Faculty of Pharmacy

Annual Report

July 1, 2011 - June 30, 2012

Educating Pharmacists in Manitoba since 1899
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Editor: Lisa Thomson Stifora, Stewardship and Communications Officer
Our Mission

The Faculty of Pharmacy is an institution that will create an educational environment that facilitates the integration of pharmacy scholarship in the areas of practice, research and service to effect optimal health outcomes for individuals and communities, and the advancement of the profession of pharmacy.

In striving to fulfill this mission the Faculty is dedicated to:

• Preparing competent graduates from both undergraduate and post-graduate programs who:
  • demonstrate confidence in their abilities to take responsibility for their role in optimizing the health status of society;
  • demonstrate the practical and professional application of knowledge, skills, and attitudes;
  • are critical thinkers;
  • demonstrate professionalism in the values, ethics and attitudes reflected in their practice;
  • demonstrate skills and processes of active life-long learners.

• Ensuring that ownership and responsibility for the Faculty’s educational outcomes are widely shared by both internal and external stakeholders:
  • Students share responsibility for their own academic and professional development;
  • Students are involved in the definition of education outcomes, curriculum development, evaluation and professional activities;
  • Faculty, staff, preceptors and students work collaboratively to achieve the mission of the Faculty;
  • All stakeholders are aware of curriculum components, research programs and governance/accountability structures, as well as the goals and outcomes achieved by each.

• Collaborating with the profession to enhance the continuing competence of pharmacy practitioners in Manitoba.

• Fostering a reciprocal relationship with graduates to advance both the education program and the development of the profession.

• Working with all stakeholders to proactively influence health care system innovation, change and reform to optimize the health status of society.

• Encouraging collaborative models of research that support the strategic direction of the Faculty.

• Implementing transparent structures, systems and processes to manage and support ongoing change
Message from the Dean

I am happy to provide the Dean’s message for the 2011-2012 annual report. This is my first report as the Dean since my arrival back to Canada last year. A tremendous legacy of pharmacy research and teaching at the University of Manitoba Faculty of Pharmacy is detailed in this report, along with an unparalleled sense of student, faculty and alumni pride.

It has been a pleasure to welcome our new faculty. Dr. Ted Lakowski accepted a tenure track assistant professor position in July and we have two new cross appointments, Dr. Cheryl Kristjanson (Medicine) and Dr. Rob Renaud (Education) who are leading our efforts in Program Evaluation. Our new instructors Drena Dunford, Sheila Ng, Grace Frankel and Sonal Purohit have integrated well to our organization and have taken active roles. We also welcomed Ms. Sarah Smith and Ms. Paola Cordova as office assistants and they have comfortably settled into the team.

As I contemplate the past year it brings to mind our many accomplishments and special achievements. Dr. Hope Anderson was granted tenure effective July 1. Xiaochen Gu completed a successful research study leave in China. We have maintained considerable success in research and graduate education. With the power of team work we have successfully submitted our accreditation report and laid out a new strategic plan for the Faculty’s future development. These accomplishments are highlighted throughout this report.

In 2011, we welcomed 55 students into the Faculty of Pharmacy and in 2012 we all shared in our students achievements as we were piped over to the Brodie Centre together to graduate 48 new pharmacists. Our students have performed very well in the Pharmacy Examining Board of Canada examination process. Furthermore, student and faculty involvement in volunteer and community activities is thriving and the Bio-medical Youth Camp and Pharmacy Awareness Week are featured in this report.

In my tour of over 150 pharmacies in our province so far (http://umanitoba.ca/faculties/pharmacy/pharm_locations.html), I am proud to say that I have seen our students being transformed by and contributing to the pharmaceutical care in our health care system and I have witnessed their valued recognition to and by our citizens. It stands as affirmative proof that the training we foster at the University of Manitoba Faculty of Pharmacy, is being deployed in a needed and meaningful way for the citizens of Manitoba who require it.
Finally, I ask all of you for your continued support. There is still much work to be done in recalibrating our program and the profession of pharmacy in the 21st century. It is with great pride that I tell you we are progressing towards our goals and we are proud to have developed in conjunction with the Faculty of Nursing and the Manitoba Pharmaceutical Association an Immunization Training Program for students and pharmacists.

I would like to thank our alumni, stakeholders and supporters which have been generous in their time and financial commitments which facilitate the success of the Faculty of Pharmacy. I am proud of what we have accomplished over this past year, and I look forward to the future. There’s a long road behind us and a long road ahead with much to accomplish in 2012-2013 and even more to celebrate.

Thank you for having me as your Dean.

Sincerely,

Neal Davies BSc.(Pharm), Ph.D., R.Ph., Dean and Professor
Message from the Associate Dean (Academic)

I am pleased to provide highlights of the 2011-2012 academic year in the Faculty of Pharmacy. The Faculty have spent the last ten months preparing for an accreditation visit from the Canadian Council for Accreditation of Pharmacy Programs (CCAPP). This is a significant undertaking that requires a self-assessment report and strategic plan to be submitted to CCAPP, with an on-site evaluation scheduled from October 21-24, 2012. The accreditation process provides a time to reflect on potential areas of improvement, but also reaffirms the many positive aspects of the pharmacy program in Manitoba. Due to the effort and dedication of faculty, staff, external instructors, preceptors, elective supervisors, bright and committed students and supportive alumni, the pharmacy program in Manitoba remains strong and committed to improving the health of Manitobans through high quality education.

The Faculty is ready to support innovative changes in Manitoba, which will be facilitated by a new Pharmaceutical Act and the anticipated implementation of the pharmacy regulations. As an example, the Faculty has expanded the third year skills lab to train students for expanded scopes of practice. Over the last year, the Faculty has worked in cooperation with the MPhA, the Faculty of Nursing, CSHP, MSP, and Manitoba Health to implement an Immunization/Injection Training Program for Manitoba pharmacy students and practicing pharmacists. 2012 will mark the first year where Manitoba pharmacy students will be trained to provide these services. The Curriculum Management Committee will also be exploring other expanded scopes of practice and incorporating suitable training into the pharmacy curriculum. These activities may include opportunities for interprofessional education with other faculties, which the Faculty of Pharmacy remains committed to.

The Faculty has also made significant advances in formalizing program evaluation. A new Program Evaluation Committee has been struck, and two University of Manitoba professors were hired to facilitate the evaluation process; Dr. Rob Renaud (Faculty of Education) and Dr. Cheryl Kristjanson (former Director of University Teaching Services). The committee is charged with the responsibility of overall program evaluation; to identify areas of the program that may need additional resources or support to strengthen the program even further. The committee is currently focusing on; admissions evaluation, surveys of employers and previous pharmacy graduates, new faculty orientation and ongoing development, student assessment and experiential training.

In closing, I would like to thank the entire faculty and all of our partners as mentioned above, the Curriculum Management Committee and the Program Evaluation Committee for all of their efforts in ensuring a strong pharmacy program in Manitoba.

Lavern M. Vercaigne, PharmD, Professor and Associate Dean (Academic)
Message from the Associate Dean (Research)

Research in the Faculty of Pharmacy involves in a variety of research areas in pharmacy and pharmaceutical sciences such as pharmaceutics, pharmacoepidemiology, medicinal chemistry, antibiotic resistance, nanotechnology, biomedical sciences and clinical pharmacy. With the relocation of research laboratories on the second and third floor of the Apotex Centre, research capacity has been significantly improved.

In 2011 to 2012 it has been an exciting year for research in the faculty. The faculty has installed several advanced instruments such as a cryostat, fluorescent microscope, -800C freezer, the Zeta Nano Sizer, biosafety cabinet and the Cellometer Auto 2000 cell viability counter. These instruments have enhanced the research capacity and diversity in the faculty.

Researchers in the faculty have obtained funding from national and international agencies such as CIHR, NSERC, Heart & Stroke Foundation of Manitoba, Manitoba Medical Service Foundation, Manitoba Institute of Child Health, University of Manitoba, Health Science Centre Foundation and industry contract grants such as Pfizer. Total funding for July 1, 2011 to June 30, 2012 exceeded more than one million Canadian dollars. A major highlight of the funding received in the year 2011 to 2012 is a successful MHRC Establishment Grant to Assistant Professor Dr. Emmanuel Ho for his translational research in nanomedicine and targeted delivery of a HIV vaccine.

On July 1, 2012, an Assistant Professor – Dr. Ted Lakowski joined the Faculty of Pharmacy. Dr. Lakowski will bring another research area – pharmacoepigenetics. His expertise will enhance not only research but also teaching in pharmacogenetics and/or pharmacogenomics in our faculty.

In conclusion, I am very excited for the research achievements in the Faculty of Pharmacy and looking forward to seeing further growth in research capacity and activity in the years to come. Finally, I want to thank all faculty, students, staff and alumni for all your hard work and support in enhancing the pharmacy and pharmaceutical research within the Faculty of Pharmacy.

Yuewen Gong, Ph.D., Professor and Associate Dean (Research)
Faculty & Staff 2011-2012 (full-time or faculty based)

Dean
Neal Davies, B.Sc. (Pharm.) (Alberta), Ph.D. (Alberta)

Associate Dean (Academic)
Lavern M. Vercaigne, B.Sc. (Pharm.), Pharm.D. (Toronto)

Associate Dean (Research)
Yuewen Gong, B.M. (Beijing), M.Sc., (China), Ph.D.

Professors
Frank Burczynski, B.Sc. (Pharm.), M.Sc., Ph.D. (Manitoba)
David Collins, Dip. Pharm. (NZ), M.S. (Minnesota), Ph.D. (Minnesota)
Yuewen Gong, B.M. (Beijing), M.Sc., (China), Ph.D.
Ruby Grymonpre, B.Sc. (Pharm.), Pharm.D. (Minnesota)
Xiaochen Gu, B.Sc. (Pharm.), M.Sc., Ph.D. (China)
Brian Hasinoff, B.Sc. (Hons.), Ph.D. (Alberta)
Lavern M. Vercaigne, B.Sc. (Pharm.), Pharm.D. (Toronto)
Sheryl Zelenitsky, B.Sc. (Pharm.), Pharm.D. (Buffalo)

Associate Professors
Hope Anderson, B.Sc., Ph.D. (Manitoba)
Shawn Bugden, B.Sc. (Hons.), B.Sc. (Pharm), M.Sc. (Oxford), Pharm.D. (Washington)
Lean Chee, B.Sc. (Biochemistry), Ph.D.
Alan McIntosh, B.Sc. (Alberta), Ph.D. (Queen’s)
Mike Namaka, B.Sc. (Pharm.), M.Sc., Ph.D. (Manitoba)

Assistant Professors
Silvia Alessi-Severini, B.Sc. (Pharm.) (Parma), Ph.D. (Alberta)
Christine Davis, B.Sc. (Pharm.), Pharm.D. (UBC)
Emmanuel Ho, B.Sc. (Hons.) (Toronto), Ph.D. (Toronto)
Harris Iacovides, B.Sc. (Pharm.), M.Sc., Pharm.D. (Toronto)
Ted Lakowski, B.Sc. (Pharm.), Ph.D. (UBC) – effective July 1, 2012

Instructors
Drena Dunford, B.Sc. (Pharm.)
Grace Frankel, B.Sc. (Pharm.)
Nancy Kleiman, B.S.P. (Sask.), MBA (Athabasca)
Christopher Louizos, B.Sc. (Pharm.)
Sheila Ng, B.Sc. (Pharm.)
Sonal Purohit, B.Sc. (Pharm.)
Sessional Instructors
Brock Cordes, B.A., M.B.A.
Ross Forsyth, B.Sc. (Pharm.)
Ronald Guse, B.Sc. (Pharm.)
Susan Lessard-Friesen, B.Sc. (Pharm.)
Kim McIntosh, B.Sc. (Pharm.)

Professional / Research Associates
Emma Frost, B.Sc. (Hons.) (U.K.), Ph.D. (U.K.)
Kim O’Hara, B.Sc. (Alberta), Ph.D., (Dartmouth Medical School)
Xing Wu, B.Sc. (Biochem) (China), Dip. Fermentation (China), Ph.D. (Biochem)(Switzerland)

Program Evaluation Administrators
Cheryl Kristjanson, Ph.D.
Robert Renaud, Ph.D.

Faculty Administrative Staff
Janice Bailey – Faculty Manager
Paola Cordova—Office Assistant (started August 2012)
Patricia Kopp – Technical Support Manager
Cheryl Lee – Undergraduate Program Administrator
Blair Nicholls – Development Officer
Joanne Ogilvie – Assistant to the Dean
Mark Rabnett – Librarian
Sara Smith – Office Assistant
Lisa Thomson Stifora - Stewardship & Communications Officer
Lisa Zhang - Graduate Program Administrator

Technical Staff
Steven Birch - Computer Technician
Chrissy Laqui - Laboratory Technician
Daywin Patel – Laboratory Technician
Casey Sayre – Laboratory Technician
Cathy Zahradka - Laboratory Technician
Faculty & Staff 2011-2012 (Emeritus, Clinical and External)

Dean Emeritus
John Steele, B.Sc., Ph.D. (Glasgow)

Professor Emeritus
Colin Briggs, B.Pharm., Ph.D. (London), FRPharmS

Assistant Professors
Albert Friesen, B.Sc., M.Sc., Ph.D.
Kennedy Mang’era, B.Sc. (Pharm.) (Kenya), M.Sc. (Belgium), Ph.D. (Belgium)
Alberto Severini, Ph.D. (Parma)

Clinical Associate Professor
Robert Ariano, B.Sc. (Pharm.), Pharm.D. (Minn.)

