrhythmia and sudden cardiac death with domperidone use in Parkinson's disease. *British Journal of Clinical Pharmacology*, pp. 461 - 472.

Willems JL, Khamis MM, Mohammed Saeid W, Purves RW, Katselis G, Low NH, **El-Aneed A**. (2016). Analysis of a series of chlorogenic acid isomers using differential ion mobility and tandem mass spectrometry. *Analytica Chimica Acta*

Lorenz R, Grant E, Muyindike W, Maling S, Card C, **Henry C**, **Nazarali AJ**. (2016). Caregivers' attitudes towards HIV testing and disclosure of HIV status to at-risk children in rural Uganda. *PLoS ONE* , 11 (2) , art. no. e0148950.

Hoover J, **Vatanparast H**, Uswak G. (2016). Risk Determinants of Dental Caries and Oral Hygiene Status in 3–15 Year-Old Recent Immigrant and Refugee Children in Saskatchewan, Canada: A Pilot Study. *Journal of Immigrant and Minority Health*, pp. 1 - 7.

Sassene PJ, Michaelsen MH, Mosgaard MD, Jensen MK, Van Den Broek E, **Wasan KM**, Mu H, Rades T, Müllertz A. In vivo precipitation of poorly soluble drugs from lipid based drug delivery systems.

Molecular Pharmaceutics . 2016 Aug 17. [Epub ahead of print] PMID:27533712

Gordon JA, Midha A, Pandey M, **Wasan KM**, Cox ME. Inhibition of scavenger receptor class B type I suppresses androgen pathway activity and induces cytotoxic stress in C4-2 castration resistant prostate cancer cells DOI: 10.1158/1538-7445.AM2016-1800 *Cancer Research* 1800-1806, Published 15 July 2016

Kebede A, Retta N, Abuye C, **Whiting SJ**, Kassaw M, Zeru T, Tessema M, Kjellefjord M. (2016). Dietary fluoride intake and associated skeletal and dental fluorosis in school age children in rural Ethiopian Rift Valley. *International Journal of Environmental Research and Public Health*, 13 (8) , art. no. 756.

Kaviani M, Chilibeck PD, Yee P, **Zello GA**. (2016). The effect of consuming low-versus high-glycemic index meals after exercise on postprandial blood lipid response following a next-day high-fat meal. *Nutrition and Diabetes*, 6 (7) , art. no. e216.

UNIVERSITY OF TORONTO

Appointments, Promotions, and Retirements

Dr. Jillian Kohler was promoted to Full Professor, effective July 1, 2016. Her research is focused on fair access to essential medicines with a focus on good governance and intellectual property rights. She pioneered the methodology on good governance in the pharmaceutical system for the World Bank, which was subsequently adopted by the World Health Organization (WHO) and applied in over 35 countries globally.

She is also the author of over 100 policy papers, journal articles and book chapters on pharmaceutical policy and is a co-editor of *The Power of Pills: Social, Ethical and Legal Issues in Drug Development, Marketing and Pricing Policies* (2006) and *Access to Medicines as a Human Right: Implications for Pharmaceutical Industry Responsibility* (2012). Dr. Kohler is a technical adviser for the Access to Medicines Index and WHO Good Governance for Medicines Programme, and she is also Director of the WHO Collaborating Centre for Governance, Transparency and Accountability in the Pharmaceutical Sector, which is based at the Faculty.



Jillian Koehler



Lisa Dolovich

Effective January 1, 2017, Dr. Lisa Dolovich will join the Faculty and the Centre for Practice Excellence as tenured Full Professor and Ontario College of Pharmacists Professor in Pharmacy Practice.

Dr. Dolovich is the PI (or co-PI) on over \$10 million in research grants. Her research program explores “approaches that better weave pharmacists and others within the community based healthcare system to create a better care experience and improve health for individuals living at home and develop community pharmacies delivery of person-focused care and connection to the rest of the health care system.”

Dr. Dolovich’s accomplishments have been greatly influenced by her formal training in health research methodology (MSc) and pharmacist practice (BScPhm, PharmD), her research fellowship in clinical pharmacology, and practice in community, hospital, ambulatory care, and Family Health Team settings. She has published over 147 peer reviewed articles, many as first/senior author, including some highly cited papers in *CMAJ* and *BMJ*, as well as many in the top journals in the fields of pharmacy practice, family medicine, interprofessional care, and implementation science, which demonstrates the depth and breadth of her work.

Dr. Dolovich will continue her key leadership roles in in several projects for research programs that will remain centred at McMaster University in the Departments of Family Medicine (DFM) such as Health TAPESTRY, and the Cardiovascular Health Awareness Program (CHAP) as she transitions to the University of Toronto. She will also continue to co-lead the Ontario Pharmacy Research Collaboration (OPEN). This will ensure a smooth transition between institutions and serve as a catalyst to build robust collaborations between colleagues at Department of Family Medicine, McMaster University, the School of Pharmacy at the University of Waterloo, and the Leslie Dan Faculty of Pharmacy, University of Toronto.

