

CAPSIL - JACEIP

LE JOURNAL DE L'ASSOCIATION CANADIENNE DES ETUDIANTS
ET DES INTERNES EN PHARMACIE

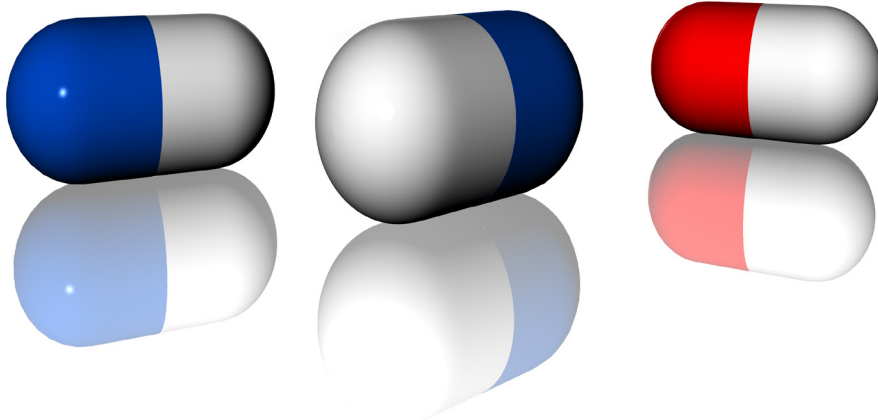


2010: New Decade, New Opportunities

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Editor's Message

The CAPSIL

is published three (3) times a year by the Canadian Association of Pharmacy Students and Interns (CAPSI) as a service to its valued members.

CAPSI is a national student organization that promotes and represents the interests of Canadian pharmacy students. Visit www.capsi.ca for more information and to view old issues of the CAPSIL.

All published articles reflect the opinions of the authors and are not necessarily the opinions of CAPSIL, CAPSI or its sponsors.

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Brittany Churchill
National CAPSIL Editor
3rd Year, Memorial University

Happy New Year CAPSIL readers!

It's hard to believe that another decade has begun. The start of the new decade has caused me to think about the future. I often wonder what will be in store for me as I become a pharmacist. There are many different practice settings available to pharmacists and considering all the options can be overwhelming at times.

Often opportunities available in hospital pharmacy and community pharmacy are the main options presented to students. While there are excellent opportunities in each of these areas, they are not the only options available. Pharmacists also work in the military, in academic positions, with pharmaceutical companies, with regulatory bodies and with the government. Likely, there are even more positions for pharmacists than those I've listed.

Oftentimes, these opportunities for pharmacists and pharmacy students are discussed in the CAPSIL. In this issue, there are articles describing pharmacy students experiences working on research (pages 34 and 36) and an article outlining a resident's experiences while completing the Industrial Pharmacy Residency program (page 35). There is also an interview with a student who volunteered abroad and had the opportunity to work with a mobile eye clinic (page 19).

If you are interested in learning about how pharmacy is practiced internationally, you can get involved with the International Pharmaceutical Students Federation

(IPSF). On page 20, Amy Smith, the CAPSI – IPSF Student Exchange Officer has described her experiences at the recent IPSF World Congress in Bali, Indonesia.

As students, we should remain aware of changes occurring in our profession. Through the work of advocacy organizations such as the Canadian Association of Pharmacy Students and Interns (CAPSI), the Canadian Pharmacists Association (CPhA) and the Canadian Society of Hospital Pharmacists (CSHP), we can work towards necessary improvements in the practice of pharmacy. For more information on the work that CPhA has been doing to "...shape the future of pharmacy...", please see their article on page 11.

Finally, I'd like to remind you to learn as much as possible about all the options available to pharmacists (and pharmacy students) before you decide on a career path. This year at PDW, there will be a panel discussion on "Non-traditional Career Pathways in Pharmacy". As well, there is a Health Fair where you can speak with various stakeholders in pharmacy. Even listening to the speaker presentations could spark your interest in an area you hadn't previously considered.

As future pharmacists, we have many options available to us. Fortunately, there is also lots of information out there to help us make informed decisions. As you attend events and read through the CAPSIL, be sure to keep this in mind.

A Word from the President



Brad Elliott
CAPSI National President
3rd Year, Dalhousie University

Dear CAPSI Members,

Happy New Year! I hope that all of you were able to enjoy your break and that you had plenty of time to relax in preparation for the second semester. For many of you, this may be your last as a pharmacy student, in which case I encourage you to make the most of these final weeks.

In representing you, the Canadian Association of Pharmacy Students and Interns (CAPSI) had a busy first half hosting competitions, promoting awards and working with partners and sponsors to ensure you are able to maximize your CAPSI membership, your opportunities and your experiences throughout your time as a pharmacy student. On that note, I would like to send congratulations to all of our local competition and award participants and winners. I look forward to seeing many of you at PDW and am very anxious to see who will prevail nationally!

In working with your local CAPSI representatives and executive council members from across Canada, I am continuously reminded that we reside in a very large country. CAPSI National aims to unite students nationwide and one way in which we accomplish this goal is through Professional Development Week (PDW). PDW is held annually and provides an excellent forum to enhance the knowledge and skills set that is obtained from your respective curriculums and to develop new or build upon existing relationships with your future colleagues from across the country. For those of you attending PDW, I hope that you are able to gain valuable experience outside of the classroom, meet many interesting and wonderful people and have some fun!

Keep reading on for the updates from our National executive and many other exciting articles from students and partners alike. It has been an absolute pleasure to represent you thus far and I look forward to the rest of my term as National President.

As always, if you have any questions, comments, or concerns, please do not hesitate to contact your local CAPSI representatives, or myself at pres@capsi.ca.

Have a great second semester!

Yours truly,

Brad Elliott
CAPSI National President
3rd Year Pharmacy Student, Dalhousie University



Un Mot du Président



Brad Elliott
Président National du ACEIP
3^{ème} année, Dalhousie University

Chers membres de l'ACEIP,

Bonne année! J'espère que chacun et chacune d'entre vous a su profiter d'un relais de travail et que vous avez tous eu la chance de vous reposer durant les vacances en préparation du deuxième semestre. Pour plusieurs d'entre vous, il se peut que ça soit votre dernier comme étudiant(e) en pharmacie, dans ce cas je vous encourage d'en profiter de ces dernières semaines.

En vous représentant, l'Association canadienne des étudiants et internes en pharmacie a eu un premier semestre occupé en accueillant des compétitions, promouvant des bourses et en travaillant avec des partenaires et commanditaires afin d'assurer que vous êtes en mesure d'exploiter au maximum les avantages de votre adhésion à l'ACEIP, vos perspectives et vos expériences tout au long de votre séjour comme étudiant(e) en pharmacie. Sur cette note, j'aimerais féliciter tous les participants et gagnants des compétitions locaux. J'espère de rencontrer plusieurs d'entre vous à PDW et j'ai hâte de voir qui emportera à l'échelle nationale !

En travaillant avec vos représentants locaux de l'ACEIP et les membres du conseil exécutif de partout au Canada, je suis constamment rappelé que nous habitons dans un pays très vaste. L'ACEIP nationale vise à unir les étudiants à travers le pays et une façon que nous accomplissons ce but est par la Semaine de perfectionnement professionnel (PDW). PDW est organisé chaque année et fournit un excellent forum pour améliorer les connaissances et les compétences qui sont obtenues par vos programmes respectifs et de développer de nouvelles ou améliorer les relations existantes avec vos collègues futurs à travers le pays. Pour ceux et celles qui assisteront au PDW, j'espère que vous êtes en mesures d'acquérir une expérience précieuse en dehors des salles de classes et de rencontrer plusieurs personnes intéressantes et merveilleuses tout en vous amusant !

Continuez votre lecture pour les dernières nouvelles de notre exécutif national et pour plusieurs autres articles excitants des étudiants et partenaires. Ce fut un plaisir de vous représenter jusqu'à maintenant et j'attends avec impatience pour le reste de mon mandat de Président national.

Comme toujours, si vous avez des questions, commentaires, ou préoccupations, s'il vous plaît n'hésitez pas de contacter votre représentant local de l'ACEIP, ou moi-même, à pres@capsi.ca.

Je vous souhaite un bon deuxième semestre!

Sincèrement,

Brad Elliott
Président national de l'ACEIP
Étudiant en 3^e année de pharmacie, Dalhousie University



CAPSI Executive Council Updates



Jonathan Mailman
Past President

My Fellow CAPSI members,

This report was written prior to the National Council meetings during PDW. Since my last update I have continued to act as a reference and advisor for Presidents as well as the National Council, for the normal business of the Association and preparing for PDW. I have also taken the opportunity to draft up some documents that should help aid in the training and preparation of new council members to be reviewed by the Constitution Review Committee. I look forward to seeing everyone at PDW in Toronto!



Polly Kwok
President-Elect

Since the last update in the fall CAPSIL, there has just been continual progress with all the committees I am involved in. For the constitutional review committee, we are putting together a final draft of the Entry-Level PharmD position statement to be presented to council at PDW. In addition, we will be updating the current operating manual and constitution, once passed by council; they will both be available on the CAPSI website. Speaking of which, Yin, our webmaster is

working hard to remodel the current layout to a new and even more user friendly one for the upcoming year. If there are any web-savvy CAPSI members, the webmaster position is a great way to get involved.

Outside of the committees, recently, representing CAPSI, I met with my working group for the implementation committee for the safety competencies, through which we are looking particularly at developing tools or motivation for others in the health profession to practice patient safety competencies (developed by the Canadian Patient Safety Institute). As the PDW 2010 is around the corner, now is definitely a busy time for everyone. Once the exciting few days in Toronto ends, I will be working with CPhA in preparation for the CPhA conference taking place in Calgary May 2010. I cannot wait to work with the newly elected council of 2010-2011.



Sarah Luong
VP Interprofessional
Affairs

Since the last update, many schools have now conducted their CAPSI symposia with much success on either remote dispensing or pandemic preparedness – both hot topics in today's pharmacy practice. I have also heard great feedback from schools that have initiated their community outreach programs from Ratiopharm. In addition to helping set up symposia and community outreach programs, I've been working

with the competition review committee to review cases for the local and national PIC, OTC, compounding and SLC. Stay tuned for the national cases at PDW 2010!

On the interprofessional front, I participated in a teleconference with the Canadian Interprofessional Student Network. In our meeting we discussed how interprofessionalism has been implemented in different professional faculties across the country. We are trying to recruit more faculties to expand the network. Other interprofessional initiatives were also discussed, and will be elaborated upon at the National Health Science Students' Association's Annual conference in March at McMaster University in Hamilton.

In the New Year, I hope to start up a guide listing current interprofessional initiatives that are in place at schools across Canada. This guide will be put together to give schools ideas on how to promote interprofessionalism at their respective campuses. It's been a great year so far serving as your VP Interprofessional Affairs. I'm looking forward to seeing the candidates in this year's elections at PDW 2010!



Amy Smith
Student Exchange
Officer

The SEP is on Facebook! Find us by searching "The Student Exchange Programme in Canada."



CAPSI National Updates - continued

This is a great place to ask questions about SEP, talk to other Canadian Pharmacy Students and find great pictures from past exchanges.

There is currently a very high demand from international pharmacy students to travel to Canada with the Student Exchange Programme (SEP). However, the number of Canadian pharmacy host sites is much lower than the current demand. In order to broaden the program and reach out to our international colleagues, CAPSI National needs your help to find new pharmacy host sites. SEP students do not receive a wage when working at Canadian pharmacies and therefore there is virtually no cost to the hosting pharmacist. If you know of a pharmacist who may be interested in an international pharmacy perspective please contact me.