Clinical Assistant Professors
Alvaro Bras, B.Sc. (Chem.), Ph.D.
Shanna Chan, B.Sc (Pharm.)
Anna Coulter, B.Sc. (Pharm.), Pharm.D. (Ohio)
Jamie Falk, B.Sc. (Pharm.), Pharm.D. (UBC)
Sheri Fandrey, B.Sc. (Pharm.), Ph.D.
Mark Friesen, B.Sc. (Pharm.), M.Sc., Pharm.D. (Toronto)
Rhonda Fusee, B.Sc. (Pharm.)
Alfred Gin, B.Sc. (Pharm.), Pharm.D. (SUNYAB)
Kimi Guilbert, B.Sc. (Pharm.), M.Sc.
Ronald Guse, B.Sc. (Pharm.)
Nick Honcharik, B.Sc. (Pharm.), Pharm.D. (SUNYAB)
Pat Honcharik, B.Sc. (Pharm.), Pharm.D. (SUNYAB)
Kyle MacNair, B.Sc. (Pharm.)
Colette Raymond, B.Sc. (Pharm.), Pharm.D. (Toronto)
Amy Sood, B.Sc. (Pharm.), Pharm.D. (Toronto)
Peter Thomson, B.Sc. (Pharm.), (UBC), Pharm.D. (Wayne State)
Rick Thurmeier, B.Sc. (Pharm.)
Shirley Treacy, B.S.P., M.Sc. (Sask.)
Pat Trozzo, B.Sc. (Pharm.)
Wally Watral, B.Sc. (Pharm.), Pharm.D.
Lori Wazny, B.Sc. (Pharm.), Pharm.D.
Donna Woloschuk, B.Sc. (Pharm.) (Sask.), Pharm.D. (Cincinnati)
Adjunct Professors
Sreeneeraj Kasichayanula, B.Pharm (India), Ph.D. (Man.)
Songyan Liu, M.D. (China), MSc (Patho) (China), PhD (Patho) (China)
Gary Van Domselaar, B.Sc. (Chemistry), Ph.D. (Alberta)

Lecturers
Kural, Britt, B.Sc. (Pharm.)
Lister, Danica, B.Sc. (Pharm.)
Rosenthal, Brenda, B.Sc. (Pharm.)
Santos, Dinah, B.Sc. (Pharm.), C.D.E.

Field Instructors (WISH Clinic)
Alan, Mark, B.Sc. (Pharm.) (Man.)
Attwood, Jennifer, B.Sc. (Pharm.) (Man.)
Petrasko, Kristine, B.Sc. (Pharm.) (Man.)
Rashid, Farah (Joy), B.Sc. (Pharm.) (Man.)
Walus, Ashley, B.Sc. (Pharm.) (Man.)

External Appointments
Robert Biscontri, Accounting & Finance
Ratna Bose, Pharmacology
Ed Kroeger, Physiology
William Leslie, Internal Medicine
Hassan Marzban, Human Anatomy & Cell Science
Mohammed Moghadasian, Human Nutritional Sciences
Grant Pierce, Physiology
Daniel Sitar, Internal Medicine / Pharmacology
Teresa DeKievit, Microbiology
New Faculty and Staff

The Faculty of Pharmacy is pleased to announce the following new faculty and staff appointments.

**Dr. Ted Lakowski** joined the faculty as an assistant professor effective July 1, 2012. He obtained an undergraduate degree in pharmacy from the University of British Columbia (UBC) in 1999. In 2006 he earned a Ph.D. in Pharmaceutical Chemistry from UBC under the supervision of Dr. Ron Reid. His thesis focused on the structural biology of novel calcium binding proteins using NMR. Continuing at UBC, Ted completed postdoctoral studies in the laboratory of Dr. Adam Frankel in 2011. While there, he developed methods to measure the enzymatic activity and inhibition of protein arginine methyltransferases using mass spectrometry, designing several inhibitors for this family of enzymes. A final postdoctoral fellowship in high-throughput drug screening at The Centre for Drug Research and Development in Vancouver was completed in June 2012. Ted’s areas of research interest include the emerging field of epigenetics. He is particularly interested in novel drugs that target epigenetic processes as a means to treat disease. Ted is a licensed pharmacist and has worked regularly as a community pharmacist throughout his graduate and postdoctoral studies.

**Sara Smith** joined the support staff team effective December 12, 2011. Sara’s most recent position was with Great-West Life. She is a graduate from the University of Manitoba with a Bachelor of Arts, majoring in criminology.

**Paola Cordova** joined the support staff team effective August 21, 2012. Paola obtained her Bachelor of Environmental Science and her Bachelor of Science degrees at the University of Manitoba. She worked as a research assistant at the Cereal Research Centre, Agriculture and Agri-Foods Canada as well as a library assistant at St. Paul’s College Library.

**Dr. Cheryl Kristjanson** and **Dr. Robert Renaud** joined the faculty in October 2011 to support our Program Evaluation process.
Outstanding Teacher Awards 2011-2012

2012 UMSU/UTS Students’ Teacher Recognition
Dr. Lean Chee, Associate Professor, Faculty of Pharmacy
as chosen by fourth year student Kaley Kawchuk.

Outstanding Teacher 1st year
Ms. Nancy Kleiman, Instructor

Outstanding Teacher 2nd year
Dr. Lean Chee, Associate Professor

Outstanding Teacher 3rd year
Dr. Sheryl Zelenitsky, Professor

Outstanding Teacher 4th year
Dr. Lavern Vercaigne, Professor & Associate Dean
(Academic)

From left: Bilan Arte (UMSU Pres), Laverne Vercaigne,
Steven Boyko (K-12 Teacher), Kaley Kawchuk,
Lean Chee, Erin Selby (Minister of Advanced Education
and Literacy), and Karen Grant
(previous Vice-Provost, Academic Affairs)

Outstanding 4th year teacher Dr. Lavern Vercaigne

Tenure and Promotions

Dr. Hope Anderson was granted tenure effective July 1, 2012.
Research/Study Leave Report - Dr. Xiaochen Gu

I completed a 6-month Research/Study Leave between February 1 and July 31, 2012. I spent this period of time in Nanjing, China and Winnipeg, and mainly focused my activities on research collaboration (China) and graduate studies (Winnipeg). Overall, this R/S Leave was a very productive and rewarding period for me.

1. Research Collaboration

Establishing research collaboration in China was one of the main objectives of my R/S Leave. I have received research support from Jiangsu ASK Pharmaceutical Co., Ltd. (ASK Pharm) to formulate a transdermal antifungal/anesthetic preparation in the past two years. I continued this research project at ASK Pharm headquarters in Nanjing, China, mainly focusing on pilot-scale preparation of solid lipid nanoparticles and drug analysis/quality control standardization.

I also participated in two research projects at the Department of Pharmaceutics, China Pharmaceutical University. The two projects were all related to novel nanotechnology in specific delivery of antitumor drugs (see Research Publications for details). In addition, I was exploring collaborative opportunity with another Chinese university in the area of novel drug delivery. Based on my interactions with my collaborators in China, we came to agree on the following initiatives for future research collaborations:

1) supervision of graduate students, as either member of advisory committee or external examiner;
2) short-term exchange visitation of research scholars/graduate students; and
3) training workshop in novel drug delivery in China.

I also held seminar series at both ASK Pharm and China Pharmaceutical University for graduate students and research scientists. The subjects that I covered included:

1) microneedles for specific drug delivery;
2) solid lipid nanoparticles for oral and parenteral drug delivery;
3) applications of nanotechnology in pharmaceutics and drug delivery;
4) safety and toxicity of pharmaceutical nanoparticles; and
5) drug dissolution, biorelevance and their technical adaption.

These seminars presented the latest development in pharmaceutical research, and the feedback from the audience was highly positive. This also laid the foundation for academic exchanges between us in the future.
2. Research Publications

I have published three original research papers during my R/S Leave. These publications are:


Abstract: Surface functionalized polyurea microcapsules (MCQ) are synthesized in one step. Dimethyl-dodecyl-(5-hydroxy-pentyl)-ammonium bromide (DAB), a hydroxyl-end-capped quaternary ammonium salt, is synthesized and adopted as a new surfmer for the synthesis of MCQ. It is confirmed by fluorescein adsorption that DAB is covalently bonded to MCQ. The so-formed MCQ possess dual-functionality: contact infection control and sustained drug delivery. Agar diffusion antimicrobial tests confirm successful inhibition of multi-drug-resistant E. coli by MCQ alone instead of by leaching of free quaternary ammonium salts. Furthermore, few E. coli colonies survive on an agar plate coated with 3–4 layers of MCQ. Dissolution tests show a typical first-order release profile of coumarin-1, a model dye, from MCQ.


Abstract: Insect repellent DEET and sunscreen oxybenzone have shown a synergistic percutaneous enhancement when applied concurrently. Both compounds are extensively metabolized in vivo into a series of potentially toxic metabolites: two metabolites of DEET, N,N-diethyl-m-hydroxymethylbenzamide (DHMB) and N-ethyl-m-toluamide (ET), and three metabolites of oxybenzone, 2,4-dihydroxybenzophenone (DHB), 2,2’-dihydroxy-4-methoxybenzophenone (DMB) and 2,3,4-trihydroxy-benzophenone (THB). In this study, the metabolites were extensively distributed following intravenous and topical skin administration of DEET and oxybenzone in rats. Combined application enhanced the disposition of all DEET metabolites in the liver, but did not consistently affect the distribution of oxybenzone metabolites. DHMB appeared to be the major metabolite for DEET, while THB and its precursor DHB were the main metabolites for oxybenzone. Repeated once-daily topical application for 30 days led to higher concentrations of DEET metabolites in the liver. Hepatoma cell studies revealed a decrease in cellular proliferation from all metabolites as single and combined treatments, most notably at 72 hours. Increased accumulation of DHMB and ET in the liver together
with an ability to reduce cellular proliferation at achievable plasma concentrations indicated that simultaneous exposure to DEET and oxybenzone might have the potential to precipitate adverse effects in a rat animal model.


Abstract: A novel amphiphilic multi-functional linear-dendritic block copolymer, semi-polyamidoamine-b-poly(D,L-lactic acid) (PALA) was successfully synthesized to prepare polymeric micelles. Antitumor molecule docetaxel (DTX) was selected as model drug for evaluation in the study. The micelles were characterized by a series of analytical instrumentation. Drug release, hemolysis and cytotoxicity of the prepared DTX micelles were also investigated in vitro. Pharmacokinetic study of DTX micelles was compared against commercial Taxotere® preparation in rats. PALA readily self-assembled to form nanomicelles in an aqueous environment and exhibited a low critical micelle concentration. The DTX-loaded micelles demonstrated modified drug release profiles under various pH conditions. The MCF-7 cells viability was improved by DTX-loaded micelles in comparison to DTX solution. AUC of DTX was increased and clearance was decreased after intravenous administration of DTX-loaded PALA micelles. The results indicated that DTX-loaded PALA micelles demonstrated potentials as a multi-functional, intracellular delivery carrier for antitumor drugs.

My research collaboration at China Pharmaceutical University also resulted in another manuscript that is in the final stage of revision,

1) Ying Sun, Juan Li, Jin Meng, Guangji Wang, Xiaochen Gu: Synthesis, Characterization and Pharmacokinetics of Amphiphiles Graft Copolymer of mPEG-g-PAA-g-PLA Hydroxycamptothecin-loaded Nanoparticles.

Abstract: A novel methoxy poly(ethylene-glycol)-g-poly(acrylic acid)-g-poly(lactide) (mPEG-g-PAA-g-PLA) was synthesized as a potential drug carrier; 10-hydroxycamptothecin (HCPT) was encapsulated as a model compound. mPEG-g-PAA-g-PLA readily self-assembled to form nanoparticles in an aqueous environment and exhibited a low critical micelle concentration and a high drug encapsulation efficiency. The physicochemical structure of the nanoparticles was characterized by FT-IR and 1H-NMR. The nanoparticle size measured by DLS demonstrated a narrow particle size distribution with average particle diameter of <150 nm. The nanoparticle morphology observed by AFM revealed smooth particle surface and distinct spherical
Research/Study Leave Report ... cont.

shape. In vitro and in vivo drug release experiments both indicated sustained drug release effects. The main pharmacokinetic parameters of HCPT injection and HCPT/mPEG-g-PAA-g-PLA nanoparticles were as follows, $t_{1/2}$ 0.71 and 1.45 hr, AUC$0\rightarrow\infty$ 5.49 and 17.90 μg h/mL, MRT 0.56 and 3.09 hr. The study results suggested that mPEG-g-PAA-g-PLA copolymer could act as a promising drug carrier for antitumor agents in chemotherapeutics.