Doris Kalamut retired this June after 35 years of teaching at the Leslie Dan Faculty of Pharmacy. To celebrate Doris' career and achievements, the Faculty convened at the Faculty Club in June to reminisce on the impact Doris had on the Faculty and our students during her time as an instructor. Doris joined the Faculty in 1981, drawing on her experience as a community pharmacist to teach courses in pharmaceuticals, patient self-care, communication skills, experiential, and professional practice. For much of her career, Doris was Course Coordinator for Year 1 and Year 2 Professional Practice Laboratories. She was also very involved in the International Pharmacy Graduate program, and was the

inaugural Director of Student Experience and Academic Progress at the Faculty from 2012 to 2016. As part of the celebration, Dean Heather Boon, who herself was a student of Doris' a few years ago, spoke about Doris before inviting Dr. Zubin Austin, Dr. Lalitha Raman-Wilms, Associate Professor Marie Rocchi, and PharmD student Shane Nirula to share their humorous and touching stories. Thank you, Doris, for your years of selfless service and commitment to the Faculty.



After 22 years working at the Leslie Dan Faculty of Pharmacy, and 24 years at the University of Toronto, Lucy Gabinet retired from the Office of Experiential Education this summer. To celebrate Lucy, the Faculty assembled in August to recognize her accomplishments and send her off in style. During this fun-filled party, colleagues alternately praised, serenaded, and roasted Lucy about her triumphs, personality, and influence at the Faculty over the past 20+ years, making for a thoroughly entertaining party befitting the guest of honour. Congratulations, Lucy, on your stellar career at the Faculty, and best of luck from all of your friends at the Faculty as you embark on your next adventure.

Faculty News

The WHO Collaborating Centre for Governance, Accountability and Transparency in the Pharmaceutical Sector held its official launch at the Faculty on April 29 before a standing room only audience. Following the launch, a policy workshop was held where a distinguished panel of academics, journalists, representatives from the pharmaceutical industry, and others discussed issues of transparency, governance and corruption in the sector. Under the leadership of Professor Jillian Kohler, the Centre will conduct research, analysis and training on critical issues related to good governance, transparency and accountability in the pharmaceutical sector. The Centre includes faculty from Dalla Lana, Medicine, Law, Munk School of Global Affairs, and the Rotman School of Management at the University of Toronto, along with collaborators from the World Bank, Dalhousie, Carleton, and the University of California at San Diego.

Grants

Last summer, the federal government awarded its largest single research award – a \$114 million Canada First Research Excellence Fund grant – to the University of Toronto for the newly created Medicine by Design initiative, a leading regenerative medicine program that is designing and manufacturing cells, tissues and organs that can be used in research, drug discovery, and clinical treatments. This summer, 20 projects from researchers at U of T received \$27 million in funding from this program, five of which featured pharmaceutical sciences researchers.

Professor Shana Kelley is part of three projects, including PI of “New technologies for high-performance stem cell cultures.” Through this grant, the team, which includes Co-PI Assistant Professor Keith Pardee, will develop robust electrochemical sensor technology for a panel of analytes using cell-free systems to allow for versatile and high-capacity culture monitoring.

The Faculty’s Optimizing Patient Care program recently released three new online learning modules for pharmacists. Developed by the Faculty’s Centre for Practice Excellence and Office of Continuous Professional Development, with the support of the Ontario College of Pharmacists, these free learning modules feature experienced practitioners and educators explaining and demonstrating best practices and providing examples of how to implement new practices and skills in community pharmacy settings.

Available now at www.optimizingpatientcare.ca, these new modules join the six modules already released to tackle every day issues facing pharmacists in their quest to deliver the most up-to-date and best care to patients.

The newest modules include:

1. *Motivating Patients to Promote Adherence*, which introduces participants to Motivational Interviewing as a communication tool.
2. *Decision Making and Documentation: Keeping it Simple Part 1*, which explores clinical decision making at a practical level, providing examples routinely encountered in community pharmacy settings.
3. *Decision Making and Documentation: Keeping it Simple Part 2*, which builds on the lessons from Part 1 and reviews pharmacy documentation from a practical perspective.

In “Pathways to enhance the clinical utility of hematopoietic stem cell transplantation,” Dr. Kelley will work as part of a multidisciplinary team to identify regulators of stemness and survival pathways to generate methods to increase hematopoietic stem cell numbers and overcome transplant inefficiencies.



In “Overcoming blindness: Differentiation, purification and transplantation of photoreceptors,” Dr. Kelley is Co-PI on a project to tackle age-related macular degeneration, developing procedures for the efficient identification of rod and cone photoreceptor specific progenitors from stem cells and their differentiation and purification into human rod and cone photoreceptors.

Assistant Professor Keith Pardee is Co-PI on “Synthetic biology approaches to regenerative medicine in the human intestine,” a project that will combine expertise in synthetic biology, biological engineering, gut stem cell research, and advanced genetic analysis, to examine inflammatory bowel diseases and create a new probiotic bacterium that can sense the level of these molecules and produce more when needed, providing additional stimulation to the cells in the gut lining and helping improve or cure the disease for people whose protein detectors need more of the stimulatory molecule in order to respond properly.



Dr. Anna Taddio received a CIHR Knowledge to Action Operating Grant for “Pain pain go away: improving the vaccination experience at school.” Ranked in the top 5% of applications for this competition, this two-year project will integrate evidence-based strategies to mitigate pain and fear into school vaccination policies and programs in the Niagara Region.