In January 2010, IPSF will launch its second humanitarian project, the Mobile Pharmacy in Northern Uganda Project (MPNUP). The aim of this project is to provide medical help and ensure health care for people living in refugee camps around Gulu (25km diameter), Northern Uganda. The MPNUP team will consist of a MPNUP Coordinator, doctor, driver and pharmacy student (must be a CAPSI member). Two times per week the MPNUP team will visit camps around Gulu and provide people with basic medical care. Pharmacy students can choose the duration of their placement of six, nine, or twelve weeks. MPNUP is a joint project with Respond ReNUH and will operate from January 2010 – December 2010. For more information please email the Humanitarian Coordinator at humanitarian@ipsf.org or visit <http://ipsfusa.webs.com/> and www.renu-world.org.

For questions about MPNUP, SEP, or international pharmacy please contact me at anytime at seo@capsi.ca!



Kendell Langejans
IPSF Liaison

My first school semester as your IPSF Liaison has been full of challenges and fun. First of all, I'd like to say a big THANK YOU to Amy Smith, for putting up with all of my questions, and give a big shout out to all of the local liaisons; it wouldn't be possible to share the IPSF spirit with students across Canada without you! The University of Manitoba is currently without a local liaison, which posed a unique challenge for me in making sure Manitoban students don't miss out on all IPSF has to offer. If you go to U of M and would like to get involved with IPSF, please contact me!

This semester, we saw the first two of IPSF's Public Health Campaigns of the year. As pharmacy students and young pharmacists, we are well positioned to promote public health and prevention, and IPSF's Public Health Campaigns are a great way to learn more and develop our skills. First was the Diabetes and Healthy Living Campaign to correspond with World Diabetes Day, November 14. Next was the HIV/AIDS Awareness Campaign, timed around World Aids Day, December 1. Many schools sold Little Travellers to support families affected by AIDS in South Africa, and had local guests to speak about HIV/AIDS. I'm looking forward to reading and compiling their reports

to share with the rest of the world!

Another exciting development this semester is the CAPSI-IPSF Health Campaign Award, to be awarded annually at PDW to the university with the most organized and professional mandatory health campaign within the first semester, which this year was HIV/AIDS. Thanks to the hard work and dedication of Amy Smith, this award will be presented for the first time in Toronto.

Also related to HIV/AIDS, the new IPSF Humanitarian Project, the Mobile Pharmacy in Northern Uganda Project, will run for all of 2010. I got a call at 4:30 am from Amsterdam, because the IPSF Executive is very excited about this project, but I didn't mind because so am I! Watch for more information after PDW about how Canadian students can get involved.

Lastly, registration for the 56th IPSF World Congress is opening soon. For 10 days in August 2010, 509.950.715 km will be concentrated only on 20.256 km, when IPSFers from across the globe gather in Ljubljana, Slovenia. Their website is now operating, check it out at <http://www.ipsf2010.org>, and watch for more information from your local liaison. Looking forward to meeting as many of you as possible in Slovenia!





Rajwant Minhas
Executive Secretary

Since the last issue I have finished the Fall Teleconference minutes. I also facilitated CAPSI National's PDW registration and hotel rooming. I constantly check emails coming from students across the Canada, CAPSI National Council and representatives from other organizations. I am also thrilled to organize the national elections at PDW and the call for nominations was included in the last issue. During Christmas break, I will be working on getting organized for elections and AGM at PDW. Additionally, I will be updating the membership database. As part of the Constitution Review Committee, I am working on revising CAPSI's position on Entry Level Pharm D programs and making constitution changes for operating manual.



Ammara Ghuman
VP Education

Since the last issue of the CAPSIL, and the completion of the local competitions, I have been preparing for the National Competitions at the Professional Development Week (PDW) 2010 Conference. In collaboration with the Competitions Review Committee, our competition sponsors and the PDW 2010 Academic Chair, Gigi Wong, we have created and reviewed the competition cases for the National Competitions. If you have any feedback about the competitions locally or nationally, please feel free to send me an email at vped@capsi.ca.

If you participated in the competitions this year, please let me know what you liked, what you didn't like, what could improve, what was too easy or too difficult... I am open to all comments!

Another project I am working on is the compilation of a robust Mock OSCE bank. With the help of the Mock OSCE Review Committee, I am modifying cases for students to practice with in preparation for the OSCEs. Please make sure you utilize these resources in practicing for the OSCEs and all the best with your preparation for licensing exams!

Finally, although the awards deadlines for this year have passed, I would like to remind you of two of the great CAPSI awards which students can qualify for each year: The Guy Genest Passion for Pharmacy Award and the Award of Professionalism. The Guy Genest Passion for Pharmacy Award is offered to students in faculties of pharmacy across Canada each year and recognizes students who embody the spirit of and passion for the profession of pharmacy. If you know of a pharmacy student who exudes passion for pharmacy, please consider nominating him/her! The national Award of Professionalism is offered to recognize and reward the best-organized and executed Pharmacy Awareness Week by a student body from across Canada. Not only does this prestigious award come with a prize for the winning team, it also comes with bragging rights for the school who wins! For more information on either award, please contact me at vped@capsi.ca or your local CAPSI representatives.



Brittany Churchill
CAPSIL Editor

Since my last update, I've been busy preparing this edition of the CAPSIL. I would like to thank the CAPSIL Representatives (listed on p. 2 as CAPSIL Staff) for helping to promote the CAPSIL at your respective schools and for sending in so many excellent articles.

I would also like to thank the authors who took the time to write an article during this busy time of year. Your articles are well prepared and they provide insight into the thoughts and activities of pharmacy students across the country.

If you would like to voice your opinion on any of the articles published in the CAPSIL, please visit the forum at <http://www.capsi.ca>



Nevina Valani
Finance Officer

The period of September to December is a slower period in terms of workload for the Finance Officer. I have been keeping our financial records up-to-date and we have submitted our taxes. I am pleased to report that for the fiscal year of 2008-2009 we had a surplus of approximately \$4,800! This is very encouraging since it was a really difficult financial year all over the world and it proved that the budget cuts made in the previous year, though difficult, were necessary. We did see a drop in student CAPSI membership



CAPSI National Updates - continued

but a surprising increase in corporate memberships over the past year.

As for our current financial position, it is difficult to report on as most of the major expenses are yet to be paid as they occur after January 1st. We predicted that we would have a decrease in sponsorship and that has happened but we have also found new sponsors. At PDW we will discuss and evaluate some of our current membership benefits and programs to ensure that they have adequate support while remaining fiscally responsible.



James Morrison
VP Communications

Hello CAPSIL readers!

My portfolio has been a very busy yet rewarding one thus far as we enter the Winter term. The agenda advertising contract with CU Advertising has been finalized and we have begun obtaining advertisements for the next printing. The McGraw-Hill book sale was wrapped up this fall and it is currently being reviewed for next year.

Lastly, don't forget to use your iPharmacist coupons before the end of March. The coupons which are sponsored by Apotex are available through your local CAPSI representatives and may be used towards renewing your iPharmacist subscription, the regular Palm, or the Palm Centro Smartphone! As always, if you have any questions please email me: vpcom@capsi.ca

Thank You to all CAPSI Club Members for Your Sponsorship:

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CAPSI Club:





Taj Dhinsa
Pharmacy Student
3rd Year, University of Toronto

You Can Rely On Us: Pharmacists' Role in Pandemic Planning

It is beyond doubt that with the rise in cases of H1N1, the threat of an influenza pandemic is certainly looming. Along with an increased burden on our already-tired health care system, the pandemic also threatens to rearrange delivery of key patient services. Some may view this as an opportunity for health professionals that are currently behind the scenes to step into the spotlight; this is certainly the case for pharmacists who are preparing to take on a larger role in pandemic planning. Community pharmacists can play a major role in providing patient care, disseminating health information and distributing drugs during pandemics. Numerous challenges also face pharmacists as many pandemic plans lack the integration of pharmacy services during crisis situations. This brings to discussion two key issues: first, determining the role of pharmacists during pandemics; second, equipping pharmacists with the resources that they need in order to carry out services during public health emergencies.

Community pharmacies often become frontline health care facilities during times of crisis. During the SARS crisis in Toronto, many acute care centres and emergency rooms had to close because they simply could not accommodate any more patients.³ Being one of the most accessible and trusted healthcare professionals, pharmacists quickly became the people to 'go to' for care.³

On a regular basis pharmacists have to interact with patients to obtain medication and disease histories.² This routine activity can be extended to screen patients for influenza during a pandemic.² In this role, pharmacists are provided with a unique opportunity to manage the spread of illness. They can: a) identify patients that are most at risk using their medication profiles; b) differentiate between different respiratory illnesses in order to identify individuals having a high likelihood of influenza; and, c) identify patients that are at risk of developing influenza-related

complications.² Accordingly, pharmacists are not diagnosing patients, but are instead identifying high-risk individuals and referring them to appropriate facilities for triage.² Advantages of this screening program include using health care professionals more resourcefully, early detection of influenza and minimizing its spread.

Pharmacists can also provide leadership as a provider of health information by counselling patients on the illness itself, medications, methods of self-care as well as methods on how to prevent its spread.⁴ In Ontario, community pharmacies have been provided with kits to give to patients which include a handout on how to discern myths and facts about H1N1 and even information on proper handwashing techniques.⁵ Pharmacists can also stress to patients about the need to be prepared and address fears and misconceptions regarding vaccinations.² With the public and health care personnel alike questioning the safety and efficacy of vaccines, pharmacists can advocate for vaccination by spearheading community presentations to educate both fellow health care professionals and the public.²

Pharmacies, because of their unique community setting, also have appropriate infrastructure in place to be able to accommodate vaccination programs.³ With training, pharmacists can also help administer vaccines. Forecasted shortages in doctors and nurses has already led this program to be adopted in both British Columbia and Alberta.⁶ Pan-Canadian legalisations are long overdue as pharmacist-administered vaccination programs boast numerous benefits. Not only can this program provide outreach in rural and remote regions where there is little access to health care providers, it can also mitigate long line-ups and increase overall vaccination rates. Furthermore, when vaccination programs are limited to only high-risk populations, pharmacists can help to identify people who should be vaccinated.²

(Continued on page 10)



...Pharmacists' Role in Pandemic Planning (Continued from page 9)

Pharmacists are experienced in conducting extensive literature searches to determine pharmacokinetic and pharmacodynamic information and can help develop appropriate dosing guidelines and monitor drug efficacy in patients taking antivirals.⁷ In addition, pharmacists can monitor drug utilization trends and facilitate efficient re-supply of medications.⁴ After the SARS crisis, many pharmacies allied with the Canadian Network for Public Health Intelligence and now transfer sales data for purchases related to OTC flu products. This can quickly identify outbreaks and help the government allot adequate resources in time to flu 'hot-zones'.⁴ Pharmacists can also collaborate with other health care providers in establishing and staffing satellite clinics to aid in drug distribution.²

Pharmacists must be ready to embrace the new opportunities and challenges that face them during crisis situations. Currently, a lack of integration of pharmacy services into public health strategies significantly hinders the success of pandemic plans.¹ Pharmacy's role in pandemic preparedness must be recognized by both the government and fellow health care professionals. Traditionally, public health teams only consisted of doctors and nurses; interdisciplinary education emphasizing the responsibilities of each health care profession during a pandemic should be provided and the inclusion of pharmacists should be standard procedure.³

Pharmacies should not compromise the delivery of essential services to their patients during a pandemic. In order to do so, they must be equipped with appropriate resources and staff and have general plans in place on how to deal with shortages.

In the advent of a pandemic, pharmacies must align and be in regular contact with their respective provincial advocacy organizations. Pharmacy advocacy bodies must, in turn, determine appropriate methods of communication with their stakeholders, engage pharmacies to participate in awareness campaigns and must be responsible for providing pharmacists with the most accurate and recent pandemic information. These organizations must also advocate for appropriate compensation for services provided by pharmacists during pandemics.