3. Graduate Studies

Two Ph. D. candidates concluded their studies in my laboratory this summer. I used my R/S Leave to help the students revise/finalize the theses and prepare for the oral defense. I also reviewed two other theses as a member of the advisory committee; one of the students had successfully passed his oral defense while the other defense is to be scheduled shortly. The completion of these tasks enabled me to finish past research programs in my laboratory and to initiate new research directions for the future.

Hongtao Li, Ph. D., Faculty of Pharmacy

Advisory Committee: Xiaochen Gu, David Collins, Keith Simons, Fiona Parkinson


Oral Defense completed on June 5, 2012

Abstract

Swellable matrix tablet is a monolithic system for oral drug delivery. Active pharmaceutical ingredients (APIs) and hydrophilic polymers are mixed together and compressed into a tablet preparation for modified drug release. The drug delivery system has been extensively utilized in clinical applications, because it offers structural simplicity, low-cost manufacturing, and desirable drug delivery capacity.

Hydrophilic polymers in a swellable matrix tablet hydrate quickly to form a hydrogel layer on the exterior of the dosage once in contact with water or biologic fluid. The resultant hydrogel serves as a barrier to regulate water permeation into the matrix and drug diffusion from the preparation. It is therefore important to understand how the polymer is hydrated and what mechanism exists between hydrogel formation and drug dissolution from a swellable matrix tablet.

In this thesis, a TA texture analyzer was utilized to monitor and characterize matrix swelling properties dur-
ing dissolution process. Multiple regression models were employed to analyze the quantitative relationship between drug dissolution or hydrogel thickness and major formulation factors (polymer ratio, drug solubility). Modified release matrix tablets were prepared using four APIs with a range of aqueous solubility, i.e., acetaminophen (ACE), chlorpheniramine (CHL), ibuprofen (IBU), and pseudoephedrine hydrochloride (PSE). Two hydrophilic polymers, polyethylene oxide (PEO) and hydroxypropyl methylcellulose (HPMC) were selected and tested as primary matrix polymers for the formulations.

It was found from the experiments that multiple regression models were capable of describing the relationship between drug dissolution and major formulation factors for both PEO and HPMC matrix preparations. The regression models developed provided satisfactory prediction of drug release from PEO and HPMC matrix tablets, which could further aid in formulation development and optimization.

Texture analysis was a simple and straightforward operation that enabled the collection of directly measurable data for formulation design and optimization. The multiple regression modeling approaches that were developed and validated were also accurate and practical. It would be possible for formulation scientists to predict influences of matrix polymers on drug release characteristics and to optimize drug release profiles using the methodology described in the thesis.

Daryl Fediuk, Ph. D., Faculty of Pharmacy

Advisory Committee: Xiaochen Gu, Mike Namaka, Keith Simons, Fiona Parkinson

Thesis: Pharmacokinetic and Toxicological Characterization of Repellent DEET and Sunscreen Oxybenzone

Oral Defense completed on June 7, 2012

Abstract

Insect repellent N,N-diethyl-m-toluamide (DEET) and sunscreen oxybenzone are commonly incorporated into commercially available repellent and sunscreen preparations. Both compounds have demonstrated an increased percutaneous permeation and systemic disposition after concurrent application in vitro and in vivo. The permeation enhancement between DEET and oxybenzone not only compromises their respective protective efficacy against biting insects and UV radiation, but also potentiates toxicological properties in susceptible subjects. The pharmacokinetic and toxicological profiles from concurrent use of DEET and oxybenzone were evaluated and compared in this thesis. DEET and oxybenzone were administered by intrave-
Research/Study Leave Report ... cont.

nous and topical routes in rats, either alone and/or in combination, to compare the pharmacokinetics of parent compounds and their primary metabolites in vivo. To evaluate toxicological characteristics, rat primary cortical neurons and astrocytes, and rat hepatoma 1548 cells were exposed to DEET, oxybenzone and their metabolites in vitro, and cell viability was analyzed. Various behavioral testing protocols were also performed to assess arousal, locomotion, habituation, and motor coordination of rats over a 30-day study period.

Concurrent topical application of DEET and oxybenzone enhanced the disposition of DEET and its metabolites in rats, but did not consistently affect the distribution of oxybenzone and its metabolites. The disappearance of DEET from skin application site was accelerated; its apparent elimination half-life was decreased while its plasma and tissue concentrations were predominantly increased. Cellular toxicity occurred at 1 μg/ml for neurons and 7-day exposure for both astrocytes and neurons. Viability of hepatoma cells was also reduced when treated with DEET, oxybenzone and their metabolites, either alone or in combination, most notably after 72 hours of exposure. However, no overt signs of toxicity were observed from behavioral testing in rats after a 30-day topical study.

The pharmacokinetic data obtained was beneficial in understanding and elucidating absorption and biodistribution of DEET and oxybenzone in vivo. The toxicological data suggested that the risk for increasing adverse effects from concurrent skin application of repellents and sunscreens would be low and marginal in healthy individuals. Nevertheless, further studies should be carried out to assess the long-term health impact of these compounds in susceptible subjects, especially at higher application doses.

Wei He, M. Sc., Department of Textile Sciences

Advisory Committee: Song Liu, Wen Zhong, Xiaochen Gu

Thesis: Dual-Functional Polyurea Microcapsules for Chronic Wound Care Dressings: Sustained Drug Delivery and Non-Leaching Infection Control

Oral Defense completed on March 30, 2012

Abstract

A new design of dual-functional polyurea microcapsules was proposed for chronic wound dressings to provide both non-leaching infection control and sustained topical drug delivery functionalities. Quaternary am-
monium functionalized polyurea microcapsules (MCQs) were synthesized under mild conditions through an
interfacial crosslinking reaction between branched polyethylenimine (PEI) and 2,4-toluene diisocyanate (TDI)
in a dimethylformamide/ cyclohexane emulsion. An in-situ modification method was developed to endow
non-leaching surface antimicrobial properties to MCQs via bonding antimicrobial surfactants to surface iso-
cyanate residues on the polyurea shells. The resultant robust MCQs with both non-leaching antimicrobial
properties and sustained drug releasing properties have potential applications in medical textiles, such as
chronic wound dressings, for infection control and drug delivery.

Wenjun Zhu, Ph. D., Faculty of Pharmacy

Advisory Committee: Mike Namaka, Yuewen Gong, Xiaochen Gu, Maria Vrontakis

Thesis: The Role of Brain Derived Neurotrophic Factor in Multiple Sclerosis and the Role of Fractalkine in Mul-
tiple Sclerosis Induced Neuropathic Pain

Oral Defense date to be decided.
Biomedical Youth Summer Camp

The Biomedical Youth Summer Camp (BYSC) is an annual, weeklong, free of charge camp for students in grades 5-12. Particularly, the BYSC is one of many initiatives run through the Faculty of Medicine’s Biomedical Youth Program (BYP). In essence, the BYP aims to “promote interest in science and facilitate access to health careers for disadvantaged youth” as defined in their mission statement. This year’s camp is July 23-27 with sessions across the sciences and health sciences.

Amanda Li (third year), Ruth Habte (second year), and Dr. Cote are running the pharmacy activity for BYSC. Over the course of the session, participants have the opportunity to experience the joys of pharmacy through three case studies and a tableting activity. The first case is a patient suffering from heartburn, who enlists the help of pharmacist to find the best antacid for their condition. This activity allows the kids to learn about pH by testing the pH of different antacids (TUMS, generic TUMS, Alka-Seltzer, and Gaviscon) as well as that of mock stomach acid (Vinegar). Our goal for this case is to show how pharmacists use evidence based medicine when recommending OTCs to patients. The second case is a patient who gets sunburned easily and is looking for some sunscreen. The participants will compound a zinc oxide sun block and think of other non-pharmacological advice to give the patient. During the activity, the kids will learn about the UV index, sunburns, skin cancer and how a pharmacist can help find the right sun protection for patients. The final case is an online game demonstrating a busy day in a pharmacy. This activity demonstrates the environment of a busy community pharmacy. The object of the game is to ensure the correct medication is given to the intended patient. Lastly, the tableting activity is a demonstration by Dr. Cote which will show the kids how tablets are made. First, the kids view the different excipients needed to make a tablet, then they see how the pill press turns granules into tablets. Finally, the activity will close by testing the hardness of the tablets they have made. Ultimately, our goal for the week of the camp is for the kids to have a great experience participating in the pharmacy session and become interested in pharmacy.
New sticks will see long tradition continue

This year, the 73-year tradition of passing down symbolic canes from one co-stick to the next will get a facelift. At the 2012 White Coat Ceremony, two new canes will be unveiled for the new co-sticks.

The new sticks have become a necessity for the tradition to continue. A small gold plate bearing the name of the co-stick is added to each cane every year. Today, the original canes are completely full, with no room to add the names of the 2012 co-sticks.

Being selected as a co-stick is the highest honour that a pharmacy student can receive from his or her peers. This is why it is so important to the faculty for the recipients to be remembered in a permanent way.

The tradition began in 1939, coinciding with the retirement of Professor H. E. Bletcher. Since that time, traditions have evolved, with positions changing from a male “Senior Stick” and female “Lady Stick” to today’s two positions of “Co-Stick,” awarded to the two students (male or female) who receive the largest numbers of votes from their peers.

Dean’s Tour of Manitoba kicks off

Dean of Pharmacy, Dr. Neal Davies has embarked on a tour of Manitoba’s pharmacies that will see him visit each and every pharmacy practice in the province.

The Manitoba tour kicked off in January 2012, with Davies leaving the Apotex Centre to, he says, “go out on the front lines and meet with alumni and members of the pharmaceutical community to thank them for their support and encourage their continued involvement with the faculty.”

Davies plans to visit each and every one of Manitoba’s 370 pharmacies. To date, he has visited more than 155 pharmacies across the province, including stops in Selkirk, Gimli, Stonewall, Ste. Anne, Steinbach, Emerson, Altona and Morris. At each stop, Davies has been given a warm welcome and he is excited to continue connecting with alumni over the coming months.
Students

White Coat Ceremony welcomes new students

Fifty-five first-year University of Manitoba pharmacy students took their first steps toward becoming pharmacists on September 26, 2011 during the annual White Coat Ceremony and Student Recognition event.

The White Coat Ceremony is a highly symbolic, tradition-filled event that culminates with each student receiving a new white lab coat that symbolizes their entry into the pharmacy profession. Students then stand and recite the “Pledge of Professionalism” in which they promise to show compassion and respect throughout their careers and to set worthy examples in the application of humanistic principles.

New Dean of Pharmacy Dr. Neal Davies hosted the ceremony, welcoming students and guests. Manitoba Pharmaceutical Association Registrar Ron Guse was the guest speaker. He advised students that they have crossed over from being just university students and have now become responsible representatives of the pharmacy profession. He went on to say that they are now first and foremost responsible and accountable to their patients.

The outstanding accomplishments of pharmacy students and faculty were recognized as Dr. Davies and Dr. Lavern Vercaigne presented the 2010-11 student awards. Dr. Yuewen Gong then presented the summer student research awards to four students: Scott Andreson, Chelsea Huang, Jordan Nash and George Panos.

Educators were also honoured at the ceremony with the presentations of the Outstanding Teacher and Preceptor of the Year awards.

The event closed with the ceremonial draping of the incoming first year students. Faculty member Dr. Harris Iacovides then led the students in the pledge of professionalism before this year’s co-sticks gave closing remarks.
Pharmacist Awareness Week

Pharmacist Awareness Week (PAW) was very successful this year at the University of Manitoba. Our local Canadian Association of Pharmacy Students and Interns (CAPSI) council partnered with the Manitoba Society of Pharmacists to plan events throughout the province.

During PAW, students visited pharmacies in Winnipeg, Brandon, Carmen, Lorette and other cities to promote the Safe to Ask and Medication Return programs. Booths were also set up at select malls across Winnipeg and in the Brodie Atrium at the University of Manitoba. This gave pharmacy students the opportunity to educate the public on the role of pharmacists and their importance in the health care system.

A secondary focus of PAW was in-school education. Pharmacy students delivered 14 presentations at four different elementary schools in Winnipeg to over 600 kindergarten to grade five students. The topics were proper hand washing and allergies. The pharmacy students were enthusiastic making the presentations fun and interactive.

A big thank you goes out to everyone who volunteered for Pharmacist Awareness Week. We could not have done it without you!
**Students**

## Undergraduate Enrolment

In 2011/2012, 55 students were offered positions in the Pharmacy program. Of these, 36 had attended an urban high school, and 15 had attended rural high schools in Manitoba; the remaining four had attended high school in other provinces.

Nine university graduates were admitted to first year, and of the balance, 12 students had completed three or more years of university study, 13 students at least two years of study, and the remaining 21 had completed the required one year university program.

<table>
<thead>
<tr>
<th>Year</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>24 (46%)</td>
<td>29 (54%)</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>33 (63%)</td>
<td>20 (37%)</td>
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<td>3</td>
<td>31 (55%)</td>
<td>26 (45%)</td>
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<td>27 (57%)</td>
<td>21 (43%)</td>
<td>48</td>
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<tr>
<td>Total</td>
<td>115 (55%)</td>
<td>96 (45%)</td>
<td>211</td>
</tr>
</tbody>
</table>

The total number of applications for entry to the Faculty in 2011-2012 was 307, compared to 306 in 2010-2011.