Professor Christine Allen received a five-year Discovery Grant from NSERC for “Engineering Block Copolymer and Hybrid Nanotechnologies of Well Defined Architecture.” Through this project, she will design and develop new amphiphilic, biocompatible materials that enable the production of stable supramolecular assemblies of copolymer and drug or copolymer and gold nanoparticles of defined shape and dimension. These hybrid polymer/metallic nanostructures offer unique properties and functionality over existing technologies, and have tremendous potential for use in biomedical applications like imaging, photothermal therapy, radiation therapy, and biosensors.

Dr. Keith Pardee received a 5-year NSERC Discovery Grant for “Building Hybrid Devices Powered by Cell-Free Synthetic Biology.” He will extend his existing paper-based sensor technology to develop innovative cell-free biotechnologies to lower the cost and technical barriers of sensor development, allowing sensors to be integrated into applications in industry, national security, agriculture, and at home. This project will lead to more practical and cost-effective sensors, and allow for development of tools required to respond to new demands swiftly, and accelerate research in this field.

Assistant Professor Rob Bonin received an NSERC grant for “Reconsolidation as a mechanism for the homeostatic regulation of synaptic strength.” Through this five-year project, Dr. Bonin will explore how

Associate Professor Stephane Angers is Co-PI on “Systems-level analysis of blood progenitor development from human PSCs,” a project designed to identify and generate alternative sources of patient-specific hematopoietic stem cells, and establish a robust platform that can be used to identify and validate novel genetic factors and protein tools to improve understanding of the process that will lead to the ability to re-constitute the entire blood ontogeny in a patient-specific manner.



reconsolidation affects the strength of synaptic connections between nerve cells. This five-year project will seek to understand the mechanisms through which reconsolidation can lead to the modification and erasure of plastic changes in nerve connectivity, and how this process is regulated by previous and ongoing nerve activity, ultimately enhancing the understanding of how information is stored and updated in the brain and spinal cord.



Professor Raymond Reilly received a major Canada Foundation for Innovation John Evans Leadership Fund award for a project to establish a Good Manufacturing Practices (GMP) facility at the Faculty. This project will provide the necessary funding to establish the first-ever infrastructure at the University of Toronto to manufacture radiolabeled monoclonal antibodies under GMP conditions. Once established, this facility will produce the radiolabeled antibodies in a pharmaceutical quality required for advancement to first-in-humans Phase I clinical trials of these agents for molecular imaging and radioimmunotherapy of cancer.

Dr. Christine Allen and Dr. Micheline Piquette-Miller of the Faculty’s Centre for Pharmaceutical Oncology are the recipients for “Targeted Nanotechnology for Precise Delivery of Synergistic Combination Chemotherapy Exploiting Deficiencies in DNA Repair in High-Grade Serous Ovarian Cancers” from the US Department of Defense Ovarian Cancer Research Program, to develop an innovative nanotechnology approach which delivers a specific synergistic ratio of PARP inhibitor olaparib and the DNA-damaging doxorubicin to ovarian cancer tumors, to create a more powerful, less toxic, and ultimately more effective treatment.

Professor David R. Hampson received a four-year CIHR Project Grant to develop a gene therapy to treat Fragile X syndrome. “Development of Gene Therapy for Autism Spectrum and other Neurological Disorders” will see Dr. Hampson and members of his laboratory attempt to restore normal function by reintroducing the missing Fragile X Mental Retardation Protein into the brain via viral vector-mediated gene expression.

Assistant Professor Elise Paradis is part of a team to receive funding from the Canadian Patient Safety Institute. “The Tools and the Trade: An ethnographic study of checklist policy and performance, and implications for patient safety” will explore the interplay between surgical culture and real-world performance of safety tools like checklists.



Assistant Professor Elise Paradis is Principal Investigator on a five-year CIHR Project Grant that also includes Professor Heather Boon and Professor Lisa Dolovich. “The collaborative ideal in Canadian healthcare delivery: Its rise, practice and future” will collect views from current healthcare practitioners on collaborative healthcare delivery and investigate ethnographically how collaboration has changed practices in diverse clinical areas (the intensive care unit, the operating room, and family health teams) to shape collaboration policies, refine collaborative learning practices, and improve the training of the next generation of healthcare professionals for enhanced collaboration through evidence-based education.

Associate Professor and Clinician Scientist Sandy Walker received a MAD-ID Antimicrobial Stewardship Research Grant from Making a Difference in Infectious

Awards & Recognition

Assistant Professors Elise Paradis, Sara Guilcher, and Keith Pardee of the Leslie Dan Faculty of Pharmacy are recipients of Connaught New Researcher Awards.

Dr. Elise Paradis received funding for “The State of the Union: Mapping evolving professional stereotypes and clinical reasoning of pharmacy and medicine students in a time of regulatory upheaval.”

Dr. Sara Guilcher received funding for “Polypharmacy among community-dwelling persons with spinal cord injury in Ontario: Optimizing medication management.”

Dr. Keith Pardee received funding for “The creation of

Diseases Pharmacotherapy. “Clinical Burden of Antibiotic Resistance Following Implementation of a Multidisciplinary Antimicrobial Stewardship Team Prospective Audit and Feedback Initiative in a Major Tertiary Care Centre (ARAST Study) – A Controlled, Interrupted Time Series Analysis over 12 years” will examine the effectiveness of antimicrobial stewardship strategies at Sunnybrook Health Sciences Centre implemented between 2003 and 2015.

Associate Professor Stephane Angers of the Centre for Pharmaceutical Oncology is the recipient of a five-year CIHR Project Grant entitled “Targeting Frizzled proteins in RNF43 mutant cancers” to develop and refine antibodies that can block the function of overabundant Frizzled receptors in a subset of pancreatic, colorectal, and gastric cancers.