Overall, the threat of a pandemic brings a massive opportunity for pharmacists to establish themselves as frontline responders during times of emergency. Pharmacists can prove to be an invaluable resource during pandemics as they, in their more traditional role, can disseminate drug information and facilitate drug distribution. With additional training, pharmacists can assume new responsibilities such as participating in patient screening and pharmacist-administered vaccination programs. Although their role still needs to be recognized, pharmacists must be prepared to collaborate with both the government and other health care professionals in the development of a pandemic preparedness plan that meets the needs of patients during public health emergencies.

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Your Profession, Your Future...

How CPhA is helping shape the future of pharmacy
and how you can get involved

There are very few perfect jobs in the world. Whether your life's dream is to be an astronaut, bureaucrat or librarian, chances are there will be days you love your job, and days you'd rather stay in bed. A pharmacist's life is no different. In the Student Forum of the November/December issue of the *Canadian Pharmacists Journal*¹ Mat Nowak wrote about the "10 things I hate about pharmacy". In his article, Mat details the imperfect landscape of the world of pharmacy, including patient interaction, roles and responsibilities and financial viability, and concludes with "who knows where we'll find ourselves in the near future?".

The Canadian Pharmacists Association (CPhA) hopes that in the future you'll find yourself working in pharmacy, doing a job that you love in an environment where you're valued and supported. We recognize that there are imperfections in pharmacy and we're working hard to help change the profession so that our resources are properly managed and our patients are receiving optimal care.

So, what are we doing, and how can you become involved?

Blueprint for Pharmacy

The Blueprint for Pharmacy is a collaborative initiative designed to better align pharmacy practice with the needs of the Canadian health care system by supporting pharmacists in assuming expanded roles. The Blueprint has engaged the profession in the development and endorsement of a common Vision for Pharmacy: Optimal drug outcomes for Canadians through patient centred-care.

A major theme throughout the Blueprint Implementation Plan is that "the status quo is not an option". In fact, the document details many risks to the profession if we continue to accept the status quo. For example, pharmacists are currently paid on a fee-for-dispensing service model. Realization of the Vision for Pharmacy is predicated upon a change in the compensation model for professional pharmacy services.

Many of the key deliverables in the Implementation Plan relate directly to the expanding role of pharmacists and pharmacy technicians. The "Pharmacy Human Resources" section of the plan states that the number one action will be to "Promote workforce roles of new and emerging professional pharmacy services,"² which includes communications strategies to policy makers, health human resources planners, the public and the pharmacy workforce. Clearly defining new roles, achieving consensus and communication strategies will alleviate much of the stress and time constraints pharmacists currently face and will allow them to spend more time with patients.

How can you get involved? Embrace the Blueprint Implementation Plan, then sign the Blueprint Commitment to Act, signifying your commitment to the pharmacy workforce of the future. You can also encourage your professors to use the Blueprint for Pharmacy as a discussion point in your classes, or contact us to have a CPhA Blueprint representative speak to your class. For more information, visit www.pharmacists.ca/blueprint. When you do graduate, insist on practicing to the full extent of your knowledge and skills.

(Continued on page 12)



Access to quality Drug therapy – Applying Pharmacists’ knowledge to The primary care System (ADAPTS)

Learning doesn’t stop when school ends. CPhA believes strongly in providing high quality continuing education courses to pharmacists to help refine, advance and further develop their skills. We have recently been granted funding from Health Canada to develop a primary skills training program. **ADAPTS** will help pharmacists optimize the use of their knowledge and skills in primary care settings. The program will include skills identification, self-assessment tools, online and live training components.

How can you get involved? While you’re in school, make note of your expectations on what working life will be like. When you graduate, compare reality to your expectations. Are they the same? Think about skills you think you will need to practice and any continuing education or specializations you might be interested in upon graduation. You can take control of your career and help shape the future of your profession.

Advocacy

CPhA is dedicated to both advancing the role of the pharmacist and representing and promoting the profession. These two strategic directions are the focus of much of our advocacy work on behalf of pharmacists.

On November 25, 2009, CPhA Executive Director Jeff Poston addressed the federal government’s Standing Committee on Health regarding their study on Health Human Resources. One of his main points was that drug plans need to be less onerous: “...pharmacists currently spend too much time on drug plan administration. Simpler drug plans would be a good first step to better manage the use of Canada’s available pharmacy workforce.” The less time pharmacists spend managing complicated

paperwork, the more time they can spend with patients.

A lot has been happening recently in the world of electronic health records (EHRs). We have been working closely with the G4 (CPhA, Canadian Medical Association, Canadian Nurses Association and Canadian Healthcare Association) on efforts to encourage the government to release funds promised to Canada Health Infoway for further development of electronic health records. The G4 submitted a joint letter to the prime minister and will continue to work together to support the implementation of electronic health records systems across Canada.

How can you get involved? Keep an eye on the news reports and stay current in the world of health care reform and pharmaceutical strategy.. Decisions made by government today will directly affect the world in which you will practice. Contact your CPhA student board member, Kristjana Gudmundson (kristjana.gudmundson@usask.ca), or contact your local MP if you have any concerns.

CPhA is proud to support all Canadian pharmacists across all practice settings. We’re doing our best to shape the future of pharmacy, but we need your help. Become a member and share your thoughts, concerns, challenges and successes as you move from pharmacy school into the workforce of the future. Sign up for FREE membership online at www.pharmacist.ca/students.

We’d love to hear from you! Email us at members@pharmacists.ca to let us know what YOU’RE doing to help shape the future of your profession.

Endnotes:

- 1 Mat Nowak. Ten things I hate about pharmacy. *Canadian Pharmacists Journal*. 2009; 142(6): 304.
- 2 Task Force on a Blueprint for Pharmacy. Blueprint for pharmacy: implementation plan. Ottawa (ON): Canadian Pharmacists Association; 2009; 31.



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Votre Profession, Votre Avenir...

Voici comment l'APhC aide à définir l'avenir de la pharmacie
et comment vous pouvez vous investir

Il existe très peu d'emplois parfaits. Même si vous rêviez de devenir astronaute, avocat ou premier ministre, il y a de fortes chances que certains jours vous aimiez votre travail, alors que d'autres, vous préféreriez plutôt rester au lit. La vie du pharmacien n'est pas différente. Dans le forum des étudiants de la livraison de novembre / décembre de la *Revue des pharmaciens du Canada*¹, Mat Nowak a parlé des « 10 choses de la profession de pharmacien » qu'il détestait. Dans cet article, Mat décrit le paysage imparfait du monde de la pharmacie, dont les interactions avec les patients, les rôles et les responsabilités ainsi que la viabilité financière, et se demande, pour conclure, « qui sait où serons-nous dans un proche avenir? ».

L'Association des pharmaciens du Canada (APhC) espère que l'avenir vous réserve un travail dans le milieu pharmaceutique, dans un emploi que vous aimerez et dans un environnement qui vous soutient et dans lequel vous vous sentirez valorisé. Nous savons que la pharmacie n'est pas un monde parfait, et nous travaillons avec acharnement pour aider à changer la profession en optimisant nos ressources, et à prodiguer à nos patients des soins optimaux.

Que faisons-nous et comment pouvez-vous vous investir?

Le Plan Directeur pour la Pharmacie

Le Plan directeur pour la pharmacie est une initiative en collaboration visant à mieux harmoniser la pratique de la pharmacie avec les besoins du système canadien de soins de santé, en aidant les pharmaciens à jouer des rôles élargis. Le Plan directeur pour la pharmacie a engagé la profession dans l'élaboration et la mise en oeuvre d'une vision commune, à savoir : procurer aux Canadiens un traitement médicamenteux aux résultats optimaux par des soins axés sur le patient.

Le thème principal du plan de mise en oeuvre du Plan directeur est que : « l'attentisme ne fait pas partie des options ». En fait, dans ce document, on expose les

nombreux risques auxquels est exposée la profession si nous continuons d'accepter le statu quo. Par exemple, actuellement, les pharmaciens reçoivent des honoraires pour l'exécution des ordonnances. La réalisation de la Vision de la pharmacie se fonde sur un changement dans le modèle d'indemnisation des services pharmaceutiques professionnels.

Un grand nombre des résultats escomptés du plan de mise en oeuvre portent directement sur les rôles élargis des pharmaciens et agents techniques. On dit dans la section relative aux « ressources humaines en pharmacie » que la principale action sera celle de « promouvoir pour la main-d'oeuvre des rôles permettant la prestation de services pharmaceutiques nouveaux et émergentsⁱⁱ », comprenant des stratégies de communication ciblant les décideurs de politiques, les responsables des ressources humaines, le public et la main-d'oeuvre pharmaceutique. Une définition claire des nouveaux rôles, l'atteinte d'un consensus et des stratégies de communication allégeront grandement le stress et les horaires serrés auxquels les pharmaciens doivent actuellement faire face et leur permettront d'accorder plus de temps aux patients.

Comment pouvez-vous vous investir? Adoptez le Plan de mise en oeuvre du Plan directeur, signez l'engagement envers l'action du Plan directeur, qui traduit votre volonté de faire partie de la main-d'oeuvre pharmaceutique de l'avenir. Vous pouvez aussi encourager vos professeurs à organiser des débats sur le Plan directeur dans les salles de classe ou nous contacter pour demander qu'un représentant du Plan directeur de l'AphC vienne parler à votre groupe. Pour de plus amples renseignements, venez nous rendre visite à l'adresse www.pharmacists.ca/blueprint. À la fin de vos études, exercez votre profession en utilisant toutes vos connaissances et compétences.

(Continué à la page 15)



Accès à une pharmacothérapie de qualité - application des connaissances des pharmaciens dans le milieu des soins primaires

(de l'anglais, **Access to quality Drug therapy – Applying Pharmacists' knowledge to The primary care System [(ADAPTS)]**)

L'apprentissage ne s'arrête pas à la fin des études. L'APhC croit fermement à l'utilité des cours de formation continue de grande qualité destinés aux pharmaciens, afin de les aider à se perfectionner, à se développer et à accroître encore plus leurs compétences. Nous avons récemment reçu une subvention de la part de Santé Canada en vue d'élaborer un programme de formation sur les compétences nécessaires en soins primaires. **ADAPTS** aidera les pharmaciens à optimiser l'utilisation de leurs connaissances et compétences dans les milieux des soins de première ligne. Le programme comprendra la définition des compétences, des outils d'autoévaluation, et des cours de formation en ligne et en direct.

Comment pouvez-vous vous investir? Pendant que vous êtes encore sur les bancs de la faculté, faites la liste de vos attentes envers votre vie professionnelle. À la fin de vos études, comparez la réalité à ces attentes. Y correspond-elle? Pensez aux compétences dont vous aurez besoin dans votre travail et à la formation continue ou la spécialisation que vous aimeriez poursuivre par la suite. Vous avez une réelle emprise sur votre carrière et vous pouvez aider à préparer l'avenir de votre profession.

Défense des Droits

L'APhC est engagée non seulement envers l'élargissement du rôle du pharmacien, mais aussi envers la représentation et la promotion de la profession. Ces deux orientations stratégiques représentent la pierre angulaire de notre travail de défense des droits des pharmaciens.

Dans sa présentation du 25 novembre 2009 devant le comité permanent du gouvernement fédéral sur les ressources humaines dans le secteur de la santé, Jeff Poston, le directeur général de l'APhC, a souligné que les régimes d'assurance-médicaments ne doivent pas coûter cher « les pharmaciens consacrent trop de temps aux questions reliées aux régimes d'assurance-médicaments. Une gestion moins onéreuse et compliquée des régimes d'assurance-médicaments constituerait un bon premier

pas vers une meilleure gestion de la main-d'oeuvre pharmaceutique ». Moins de temps les pharmaciens auraient à passer dans les dédales administratifs, et plus ils auraient du temps à s'occuper de leurs patients.