## GRADUATES

The Faculty graduated 48 undergraduate students in 2011/2012.

Alvin A. Agpalza  
Kaila Bell  
Krista Brown  
Anastasia Charles  
Jessica Cortens  
Laura Delavau  
Jordan Ducheminsky  
Michael Dwilow  
Blair Einarson  
Karín Ens  
Víctor Fang  
Michael Fehr  
Chelsea Galatiuk  
Kayleigh Gordon  
Ashley Graham  
Caitlin Hacault  
Benjamin Hornstein  
Christine Husarik  
Kristina Jandavs  
Mandeep Jassal  
Karli Jones  
Danijel Juric  
Kaley Kawchuk  
Samantha Kendall  
Jennifer Lamont  
Melody Love  
Arleigh Maddison  
Megan Matwychuk  
Stephanie Moroz  
David Nguyen  
Harvey A. Noel  
Joel Pankewich  
George Panos  
Rebecca Papineau  
Olga Pozdirca  
Michael Prout  
Christopher E. Rondeau  
Jasbir Rukhra  
Jasdeep Ruprai  
Sheryl-Rose San Miguel  
Carly Sanderson  
Mark Shawarsky  
Devarshi Shome  
Kyle Skayman  
Shannon Smith  
Christopher Sochan  
Stephanie Warnez  
Derek Wong
Interprofessional Education Initiative

The U of M Interprofessional Education Initiative (IPE), led by Dr. Ruby Grymonpre, was created in 2008 by the deans of the health sciences academic units within the university. The IPE Coordinator reports directly to the Vice-President (Academic) and Vice-Provost (Programs). The IPE Coordinator and chairs of the working groups report on a regular basis to the Steering Committee which is comprised of the deans of the participating academic units. The IPE Coordinator is supported by a full-time administrative support person who attends all meetings and helps to organize events.

A Liaison Advisory Committee, with faculty representation from each of the academic units, oversees the interprofessional curriculum implementation and facilitates communications between the initiative and the faculties involved. There are a number of working groups that are charged with the responsibility of designing, implementing and evaluating interprofessional education learning opportunities. There are a few Faculty members from pharmacy who are involved in these working groups: Health Promotion (Nancy Kleiman), Oral & Systemic Health (Drena Dunford), Safety and Quality (Chris Louizos) and IP Clinical Placements (Kelly Brink). There are some working groups where pharmacy is currently not represented and these include Faculty Development, Simulation and Communication.

IPE Events for 2011-2012

IP Faculty Development Days: A number of faculty training workshops were held in preparation for the Health Promotion/Team Communication working group collaborative initiative.

WRHA IP Clinical Placement Project: This project was started in 2008 and continues each year with a number of WRHA sites participating again this year. This past year had eight 4th year students participating at various sites for their SPEP 4 hospital rotation.

An IPE (non-practice) session was held March 14, 2012. The Health Promotion and Team Communications working groups worked collaboratively to design and organize the session. The inaugural event involved almost 400 students from 12 health and social care faculties and will undergo its 2nd iteration in the fall of 2013 and again in March 2013. The event consisted of a group of interprofessional students with the help of a faculty facilitator discussing a case involving the determinants of health and health promotion. All 57 second year pharmacy students took part in the event along with a number of faculty members (Drena Dunford, Sheila Ng, Nancy Kleiman, Chris Louizos, Christine Davis and Kelly Brink).

For more information about IPE and the Faculty of Pharmacy, visit: umanitoba.ca/programs/interprofessional/

Submitted by Nancy Kleiman, Faculty of Pharmacy IPE Liaison
Canadian pharmacy students unite at PDW

Each year, the Canadian Association of Pharmacy Students and Interns (CAPSI) organizes Professional Development Week (PDW). PDW provides educational and professional growth opportunities to CAPSI members and enables pharmacy students from across the country to share interests, concerns and ideas, while establishing friendships and professional relationships. This year over 550 students attended PDW in Halifax, NS from January 11 to 14 with the theme “Oceans of Opportunity.”

One of the components of PDW is a series of skills competitions such as the OTC, patient interview and compounding competitions. Manitoba’s students once again displayed their top-notch skills during this year’s competitions at Dalhousie University. Justine Manulak (third-year) came in first place in the OTC competition, while Karin Ens (fourth-year) earned fourth place for the patient interview competition.

Manitobans also scored in the exciting Pharmafacts Bowl, which tests pharmacy knowledge learned throughout the four years of study. Our team of four students: Jesse Franklin (first-year), Megan Scott (second-year), Devin Ross (third-year) and Karin Ens (fourth-year), took second place among the 10 competing pharmacy schools.

The CAPSI-Wyeth Guy Genest Passion for Pharmacy (Manitoba) Award was presented to third-year student Sara Smith. Created in honour of Guy Genest, this award recognizes one individual from each pharmacy faculty/school in Canada for their notable passion for and dedication to the profession of Pharmacy.

Congratulations to the Faculty of Pharmacy’s outstanding students on your achievements at PDW week and your CAPSI local competitions!

**Manitoba’s PDW attendees:**

Nathan Baart  
Kaeleigh Bawdon  
Joelle Boileau  
Steven Burczynski  
Aaron Chu  
Louis Chute*  
Alicia Dash  
Blair Einarson  
Karin Ens*  
Ashley Ewasiuk  
Jesse Franklin  
Adam Heinrich  
Liam Hogue  
Cody Hotel*  
Jillian James  
Mandeep Jassel  
Lisa Lagimodiere  
Dennis Le*  
Nicole Lee  
Justine Manulak*  
Kristin Nelson  
Juliana Nguyen  
Varinder Pandher  
Kathryn Peterson  
Michael Prout  
Devin Ross*  
Parveen Samra  
Myralie Sanchez  
Megan Scott  
Pawandeep Sidhu*  
Sara Smith  
Mark Takla  
Graham Trott  
Derek Wong

*Winners of CAPSI local competitions*
Convocation Ceremony 2012

The Pharmacy Class of 2012 Convocation was held on Thursday, May 31, 2012 in the Brodie Centre.

After a piping procession of Faculty and Students from the Apotex Centre, Dean Neal Davies started the morning with a welcome and introduction. The valedictorian address was given by Mr. Devarshi Shome. Mr. Kyle MacNair, Manitoba Pharmaceutical Association (MPhA) President presented the MPhA Awards, Ms. Lora Jaye Gray, President of CSHP presented the CSHP Award, Ms Amy Oliver, Pharmacy Awareness Week chair of Manitoba Society of Pharmacists presented the A. Langley Jones Leadership Award, and Dean Davies presented the Award for Excellence in Teaching 4th year.

Guest Speaker at the event (invited by the students) was Dr. Lavern Vercaigne, Associate Dean (Academic) and Professor, Faculty of Pharmacy. MPhA Pins, Mortar & Pestles, Deans Honour List and other award certificates were then presented to the 2012 Pharmacy graduating class. The ceremony closed with the passing of the 4th year stick from Mr. Michael Prout to Mr. Scott Andresen. A small reception took place following the ceremony.

Dean’s Honour List 2011-2012

Year 1
Stephanie Gautron
Ruth Habte
Ryan Persaud
Kristen Poncsak

Year 2
Morgan Albisser
Heather Bourns
Kristjana Britton
Ashley Ewasiuk
Ryan Kusiak
Amelia MacDougall
Heidi Marschall
Adriana Muc

Year 3
Magkie Cheung
Nathan Friesen
Daniel Kyrzyk
Stephen Lewis
Jordan Nash
Devin Ross
Lesley Worsnop

Year 4
Kaila Bell
Krista Brown
Blair Einarson
Michael Fehr
Kayleigh Gordon
Caitlin Hacault
Karli Jones
Kaley Kawchuk
Arleigh Maddison
Jasbir Rukhra
Christopher Sochan
Stephanie Warnez
Students

Graduand Exit Survey, 2012

In the fall of 2011, the Faculty of Pharmacy implemented a comprehensive program evaluation plan. As such, the exit survey of graduands was expanded to include an online survey and facilitated focus groups to provide feedback on their Pharmacy education and transition to the profession. Invitations to participate were extended to 48 students in the 4th Year Pharmacy class (Graduating Class of 2012).

The following summarizes the responses from 45 students including 44 who completed the online survey and 45 who participated in the focus groups in March 2012. All respondents planned to obtain licensure to practice pharmacy. There was also interest in pursuing further studies in a Pharm.D. (32%), Masters or Ph.D. in pharmacy (11%), non-pharmacy degree (11%) or pharmacy residency (9%). Only 11% indicated a lack of interest in pursuing more formal education or training.

Of the 45 respondents, 22 (49%) indicated that they had already secured a practice position following graduation. One person indicated that they had not secured a position, and 22 respondents skipped the question. Of those with positions, 68% were with a chain pharmacy, 18% with an independent pharmacy and 14% with a hospital pharmacy. Seventy-seven percent of practice sites were in Winnipeg, whereas 23% were outside the city but within the province of Manitoba. Respondents indicated a salary of $80,000-100,000 in 65% of cases and >$100,000 in 35% of cases.

When asked about their 10 year practice goals, 23 responded with plans to work with a chain pharmacy (35%), hospital pharmacy (26%), independent pharmacy (22%), government (4%) and undecided (13%). When asked about their interest in pursuing ownership of a retail pharmacy, 26% of respondents indicated “yes”, 30% indicated “no” and 44% were unsure.

The exit survey/focus groups gathered valuable feedback from graduands on the Pharmacy curriculum. The following summarizes the results from 44 students who responded to this part of the online survey, in addition to data collected during the focus groups. Students agreed (71%) or strongly agreed (23%) that they are prepared to apply the specialized body of pharmacy knowledge for the benefits of patients and the profession. Eighty-four percent also agreed or strongly agreed that they are able to work collaboratively as a part of an inter-professional team. Strengths of the pharmacy curriculum were identified as the small class sizes and strong clinical program with access to expert clinicians and practitioners in courses and experiential training. Some opportunities for follow-up include a re-structuring of pharmacy pre-requisites and the 1st Year pharmacy program, and enhancing the quality control and improvement measures for instruction and student assessment.
Undergraduate Student Awards

Ruthe Habte (Year 1) and Amanda Li (Year 2): Pharmacy Class of 1966 Scholarship. Completion of 1st or 2nd year with high academic standing (min GPA 3.5) and demonstrated leadership & involvement in extra-curricular activities (by letter of application.)


Stephanie Gautron, (Year 1): Sanofi-Aventis Canada Scholarship. Academic merit in first year pharmacy (min. GPA 3.00.)

Ryan Persaud, (Year 1): William G. Eamer/Manitoba Pharmaceutical Association Scholarship. Academic excellence and demonstrated social responsibility and personal initiative through active participation in student government or other student community service. FOUR AWARDS are granted.

Dustin Reimer, (Year 1): Dr. D. McDougall Memorial Scholarship. Outstanding merit in Fundamentals of Pharmaceutics (PHRM1300).

Antonio Sacco and Amanda Wallack, (Year 1): Procurity Pharmacy Services Inc. Award. Outstanding merit (great aptitude) in Skills Lab I (PHRM1100). TWO AWARDS are granted. Obtained grade no less than B+ in course; achieved minimum cumulative GPA of 3.5.

Morgan Albisser & Ryan Kusiak, (Year 2): Procurity Pharmacy Services Inc. Award. Outstanding merit in Skills Lab II (PHRM2100). TWO AWARDS are granted. Obtained grade no less than B+ in course; achieved minimum cumulative GPA of 3.5.

Heather Bourns, (Year 2): Clinical Pharmacy I Award of Excellence. Changed to Petrasko Award of Excellence for Clinical Pharmacy 1. For a student who has completed second year of the B.Sc. in Pharmacy with high academic standing and shown outstanding merit in Clinical Pharmacy I.

Heather Bourns, (Year 2): Bletcher Memorial Scholarship. High standing in second year pharmacy.

Heather Bourns, (Year 2): Dr. A.W. Hogg Undergraduate Scholarship. Highest standing in the Faculty of Pharmacy.

Ashley Ewasiuk, (Year 2): William G. Eamer/Manitoba Pharmaceutical Association Scholarship. Academic excellence and demonstrated social responsibility and personal initiative through active participation in stu-
Students

Undergraduate Student Awards ... cont.

dent government or other student community service. FOUR AWARDS are granted.


Ashley Ewasiuk, (Year 2): Joseph & Sylvia Lavitt Award in Pharmacy. For a student enrolled full-time in the third year of the B.Sc. Pharmacy and in good academic standing.

Ashley Ewasiuk, (Year 2): The Doreen Ash Memorial Prize (student nominated). For a student active in available sports programs, social programs and student activities of the faculty with at least one year of Pharmacy.

Heidi Marschall, (Year 2): Sanofi-Aventis Award in Law & Ethics. Highest academic standing in the jurisprudence section of PSL-2 PHRM2100.