Professor Raymond Reilly, Director of the Centre for Pharmaceutical Oncology, received a three-year Canadian Cancer Society Research Institute Innovation to Impact grant to develop radiopharmaceutical agents for the imaging and treatment of pancreatic cancer. This project will see the further development and optimization of radiopharmaceuticals with two exceptional features – the ability to improve detection of pancreatic cancer by PET scans, and the ability to deliver toxic radiation directly to the tumour – developed in previous study by Dr. Reilly and team.

Professor Shana Kelley received a seven-year CIHR Foundation Grant. “Development of non-invasive diagnostics for disease prevention and control” will allow Dr. Kelley and her research group to continue development of a toolbox of assays capable of reporting on specific disease markers. At the same time, they will use these technologies to further understand the role that cellular biomarkers play in disease progression.

hardware interfaces for practical applications of cell-free synthetic biology.”

Professor Shana Kelley received a Connaught Innovation Award for “Device for the Rapid Electrochemical Phenotypic Profiling of Antibiotic-Resistant Bacteria.” This project will see the development of a unique concentration and electrochemical assay technology to diagnose urinary tract infections. This technology will identify which type of urinary tract infection a patient has, informing what antibiotic should be prescribed and length of treatment in less than an hour, days before the results of standard culture-based susceptibility testing are available.

Professor Shirley X.Y. Wu was recognized with the 2016 AFPC-Pfizer Research Career Award for her many outstanding research accomplishments. Dr. Wu is a nationally and internationally recognized expert and distinguished research leader in controlled release dosage forms, innovative drug delivery systems, and delivery strategies for the enhanced treatment of multidrug resistant and metastatic cancer. Her group has developed a novel nanoparticle platform – polymer-lipid hybrid nanoparticles – for delivering synergistic drug combinations. In addition, she has made significant contributions to modeling and computer simulation of modified release dosage forms and nanotechnology-enabled closed-loop insulin delivery. Dr. Wu has established and directed a very active, innovative, and well-funded research program in advanced pharmaceuticals and drug delivery. In this capacity, she has provided excellent multidisciplinary research training to more than 130 graduate and undergraduate research students and postdoctoral researchers in pharmaceuticals, drug delivery, drug development, and pharmaceutical nanotechnology. She is also a dedicated educator who has played a leading role teaching pharmaceuticals and drug delivery to students at the graduate and undergraduate levels at the Faculty.

Clinician Scientist and Assistant Professor Carlo De Angelis was recently recognized by the Ontario Pharmacists Association as its Pharmacist of the Year. Dr. De Angelis is the Clinical Pharmacy Coordinator for Oncology at the Odette Cancer Centre, Sunnybrook Health Sciences Centre, and a member of the Faculty’s Centre for Pharmaceutical Oncology. He also owns and operates a community pharmacy. In addition to being beloved by his hospital and community patients, he is a respected and recognized leader in pharmaceutical oncology. Dr. De Angelis’ desire to help people lead healthier lives permeates his community and clinical practices, and informs his academic teachings and research, making him a fitting recipient of this important honour.



At this year’s Canadian Pharmacists Association (CPhA) Conference in Alberta, Adjunct Lecturer Suzanne Singh was honoured by CPhA with the Patient Care Achievement Award for Innovation. Over the past decade, Dr. Singh has been at the cutting-edge of pharmacy practice and innovation through her role at Mount Sinai Hospital’s Academic Family Health Team. In 2015, she launched the Brown-Bag Medication Check-Up Program, a patient-centred initiative designed to improve medication safety with a focus on

This summer, Professor Micheline Piquette-Miller was appointed a Fellow of the Canadian Society for Pharmaceutical Sciences. Since joining the Faculty, Dr. Piquette-Miller has cultivated a strong research program that has manifested in over \$5.25 million in funded research projects, 97 peer-reviewed publications, and 27 current and former graduate students. Over this period, she has chaired over 20 symposia and conferences, and delivered 58 national and international presentations. She is also an Associate Editor of *Clinical Pharmacology & Therapeutics*. For her research into understanding the regulation of drug transport proteins and how this impacts drug disposition, Dr. Piquette-Miller has received numerous national and international research awards, including the Leon Goldberg Young Investigator Award (American Society of Clinical Pharmacology and Therapeutics), Rx&D/CIHR Research Career Award, Pfiasky Young Investigator Award (Canadian Society of Clinical Pharmacology), Horizon Award (University of Alberta), Pfizer Career Research Award (Association of Faculties of Pharmacy of Canada), and the ORISE Fellowship Award (U.S. Food and Drug Administration).

ambulatory-care sensitive conditions like diabetes, heart failure, angina, hypertension, asthma, and chronic obstructive pulmonary disease.

Professor Anna Taddio received the 2015 Publication Award from the Canadian Society for Pharmacology and Therapeutics for her paper “Reducing pain during vaccine injections: clinical practice guideline,” which was published in *CMAJ*.

Each year, students in the PharmD program recognize the instructors who have made the largest impact on their classes through the presentation of the Professor of the Year Award. Those instructors selected to receive this award demonstrate a commitment to undergraduate education and excellence in teaching. This year, Carolyn Cummins (selected by the first year students) Norman Dewhurst (selected by the second year students), and Jamie Kellar (selected by the third year students), were recognized with these awards.