Beaucoup de changements sont intervenus dans le domaine des dossiers de santé électroniques. Nous avons travaillé en étroite collaboration avec les G4 (l'APhC, l'Association médicale canadienne, l'Association des infirmiers et infirmières du Canada et l'Association canadienne des soins de santé) pour encourager le gouvernement à verser les montants promis pour l'Inforoute Santé du Canada afin de continuer la mise au point des dossiers de santé électroniques. Le G4 a envoyé une lettre conjointe au premier ministre et continuera sa collaboration en vue de soutenir la mise en oeuvre du système de dossiers électroniques de santé dans tout le Canada.

Comment pouvez-vous vous investir? Lisez les rapports et tenez-vous au courant des problèmes concernant la réforme des soins de santé et la stratégie pharmaceutique. Les décisions prises par le gouvernement, aujourd'hui, auront une incidence directe sur le monde dans lequel vous travaillerez demain. Si ce problème vous préoccupe, contactez Kristjana Gudmundson, le membre du conseil d'administration qui représente les étudiants (kristjana.gudmundson@usask.ca), ou contactez votre député.

L'APhC est fière de soutenir tous les pharmaciens canadiens de tous les milieux de pratique. Nous ne lésinons sur aucun effort pour définir l'avenir de la pharmacie, mais nous avons besoin de votre aide. Devenez membre de votre association et faites-nous part de vos pensées, opinions, préoccupations et succès pendant votre cheminement de la faculté de pharmacie vers le marché du travail de l'avenir. Vous pouvez obtenir le statut de membre GRATUITEMENT, en contactant en ligne l'APhC à l'adresse www.pharmacist.ca/students.

Donnez-nous de vos nouvelles! Envoyez-nous un courriel à l'adresse members@pharmacists.ca pour nous dire ce que vous faites pour nous aider à définir l'avenir de votre profession.

Endnotes

1 Mat Nowak. Ten things I hate about pharmacy. *Canadian Pharmacists Journal*. 2009; 142(6): 304.

2 Groupe de travail chargé du Plan directeur pour la pharmacie : plan de mise en oeuvre. Ottawa (ON) : Association des pharmaciens du Canada; 2009; 31.



Zenah Surani
Pharmacy Student
2nd Year, University of Toronto

A Complicated, Unnecessary Web of Red Tape

Providing Generic Medications to the Less Developed World

In August 2003 at the World Trade Organization (WTO) in Geneva, Canada made history in the world of global public health. It became the first country to commit to reform its patent laws so that generic pharmaceutical companies could obtain compulsory licenses in order to produce and export affordable life-saving medications to the less developed world. In signing onto the agreement, then known as the Jean Chrétien Pledge to Africa Act, Canada demonstrated its leadership and responsibility in the field of international development. Although loaded with potential and a source of great pride to Canadians, the outcome of the legislation, now known as the Canadian Access to Medicines Regime (CAMR), has been pathetic, to say the least. There have only been two shipments of life-saving medications—one in 2008 and one in mid-September of 2009. They were shipped to only one country, Rwanda, and by only one Canadian generic pharmaceutical company: Apotex. To make matters worse, there isn't even more where these drugs came from—Apotex, backed by the Canadian Generic Pharmaceutical Association, which represents Canada's Generic Pharmaceutical companies, has declared that they are not willing to ship any more medications to the developing world because CAMR presents too much red tape and too many obstacles to make it worth their while. CAMR, once heralded as an innovative and ground-breaking new law, could soon face a shameful demise if the Canadian government does not take action to reform it.

Last year, I witnessed the wonders of antiretroviral medications for the treatment of HIV-AIDS first-hand. For my first year community site visits, I was placed at a small pharmacy in downtown Toronto, at the corner of Church and Wellesley Streets. This pharmacy specializes in HIV/AIDS antiretroviral drugs—they stock almost everything from Atrivus to Kaletra, and Truvada to Ziagen. Week after week, I would see the same familiar patients coming in to pick up about three or four of these types of medications. Such combination therapy methods will not cure an individual of AIDS, but are effective in abating symptoms

in order to improve general health and quality of life and have greatly decreased AIDS mortality in the western world. Thanks to these drugs, the patients picking up these medications are no longer given a death sentence due to HIV-AIDS—their life expectancy has been improved and they can continue to contribute positively to society. Very few of these patients paid for their prescriptions, however. The vast majority of these drugs are extremely expensive and covered by various drug plans. Not all victims of HIV-AIDS are so fortunate, however. An estimated 23 million people in Sub-Saharan Africa are living with AIDS, and about 8000 people worldwide die from AIDS every day. These brand name, patent-protected drugs are just too expensive for people in the developing world to afford, so they pay—with their lives.

In 2004, NGO Medicins Sans Frontiers put in an order for generic antiretroviral drugs for Africa. It approached Toronto based generic pharmaceutical company Apotex, which agreed to develop Apo-TriAvir, a three-in-one antiretroviral therapy (which didn't exist at the time) for export to the developing world. Apo-TriAvir contains 300mg Zidovudine, 150mg Lamivudine and 200mg Nevirapine. Apotex then had to approach the federal government to amend patent law schedules, since this new three-in-one combination treatment was not eligible for export under existing product schedules. Approval was obtained 2006. Next, because the three ingredients are patent protected in Canada, Apotex needed to negotiate with brand name pharmaceutical companies Boehringer Ingelheim Ltd., and GlaxoSmithKline Inc. in order to obtain a voluntary license, or permission, to copy these drugs for its treatment. The two pharmaceutical companies decided not to grant Apotex a voluntary license, so Apotex had no choice but to apply for a compulsory license from the federal Commissioner of Patents. A compulsory license is a form of government intervention in the market in order to correct some market failure—in this case, issue a patent for the export and distribution of medication in the developed world.

(Continued on page 17)



Apotex finally secured the license in 2007, and, with that license, was only then able to submit a bid to the Rwandan government. Rwanda finally selected Apotex from a group of international offers. The first shipment of Apo-TriAvir was sent out to Kigali in September 2008, and the second in September 2009. The treatment was to be distributed at 19.5 cents per pill—about 30 times cheaper than the brand-name versions. However, because of the unnecessarily cumbersome process, the millions of dollars in research and development and legal fees, and time invested in the project, the latest shipment to Rwanda will also be Apotex's last.

In an ideal world, a country like Rwanda could simply phone a generic company in Canada, order antiretroviral pills, and receive a shipment soon after. However, the process is made extremely complex by lengthy negotiations, international intellectual property rules, and federal patent laws. Who is to blame in this bureaucratic nightmare? This can only be assessed by examining the various players involved. First of all, the World Trade Organization requires generic companies to negotiate patents for every new drug they plan to export and for each and every different country they plan to export to, because of differing drug needs in various parts of the world. This burdensome separate case-by-case process is only made worse by the government of Canada, which requires the addition of the drugs in question to the schedule of acceptable products to be exported. This is a hurdle that could take months to clear. The brand-name pharmaceutical industry also adds to the delays in granting voluntary licenses to generic companies. It is conceivable under any normal circumstance that they are anxious about giving up valuable intellectual property—after all, patents are Big Pharma's biggest asset. However, CAMR makes it clear that lower cost medicines are only made available to those in less developed countries that would not be able to afford brand-name drugs. They would not be made available in the developed world's markets. So, if there is no threat to the brand name companies' profits in these markets, the reason for the complications with license-granting is hazy. The Canadian government's role in this issue has been half-hearted. In 2006, when the Conservatives took power, Health Minister Tony Clement vowed to fix the CAMR legislation. However, the issue became buried under other domestic issues and was never explicitly addressed by Stephen Harper. Several NGOs are fighting for change. Richard Elliott, Director of the

Canadian HIV and AIDS Legal Network, asks, "How many lives could have been saved if this law had worked smoothly the way it should and could?" Elliott supports a "one-license solution", eliminating the current inefficient process of separate, case-by-case and country-by-country negotiations. Only about 31 percent of those who stand to benefit from CAMR in the developing world are being treated with antiretrovirals. These drugs come from clinical trials, donations from brand-name companies and from charities. However, if affordable antiretrovirals are made available to these countries, it is a win-win situation. Victims of HIV-AIDS would not need to depend on limited donations of the drugs—they would be able to buy them cheaply, and in turn would be able to continue working to provide for themselves and their dependents. Canadian pharmaceutical companies would benefit by using their knowledge to come up with innovative drug solutions to help those less fortunate. Finally, in refusing to export any more Apo-TriAvir to the developing world, Apotex cannot be blamed—in a capitalist system, individuals and corporations are naturally driven by incentives. As a large, wealthy, first-world nation, Canada must intensify its presence at the WTO and push for reforms to the various intellectual property rules. Canada has a reputation for being a leader on the world stage in international development and diplomacy, and ultimately, the responsibility lies with the Canadian government to live up to its promise to the third world and reform the Canadian Access to Medicines Regime. Until this happens, Canada will have blood on its hands as millions continue to perish while the life-saving pills they so desperately need remain tangled in a complicated, unnecessary web of red tape an ocean away.

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Caplan, Gerald. "Abandoning our responsibility." *The Globe and Mail*. 25 September 2009.

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"Generic AIDS Drugs: What happened to Canada's pledge to Africa?" *CBC News Online*.



Do you Know a Pharmacist Who is Interested in International Pharmacy? Then please pass this information along...

The SEP provides an opportunity for international students to experience the exciting practice of pharmacy in Canada. The program not only provides students with the opportunity to learn about pharmacy outside their own country, it also enriches both their professional and personal lives with unique cultural experiences.



Your role as a preceptor/host site will be a rewarding one. Students bring a great deal of knowledge and enthusiasm to the workplace and can add an international diversity to your establishment. Also, if you choose to accept an international student, you enable a much deserving Canadian pharmacy student to go abroad the following year.

- ❖ Most exchanges are **one month** and usually take place from May to September. However, exchanges can be anywhere from two weeks to three months and can occur within any month during the year. It all depends on what is convenient for you, the host site.
- ❖ During the exchange, the amount of time the student spends on site will be catered to your preferences. IPSF recommends that the student works for **4-8 hours/day for 4 days/week**.
- ❖ We require host sites in **all** areas of pharmacy practice (i.e. Research, Industry, Hospital, Community, etc.)
- ❖ The exchange students are **volunteers** and therefore are **unpaid**. Students are also responsible for the cost of their transportation and accommodations and therefore there is no cost to you!
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I hope that you will strongly consider sharing your experiences, knowledge, and ideas with an international students. For more information on how you can host a student please contact:

AMY SMITH

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306-668-1003



Lora Wang
Pharmacy Student
2nd Year, University of British Columbia

Volunteering in Thailand...

An Eye - Opening Experience

Where did you travel?

I went to a children's home in a village that was about a 5-hour drive from Bangkok, in the western part of Thailand. The children's home was called Baan Dada and housed about 60 students who were orphaned or whose families were facing severe financial difficulties. Many of the children were of Burmese (Myanmar, the neighboring country) origin, whose families fled the country and into Thailand but were not able to support the children.

What program did you volunteer through and where can other students get more information?

I volunteered directly with the children's home, from their website (www.baandada.org). My friend introduced me to this children's home as she has previously volunteered there before. It is lead by two Dadas (meaning "brother"), who serve their lives to community support, and started up the home and other services (i.e. their local vaccination program and eyecare project).

Was there anything that surprised you during the travel?