Heidi Marschall, (Year 2): Stewart G. Wilcox Award. Completion of the second year of the program in the Faculty of Pharmacy with high academic standing and achieving the highest standing in the course PHRM2100: Jurisprudence Section.


Corina Martens, (Year 2): Mrs. Ethel Roberts Memorial Prize. Outstanding merit in second year pharmacy. NOT TENABLE with other awards.


Adriana Muc, (Year 2): Donald J. Forsyth Memorial Scholarship. Outstanding merit in second year pharmacy.


Jaden Brandt, (Year 3): The Mike Kupfer Memorial Award (student nominated). Participated in student activities; demonstrated high degree of empathy of fellow students.

Magkie Cheung & Stephen Lewis, (Year 3): Procurity Pharmacy Services Inc. Award. Outstanding merit in Skills Lab III (PHRM3100). TWO AWARDS are granted. Obtained grade no less than B+ in course; achieved minimum cumulative GPA of 3.5.
Undergraduate Student Awards ... cont.

Magkie Cheung, (Year 3): Procurity Pharmacy Services Inc. Award. Outstanding merit in Skills Lab III (PHRM3100). TWO AWARDS are granted. Obtained grade no less than B+ in course; achieved minimum cumulative GPA of 3.5.

Jennifer Dannefaer, (Year 3): Novopharm Ltd. Scholarship in Medicinal Chemistry. Highest aggregate standing in first, second, and third year medicinal chemistry. Given along with Flexon Silver Medal (same criteria.)

Kaley Kawchuk, (Year 3): Isbister Scholarship in Pharmacy. Highest standing in any year (first, second, third.)

Stephen Lewis, (Year 3): Harry Singer Memorial Medal. High academic standing and demonstrated outstanding merit in the second & third year skills lab in the patient counseling component; minimum cumulative GPA 3.5.


Stephen Lewis, (Year 3): Natural Medicines Comprehensive Database Prize in Pharmacy. High academic standing and demonstrated promise in improving patient care and an appreciation for scientific inquiry and an evidence-based approach to evaluating natural medicines.

Justine Manulak, (Year 3): Professional Development Week Award. For a student who has demonstrated involvement in student-related activities in the Faculty, professional pharmaceutical organizations, and/or volunteer activities. Given to a second or third year student who is in good standing in the faculty of Pharmacy.

Jordan Nash, (Year 3): William G. Eamer/Manitoba Pharmaceutical Association Scholarship. Academic excellence and demonstrated social responsibility and personal initiative through active participation in student government or other student community service. FOUR AWARDS are granted.


Lesley Worsnop, (Year 3): Novopharm Ltd. Award in Biopharmaceutics/Pharmacokinetics. Highest aggregate standing in Biopharmaceutics (2270): Pharmacokinetics (2280) & Clinical Pharmacokinetics (3500.)

Lesley Worsnop, (Year 3): Sheppy I. Adler Memorial Scholarship. Best major project (essay, oral presenta-
Students

Undergraduate Student Awards ... cont.

Lesley Worsnop, (Year 3): Flexon Silver Medal. Highest aggregate standing in Medicinal Chemistry courses (same criteria for Novopharm Med Chem Award #22409.)

Lesley Worsnop, (Year 3): Dr. Roman (Roy) Bilous Scholarship. High academic standing for a FT student completing third year who has achieved high academic standing in the Medicinal Chemistry subject stream: PHRM2220 & PHRM3220.

Not Available, (Year 3): Canadian Pharmacists Association Centennial Award. Student Council nominates a third year student for the award, who promotes the faculty and profession, is actively involved with student council and other local/provincial associations, who participates in student athletics and other extracurricular activities, is in good academic standing, and is a CPhA student Member.

Krista Brown, (Year 4): Audrey Koz Memorial Prize. Outstanding merit in Clinical Pharmacy 3 (PHRM 4310) and SPEP-4 (PHRM4700.)

Jordan Ducheminsky, (Year 4): Pat Gorman Memorial Award (student nominated). Satisfactory academic record and satisfactory athletic participation record.

Karin Ens, (Year 4): David Stern Memorial Scholarship. Highest standing Pharmacy Practice Management (PHRM4230) and who plans to pursue a career in retail pharmacy. (96.7%.)

Karin Ens, (Year 4): Dr. D. McDougall Memorial Trophy (student nominated). Good scholastic standing throughout undergraduate years, citizenship and dedication.

Karin Ens, (Year 4). Pharmacy Class 2009 – Passion & Commitment Award, Successfully completed the requirements for the BSc. Pharmacy program with a minimum degree grade point average of 3.0, & a strong record of community service within the broader community, the Faculty of Pharmacy, and/or the University.


Caitlin Hacault, (Year 4): Dr. J.R. Murray Scholarship. After completing Manitoba Grade 12 proceeded to 1st
Undergraduate Student Awards ... cont.

Undergraduate Student Awards ... cont.

year Science in a Manitoba University. Minimum GPA 3.5. High standing in all years of the program. Has participated in extra-curricular activities.

Karli Jones, (Year 4): Manitoba Branch – Canadian Society of Hospital Pharmacists Award. Outstanding merit in Clinical Pharmacy 3 (PHRM4310) and SPEP-4 (PHRM4700.)

Kaley Kawchuk, (Year 4): University Gold Medal. Highest standing in Pharmacy. Based on degree GPA.

Kaley Kawchuk, (Year 4): MPhA Gold Medal in fourth year Pharmacy. Highest GPA second, third, fourth year (pharmacy courses only.)

Kaley Kawchuk, (Year 4): Abraham Schwartz Prize. Highest standing in B.Sc. (Pharm.)


Kaley Kawchuk & Arleigh Maddison, (Year 4): Procurity Pharmacy Services Ltd. Award (2). Highest standing in PHRM4230 Pharmacy Practice Management.

Samantha Kendall, (Year 4): Langley Jones Leadership Award (student nominated). For aptitude for community pharmacy and consumer health care products and leadership qualities.

Arleigh Maddison, (Year 4): Frank Edick Memorial Prize. Highest standing in Clinical Pharmacy 3 (PHRM4310.)

Arleigh Maddison, (Year 4): MPhA Silver Medal. Second highest GPA second, third, fourth year pharmacy courses only.

Christopher Sochan, (Year 4): MPhA President’s Prize. Outstanding merit in fourth year pharmacy courses.

Christopher Sochan, (Year 4): Halsey A. Park Memorial Prize. For outstanding merit in the aggregate of clinical pharmacy (PHRM 3310 & PHRM 4310); active participation in the life of the University and a promise of advancing the profession.

NOT OFFERED, (Year 4): Manitoba Lung Association Award. Providing a student in their fourth year of the Undergraduate Pharmacy Program the opportunity to take the ASTHMATrec Program, who has obtained a sufficiently high academic standing & a minimum of 3.0 in PHRM 2310, 3310 & 4310.

NOT OFFERED, (Year 4): McKesson Canada Scholarship. Outstanding merit in the graduating year.

NOT OFFERED, (Year 4): McKesson Canada Scholarship. Highest standing in the graduating year.
Elective Spotlight

My Days in The Gambia - submitted by Kayleigh Gordon

Near the end of my third year in pharmacy, I was asked to choose my fourth year elective project. It was a last minute opportunity to travel to The Gambia, West Africa with the non-profit Christian Volunteer Mission (CVM) that really caught my attention.

I travelled to The Gambia for six weeks in November and December 2011 with a fellow pharmacy student to carry out pharmacy assistant training. Our preceptor, Jen Dyck, a pharmacist at the Health Sciences Centre, had worked closely with CVM and travelled to The Gambia on previous trips carrying out work at the Royal Victoria Teaching Hospital.

Our task in The Gambia was to give lectures to pharmacy assistant students working at the Royal Victoria Teaching Hospital. Our lectures were designed to improve knowledge and counseling skills on topics within the pharmacy assistant’s curriculum (hypertension, diabetes, asthma, etc.) as well as a range of supplementary topics.

On a regular day, we would work with our students in the hospital to build relationships and gain a general understanding of how their drug distribution system operated. At first, teaching was overwhelming, but the students were great and eager to learn. At the end of each class we would ask them to write down any questions they had about the lecture. It warmed my heart that in addition to their questions, many students used the opportunity to express gratitude for our lectures. This is one of my fondest memories from my time in The Gambia. It brings a smile to my face today when I think back to my students.

Apart from my teaching experience, exploring The Gambia and learning about its people and culture was incredibly rewarding. A great example of how it broadened my perspective came at dinner time. In most of Africa, dining is a communal affair. We would eat with our hands and share from one giant bowl. I had to be careful to only use my right hand, because in Muslim culture, the left hand deals with uncleanly matters, and to eat communally with it is a great insult.

Gaining this opportunity to explore and immerse myself in another culture is something which I will never forget. I hope to have the good graces to experience it again.
MPhA awards recognize U of M grads

At the 2012 Manitoba Society of Pharmacists and Manitoba Pharmaceutical Association (MPhA) Awards Banquet on April 21 (part of the annual Manitoba Pharmacy Conference) 11 University of Manitoba graduates were honoured for their service to the profession. The Faculty of Pharmacy congratulates all the winners on their accomplishments.

Pharmacist of the Year: Dinah Santos

Dinah graduated from the University of Manitoba with a B.Sc. (Pharm.) in 1993. Since then, she has worked for Canada Safeway in various capacities including staff pharmacist, assistant manager and manager of various stores in Winnipeg. She is currently a clinical pharmacist – a new role at Safeway. Dinah is also a resource for staff at other Safeway pharmacies. She works closely with Health Care Consultants to train pharmacists, pharmacy students and Diabetes Meter Trained Technicians.

Outside the pharmacy, Dinah gives back to the community through her work with the Youville Centre. The centre provides a place where individuals and families can work on their health concerns with health professionals. In 2000, Dinah became a Certified Diabetes Educator and is involved in the planning and implementation of Living Well: A Health Information Series for Persons at Risk of Living with Diabetes, Type 2 (Primary and Secondary Prevention) at the Youville Centre.

Dinah has received numerous awards including: Outstanding Achievement award from Canada Safeway 2002, CPhA Pharmacist Diabetes Educator Award 2004 and the Bonnie Schultz Memorial Award for Practice Excellence 2005. She also received the Certificate of Achievement in Life Long Learning in Pharmacy from the MPhA in 2005, 2006, and 2008. Dinah and her husband Brock have three beautiful children, Lucas and twins Jack and Annalise.

The Pharmacist of the Year award is given annually to a Manitoba Pharmacist who, in the opinion of his or her peers, has made a significant contribution to the profession during his or her career.

Bonnie Schultz Memorial Award for Practice Excellence: Barbara Bromilow

Barbara earned her B.Sc. (Pharm.) from the University of Manitoba in 1969. She received this award for
MPHA awards recognize U of M grads ... cont.

demonstrating excellence in optimizing patient care, serving as a role model, demonstrating superior communication skills and displaying compassion, empathy and concern. Barbara is renowned for her dedication to patient care and counselling, and is known to go the extra mile to ensure her patients receive the optimal benefit of their medication therapy and treatment plan.

**Pfizer Consumer Healthcare Bowl of Hygeia: Charles E. McClure**

Charles graduated from the University of Manitoba with a B.Sc. (Pharm.) in 1972. He received this honour in recognition of his outstanding community service in Stonewall, MB, where he actively served his community on various boards, executives and as a sport coach and Beaver/Cub Scout leader. He continues to be involved, serving on the Board of Directors of the South Interlake Seniors Resource Council and on the Executive of Southwest District Palliative Care Inc.

**Patient Safety Award: Cenzina Cligiuri**

Cenzina graduated from the University of Manitoba in 1986 with a B.Sc. (Pharm.) She received this honour in recognition of her significant and lasting contributions to improving patient safety and health care quality, including It’s Safe to Ask – Initial Groundwork With the Manitoba Institute for Patient Safety, a program developed to encourage patients and their families to request the necessary information needed to empower them to become active participants in their own care.

**Bristol-Myers Squibb Past President Award: Shawn Bugden**

Shawn earned his B.Sc. (Pharm.) from the University of Manitoba in 1991 and is now a member of the Faculty of Pharmacy. He received this award as the exiting president of the MPHA. Shawn was first elected to the MPHA council in 2006 and became President of the MPHA in 2010.

**2012 Young Leader Awards**

These awards are given to new pharmacists and pharmacy students in their final year who have made a professional impact in their community or amongst their peers. This year’s recipients are:

- Chris Tsang [BSc(Pharm)/08]
- Michael Prout [BSc(Pharm)/12]
- Farah Rashid [BSc(Pharm)/11]
- Thanh Nguyen [BSc(Pharm)/11]
- Harvey Noel [BSc(Pharm)/12]
- Laura Delavau [BSc(Pharm)/12]
Distinguished Alumni Award established

Dr. Neal Davies, Dean of Pharmacy, is pleased to announce the establishment of the Faculty of Pharmacy Pillars of the Profession Outstanding Alumni Award.

The award recognizes our most outstanding alumni. The community is encouraged to send nominations via email to pharmacy@umanitoba.ca. The inaugural award will be presented at the faculty’s annual White Coat and Student Recognition Ceremony in autumn 2012.

The deadline for nominations each year will be April 1. Nominations received after this date will be considered the following year.