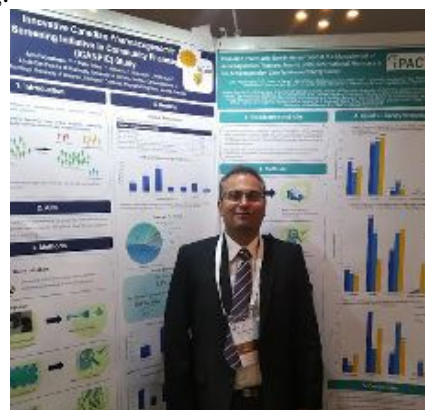


L-R: Carolyn Cummins, Heather Boon (Dean), Norman Dewhurst

Professor Shana Kelley was recently elected a Fellow of the Canadian Academy of Health Sciences. Dr. Kelley is an internationally recognized scientist who has made numerous contributions to the development of new clinical diagnostic technologies, and is the inventor of more than 20 patents, has published over 130 scientific articles that have been cited more than 6,000 times, and has co-founded two clinical diagnostic companies. Over her distinguished career, Dr. Kelley has received a number of prominent honours, including the Queen Elizabeth II Diamond Jubilee Medal, the Brockhouse Canada Prize for Interdisciplinary Research, the University of Toronto Distinguished Professor Award, the ORION Leadership Award, the Steacie Prize, the University of Toronto Inventor of the Year award, the NSERC E.W.R. Steacie Fellowship, and the Alfred P. Sloan Fellowship, and was named one of Canada's Top 40 Under 40 by the *Globe and Mail* and a Top 100 Innovator by MIT's *Technology Review*.

Assistant Professor John Papastergiou and a team of researchers including Lecturer Peter Tolios and pharmacy students Jia Jane Li and Phillip Kim received

first prize in the Community Pharmacy Practice Research Section poster competition at the International Pharmaceutical Federation (FIP) World Congress of Pharmacy and Pharmaceutical Sciences in Buenos Aires, Argentina. Their poster showcased the results of their project evaluating the feasibility and effectiveness of implementing personalized medication services in community pharmacy practice, and ascertaining the type of drug therapy problems identified as a result of screening.



Publications

Assistant Professor Keith Pardee was lead author on “Rapid, Low-Cost Detection of Zika Virus Using Programmable Biomolecular Components” in *Cell*. Using cutting-edge technologies, the team of researchers from seven leading research institutions including Harvard and MIT developed a cell-free, paper-based platform that can host synthetic gene networks for use outside of the lab. This portable, reliable, and inexpensive Zika diagnostic tool does not require expensive equipment or highly-trained technicians to administer, provides rapid results, and costs less than a dollar per test.

Dr. Pardee was also co-lead author on a second paper in *Cell*, “Portable, On-Demand Biomolecular Manufacturing” which details the development of a proof-of-principle platform able to manufacture on-site, on-demand therapeutics and biomolecules. The new portable drug-manufacturing system uses two sets of freeze-dried components that, when mixed with water, is able to produce medications, therapeutics, and diagnostic tools virtually anywhere, showing incredible potential for application for outbreaks and in the developing world.

Professor Raymond Reilly and recent PhD graduate Simmyung Yook published “Intratumorally Injected ¹⁷⁷Lu-Labeled Gold Nanoparticles: Gold Nanoseed

Brachytherapy with Application for Neoadjuvant Treatment of Locally Advanced Breast Cancer,” a paper that was selected for the front cover of the *Journal of Nuclear Medicine*. This paper details research on locally injected radiolabeled gold “nanoseeds” – nanoparticles modified with antibodies that target epidermal growth factor receptors on breast cancer cells and radioisotopes that treat the tumour with radiation – into and around breast cancer tumours in animal models, revealing that these nanoseeds were highly effective inhibiting the growth of breast cancer and caused no normal organ toxicity.

Professor Shana Kelley was part of an interdisciplinary team of researchers from Applied Science & Engineering, Pharmacy, Chemistry, and Mechanical & Industrial Engineering to publish a paper in *Nature* on converting carbon dioxide into stored energy.

Student News

Dr. Adam J. Shuhendler, who received his Masters (2006) and PhD degrees (2011) in Pharmaceutical Sciences under the supervision of Professor Shirley X.Y. Wu in the Advanced Pharmaceutics and Drug Delivery Laboratory at the Faculty, was recently appointment Canada Research Chair in Chemical Biology in the Department of Chemistry and Biomolecular Sciences at the University of Ottawa.

This summer, the Faculty held a Convocation Reception and Graduating Awards Ceremony to recognize the achievements and celebrate with the families of the second cohort of students to graduate from the new PharmD program. During this event, valedictorian Joseph Samuel spoke, summing up four years of classes, experiential rotations, extracurricular activities, conferences, and fun-filled times. Alumnus John Papastergiou also spoke to the students, their loved ones, and faculty and staff about the profession of pharmacy and their place in it. Following this event, students and guests assembled at historic Convocation Hall to participate in their convocation ceremony where they received their degrees.