Oh lots. One main thing that I could never get used to was seeing a developing country and its mixture of technologies. Most of the citizens of the village lived in a single roomed bamboo-built hut, with no door except for a piece of fabric or newspaper coverings, yet they had a small TV screen. They used cell phones, and some had mp3 players, but it certainly looked out of place. I knew before I arrived that they had access to technology, but actually seeing it seemed different. Another thing that surprised me were the familiar items

I saw all over the place: Coke, Pepsi, and candy brands were everywhere. Yet another one was the economical status differences between the villagers. It occurs everywhere, but in Vancouver it is not as noticeable as it was in Sangklaburi. On one street, one home would be a bamboo hut with newspaper coverings, while the one next door would be a three-storey architecturally-designed wooden house with a paved driveway and a metal gate.

Was it similar to how you thought it would be? Different?

I've been to another developing country before, and have seen a bit of what life in rural areas were like. Most of what I thought the lifestyle would be were the same.

What were your living conditions?

My living standards were very good compared to what I had thought it would be. I thought I would be living in the bamboo huts that were predominant in the area, but the children's home had a concrete cabin made especially for volunteers, funded from various non-profit organizations. We can choose to live in bunk beds or on a matted floor, all covered by mosquito nets. There were working showers (it was cold water, but it was very nice in the hot summer weather) and toilet facilities, where most of them were the squat-type toilets found in asian countries and one was a throne-type toilet that was rumored to be inhabited by a frog. I didn't see the frog, although there were many ants and spiders running along the walls of the stall. Coming from a person afraid of most bugs, you will get used to it. Most of them don't bite. My meals were cooked by the mothers who work at the children's home, and had a vegetarian diet everyday, based on the belief of the children's home. There was delicious vegetarian food!

(Continued on page 27)

A Pharmacy Adventure in Bali

It is very difficult to describe what a pharmacy student experiences at the International Pharmaceutical Students' Federation (IPSF) World Congress in Bali, Indonesia. The Congress is filled with a wide range of activities including insightful workshops and symposiums, competitions, social events and the general assembly. My time spent in Bali was personally significant, as I was able to watch the unveiling of a humanitarian project I have been involved with. However, the congress was significant to all delegates, as it marked IPSF's 60th birthday. The special occasion allowed pharmacy students from around the world to take a moment to acknowledge how much the federation has accomplished, as well as to look to the future.



Rice Fields, Ubud



Throughout the ten day congress there were numerous guest speakers who presented delegates with insight on many relevant topics including the role of the pharmacist in primary health care and infectious diseases. Guest Speakers from the University of London encouraged students to help change the profession's view from pharmacy to health care and pointed out that pharmacists often spend much time and effort searching for reasons why they cannot instead of searching for reasons why they can. Presentations were followed by workshops which allowed delegates to develop ideas on how we can measure pharmacy students' and pharmacists' competency in practice, with attention being paid to the new procedures being put in place in Ontario.



Much of the congress was devoted to the General Assembly (G.A.). Being the highest decision making body of IPSF, there were many exciting and controversial topics to discuss. As Canada's official delegate, much of my time at the congress was spent in the G.A (approximately 34 hours in total). I also met with representatives from countries Canada has worked closely with in the past, to discuss future activities and networked with new member countries. Overall, Canada has a very strong presence at the World Congress and we are often looked to for advice as well as to comment on what is currently occurring in Canada.



Sanur Beach



Canadian students at international Night

The 55th Congress marked the unveiling of IPSF's second humanitarian project, The Mobile Pharmacy in Northern Uganda Project (MPNUP). Over the last few months, I have been working closely with the Humanitarian Coordinator as the Promotional Coordinator and it was very rewarding to see all of our hard work presented to delegates. MPNUP is a joint project with Respond ReNUH with the aim to provide medical help and ensure health care for people living in refugee camps around Gulu, Northern Uganda. Pharmacy students, including all CAPSI members, will have the opportunity to choose the duration of their placement (6, 9, or 12 weeks) from January - December 2010. I will have the pleasure of continuing to work with the Humanitarian Committee as the Promotional Coordinator as this project unfolds in the next year.

Once again the social activities during the congress did not disappoint. Delegates were completely immersed in the local culture. During Traditional Night we found ourselves in a temple to watch the famous Kecack dance performed by over 250 local men. The dramatic dance depicts the battle in which the monkey, Vanara, helps Prince Rama defeat the evil King Ravana and rescue his princess. The unique name comes from the chanting "cak" sound made by the performers.

As always, International Night provided an opportunity for countries to display their unique culture by performing a dance or a song. Canadian students, who always suffer from a slight identity crisis when preparing for the event, performed a country line dance to "Cadillac Ranch" which had delegates from other countries up on stage dancing with us. We also had the opportunity to try local foods from other countries, my favorite being the Toblerone chocolate from Switzerland.

Local students treated delegates to a unique Bali Adventure. We traveled through twisting roads to the remote village of Ubud and past numerous rice fields until we arrive at a cultural centre. Students had the opportunity to learn traditional dance, beading, painting as well as how to play local musical instruments. At the end of the evening we were treated to a performance of the many different types of local dance as well as a traditional meal.



Sunset at Kuta Beach

The World Congress in Bali marked IPSF's 60th Birthday. IPSF is the oldest faculty-based international student organisation in the world, and only one year younger than the World Health Organisation. To mark this special occasion, a history book was unveiled in Bali which contained the following quote in regards to the founding of the federation:

"The atmosphere of the round table conference was that of pharmacy students knowing that their decisions would go down in the history of pharmacy. IPSF was founded while the world was recovering from the savages of World War II. Many of those involved in planning meetings had not only survived, but represented their countries in the conflict. Therefore the establishment of IPSF was more than an attempt to improve communication between pharmacy students, but also to make the world a more peaceful and safer place in which to practice"

The history and work that the federation has preformed thus far is remarkable. The federation remains strong as it continues to provide life altering opportunities.



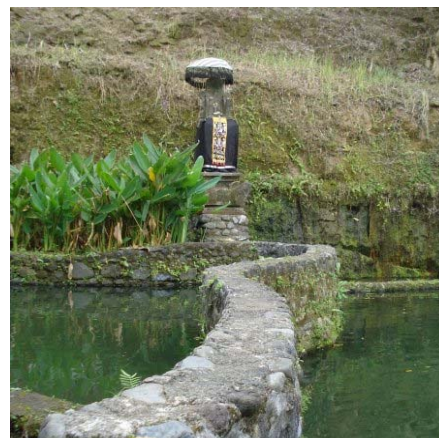
Surfing at Kuta Beach.

Amy Smith
Student Exchange Officer
Canadian Association of Pharmacy
Students and Interns



Traditional Night - Kecak Dance

There is beyond doubt no better means of developing an appreciation for pharmacy on an international level than by attending the IPSF World Congress. The Bali Congress provided an opportunity to interact and befriend so many like minded individuals from every part of the world. As many delegate did not know where Saskatchewan is located, and especially not Saskatoon, it provided me with an opportunity to express the pride I have for my home as well as place the University of Saskatchewan on an international map. By spending ten days discovering and appreciating how we differ so greatly between countries, we find, as young professionals, we are still all striving towards similar goals. The IPSF congress has left me with an ever lasting impression, which I will carry long into my pharmacy career.



Cultural Centre in Ubud



GREAT NEWS FOR PHARMACY STUDENTS ACROSS CANADA

CAPSI and Scotiabank have forged a partnership in support of Pharmacy students across Canada. Scotiabank and *Scotia Professional*® Student Plan are now recognized as the exclusive Financial Services institution of choice, providing support for CAPSI initiatives such as Professional Development Week.

We're as committed to your education as you are. Whether you're an undergraduate entering professional studies, in residency, or have recently graduated, financial considerations are critical components of a successful career. We know your professional and personal goals will change over time, calling for effective strategies to meet your needs.

We're committed to providing a customized, comprehensive banking program of the best financial solutions, resources and advice, no matter what your needs may be. Our experience working with professional students has shown us that by delivering what you need up front, we can help take those money worries off your mind. That's important, because at this stage of your life, the most important focus is your studies.

Like all businesses, professional practices succeed through hard work, planning and investment.

Here are some key things to consider as you think about entering the "Pharmacy" business world:

- Understanding and minimizing your student debt as you transition into an accredited Pharmacist helps you build for tomorrow, both personally and professionally.
- Understanding basic Financial statements will assist you in speaking with your accountant.
- Understanding business structures/should you Incorporate? Typical business structures for professionals include sole proprietorship, partnership, or a cost sharing arrangement. Larger companies offer Associate franchise programs, such as Shoppers Drug Mart.
- Understand who your potential customers are so that you can market your Pharmacy to the right target group
- Begin networking. Meeting people and establishing a reputation as reliable and knowledgeable is an important promotional strategy for professionals.

As you become a practicing professional, Scotiabank will continue to work with you to help achieve your short and long term goals. Your Scotiabank Small Business advisor can show you how the right advice, information and services can help you become financially better off, both professionally and personally.

If you have questions or wish to meet with your local Scotiabank faculty representative, simply login to www.scotiabank.com/studentprofessional.

Scotiabank is proud to be working with your profession and especially the Canadian Association of Pharmacy Students and Interns.



BONNE NOUVELLE POUR LES ÉTUDIANTS EN PHARMACIE DU CANADA

L'ACEIP et la Banque Scotia ont formé un partenariat pour soutenir les étudiants en pharmacie du Canada. La Banque Scotia, avec son programme *Professions libérales Scotia*^{MD}, est maintenant reconnue comme l'institution financière de choix et elle appuie des projets de l'ACEIP tels que la Semaine de développement professionnel.

Notre engagement envers vos études n'a d'égal que le vôtre. Que vous soyez au premier cycle et débutant des études supérieures, en résidence, ou que vous ayez récemment reçu votre diplôme, les considérations financières sont des composants importants d'une carrière réussie. Nous savons que vos objectifs personnels et professionnels changeront avec le temps et qu'ils exigeront des stratégies efficaces pour combler vos besoins.

Nous voulons offrir un programme bancaire complet et personnalisé, comportant ce qu'il y a de meilleur en termes de solutions, de ressources et de conseils financiers, quels que soient vos besoins. Notre expérience auprès des étudiants qui se destinent aux professions libérales nous a montré qu'en offrant immédiatement ce dont vous avez besoin, nous pouvons vous libérer de nombreux soucis financiers. Cela est important, parce qu'à ce stade de votre vie, vos études sont votre priorité absolue.

Comme toutes les entreprises, les cabinets professionnels connaissent le succès grâce au travail acharné, à la planification et à l'investissement.

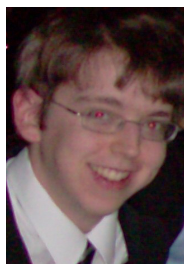
Voici certains éléments clés à considérer si vous envisagez faire partie du secteur des pharmacies de détail :

- La compréhension et la réduction de votre endettement étudiant, alors que vous accédez au statut de pharmacien accrédité, vous permettront de bâtir votre avenir personnel et professionnel.
- La compréhension des états financiers de base vous aidera à discuter avec votre comptable.
- La compréhension des structures d'entreprises est impérative si vous songez à vous constituer en société. Les structures d'entreprises habituelles pour les membres des professions libérales comprennent les entreprises à propriétaire unique, les sociétés en nom collectif ou les sociétés à entente de partage des coûts. Les grandes entreprises offrent des programmes de franchisé associé, telles que Shoppers Drug Mart/Pharmaprix.
- L'identification de vos clients potentiels est importante pour présenter votre pharmacie au groupe cible approprié.
- Le réseautage est crucial. Le fait de rencontrer des gens et de se tailler une réputation de professionnel fiable et bien informé est une importante stratégie promotionnelle pour les membres des professions libérales.

Alors que vous devenez membre d'une profession libérale dans un champ de pratique, la Banque Scotia continuera de travailler avec vous pour vous aider à atteindre vos objectifs à court terme et à long terme. Votre conseiller de la Banque Scotia auprès des petites entreprises peut vous donner les conseils, l'information et les services appropriés qui peuvent vous aider à améliorer votre situation financière personnelle et professionnelle.