Each nominee must be a graduate of the University of Manitoba Faculty of Pharmacy, who has served the profession or community in such a way as to have distinguished themselves and directly or indirectly brought distinction and honour to the faculty.

The inaugural Faculty of Pharmacy Pillars of the Profession Outstanding Alumni Award was presented during the 2012 Homecoming festivities to Dr. Wayne K. Anderson, B.Sc. (Pharm) 1962, M.Sc. (Pharmaceutical Chemistry) 1964.
With a generous contribution of $100,000, Cecile Bellec [BEd/67] has established the Rudy Goldman Bursary at the University of Manitoba, Faculty of Pharmacy. The bursary was created in memory of pharmacy graduate, Rudy Goldman [DipPharm/37].

Rudy and Cecile were long time best friends and partners, and it was important to Cecile to establish a lasting legacy in his honour. “I loved Rudy and I wanted him remembered by setting up a bursary in his memory,” Cecile says.

Cecile’s generosity will make a major impact upon pharmacy students, who are some of the highest calibre pupils at the university. The Rudy Goldman Bursary will give promising students the ability to pursue their dreams of joining the pharmacy profession, regardless of their financial circumstances. Students who receive bursaries report that they are better able to concentrate on their studies because worries about the financial burden of a quality postsecondary education have been eased.

The recipients of this bursary will also have the inspiration of knowing that they are following the path of an outstanding pharmacist. Rudy owned and operated two pharmacies, working into his 90’s: “Rudy’s Pharmacy” at the corner of Sherbrook and Ellice Avenue and “Westwood Pharmacy” at the corner of Logan Avenue and Keewatin Street.

They were known to be, “more than places that sold medicine,” says Cecile. “They had long lunch counters where people could meet, talk and always find a kind and understanding listener. Rudy’s pharmacies dispensed lifelong friendships.”

In addition to being very highly regarded as a sympathetic and caring pharmacist, Rudy was admired for his personal qualities. He lived his life to the fullest, with vitality and warmth that were infectious to those around him.

“He was very kind and his charitable nature inspired me to make this gift,” says Cecile. “He would be so pleased to learn of this award in his name.”
Endowment Fund

Endowment Committee

The Pharmacy Endowment Committee met on October 31, 2011 to consider the endowment requests that were submitted from Pharmacy faculty, staff and students.

Members of the committee consist of the Dean (as chair), four members from the academic staff, a member from MPhA, an undergraduate student co-stick, one graduate student, the technical support manager, and a senior support staff member. The current members are: Neal Davies (chair), Nancy Kleiman, Keith Simons, Frank Burczynski, Mike Namaka, Ron Guse (MPhA), Scott Andresen (third year co-stick), Parvez Vora (graduate student), Pat Kopp and Jordana Hughes (recorder).

This fund was established in 1986. Contributions are derived from various donors and on an annual basis from the undergraduate students. The undergraduate students pay $110 through their student fee assessment. Every three years, the students have a referendum to vote on the contribution. The last referendum was held in September 2010, where students voted to each contribute $110 per year for a three year term beginning in September 2011. The money is allocated as follows: 45% to the Endowment fund, 45% to the Student Initiative fund and 10% to the WISH Clinic.

<table>
<thead>
<tr>
<th>REQUEST</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Student Funding</td>
<td>$15,000</td>
</tr>
<tr>
<td>Graduate Travel Awards</td>
<td>$5,000</td>
</tr>
<tr>
<td>Fluorescence Microscope</td>
<td>$26,252</td>
</tr>
<tr>
<td><strong>TOTAL REQUESTED</strong></td>
<td><strong>$46,252.00</strong></td>
</tr>
<tr>
<td>Balance remaining of endowment funds</td>
<td>$717.13</td>
</tr>
</tbody>
</table>

Endowment Funds Available: $46,969.13

Catastrophic Instrument Fund and the Research and Support Fund

Catastrophic Instrument Fund Allocation of Funds Procedure

Preamble

Subject to review at the annual Endowment Meeting, funds are normally allocated to the Pharmacy Catastrophic Instrument Fund, ($5,000).
Endowment Fund ... cont.

The Faculty owns various pieces of equipment ranging in cost from a few hundred dollars to thousands of dollars. This equipment is used to deliver the undergraduate and graduate educational programs and research. In the event the equipment breaks down and is not repaired or replaced in a timely fashion, the delivery of the programs and/or research could potentially be jeopardized. To replace or repair the equipment on short notice could prove to be financially difficult if not impossible for operating or research funds to support.

**Purpose / Criteria**

The primary purpose of this fund is to provide funds to repair or replace equipment used for the undergraduate program, graduate student program, or Faculty research in the event of a catastrophe. A catastrophe is defined as a situation where the delivery of the undergraduate program, graduate programs, or critical research would be jeopardized if the equipment is not repaired or replaced in a timely fashion. Replacement will only be considered in the event that repairing the equipment is not viable (e.g. cannot acquire replacement parts) or where purchasing a replacement is considered to be more appropriate than making multiple repairs to an old or dysfunctional piece of equipment. The equipment must also be considered to be “essential” to qualify for these funds.

The Pharmacy Catastrophic Instrument Fund is not intended to be used to purchase new equipment not previously available in the Faculty. It is not meant to be a “funding agency” for new equipment purchases. The fund should also not be used to purchase service contracts. The fund is not meant to be used for small repairs to instruments (under $1000.00) that is otherwise the responsibility of researchers to maintain.

The priority for use of the funds includes the following:

Repair or replacement of:

1. undergraduate and graduate student instruments (e.g. undergraduate labs, instruments needed for undergraduate and graduate student research)
2. faculty acquired multi-user Instruments
3. equipment purchased on individual grants but multi-user instruments
4. equipment purchased on individual grants and primarily an individual user instrument

**Process**
Endowment Fund ... cont.

All requests for funding from the Pharmacy Catastrophic Instrument Fund should be made in writing to the Faculty Management Committee on an ad hoc basis. The written request should clearly describe justification for the repair / replacement of the equipment and a detailed estimate (official quotes) of the associated costs. Normally a minimum balance of $30,000 should remain in the fund in order to provide enough funds in the event of a catastrophe. All expenditures must be approved by the Faculty Management Committee.

Pharmacy Research and Support Fund Advisory Committee Terms of Reference

Purpose

To allocate the Faculty of Pharmacy’s Research and Support funds.

Membership

The Committee shall consist of five members:

- The Associate Dean (Research) as chair (non-voting)
- Two members from the Academic Staff
- Chair of Graduate Studies
- Support staff as secretary (non-voting)
- Current incumbents:
  - Yuewen Gong (chair)
  - Neal Davies
  - Chris Louizos
  - Hope Anderson
  - Emmanuel Ho
- Support staff member

The Dean will appoint one member as chair. The chair may vote only in the case of an equality of votes.

Function
1. On receipt of the funds available, the chair shall send out a call for submissions to the Committee simultaneously with the Endowment Fund call for submissions.

2. The chair shall report on the balance of these funds

Meetings

The Committee shall meet as required to:

1. develop and maintain procedures for soliciting properly documented proposals and activities to be funded;

2. consider applications from academic staff for proposals for purchasing equipment, additional student support and small project support.

Decisions are made by a simple majority.

This equipment is used to deliver the undergraduate and graduate educational programs and research. In the event the equipment breaks down and is not repaired or replaced in a timely fashion, the delivery of the programs and/or research could potentially be jeopardized. To replace or repair the equipment on short notice could prove to be financially difficult if not impossible for operating or research funds to support.
## Endowment Fund  
... cont.

<table>
<thead>
<tr>
<th></th>
<th>Funding provided</th>
<th>Amount Spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Balance</td>
<td>$ 28,102</td>
<td></td>
</tr>
<tr>
<td>2004-05</td>
<td>$ 5,000</td>
<td>-$ 2,252</td>
</tr>
<tr>
<td>2005-06</td>
<td>$ 5,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>2006-07</td>
<td>$ 5,000</td>
<td>-$ 1,800</td>
</tr>
<tr>
<td>2007-08</td>
<td>$ 5,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>2008-09</td>
<td>$ 5,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>2009-10</td>
<td>$ 5,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>2010-11</td>
<td>$ 5,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>2011-12</td>
<td>$ 5,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Sub-total</td>
<td>$ 65,775</td>
<td></td>
</tr>
<tr>
<td>Transfer to the Research and Support Fund</td>
<td>(35,775)</td>
<td></td>
</tr>
<tr>
<td>Dec, 2012</td>
<td>Tablet Press</td>
<td>(5,320)</td>
</tr>
<tr>
<td><strong>Funds available</strong></td>
<td></td>
<td>$ 24,680</td>
</tr>
</tbody>
</table>

## Research and Support Fund Spending

<table>
<thead>
<tr>
<th>Fund</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds Available</td>
<td>$ 35,3775</td>
</tr>
<tr>
<td>Cryostat (put in the HPLC room (328)</td>
<td>(27,564)</td>
</tr>
<tr>
<td>Biosafety Cabinet (Sheryl Zelenitsky/Harris Iacovides lab)</td>
<td>(8,037)</td>
</tr>
</tbody>
</table>

| Funds Available | $ 174 |
Faculty of Pharmacy, Graduate Studies Committee:

Dr. Hope Anderson, Chair
Dr. Shawn Bugden
Dr. Frank Burczynski
Dr. Christine Davis
Dr. Yuewen Gong
Dr. Brian Hasinoff
Mr. Daryl Fediuk, graduate student representative
Ms. Lisa Zhang, administrative support

1. OVERVIEW OF FACULTY OF PHARMACY GRADUATE ACTIVITIES FOR 2011-2012

<table>
<thead>
<tr>
<th>Number of continuing graduate students, as of August, 2012</th>
<th>M.Sc.</th>
<th>Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of incoming graduate students</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Total number of graduate students</td>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>

i. Summary of Graduate Students, as of June 1, 2012

<table>
<thead>
<tr>
<th>Name</th>
<th>Program</th>
<th>Supervisor</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ms. Crystal Acosta</td>
<td>M.Sc.</td>
<td>Dr. Mike Namaka</td>
<td>September 2011</td>
</tr>
<tr>
<td>2. Mr. Kevin Hamilton</td>
<td>M.Sc.</td>
<td>Dr. Christine Davis</td>
<td>September 2011</td>
</tr>
<tr>
<td>3. Ms. Sarita Jha</td>
<td>M.Sc.</td>
<td>Dr. Silvia Alessi-Severini</td>
<td>July 2011</td>
</tr>
<tr>
<td>4. Mr. Ryan Lillico</td>
<td>M.Sc.</td>
<td>Dr. Lean Chee</td>
<td>May 2012</td>
</tr>
<tr>
<td>5. Ms. Stephanie Martinez</td>
<td>Ph.D.</td>
<td>Dr. Neal Davies</td>
<td>January 2012</td>
</tr>
<tr>
<td>6. Dr. Casey Sayre</td>
<td>Ph.D.</td>
<td>Dr. Neal Davies</td>
<td>September 2011</td>
</tr>
<tr>
<td>7. Ms. Siyan Wang</td>
<td>M.Sc.</td>
<td>Dr. Lean Chee</td>
<td>May 2012</td>
</tr>
<tr>
<td>8. Ms. Sidi Yang</td>
<td>M.Sc.</td>
<td>Dr. Emmanuel Ho</td>
<td>September 2011</td>
</tr>
</tbody>
</table>
### iii. List of Current Master Students, as of June 1, 2012

<table>
<thead>
<tr>
<th>Name</th>
<th>Supervisor</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Crystal Acosta</td>
<td>Dr. Mike Namaka</td>
<td>September 2011</td>
</tr>
<tr>
<td>Ms. Bolanle Akinwumi</td>
<td>Dr. Alan McIntosh</td>
<td>September 2010</td>
</tr>
<tr>
<td>Ms. Basma Aloud</td>
<td>Dr. Hope Anderson</td>
<td>September 2010</td>
</tr>
<tr>
<td>Ms. Samaa Alrushaid</td>
<td>Dr. Lean Chee</td>
<td>January 2010</td>
</tr>
<tr>
<td>Mr. Kevin Hamilton</td>
<td>Dr. Christine Davis</td>
<td>September 2011</td>
</tr>
<tr>
<td>Ms. Sarita Jha</td>
<td>Dr. Silvia Alessi-Severini</td>
<td>July 2011</td>
</tr>
<tr>
<td>Ms. Weisi Kong</td>
<td>Dr. Yuewen Gong</td>
<td>September 2009</td>
</tr>
<tr>
<td>Mr. Ryan Lillico</td>
<td>Dr. Lean Chee</td>
<td>May 2012</td>
</tr>
<tr>
<td>Ms. Yan Lu</td>
<td>Dr. Hope Anderson</td>
<td>September 2010</td>
</tr>
<tr>
<td>Ms. Siyan Wang</td>
<td>Dr. Lean Chee</td>
<td>May 2012</td>
</tr>
<tr>
<td>Ms. Sidi Yang</td>
<td>Dr. Emmanuel Ho</td>
<td>September 2011</td>
</tr>
</tbody>
</table>