This year's Graduate Research in Progress symposium celebrating the research of MSc and PhD students in the Graduate Department of Pharmaceutical Sciences saw students from all branches of the Faculty's graduate programs showcasing their research in poster and oral presentations this summer. In addition to the outstanding research conducted by graduate students, Marc-André

Gagnon, Associate Professor at Carleton University's School of Public Policy and Administration, spoke on "Prescription Drugs in the 21st Century: Prices, Access, Regulation, Coverage, and Appropriate Use," while Associate Professor Ian Crandall spoke to the students on "Malaria and Me," a wide-ranging talk that treated students to a glimpse into Dr. Crandall's academic and career journeys, and his research focus on malaria, and Professor Jack Utrecht presented "Predicting the Unpredictable: Idiosyncratic Drug Reactions," describing the idiosyncratic journey that led him to a career in this interesting field.



UNIVERSITY OF WATERLOO

School News

Ontario College of Pharmacists funds innovative pharmacy teaching tool

The Ontario College of Pharmacists (OCP) has provided a \$400,000 grant in support of Pharmacy5in5. Pharmacy5in5 is a digital platform, developed by Assistant Professor Kelly Grindrod, which enables pharmacists and pharmacy students to assess their knowledge of current topics in pharmacy practice. Covering a wide variety of topics, the tool enables participants to complete quizzes, watch quick refresher videos, and download resources for use in their practice settings. Participants can compare their results to those of their peers to better appreciate their overall competence in particular topics. Pharmacy5in5's bank of content is growing and with support from OCP, Dr. Grindrod and her team are beginning to develop native phone apps so that the tool will be accessible across a variety of platforms.



L-R: Marshall Moleschi, Kelly Grindrod and Dave Edwards

Waterloo Pharmacy hosts fifth annual golf invitational

On August 29, friends of the Waterloo Pharmacy community came together to support student success at the Grey Silo Golf Club. This year's tournament was the fifth annual Golf Invitational, an event which has raised over \$150,000 towards this cause. Proceeds from the Golf Invitational are directed to our Student Success Fund. This fund supports students interested in attending professional conferences throughout the year, like Professional Development Week and the Ontario Pharmacist Association's conference.

27 pharmacists earn PharmD through Bridging Program

In June, the first 27 graduates of the Waterloo Bridging Program received their PharmD degrees at convocation. Each graduate already had a Bachelor of Science in Pharmacy (BScPhm) from the School, and through the Bridging Program they were able to complete five courses to earn a PharmD as well.

Awards

Tejal Patel awarded CPhA Patient Care Achievement Award for Speciality Practice

Assistant Clinical Professor **Tejal Patel** received this prestigious award from the Canadian Pharmacists Association (CPhA) in recognition of her work with the Memory Clinic, run by the Center for Family Medicine Family Health Team in Kitchener. As part of a multi-disciplinary primary care team focused on patients with cognitive impairment, Dr. Patel works regularly with a variety of healthcare providers to ensure that this vulnerable population receives complete and appropriate care. The success of the Memory Clinic is apparent in the interest other institutions have shown for Dr. Patel's work - she has participated in training pharmacists at 80 additional sites across the province.

Andrea Edginton wins University of Waterloo teaching award

In June, Associate Professor **Andrea Edginton** was awarded an Outstanding Performance Award from the University of Waterloo. These competitive awards are given to the top 10% of University of Waterloo faculty in recognition of outstanding contributions to teaching and scholarship. Dr. Edginton, who was a University of Waterloo pioneer of the flipped classroom model for her pharmacokinetics course, was also the recipient of a 2015 Excellence in Science Teaching Award.

Grants

CIHR funds investigation into patient perspectives and Hepatitis C

Assistant Professor **William Wong** received \$470,169 from the Canadian Institute of Health Research to measure the patient burden of the Hepatitis C Virus (HCV). The study will encompass approximately 600 patients in three Canadian cities and involves measuring health-related quality of life, the effect of HCV on workplace productivity, and HCV's cost to patients. Dr. Wong will gather data from patients who undergo direct anti-viral agent treatment for Hepatitis C (pre- and post-treatment), and from patients living with chronic Hepatitis C at a late-stage of the disease. This data is important for national agencies and provincial drug formularies that have to make difficult decisions about when a drug should be covered by the government.

Tom McFarlane studies telemedicine in oncology care

Clinical lecturer **Tom McFarlane** has partnered with Kitchener-based Grand River Hospital and the Ontario Telemedicine Network to explore how healthcare practitioners can use telemedicine to support cancer patients. Teleconferencing technology presents opportunities to cut down on travel time and to provide more continuous communication between healthcare

Praveen Nekkar Rao receives provincial Research Infrastructure Award

The Ontario Research Fund for Research Infrastructure Award supports infrastructure needs such as equipment and facilities. Associate Professor **Praveen Nekkar** and his graduate students' latest research focuses on the discovery of new Alzheimer's treatment options by developing small molecules that target some of the root causes of the disease. This award, officially announced by the Ontario government in August, will support the lab's work on Alzheimer's by enabling the team to conduct tests on the small molecules in-house and by supporting training of new students.



Photo: Dr. Nekkar and some of his graduate students in their lab

providers and patients. The study, which will compare the experiences of 40 patients receiving follow-up care via telemedicine against a group receiving traditional care, has received a \$50,000 grant from the Prostate Cancer Fight Foundation's Ride for Dad program. The project is also funded by Janssen Pharmaceuticals Company and Astellas Pharma.