Si vous avez des questions ou si vous désirez rencontrer le représentant de la Banque Scotia pour votre faculté, il vous suffit de visiter le site Web www.banquescotia.com/professionsliberalesetudiants.

La Banque Scotia est fière de travailler avec votre profession et particulièrement avec l'Association Canadienne des Étudiants et Internes en Pharmacie (ACEIP).



Christopher Grant
Pharmacy Student
2nd Year, Memorial University

Methadone Maintenance Treatment:

A Powerful Tool to Fight Opioid Dependence

Opioid abuse has been a major problem in society for many years. Dependence on opioids leads to withdrawal symptoms that are severe enough to drive users to serious criminal acts to obtain their next dose. Furthermore, unsafe practices in using opioids put users at a high risk of overdose and the spread of disease. Ultimately, opioid dependence poses a considerable cost to society. However, the use of methadone maintenance treatment allows patients dependent on opioids to legally obtain a safe drug that counteracts the symptoms of opioid withdrawal, and with additional help, allow patients to regain control of their lives so they can become productive members of society. This paper will give a brief account of the history and uses of methadone, as well as the benefits to patients and society in general, using the recent OxyContin controversy as an example.

Before discussing the benefits of methadone, we must first consider the impact of opioid dependence. For a simplified description, opioids such as morphine and heroin act on opioid receptors in the brain, relieving pain and causing a feeling of euphoria (Canadian Pharmacists Association 1632). Repeated use of opioids over time may cause the body to react by reducing its production of endorphins, natural chemicals that act on opioid receptors to relieve pain and elevate mood (Rassool 95). This ultimately leads to dependence, which results in intense withdrawal symptoms, such as aches, nervousness, restlessness, runny nose, shivering and diarrhoea (Canadian Pharmacists Association 1634). The severity of withdrawal compels dependent patients to go to any extent to get their next dose, which often leads to extremely dangerous criminal behaviour. Therefore, people who are dependent on opioids “are at high risk for premature death from accidental drug overdose and [drug-related] violence”; furthermore, sharing equipment such as needles and cookers puts users “at high risk of acquiring human immunodeficiency virus (HIV), hepatitis C virus (HCV) or other blood-borne pathogens” (Health Canada 8). This evidently leads to significant costs to the health care system and to society in general due to crime and lost productivity; a study by Single and coworkers found that costs related to illicit drug use in Canada in 1992 were approximately \$1.37 billion, with about 70% of this cost directly attributed to the use of opioids (cited in Health Canada 8). Clearly,

opioid dependence is a serious problem that requires an effective solution.

One of the most powerful tools used to combat opioid dependence is methadone maintenance treatment. Methadone was originally synthesized by German chemists in World War 2 as a substitute for morphine when supply lines were interrupted (Inciardi 274). It was introduced in the United States in 1947 and shown in the 1960s by researchers Dole and Nysander that it could be used to treat heroin addiction (Inciardi 274; Health Canada 8). Methadone acts by binding to opioid receptors, alleviating symptoms of withdrawal while not producing the feelings of euphoria associated with illicit opioids; furthermore, in blocking the opioid receptors, methadone actually blocks the euphoric effects caused by drugs such as morphine and heroin (Health Canada 7). It is ideal for use in therapy as a once daily dose can suppress opiate withdrawal for between 24 and 36 hours, and it is relatively straightforward to adjust to an appropriate dose (Rassool 368).

There are numerous benefits to methadone maintenance treatment. As mentioned previously, one of the major dangers or dependence on illicit opioids is the spread of disease from sharing needles and other equipment; methadone is effective orally (regardless of whether the illicit drug was taken orally or intravenously) virtually eliminating this problem (Health Canada 7). Furthermore, patients receive legal, pharmaceutical grade medication (as opposed to street drugs with potentially dangerous impurities) without the stresses of going through dangerous and illegal activities to obtain illicit opioids (Health Canada 17). As well, as the medication is given at safe dosages at regular intervals, the risk of death from overdose is greatly reduced, and patients maintain a stable mood and functional state, rather than the “highs and lows” of intermittent and unregulated doses of heroin or other illegal drugs (Health Canada 17). Being a narcotic and an opioid itself, methadone does cause patients to become dependent, however when used in a structured treatment program, patients are freed from the withdrawal symptoms and chaotic lifestyles associated with illicit drug use (Rasool 368).

(Continued on page 26)



Methadone Maintenance Treatment **(Continued from page 25)**

Methadone maintenance treatment is more than simply providing a prescribed medication to opioid dependent patients. Rather, it usually involves a structured program with additional counselling to help the patient “reconstruct [his or her life] and remain free of illicit drug use” (Erickson 159). In describing the ideal methadone program, Dr. Carlton Erickson suggests that patients should be required to take the methadone dosage under observation in the clinic to prevent the patient from stealing it to sell it on the street for heroin or other drugs (159). Dr. Erickson also suggests that patients undergoing methadone maintenance treatment get regular urine drug tests and be required to have employment to maintain stability (159). Ultimately, a patient-centered approach that aims to improve overall quality of life is essential in methadone maintenance treatment.

Over the last few decades, there have been numerous studies that have shown the benefits of methadone maintenance treatment. In the early days of the treatment, Dr. Frances Gearing’s study “Evaluation of Methadone Maintenance Program” showed a significant increase in employment rates of patients after receiving treatment compared to before beginning methadone maintenance (188). In his study of 188 patients, only 25% were employed for the three months before beginning treatment, however, after three months of treatment, 33% were employed, and after twenty-four months of treatment, 50% were able to accumulate a year of work (189). In a 2009 study by Mattick and coworkers, “methadone appeared statistically significantly more effective than non-pharmacological approaches in retaining patients in treatment and in the suppression of heroin use as measured by self report and urine/hair analysis” (4). Clearly, there is considerable evidence that methadone maintenance is among the best choices for treating opioid-dependent patients.

Methadone’s potential as a real tool in the war against opioid dependence can be demonstrated in the OxyContin controversy that plagued Newfoundland and Labrador earlier in this decade. OxyContin is manufactured by Purdue Pharma and was approved by Health Canada in 1996 (OxyContin Task Force 12). The active drug is oxycodone, an opioid analgesic that was previously included in drugs such as Percodan and Percocet; OxyContin was initially thought to have a lower abuse potential due to its slow-release properties (Cicero 662).

Ironically, abusing the slow-release properties by crushing the tablets allowed users to get a much more rapid release and absorption of the drug than from other oxycodone-containing products, thus making OxyContin a prime target for abuse (Inciardi 160).

In Newfoundland and Labrador, OxyContin has been a major concern for law enforcement since 2000 (OxyContin Task Force 12). Since the introduction of OxyContin on Newfoundland and Labrador streets, police agencies have reported that the prevalence of injection drug use has increased dramatically, as well as a general increase of pharmacy break and enters, and a general increase in criminal activity (OxyContin Task Force 16). Thus, OxyContin abuse became a major public issue, which lead the government of Newfoundland and Labrador to commission a task force on the drug’s abuse in 2003 (8). Among other recommendations to manage the OxyContin problem, the task force suggested using methadone maintenance as a harm reduction strategy to improve the lives of OxyContin-dependent patients (42). They also recommended the establishment of a Methadone Advisory Committee to develop guidelines for methadone maintenance for the province (43). As the task force’s report was completed only five years ago, there is little information on the results methadone maintenance has had on the OxyContin problem in this province, however, when considering the benefits of methadone presented in this paper, it is quite likely that methadone maintenance will prove to be a valuable asset in reducing crime and health care costs due to OxyContin abuse.

As shown in this paper, opioid dependence is a major problem in society. Opioid-dependent individuals will go to any length to get their next dose rather than endure the intense symptoms of withdrawal. The resulting crime, lost productivity, spread of disease and risk of death from overdose presents a huge cost to society. However, through the development of methadone maintenance treatment, society has been given a valuable tool to address this problem. Methadone relieves opioid-dependent patients of the symptoms of withdrawal, provides them with a safe drug product, and allows them to regain control of their lives. Methadone maintenance treatment is an invaluable component of the war on drug dependence and will prove to be effective in addressing Newfoundland and Labrador’s OxyContin problem.

***This article received the Memorial University of Newfoundland
Alcohol and Drug Dependency Commission Commemorative Award
in 2009.***

***(References listed
on page 27)***



What was the worst thing that happened during the trip?

During the trip, there wasn't really anything bad that happened. The worst may be the bug bites: my legs and arms were riddled with itchy bites from bugs of all types. The children there and the local Thai natives didn't seem too bothered by the bites at all. However, I had my bad news after the trip— one of the children, one that I had spent quite a bit of time with, passed away from a sudden seizure.

What was the best thing?

The children there were adorable (they never change no matter where they are)! Some of them were a bit of trouble when we were teaching them English, but overall they were sweet. They all showed love and attachment to the volunteers, even though so many of us come and go from their lives. The first night I arrived, some of the small children (4-10 year olds) lifted my heavy luggage and carried it all the way to the volunteer house for me, while the other children swarmed me with hugs and clung off my arms and legs as I wobbled over. I was also lucky enough to be able to participate in their eye-care program, where they provide a free mobile eye-care service to the neighboring remote communities, providing general examination and glasses. I was with several Waterloo University optometry students,

and while they did eye examinations, I gave out the proparacaine and tropicamide ophthalmic solutions to their eyes. It was interesting when I tried to communicate to them in English, and shocking when I saw some of the medical conditions they had. Cataracts were common as they mostly worked in the sun, and we were able to supply them with sunglasses, which they were ecstatic about – they thought it was cool to wear sunglasses too!

How has this changed your perspectives?

I feel guilt now. Here in Canada we're so privileged with our living conditions, such as the virtually insect-less interiors, hot showers, and our endless use of water. One t-shirt here can be able to sponsor a child's education fund for a month. Most of us had never had to flee a country and live in remote communities to begin a new life and gave up their children.

If you are interested in sponsoring a child, or volunteering at the home, please do not hesitate to contact me at wang.lora@gmail.com or by checking their website at www.baandada.org. If you were thinking of volunteering out of the country, I truly suggest you give it a try. There are many things we learn in school, and many things we don't, and opportunities such as this can give you a real perspective of the concepts you've learned, and teach you firsthand the things you haven't.

Methadone Maintenance... (pages 25 - 26)

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Your CAPSI Disability Insurance Plan Top 10 FAQ's

Martin Maretzki RHU, President ax/iz financial solutions inc.

It has been a pleasure to speak to many of the graduating classes across the country regarding the benefits of Disability Insurance and why you need this very important form of protection. We are also please to reveal the exclusive **CAPSI Guaranteed Standard Issue Disability Insurance Program** which you have access to as a Graduating Pharmacist.

There were many questions after the presentations and I thought I would cover them in an article so that they can be addressed.

1) Why is this Disability Insurance Plan so unique?

There are many advantages to having a personal disability plan. This particular plan has been brought to all the Pharmacy Grads by CAPSI. Specifically, under this plan, you do **NOT HAVE TO PROVIDE ANY PROOF OF GOOD HEALTH**. Traditionally, this type of insurance is the **MOST** difficult to qualify for. Many applications are issued with exclusions or extra premium charges for pre-existing conditions. Just because you think you are healthy, does not mean the insurance company agrees. Therefore many applicants are surprised when they are approved for coverage with modifications or declined for coverage outright. Under the CAPSI plan, there is no proof of health required so there is no danger of you having specific conditions excluded or having to pay an extra premium. Also, you eliminate the risk of being declined for coverage altogether. This is a **TREMENDOUS** advantage especially given the fact that you are being offered a **GUARANTEED, NON CANCELLABLE** plan at a discounted premium.