### iv. List of Current Ph.D. Students, as of June 1, 2012

<table>
<thead>
<tr>
<th>Name</th>
<th>Supervisor</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Yufei Chen</td>
<td>Dr. Emmanuel Ho</td>
<td>May 2011</td>
</tr>
<tr>
<td>Ms. Stephanie Martinez</td>
<td>Dr. Neal Davies</td>
<td>January 2012</td>
</tr>
<tr>
<td>Mr. Ousama Rachid</td>
<td>Dr. Keith Simons</td>
<td>January 2007</td>
</tr>
<tr>
<td>Mr. Casey Sayre</td>
<td>Dr. Neal Davies</td>
<td>September 2011</td>
</tr>
<tr>
<td>Ms. Dana Turcotte</td>
<td>Dr. Mike Namaka</td>
<td>May 2007</td>
</tr>
<tr>
<td>Ms. Tao Wang</td>
<td>Dr. Xiaochen Gu</td>
<td>January 2005</td>
</tr>
<tr>
<td>Mr. Wenjun Zhu</td>
<td>Dr. Mike Namaka</td>
<td>February 2005</td>
</tr>
</tbody>
</table>
2. FACULTY OF PHARMACY GRADUATE ACHIEVEMENTS FOR 2011-2012

**i. Graduates**

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Examining Committee</th>
<th>Oral Defence</th>
<th>Graduation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mr. Yufei Chen</td>
<td>M.Sc.</td>
<td>Dr. Frank Burczynski¹            Dr. Yuewen Gong² Dr. Gerald Y. Minuk³</td>
<td>March 13, 2012</td>
<td>May 2012</td>
</tr>
<tr>
<td>2 Mr. Daryl Fediuk</td>
<td>Ph.D.</td>
<td>Dr. Xiaochen Gu¹                   Dr. Mike Namaka² Dr. Fiona Parkinson³ Dr. Keith Simons² Dr. Jagdish Singh⁴</td>
<td>June 7, 2012</td>
<td>October 2012</td>
</tr>
<tr>
<td>3 Mr. Hongtao Li</td>
<td>Ph.D.</td>
<td>Dr. Xiaochen Gu¹                   Dr. David Collins² Dr. Fiona Parkinson³ Dr. Keith Simons² Dr. Shirley Wu⁴</td>
<td>June 5, 2012</td>
<td>October 2012</td>
</tr>
<tr>
<td>4 Ms. Yining Li</td>
<td>M.Sc.</td>
<td>Dr. Yuewen Gong¹                    Dr. Brian Hasinoff² Dr. Karmin O³</td>
<td>March 21, 2012</td>
<td>May 2012</td>
</tr>
<tr>
<td>5 Ms. Michelle Nelson</td>
<td>Ph.D.</td>
<td>Dr. Ruby Grymonpre¹                Dr. Mark Torchì³ Dr. Jennifer Mactavish³ Dr. Hassan Soubhi⁴</td>
<td>December 19, 2011</td>
<td>February 2012</td>
</tr>
<tr>
<td>6 Mr. Parvez Vora</td>
<td>Ph.D.</td>
<td>Dr. Mike Namaka¹                   Dr. Silvia Alessi-Severini² Dr. Christine Davis² Dr. David Eisenstat³ Dr. Tammy Ivanco³ Dr. Timothy Kennedy⁴</td>
<td>June 11, 2012</td>
<td>October 2012</td>
</tr>
</tbody>
</table>

¹Advisor; ²Internal Committee Member; ³External Committee Member (University of Manitoba); ⁴External Committee Member (non-University of Manitoba)
2. FACULTY OF PHARMACY GRADUATE ACHIEVEMENTS FOR 2010-2011

**ii. Candidacy Exams**

<table>
<thead>
<tr>
<th>Name</th>
<th>Supervisor</th>
<th>Date of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Dana Turcotte</td>
<td>Dr. Mike Namaka</td>
<td>March 29, 2012</td>
</tr>
</tbody>
</table>

**iii. Awards/Scholarships**

<table>
<thead>
<tr>
<th>Award/Scholarship</th>
<th>Recipient(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2012 Lesley F. Buggey Graduate Scholarship</td>
<td>Bolanle Akinwumi</td>
</tr>
<tr>
<td>2011-2012 MPhA/William G. Eamer Graduate Scholarship</td>
<td>Yufei Chen</td>
</tr>
<tr>
<td>2011-2012 Pfizer Canada Inc. Centennial Pharmacy Research Award</td>
<td>Casey Sayre</td>
</tr>
<tr>
<td>Manitoba Health Research Council Graduate Studentship</td>
<td>Yining Li</td>
</tr>
<tr>
<td>University of Manitoba Graduate Fellowship</td>
<td>Yufei Chen</td>
</tr>
<tr>
<td>University of Manitoba Faculty of Graduate Studies Special Awards</td>
<td>Bolanle Akinwumi</td>
</tr>
<tr>
<td>University of Manitoba Faculty of Graduate Studies International Graduate Student Entrance Scholarship</td>
<td>Sarita Jha, Casey Sayre, Sidi Yang</td>
</tr>
</tbody>
</table>
iv. Publications – Papers published or in press


vi. Presentations; Conference Participation


Martinez SE, Sayre CL, Davies NM. Assay development, pre-clinical pharmacokinetics, and pharmacodyna-


3. PHARMACY GRADUATE STUDIES COMMITTEE DECISIONS AND UPDATES

   i. On review of applications to the Pharmacy graduate program:

   The Faculty of Pharmacy and the Faculty of Graduate Studies require a completed M.Sc. Selection Committee Form and Ph.D. Selection Committee Form, respectively, with each recommendation of acceptance on applications. Therefore, if a faculty member intends to accept a M.Sc. or Ph.D. applicant, the Pharmacy Graduate Studies Committee will review the following:

   a. Student application/qualifications.

   b. Advisor’s funding (financial picture) and ability to support at least two years of the incoming student’s stipend and operating costs. The potential advisor must provide a written statement to the Pharmacy Graduate Studies Committee, and the Dean, indicating (i) that he/she will provide the student with a stipend at a level equivalent to UMGF support for at least two years, and (ii) the source of this financial support. The requirement of stipend provision by the advisor may be waived on a case-by-case basis (for example, part-time graduate training during full-time employment): a Letter of Agreement (signed by both the advisor and the applicant) must be submitted to the Chair of the Pharmacy Graduate Studies Committee. Waiver of stipend is subject to approval by the Dean of Pharmacy.

   c. Expertise as an Advisor. Factors to be reviewed might include, for example, publications, grants, supervision of research personnel, track record as a graduate advisor.

   (Motion approved by the PGSC by email vote and carried on December 22, 2011.)
ii. On the MPhA/William G. Eamer Graduate Scholarship:

Mr. Eamer proposed that the terms of this award should be modified such that priority towards Masters vs. Ph.D. students will alternate each year. Revised terms were developed in consultation with Mr. Eamer and Mr. Guse, and are to be submitted to Senate by Faculty Manager, Ms. Janice Bailey (Motion approved at the PGSC Meeting on October 13, 2011.)

iii. On PGSC Graduate Student Representation:

The PGSC thanks Daryl Fediuk for his service on the PGSC. Ms. Stephanie Martinez (Advisor: Neal Davies) was nominated to serve on the PGSC. Stephanie accepted the nomination, and will serve effective July 1, 2012 for a 2-year term.
Research

Faculty of Pharmacy Research Report 2011-12

Personnel

Lisa Zhang is responsible for the administration of the research grant/contract funds. Researchers are reminded to submit all grant applications and other research information to Lisa. In addition, Lisa needs a copy of the FAAF to record the research and contract grants for the Faculty of Pharmacy. Lisa will also inform the researchers and graduate students of impending deadlines for submissions for scholarship and grant applications.

Research Funding

Researchers in the Faculty of Pharmacy have received the total funding of $1,143,779 for April 1, 2010 to March 31, 2011 for 11 research projects. The detailed information can be found below.

Anderson, Hope. ($357,491.00) Protective signaling by PPARs in cardiac hypertrophy. CIHR Operating.

Bugden, Shawn. (6,525.00) Cross sectional analysis of opioid use in Manitoba. University of Manitoba URGP.

Davies, Neal. ($50,000.00) In vitro and in vivo characterization of phycox in dogs with naturally occurring osteoarthritis. Contract.

Grymonpre, Ruby. ($25,000.00) Internation Research Network in IPE&P. CIHR.

Grymonpre, Ruby. ($24,487.00) Interprofessional collaboration: Impact on health human resources outcomes. CIHR.

Hasinoff, Brian. ($629,276.00) Targeting topoisomerase II. CIHR Operating.

Ho, Emmanuel. (28,000.00) Novel nanomedicine for the active targeting of lymphoid tissue. University of Manitoba Thorlakson.

Liu, Songyan. ($23,000.00) Identification of RALDH2 allelic variation by exome-wide DNA capture and next generation sequencing in patients with fetal alcohol syndrome. Manitoba Medical Service Foundation Operating.

Metge, Colleen; Raymond, Colette. ($100,000.00) PATHS equity for children: A program of research into what works to reduce the gap for Manitoba’s children. Heart and Stroke Foundation of Canada Program-
Faculty of Pharmacy Research Report... cont.

matic Grants in Health and Health Equity.

Raymond, Colette. ($1,900,000.00) PATHS equity for children: A program of research into what works to reduce the gap for Manitoba's children. CIHR.

Zelenitsky, Sheryl. ($20,500.00) LINEZOLID: Comparing MRSA monotherapies to combinations under standard and septic shock infection site conditions in an in vitro infection model. Contract.

CIHR Indirect Costs Funding

In 2011/2012, the Faculty of Pharmacy received $25,000 of indirect costs funding, which was used to support, research and grant account ($9,277), and lab assistant support and equipment facility maintenance ($15,723).

Shared Research Equipment

In 2011/2012, the Faculty of Pharmacy continued to support research in the faculty and purchased one 800C freezer, one cryostat and one Cellometer. These instruments have been used extensively by the researchers.

Post-Doctoral Fellows and Research Associates

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Post-Doctoral Fellow</th>
<th>Research Associate</th>
<th>Professional Associate</th>
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<tbody>
<tr>
<td>Dr. Brian Hasinoff</td>
<td>Dr. Arun Yadav</td>
<td>Dr. Xing Wu</td>
<td>Dr. Kim O'Hara</td>
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<tr>
<td>Dr. Hope Anderson</td>
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<tr>
<td>Dr. Mike Namaka</td>
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<td>Dr. Emma Frost</td>
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Undergraduate Summer Research Program

The undergraduate summer research program is instrumental in attracting pharmacy graduates to consider graduate studies as a part of their career choice. In 2011/2012, five pharmacy students participated in the undergraduate summer research program. The students and their advisors are listed in the table below.

Jordan Nash in the lab of Dr. Lean Chee in 2010/11 is the recipient of the 2012 GlaxoSmithKline National Summer Student Research Program Awards. Jordan Nash will present a poster and receive the award at the CSPS annual conference at Toronto in June 2012.
# Research

## Faculty of Pharmacy Research Report... cont.

<table>
<thead>
<tr>
<th>Student’s Name</th>
<th>Supervisor</th>
<th>Supported from</th>
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<tbody>
<tr>
<td>Mr. Jordan Nash</td>
<td>Dr. Sheryl Zelenitsky</td>
<td>CIHR Health Professional Research Awards</td>
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<tr>
<td></td>
<td>Dr. Harris Iacovides</td>
<td></td>
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<tr>
<td>Ms. Alicia Dash</td>
<td>Dr. Emmanuel Ho</td>
<td>Endowment</td>
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<tr>
<td>Mr. Nathan Baart</td>
<td>Dr. Emmanuel Ho</td>
<td>Endowment</td>
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<tr>
<td>Amelia MacDougall</td>
<td>Dr. Emmanuel Ho</td>
<td>Endowment</td>
</tr>
<tr>
<td>Ms. Lucy-Rose Vuong</td>
<td>Dr. Mike Namaka</td>
<td>Endowment</td>
</tr>
<tr>
<td>Ms. Heather McPhee</td>
<td>Dr. Mike Namaka</td>
<td>Endowment</td>
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</table>
Faculty Publications

Pharmacy researchers continue to be productive in their research programs. For 2011/2012, 116 peer-reviewed publications and book chapters, and approximately 99 conference abstracts and invited presentations have been published or in press by our Faculty. The publications, conference abstracts and presentations are listed in the following:


Faculty Publications ... cont.

2.585]


Li, Y, Shen, H, Burczynski, FJ, Gong, Y. Prospective review of bone morphogenetic protein-13 in liver diseases. Journal of Central South University (Medical Sciences) 37(1), 2012.

Fan J, Dai Q, Burczynski FJ, Minuk GY, Gong Y. The extent of extracellular signal-regulated kinases (ERsK) phosphorylation determines the sensitivity of hepatic stellate cells to staurosporine-induced apoptosis. Journal of Central South University (Medical Sciences) 37(1), 2012.