Publications

Wesseem Osman, Tarek Mohamed, Victor S., Vasefi M.S., **Beazely M. A.**, **Praveen P. N. Rao**, Structure-activity relationship studies of benzyl, phenethyl and pyridyl substituted tetrahydroacridin-9-amines as multi-targeting agents to treat Alzheimer's disease. *Chemical Biology and Drug Design*. 88, 710-723 (2016).

Tiago Silva, Tarek Mohamed, Arash Shakeri, **Praveen P. N. Rao**, Loreto Martinez-Gonzalez, Daniel I. Perez, Ana Martinez, Maria Joao Valente, Jorge Garrido, Eugenio Uriarte, Paula Serrao, Patricia Soares da Silva, Fernando Remiao, Fernanda Borges, Development of blood-brain barrier permeable nitrocatechol-based catechol-O-methyltransferase inhibitors with reduced potential for hepatotoxicity. *Journal of Medicinal Chemistry* 59, 7584-7597 (2016)

Conference Presentations

Prevalence of Alzheimer's and other dementias increasing in Ontario

Professor **Colleen Maxwell** presented a report at the 2016 Alzheimer's Association International Conference indicating that the prevalence of Alzheimer's disease and other dementias increased more than 18% across Ontario over the past 8 years. Maxwell and her colleagues tracked yearly prevalence, incidence and health care costs associated with Alzheimer's disease and other dementias using Ontario health administration data. She notes that while prevalence increased, their data suggests that the incidence of Alzheimer's disease and dementia across Ontario slightly decreased over the same period. The slight decline in incidence cases is a positive finding and may reflect the recent impact of beneficial lifestyle changes and improvement in vascular risk factors like high blood pressure.

Dr. Praveen P Nekkar Rao presented an oral talk titled "Kinetics of tau-hexapeptide promoted β -amyloid fibrillogenesis" at the American Chemical Society conference NERM-2016, Binghamton, NY, USA.

The following posters were also presented at the Alzheimer's Association International Conference (AAIC 2016) in Toronto:

1. **Praveen P. N. Rao**, Tarek Mohamed, Arash Shakeri. Designing small molecules as pharmacological tools to study Alzheimer's disease.
2. Tarek Mohamed, **Praveen P. N. Rao**. Rational-based design and development of quinazoline-based small molecules: multi-targeting potential for Alzheimeric pathologies
3. Arash Shakeri, **Praveen P. N. Rao**. Evaluation of novel adamantane derivatives as potential dual inhibitors of amyloid beta and tau aggregation.
4. Sarbjeet Singh Gujral, **Praveen P. N. Rao**. Novel tricyclic indole-based compounds in the prevention of Alzheimer's disease.

Student News

Jennifer Mackenzie receives OPA Student of Distinction Award

Fourth-year student **Jennifer Mackenzie** received the 2016 Ontario Pharmacist Association's (OPA) Student of Distinction Award for her leadership ability and commitment to advancing the profession. Jenn's win marks the fifth consecutive year that a Waterloo student received the Student of Distinction Award. The tenets of the award – advocacy for the profession and mentorship of peers – are personified in Jenn who was president of the Waterloo Society of Pharmacy Students and also spearheaded the Student Professional Recognition Committee, a group organized to celebrate exceptional professionalism among her peers.

Pharmacy meets global aid with Solidarity Experiences Abroad

In June, third-year Waterloo Pharmacy student **Heidi Fernandes** travelled to Peru as a volunteer pharmacy student for Solidarity Experiences Abroad (SEA). Run in partnership by McMaster and Brock University, the SEA program organizes annual trips to developing countries and establishes health clinics in low-income

parts of town. On Heidi's trip to Lima, she alongside 20 other healthcare professionals and students provided care to 900 Peruvians in just 8 days. This is the second year a Waterloo Pharmacy student has joined SEA, and their support in ensuring medication safety is valued by both the Peruvian patients and the other members of the SEA team.

Supporting refugees as a Pharmacy Student

While completing her clinical rotations in London, fourth-year Waterloo Pharmacy student **Danyah Musbah** sought out an opportunity to volunteer with Syrian refugees. Danyah understood that her combination of pharmacy knowledge and fluency in Arabic made her well-suited to help out this vulnerable population. She volunteered with the London Inter-community Health Center and the Cross Cultural Learning Center, working alongside nurses, intake clerks and Nurse Practitioners to provide interpretation and medication counselling for Syrian newcomers to Canada.

Pharmacy Educator Informatics Network

The Pharmacy Educator Informatics Network represents Phase 3 of the partnership between the Association of Faculties of Pharmacy of Canada (AFPC) and Canada Health Infoway (Infoway). This Network will build on the learning from the first 2 phases - *Pharmacists in Training* (PIT) initiative and the *Pharmacy Educator Peer Leader Network* (PEPLN) project. The focus of the Pharmacy Educator Informatics Network is to conduct initiatives that will continue to integrate informatics competencies and use of the *Informatics for Pharmacy Students e-Resource* into pharmacy curriculum and support the transition of students from the classroom and labs to the practice setting.

Objectives of the project are:

- Build educator network capacity and ability to increase digital e-health integration and related curriculum change
- Continuously improve the quality of the e-Resource.