2) What is a Guaranteed Non-Cancellable Disability Plan?

This type of plan is the best form of disability insurance available. This can only be purchased privately

(i.e. not part of your group/association benefit plan). A “guaranteed non-can” plan means that once the coverage is in place, the insurance company cannot cancel the coverage, change the contract wording, increase the premium or add any restrictive clauses to your plan during the non-cancelable period which is to age 65. So, if you change jobs, or go on claim, your contract will remain the same as it is today...no change.

3) What is the definition of Disability?

There are two definitions. One is for Total Disability. In order to be totally disabled, you must be unable to perform the important duties of your own occupation. This is referred to as a **TRUE OWN OCCUPATION** definition. For instance, if you are disabled as a community pharmacist but can work in another occupation, you would receive your full benefits for total disability in addition to what you are earning in your new job. The other type of disability is Partial Disability. This will pay you 50% of your benefit (which scales down each year you are partially disabled) if you can work half your normal time OR you can perform 1 or more but not all of your important duties. You have the best definition of disability in the marketplace under your CAPSI plan.

4) Do I have to be a member of CAPSI to have access to this Disability Insurance Program?

No, you just have to be a graduating pharmacist and enroll within the enrollment window (between October 2009 and May 31, 2010).

5) Why is there an enrollment window?

An enrollment window is required for the insurance company to make sure that there is no anti-selection. Since there is no proof of health required for this plan, the insurance company wants to monitor the enrollment.

(Continued on page 29)



There is plenty of time to enroll, but a deadline is required to control the insurance company's risk of taking on individuals who may have had a health change after the enrollment deadline and now decide to get on the plan. This has happened every year, where people were late enrolling and they had to be approved medically as a result. Subsequently they were approved, sometimes without modifications. Some individuals were even declined for coverage. The word to the wise is to enroll during the enrollment window to avoid this risk of being declined or having a modified offer.

6) Can I cancel the coverage at some point in time?

Yes. You own the plan and you control it.

7) What does the plan design encompass?

Right away, you are eligible for \$3000 per month of tax free benefit. The waiting period is 90 days (the number of days you must be disabled before the claim is paid). The benefit period is to age 65. Also, your benefits are protected from inflation with the Cost Of Living Adjuster feature. Furthermore, you have the right to increase your coverage also without proof of health, with the Future Insurability Option. If you wish you can also add the Return of Premium Feature.

8) What is the return of premium feature?

This feature refunds 50% of all your premiums if you decide to cancel your coverage at age 55 or age 65. If you were paid any claims during the time you had the coverage, the amount of claim that was paid is deducted from the refund of premium amount.

9) What is the Future Insurability Option?

At the moment, your benefit amount allows you to claim \$3000 per month tax free if you are disabled. Each year, you have an option to increase your coverage by an additional \$1000 per month (to a maximum of \$5000/month tax free). Think of this as a refill on your prescription. In this case, you have 5 refills of \$1000 to add to your current plan. If you exercise all of the options, you

would end up with a total of \$8000 per month of coverage tax free.

10) Why should I enroll now?

You should take action on this ASAP. Your local representatives will be contacting you to arrange an appointment to go over your plan design options and the enrollment form. It is vital that you take action on this before you are too distracted by other commitments and miss the boat. Every grad that has enrolled has been very glad they did. As you go out in the workforce, it is necessary for you to make sure that your income is replaced with the BEST possible plan at the BEST price. No one else will pay your living expenses if you are disabled for the long term. At your age, it is very inexpensive. Think of it as a 1% solution to protect your future income ability. You are spending 1% of your income to make sure that 100% of it is replaced if you are sick or injured and cannot work. That is a good deal!

Also, through the CAPSI plan you eliminate 4 significant risks:

- a) The risk of income loss (through a disability insurance policy)
- b) The risk of being declined for the coverage. (no proof of health required)
- c) The risk of having a modified offer for the coverage (no proof of health required)
- d) The risk of getting older. (your premiums are locked in and fixed at your current age). The younger you are, the lower the cost.

This will be one of the best financial decisions you will ever make!

I look forward to seeing you at PDW. Look for our booth on January 15th. In the meantime, you will be hearing from us to help you through your options.

With confidence,

Martin Maretzki, RHU.

Martin Maretzki, RHU is the President of ax/iz financial solutions. He works specifically with Healthcare Professionals across Canada, prescribing solutions for their good financial health. Martin, his wife Janice (also a Pharmacist) and their 4 children reside in Hamilton, Ontario. He can be reached at 1 877 522-7394 or martin@axizfinancial.com



Maggie Goebel
Pharmacy Student
4th Year, Memorial University

RITALIN ON THE RISE

When we think of drugs of abuse or drug dependencies often the first drugs that come to mind are narcotics, controlled drugs or barbiturates. However, we must keep in mind that prescription drugs can also be abused. What if there was a drug that can sustain concentration, increase energy and decrease appetite? What if you can get this drug off your family or friends or even take from your children (Lesler, 2005)? How would people feel taking a stimulant drug that their friends take on a regular basis? Or how would a mother feel taking one of her child's pills in order to calm her nerves? Sure, if a child takes it or a best friend takes it; can it be that bad for someone else to take it? If it's a prescription drug and others are taking it, its abuse may go unnoticed. This drug is methylphenidate (Ritalin), which is a mild CNS stimulant. It is methylphenidate along with other CNS stimulants, which are getting abused in today's society and whose popularity is on the rise.

Stimulants are the drug of choice for the treatment of attention-deficit hyperactivity disorder (ADHD) (Burns, Wells, Schwinhammer, Malone, Kolesar, Rotschafer, & Dipiro, 2008.) Stimulants can also be prescribed for narcolepsy and the short-term treatment of obesity (Lesler, 2005). Patients with ADHD can present with inattention and/or hyperactivity-impulsivity and it can have a serious impact on a patient's academic and social functioning. ADHD starts in childhood before the age of seven and is the most common mental disorder that occurs in the pediatric population. It can also continue into adulthood (Burns et al. 2008).

The exact pathophysiology behind ADHD is not completely understood nor is the mode of action of the stimulants used to treat it (e-Therapeutics, 2009). ADHD is generally thought of as a disorder of self-regulation or response inhibition. Patients may have difficulty maintaining self-control, resisting distractions and concentrating on thoughts or ideas. The exact cause is unknown, it may be due to atypical

brain development in early childhood and it may have a genetic link. However, dysfunction in the neurotransmitters norepinephrine and dopamine is certainly thought to be a key component. Norepinephrine's role is maintaining alertness and attention and dopamine's role is to regulate learning, motivation, goal setting, and memory. Stimulant effects in ADHD patients are theoretical. They will block the reuptake of dopamine and norepinephrine and thus increasing these neurotransmitter's concentration in the synapse. Stimulant use and psychotherapy in ADHD children has shown to improve academic performance, decrease motor activity, decrease fidgeting, increase classroom behaviour, increase social skills and alleviate conduct and anxiety disorders (Burns et al. 2008).

As mentioned above, stimulants may be used illicitly to sustain concentration or increase energy. Because it works on the neurotransmitter dopamine, it can be said that it resembles the stimulant characteristics of cocaine (Ritalin, 2009). For nonmedicinal uses the pills can be taken orally, crushed and snorted or injected (Lesler, 2005). Many teens and college students snort the crushed tablets to get intense periods of high energy ("Canadian Pharmacist's Letter", 2001). Methylphenidate street names include JIF, MPH, R-ball, Skippy, the Smart Drug, the Cramming Drug, Vitamin R and kibbles and bites, pineapple (Lesler, 2005). Often times teens and college students can obtain the drugs from their friends or family members who have ADHD. These friends and family members are getting the stimulant medication by prescription for their diagnosed ADHD. The nonmedicinal use of stimulants may simply be to get a high or it may be used to increase energy levels in order to accomplish a task. For example, students in college campuses have discovered the benefits of using stimulants in order to stay up and study or cram for an upcoming exam. It has even been seen that mothers or fathers will take a child's ADHD medication in order to obtain an energy boost so that they can accomplish more work (Lesler, 2005).

(Continued on page 31)



Some teens may get their refills for stimulants filled to early, they may keep getting the medication when it is no longer needed or they may actually skip a dose of the medication giving them some left over. All of these methods would provide them with extra medication that they then can sell for money (Lesler, 2005). In the United States, ADHD has been estimated to occur between 4.3% and 12% of all school-aged children and 4% of people in adulthood (eTherapeutics, 2009). With this large diagnosis, there is also a large number of scripts for stimulants being written. Therefore, it can be said that stimulants are somewhat available to someone who wants to use it illicitly!

Patients with ADHD who are prescribed stimulants for therapy do not become dependent on their medication (Lesler, 2005)! Stimulants should be initiated at recommended starting doses and titrated up to a patient's needs while minimizing side effects (Burns et al. 2008). It is believed that dependence occurs to stimulants when the drug quickly increases dopamine concentrations in the brain (Lesler, 2005). Since prescribed doses start low and are titrated up, the risk of dependence is small for an ADHD patient taking prescribed stimulants. They are safe and effective, with a response rate of 70% to 90% in patients with ADHD (Burns et al. 2008).

However, taking drugs that are not prescribed to you is not without side effects! Large doses can cause seizures, irregular heartbeat, high body temperatures, cardiovascular failure, psychosis and stroke (Lesler, 2005)! Short-term effects can include nervousness and insomnia, loss of appetite, nausea and vomiting, dizziness, palpitations, headaches, changes in heart rate and blood pressure (usually elevation of both, but occasionally depression), skin rashes and itching, abdominal pain, weight loss and digestive problems, toxic psychosis, and psychotic episodes (Ritalin, 2009). When clinicians prescribe ADHD medication, they use caution in patients who have underlying psychiatric or cardiac disorders (Safety Concerns of..., 2006). Therefore, when used without a physician's guidance, a user can potentially have a very serious adverse event! Then, chronically using stimulants for nonmedicinal purposes can result in drug dependence and severe depression upon withdrawal (Lesler, 2005) and 6). If depression

does occur, patients should receive behavioural and antidepressant therapy and since these users are using the stimulants illicitly, it is unlikely that they would seek medical attention for drug dependence (Lesler, 2005).

Pharmacists should keep in mind that as the number of prescriptions for stimulants increases so does the potential for stimulant abuse! Pharmacists along with other health care professionals should be aware of the signs of stimulant abuse and the adverse effects associated with it. Pharmacists should watch that their ADHD patients don't get early refills or take their medications into their teens if not needed. Pharmacist should educate their patients about safe drug use and that drugs which are prescribed and safe for them, may not be safe for others. Lastly, if a pharmacist does suspect abuse they can inform their patient that federal law prohibits the use of prescription drug by any person other than the person for whom it was prescribed and then contact the patient's doctor (Lesler, 2005). Pharmacists should be aware of methylphenidate abuse, so that now when we think of drugs that are abused, Ritalin is a drug that comes to mind!

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Just ask



Lindsay Alvero
CAPSIL Representative
1st Year, University of Manitoba

The Social Scene at the University of Manitoba

It seems as if it were only yesterday that I have started my first year as a pharmacy student. Seemingly, in a blink of an eye, the school year is already half way through! Before we know it, we'll be graduating and reminiscing about all the fun we had as students. While keeping up with the curriculum is necessary, spending time with my classmates is also very important. I have asked the first year social representative and my fellow classmate, **Lucy Vuong**, a few questions about the social activities we had during the Fall term.

Describe your role as the first year social representative.

There exists a natural healthy balance for everything. The role of a social representative is to work together with the class president help keep a healthy balance between work and play prioritizing the class' best interest. Thus, the role involves informing and encouraging participation in Faculty activities and social events. The ultimate goal is to create opportunities during narrow windows of free time throughout the year for both stress relief, but more importantly for building strong bonds between members within a unified Faculty.