Thorling CA, Dancik Y, Hupple CW, Medley G, Liu X, Zvyagin AV, Robertson TA, Burczynski FJ, Roberts


Diezi T, Takemoto JK, Davies NM, Kwon GS. Pharmacokinetics and nephrotoxicity of amphotericin B-incorporated poly(ethylene glycol)-block-poly(N-hexyl stearate l-aspartamide) micelles. Journal of Pharma-
Faculty Publications ... cont.

cutaneous Sciences  2011; 100(6):2064-2070.


Faculty Publications ... cont.


Martinez SE, Sayre CL, Davies NM. Analysis of 3-Methoxypterostilbene in Biological Fluids by High-Performance Liquid Chromatography: Application to Pre-Clinical Pharmacokinetics Submitted to Biomedical Chromatography 2012 in press.


Grymonpre RE, van Ineveld C, Nelson M. Interprofessional clinical placements as a recruitment strategy in geriatric medicine: Controlled before and after survey of student perceptions. Human Resources for Health. 2012 (Paper submitted)


Nurhani Z, Suter E, Bainbridge L, Harrison L, Grymonpre RE, Achilles S. Engaging People and Strengthening Partnerships through an eCoP: The Western Canadian Interprofessional Health Collaborative Ex-
Faculty Publications ... cont.

experience. In: Technology Enabled Knowledge Translation Investigative Centre (TECKTIC) 2011 (Book contribution)


Wu X, Yalowich JC, Hasinoff BB. Elecsclomol (STA-4783) is a potent inhibitor of topoisomerase II. American Association for Cancer Research, 2012.


Wu X, Yalowich JC, Hasinoff BB. Cadmium is a catalytic inhibitor of DNA topoisomerase II. Journal of Inorganic Biochemistry 105: 833-838, 2011. [MOP-13748]


Metge CJ. Showing the way: Enhance the value of research findings. Research in Social & Administrative Pharmacy 2012;8(4): in press.


Research

Faculty Publications ... cont.


Fediuk DJ, Wang T, Chen Y, Parkinson FE, Namaka MP, Simons KJ, Burczynski FJ, Gu X. Tissue disposition
of the insect repellent DEET and the sunscreen oxybenzone following intravenous and topical administra-


**Namaka MP**, Frost EE. FINGOLIMOD: The First Oral Treatment for Multiple Sclerosis Pharmacy Practice June 2012: E2 (Non peer reviewed journal)


Francis AA, **Pierce GN**. An integrated approach to the mechanisms responsible for atherosclerotic plaque re-
Faculty Publications ... cont.


Faculty Publications ... cont.


Hall K, Raymond CB. Honcharik N, Woloschuk DMM. Organizational Restructuring of Regional Pharmacy Services to Enable a New Pharmacy Practice Model. Can J Hosp Pharm, 2011;64(6):451-456

Raymond CB, Wazny LD. Treatment of leg cramps in patients with chronic kidney disease receiving hemodialysis CANNT J 2011;21(3):19-23


Faculty Publications … cont.


Rachid OM, Simons FER, Rawas-Qalaji MA, Simons KJ. Dissolution Testing of Sublingual Tablets: A Novel
Faculty Publications ... cont.

In Vitro Method AAPS PharmSciTech 2011;12:544-52

Simons FER, Simons KJ. Histamine and H1-antihistamines: Celebrating a century of progress. J Allergy Clin Immunol 2011;128:1139-50


Woloschuk DMM, Raymond CB. Development and evaluation of a workplace-based preceptor training course for pharmacy practitioners. Can Pharm J [accepted for publication]


Woloschuk DMM, Raymond CB. Point-counterpoint [Pro]: Should a process be developed to recognize “pharmacy practice residency equivalency” for pharmacists with substantial clinical experience who have not completed a pharmacy practice residency? Can J Hosp. Pharm. 2011; 63(6): 454-5.


Faculty Conferences and Presentations

Moroz S, Alessi-Severini S. Use of methylphenidate formulations in an urban pediatric population. 3rd Canadian Pharmacy Education and Research Conference. Quebec City, QC. June 5-7, 2012. (Abstract)

Martens P, Caetano P, Chateau D, Alessi-Severini S. CNODES – A leading-edge approach to researching the post-marketing safety and effectiveness of Canadian pharmaceuticals. Community Health Colloquia, Faculty of Medicine, University of Manitoba. Winnipeg, MB. March 9, 2012. (invited presentation)


Aloud BM, O’Hara KA, Shao Z, Anderson HD. Effect of Conjugated Linoleic Acid on High Glucose-Induced Hypertrophy and Dysfunction of Cardiomyocytes. 3rd Canadian Pharmacy Education & Research Conference [Association of Faculties of Pharmacy of Canada]. Quebec City, QC. 2012. (Abstract)


LeMaistre JL, Sanders S, Stobart MJ, Anderson HD, Anderson CM. Astrocyte activation causes local cerebral vasodilation dependent on endogenous D-serine and NMDA receptor activity. Gordon Research
Research

Faculty Conferences and Presentations ... cont.


**Ariano R.** Drugs, Clots and Cardiac Thoughts! Canadian Council on Cardiovascular Nurses (CCCN) 
Manitoba branch conference. Winnipeg, MB. November 15, 2011. (Oral presentation) 
**Lessard-Friesen S**,

**Brink K.** Preceptor Development Workshop, Manitoba Pharmacy Conference. Winnipeg, MB. April 22, 2012. (Co-presentation)

**Bugden S.** OxNEO® therapeutic and policy issues. Community Based CPD Program, Faculty of Medicine, Continuing Professional Development. Northern Manitoba (TeleHealth). June 20, 2012. (Invited Presentation)

**Bugden S.** Sometimes less is better: drugs to use less often. Community Based CPD Program, Faculty of Medicine, Continuing Professional Development. Northern Manitoba (TeleHealth). June 20, 2012. (Invited Presentation)


Allen M, **Bugden S.** Knowledge to practice: a practical tool to enhance the presentation of evidence. Cochrane Canada 10th Annual Symposium, Health Evidence for All. Winnipeg, MB. May 9-10, 2012. (Invited Presentation)


**Bugden S.** OxNEO® therapeutic and policy issues. Therapeutics Day. Faculty of Medicine, Continuing Professional Development. Winnipeg, MB. May 11, 2012. (Invited Presentation)

**Bugden S.** Sometimes less is better: drugs to use less often. Faculty of Medicine, Continuing Professional Development. Winnipeg, MB. May 11, 2012. (Invited Presentation)
Faculty Conferences and Presentations ... cont.


Bugden S. Antipsychotics and dementia: part of the solution or part of the problem. Dementia Care 2012, Alzheimer Society of Manitoba. Winnipeg, MB. March 5-6, 2012. (Invited Presentation)


Bugden S. Clear thinking on opioids in chronic non-cancer pain. Fridays@Noon. Faculty of Medicine, Continuing Professional Development. Winnipeg, MB. September 16, 2012. (Invited Presentation)


Barry SL, Martinez SA, Davies NM, Bachelez A, Remsberg CM, Liu M. Synovial fluid bupivacaine concentrations in osteoarthritic canine stifles after single intra-articular injection. American College of
Faculty Conferences and Presentations ... cont.

Veterinary Surgeons Conference. Chicago, USA. November 3-5, 2011. (Abstract)


Vera Gonzáles S, Arenas Chávez S, Davies NM, Yáñez JA. Assessment of the anti-oxidant capacity, anti-carcinogenic activity, and identification of individual polyphenols by LC/MS in methanolic extracts of Minthostachys mollis (Muña), Mutisia acuminate (Chinchilcuma), Senecio sublutescen (Senecio), Acanthoxanthium spinosum (Spiny cocklebur) and Salix humboldtiana (Sauce rind). 43rd IUPAC World Chemistry Congress, 70th CQPR Annual; Conference and Exhibition. Puerto Rico. July 30-August 7, 2011. (Abstract)


Davies NM. Nanocarriers and Nanoconjugates for Optimized Delivery of Cancer Drugs. University of Alberta, Faculty of Medicine, Grand Rounds. April 18, 2012. (Invited lecture)
Faculty Conferences and Presentations ... cont.


Davies NM. Nanomedicine for Delivery of Chemotherapy. University of Hong Kong Department of Pharmacology and Pharmacy. April 27, 2012. (Invited lecture)

Fusee R. Let’s Talk About it - Erectile Dysfunction in Heart Failure. St Boniface Hospital Heart Failure Awareness Day. May 10-11.


Gong Y. What are the roles of bone morphogenetic proteins in the liver and liver disease? Hepatology research round, Faculty of Medicine, University of Manitoba. Winnipeg, MB. October 14, 2011. (Invited Speaker)

Gong Y. Mechanism of bone morphogenetic proteins in the liver. Hong Kong Baptist University. Hong Kong. June 16, 2011. (Invited Speaker)

Gong Y. From growth factors to understand the kidney and liver relationship in traditional Chinese medicine. The 1st Shanghai International Integrative Medicine Conference. Shanghai, China. April 22-25, 2011. (Invited Speaker)

Gong Y. Understanding of aging from the traditional Chinese medicine. The 28th Spring Symposium of the Centre on Aging of the University of Manitoba. Winnipeg, MB. May 2, 2011. (Invited Speaker)


Li Y, O K, Gong Y. Homocystein reduced bone morphogenetic protein-13 expression in rat liver. The 2nd Annual Canadian Pharmacy Education and Research Conference (CPERC). Winnipeg, MB. June 6-7, 2011.

Kong W, Gong Y. The role of bone morphogenetic proteins in D-galactosamine induced hepatic injury. The
Faculty Conferences and Presentations ... cont.

2nd Annual Canadian Pharmacy Education and Research Conference (CPERC). Winnipeg, MB. June 6-7, 2011.


Dean H, Grymonpre R, Rippin-Sisler C, Walus A. Interprofessional Education and Practice. Faculty of Medicine, University of Manitoba, Pediatric Grand Rounds. February 16, 2012.


Faculty Conferences and Presentations ... cont.


Hasinoff BB, Patel D, Wu X. Lapatinib in combination with doxorubicin is highly damaging to cardiac myocytes. American Association for Cancer Research. 2011. (Abstract no. 3576)

Wu X, Yalowich JC, Hasinoff BB. The anticancer kinase inhibitor dovitinib (TKI258) may have multiple modes of action because it also binds DNA and inhibits topoisomerase I and topoisomerase II. American Association for Cancer Research. 2011. (Abstract no. 2530)


Hasinoff BB, Patel D, Wu X. The dual targeted HER1/HER2 tyrosine kinase inhibitor lapatinib strongly potentiates the cardiac myocyte damaging effects of doxorubicin. 7th Meeting of the Oxidative Stress Consortium. 2012.

Ho E. Mucosal Drug and Gene Delivery: Barriers and Opportunities. Controlled Release Society, Young Scientist Workshop. Quebec City, QC. 2012. (Invited chair)

Ho E. How Close Are we to an HIV Vaccine? Mid-Canada Association of Analytical Communities. Winnipeg, MB. 2011. (Keynote speaker)
Faculty Conferences and Presentations ... cont.


Ho E. Intravaginal Rings as a Microbicide. Department of Immunology Seminar Series. Winnipeg, MB. 2011. (Invited speaker)


Lister D. High Grade Glioma - Complexities and Opportunities; Clinical Breakout Session. Presented at the National Oncology Pharmacy Symposium. Quebec City, QC. November 3-6, 2011. (Clinical presentation)


Faculty Conferences and Presentations ... cont.


Raymond CB. Careers in hospital pharmacy. WRHA Pharmacy summer student half day. Winnipeg, MB. August 12, 2011.


Raymond CB. Pharmaceuticals in Manitoba; Opportunities to optimize use Manitoba Centre for Health Policy. WRHA Day. Winnipeg, MB. June 15, 2011.


Mendoza L, Hiebert J, Weber R, Kruk TC, Severini A. Surveillance of Measles, Mumps and Rubella in Cana-
Faculty Conferences and Presentations ... cont.


Faculty Conferences and Presentations ... cont.


Sood AR. To TREAT or Not to TREAT: Making Sense of ESAs and Hgb Targets in CKD. CSHP 43rd Annual Professional Practice Conference. Toronto, ON. February 6, 2012. (Invited Presentation)


Research

Faculty Conferences and Presentations ... cont.


Hall KW, Raymond CB, Woloschuk DMM, Honcharik N. Organizational restructuring of regional pharmacy services to facilitate pharmacy practice model change. Canadian Society of Hospital Pharmacists 43rd Annual Professional Practice Conference. Toronto, ON. February 2012. (Scientific presentation)


Zelenitsky S, Ariano R, Zhanel G. Vancomycin (Van), Ceftaroline (Cef), Daptomycin (Dap) and Linezolid (Lin) Pharmacodynamics (PDs) against Methicillin-Resistant Staphylococcus aureus (MRSA) with Van MICs of 2 mg/L. 51st Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Chicago, USA. September 2011. (Abstract)

Alkurdi N, Kumar A, Ariano R, Zelenitsky S. Investigating Ceftobiprole (Cef) Alone and in Combination with Daptomycin (Dap), Linezolid (Lin) and Vancomycin (Van) against Methicillin-Resistant Staphylococcus aureus (MRSA) in an In Vitro Infection Model. 51st Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Chicago, USA. September 2011. (Abstract)