Project activities will include:

- Expand the existing pharmacy educator network
- Create a curriculum map of informatics competencies
- Review/revise the e-Resource
- Translate sections of the e-Resource into French

The activities listed above will be conducted in the period August, 2016 – April 30, 2017. Specific timelines are as follows:

August, 2016

- Peer Leader Boot Camp/Workshop

August – October, 2016

- Recruit peer reviewers and authors for content of the e-Resource
- Finalize 3 chapters for French translation

September, 2016 – March, 2017

- Recruit faculty colleagues, primarily those in 5 target areas (pharmacy practice, experiential, skills labs, Social/Admin, Informatics)
- Integrate informatics into the curriculum
- Update content of e-Resource

January – March, 2017

- Curriculum Mapping

Peer Leaders	
University	Peer Leader
British Columbia	Jason Min
Alberta	Renette Bertholet Teri Charrois
Saskatchewan	Jason Perepelkin
Manitoba	Chris Louizos
Waterloo	William Wong Kelly Grindrod
Toronto	Aleksandra Bjelajac Mejia
Montreal	Gilles Leclerc
Laval	Genevieve Tirman
Dalhousie	Natalie Kennie-Kaulbach
Memorial	Tiffany Lee

Peer Leader Workshop

The Pharmacy Educator Informatics Network was officially kicked-off with a Peer Leader workshop held in Toronto, August 22 – 24, 2016. Presentations included:

- Pharmacy in the Emerging Digital Health Ecosystem – Ron Parker, Canada Health Infoway
- Panel Discussion – Tips from Peer Leaders for Integration Projects – Lisa Bishop, Marie Rocchi, Gilles Leclerc, Chris Louizos
- The Art of Building Relationships – Joelle Walker, Canadian Pharmacists Association
- Changing the Pharmacy Curriculum – A Case Study from U of Montreal – Chantal Pharand, University of Montreal
- Version 2 of the e-Resource and plans/process for Version 3 – Marie Rocchi, University of Toronto
- Mapping Curriculum to Achieve Educational Outcomes – Lavern Vercaigne, University of Manitoba

During break out group sessions, participants discussed strategies for engaging colleagues and recruiting champions.

Project Leadership Team:

Harold Lopatka	- AFPC Executive Director, Project Sponsor
Lisa Bishop	- National Peer Leader Mentor/Coach
Marie Rocchi	- e-Resource Instructional Designer
Seema Nayani	- Canada Health Infoway Representative
Donna Pipa	- Project Manager

The Canadian Experiential Education (CanExEd) Project for Pharmacy

Submitted by Dr. Katrina Mulherin (Project Manager) and Kelly Drummond, PEP-C Past-Chair

The Canadian Experiential Education (CanExEd) Project for Pharmacy was a quality improvement project conducted during 2014-2016 under the auspices of the Association of Faculties of Pharmacy of Canada (AFPC). The project commenced at a point when academic pharmacy programs across the country were in various stages (fully, in transition, preparation for) of implementing entry level Doctor of Pharmacy (ELPD) curricula. CanExEd had 3 overarching goals:

1. Describe the current landscape of ExEd from coast to coast
2. Discern best practices for ExEd
3. Provide recommendations and selectively develop prototypes to drive improvements identified through the Project's findings

These goals were achieved for 7 priorities (see fig.1) of ExEd and conveyed in a series of 7 reports.

The reports contain:

1. Thorough description of the state of ExEd in Canada
2. Comprehensive, rigorous systematic literature review, appraisal & synthesis of ExEd topics over the past 10-15 years
3. Plans and prototypes for achieving best practice in ExEd on a national scale (see description of perpetuation plan below)

The detailed reports can be found online: <http://www.afpc.info/content/canexed-reports>

Figure 1; Perpetuation Plan Mapped to Original CanExEd Priorities

CanExEd Priorities	Current Working Groups
Priority #1: National approach to <u>learning outcomes</u> and corresponding <u>assessments</u> at each stage of ExEd.	Making the Grade
Priority #2: Integration of the full spectrum of <u>learner-preceptor models</u> in ExEd	Teaching and Learning Models
Priority #3: Best practice in <u>preceptor development</u> to establish/augment qualities/abilities in preceptors Priority #6: Characterisation of exceptional ExEd <u>sites' best practices</u>	Partner Development
Priority 4: Description and promotion of the <u>value learners add</u> to host organisations Priority 5: Optimisation of <u>preceptor recruitment and retention</u> Priority 7: <u>Promotion of ExEd</u> to stakeholders	Recruitment & Retention

With the project manager's position concluding, a perpetuation plan was developed coalescing the work of the 7 priorities into 4 work groups (see figure 1) to be coordinated by PEP-C:

Next steps:

1. Determine commitment from various Academic programs and external stakeholders to resource (human, IT) each perpetuation plan Working Group
2. Working Groups establish grassroots participants to realize plans
3. Set priorities and schedule of work within each working group
4. PEP-C coordinates meetings, reporting structure, piloting and outcome measurement.
5. Publication/Dissemination of CanExEd Project findings, recommendations and prototypes

Conclusions:

The CanExEd reports developed during this project provide an authoritative source for research compilation and synthesis of all aspects of ExEd (domestically and internationally) and should be consulted prior to any jurisdictional initiative.

The findings, recommendations and prototypes are the beginning of a new collaborative, national, evidence based, evidence-generating paradigm for ExEd in Canada.

Achieving best practice as identified within the CanExEd reports will require steadfast commitment from Academic institutions and professional stakeholders, high degrees of organisation on the part of PEP-C and commitment from leadership in pharmacy education and practice in Canada to ensure the ongoing coordination and vision of CanExEd continues.

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