Briefly describe your class. What kinds of activities have you done as a class?

The University of Manitoba Class of 2013 consists of a wonderful mosaic of different backgrounds coming from various regions across Manitoba. Some came into the faculty with degrees in different areas of Science while others obtained Business, Arts, or even Philosophy and Drama Theatre degrees. Some decided on the profession of Pharmacy right away and came into the faculty immediately after their first year of prerequisites. No matter what the case is, this widespread range of different backgrounds contribute to a wealth of talents, knowledge and skills that help us help each other excel in our studies as a team. Working alongside these bright individuals is a humbling experience and seeing their strong spirit and dedication motivates me to believe that there is a lot of hope for pharmacy future.

Our class of fifty-two is a very personable bunch who not only works hard, but we play hard too. We came together as a class for a wings night and hosted a Christmas gift exchange to name a few.

Involvement in raising health awareness is very important to a pharmacist's scope of practice. Has your faculty hosted any events that aimed at educating the public?

They say that the greatest weapon is knowledge. Living in a world full of germs and diseases, many of which we have yet to find cures for, there is no magic drug for every ailment nor are drugs supposed to be treated as miracle cures. Health awareness and education is a preemptive tactic against avoidable illnesses as well as a tool to promote healthy living. From sanitary techniques to eating habits, there are countless ways to stay healthy and lower the risk of disease. Thus, promoting health awareness is an integral part of a pharmacist's scope of practice because our aim is to provide to the public the safest and most effective methods of achieving and maintaining good health, with or without the help of drugs.

The Faculty of Pharmacy in Manitoba has helped raise aids awareness earlier this school year by hosting a rigorous fundraiser contributing almost five thousand dollars to the Canadian Foundation for Aids Research (CANFAR) – the only national organization in Canada dedicated to privately funding HIV/AIDS research – in the form of a social called the "Red Party". As well, our faculty will also be involved in an annual MS Walk that will be taking place in April of 2010, where Team Pharmacy raised over fifteen thousand dollars last year.

How do social functions benefit pharmacy students when there is so much work to be done?

The students we see around campus everyday are our future colleagues. Teamwork is characteristic to nearly all success stories in the past and only through working together will an impact be made. Pharmacy is a profession that is always changing and involves continuous learning. No one person can be the master of all its diverse aspects. Good teamwork requires a relationship between colleagues – a relationship between friends. Therefore, despite the heavy workloads and the sleepless nights, we are all in it together in hopes that we all come out of it together too. That, and we all need to kick back once in a while and just have some senseless, well-deserved fun!



Research Experience

Elissa Aeng
Pharmacy Student
2nd Year, University of British Columbia

An Insight into the Realm of Research

Here I was, my first step into a Pharmaceutical Sciences laboratory. I had always known my faculty's building was speckled with these rooms, but I was clueless as to what new discoveries were happening behind those doors. Upon entry, I noticed the foreign equipment and hazard symbols smeared across the room. What was I getting myself into?

The graduate students and laboratory manager were bustling about conducting their experiments. I was shown my desk and given a laboratory notebook. After a couple of safety courses, a thorough orientation around the laboratory and a few days of reading about my research topic (intravesical bladder cancer therapy), I felt ready to begin my summer as a research intern.

I consider myself fortunate to have been given the opportunity to be involved with pre-clinical studies of novel formulations for anti-cancer drugs. I learned new laboratory techniques, such as how to manufacture nanoparticulate drug formulations and

measure the rate and depth of drug uptake into tissue. I also had once-in-a-lifetime experiences, such as holding a freshly excised porcine bladder in my hand.

Needless to say, the people I worked with were inspirational and excellent mentors who had dedicated their whole lives to research. Their enthusiasm for research motivated me to enter a poster competition and share my findings with my peers. It was nerve-racking, at first, to be placed on the spot and explain my experiments, but as the day continued, I found myself actively seeking out people to listen to me ramble about my findings.

From my research experience, I feel as if I've become a more well-rounded pharmacist. To me, the drugs on the shelves in the pharmacy are no longer just medications, but a symbol of many scientists' time and effort and a determination to improve patients' health. So to all those who are even remotely interested in research, I highly recommend that you give it a try. You may be surprised by what you discover.



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INDUSTRIAL PHARMACY RESIDENCY PROGRAM

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Original application forms, letters of reference and transcripts for the one-year Industrial Pharmacy Residency Program, sponsored by the Leslie Dan Faculty of Pharmacy, University of Toronto, in cooperation with the Faculty of Pharmacy, University of Montreal and participating companies, should be sent to the coordinator of the program 144 College Street, Toronto, ON. M5S 3M2 during the period of November 1, 2009 to May 1, 2010. The participating companies for the 2010 – 2011 term are: Eli Lilly Canada Inc., ESI Canada Inc., GlaxoSmithKline Inc., Hoffmann-LaRoche Ltd., Merck Frosst Canada Ltd., Patheon Inc., and ratiopharm. **For further information, please contact the coordinator, J. Graham Nairn at 416-978-2881 or the assistant, Diana Becevello at 416-978-2880.** Full information is provided at the website www.pharmacy.utoronto.ca

**Interested in writing
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Send in your submissions by

**February 26th,
2010**

to the CAPSIL Editor at

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Exploring the Industrial Pharmacy Residency Program

Have you ever thought of doing a residency at a pharmaceutical company? Everywhere you look people are trying new things like never before, so I decided to start my career as a pharmacist by completing the University of Toronto Industrial Pharmacy Residency Program. I knew that it would give me the opportunity to try something different, so that years from now I may look back and say, I never thought I would be where I am today!

The wealth of opportunity that you are exposed to during the one year residency is quite different from anything that you undertake as a pharmacy student or practicing pharmacist. Throughout the general residency, you get the opportunity to become a project manager of a major innovative project while being challenged with a number of inter-departmental assignments. While progressing through the rotational program, you have the opportunity to work in Regulatory Affairs, Business Development, Marketing, Professional Services, and others.

You may be wondering how a pharmacist can possibly contribute within these departments. You will be surprised to know that as a pharmacist, you have a unique skill set and experience which makes your contributions essential within a pharmaceutical company. And yes, it is definitely more business oriented and provides an opportunity to experience first hand how the pharmacist's profession is incorporated with the business world.

At this point, you may also be wondering what I have done in my short time as a resident at ratiopharm. I'm excited to say that I'm already well on my way to leaving a mark on the pharmacy profession. I have been involved with various program launches and most recently I contributed to the launch of a national marketing program directed at pharmacists across the country. I have also had the opportunity to deliver a presentation to over 300 elementary school students, educating them about food allergies using ratiopharm's interactive video-based program called "Operation Allergies". In addition, I worked on a crisis management project for which I prepared an educational presentation on H1N1 and presented it to all the employees at ratiopharm.

As pharmacy students, especially in 4th year, you may still be deciding where you want to practice as pharmacists; I was in the same position just a year ago. Now you have been introduced to another opportunity, so consider taking part in this journey as an industrial resident!

For more information about the residency program, visit:
<http://www.pharmacy.utoronto.ca/residency/iprp.html>



Shih-Wei Lin
CAPSIL Representative
2nd Year, University of British Columbia

Research Outside of Canada

Most pharmacy students who engage in research have probably volunteered / worked in a lab in their universities via programs such as the Summer Student Research Program. As one of many students who enjoy research, I want to share my experience as an undergraduate research student outside of Canada. During the summer, I traveled back home to visit my parents, while at the same time I volunteered at a Microbiology and Immunology laboratory at the National Cheng Kung University Medical College in Taiwan. It was a great experience working on a research project and interacting with the university students in Taiwan. I got to attend their research seminars, use several different pieces of equipment in the lab, and see how Taiwanese students manage their academic schedule to fit in “research”.

The professor who supervised my work actually majored in Microbiology and Immunology, but he was working on a research proposal regarding an anesthetic drug and it somehow related back to microbiology - he wanted to identify the cytokine that the drug acted on (i.e. the mechanism). With guidance from my supervisor and his research assistant, I first cultured several rat cells at 37°C temperature in a bacteria / virus free environment. I had to change the plate and media almost every day, because the cells we were using grew rapidly. After culturing, I applied a mutagen to induce mutation in one batch of cells, and the other batch would serve as the control. Later, I applied the drug to the cell cultures in differential concentrations. The experiment involved a lot of Western blot, so sometimes I had to stay for about nine hours to complete my work.

**For more photos from
Shih-Wei's research
experience,
see page 37**

The research assistant and PhD students there were very knowledgeable and helpful. Compared to labs in UBC, I think the labs in Taiwan seemed smaller and all of the lab equipment was compacted into a very limited space. However, the labs in Taiwan did have the latest equipment - they were not outdated! When I attended their seminar, the seminar room was quite small as well. Although they made the chairs small and squished together (approximately 70 seats), people still had to stand or sit on the staircase. I feel that the use of land is quite limited in Asia. The working environment was actually very clean. Although there was not a lab manager, all the students were assigned to clean up a portion of the lab and they followed this routine quite well. I think they polish EVERYTHING!

Similar to in Canada (or at least in UBC), research is popular among students and most of the students I met spent about three days per week in the lab, working, working, and working! It has been an awesome experience for me to see how research was done outside of my university and outside of Canada. Although I couldn't really complete my project since I volunteered only during one summer, I think I learned a lot. The basis of research and principles of science do not change wherever you go, and although your research team may seem small the research community is large and worldwide!



PhD student and research assistant



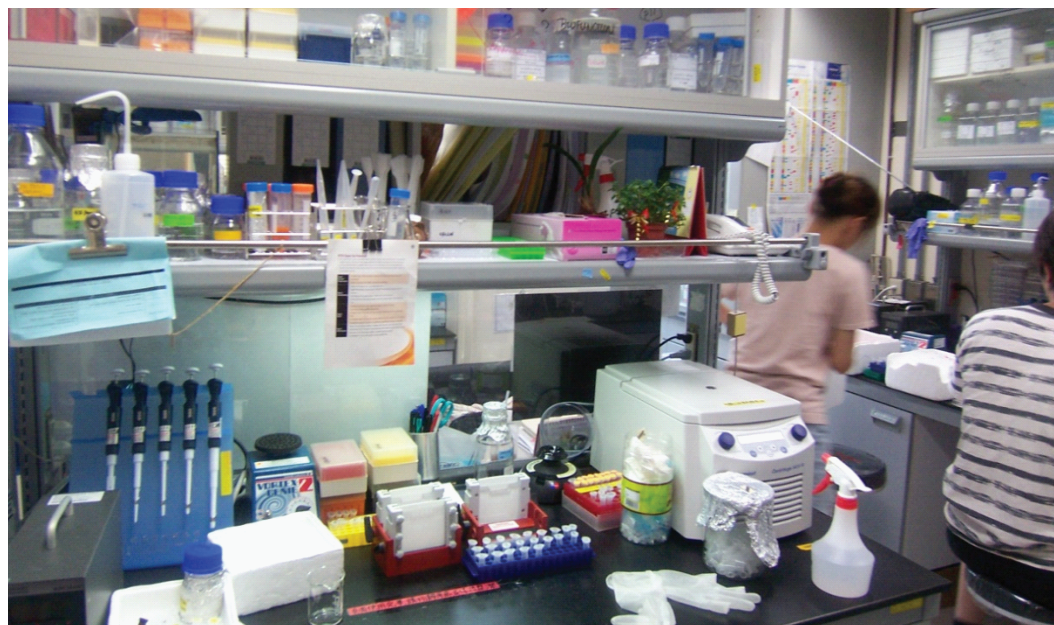
Photos submitted by:

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Research Outside of Canada: Photos



There were at least 10 students using this laboratory space...



Another view of the laboratory space