



CANADIAN ASSOCIATION OF PHARMACY STUDENTS AND INTERNS LETTERS

CAPSIL - JACEIP

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



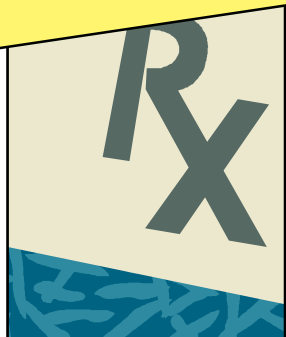
**Pharmacy and the Environment:
Green Shift**
pg. 7

New and Improved!

Bilingual Issues!

More excipients!

Electronic Distribution!



**En Français:
La Soirée de Remise des Sarraus**
pg. 28



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.capsil.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.

ALL COMMENTS AND ARTICLES ARE WELCOMED AND ENCOURAGED!

These wonderful submissions can be emailed to capsil@capsil.ca

The talented contributors to this issue:

Rachel Neumann, April Chan, Priscilla Gordon, Joseph Blais, Fiona Huang, Brittany Churchill, Jean-Phillipe Boucher, Kayleigh Gordon, Teresa Nguyen, James P.S. Hoi, Jonathan Mailman, Jennifer Day, Sara Rosaline Lavoratore, Mike Mitchell, Karoland St-Pierre

The CAPSIL's Commitment to Our Members

... that's you

Hello CAPSI members,

Happy New Year and welcome to the first issue of the Canadian Journal of Pharmacy Students and Interns, the CAPSIL, for the 2008-2009 edition.

I hope this issue finds you happy, healthy, and productive. Despite rumours to the contrary, the Association did not stop production of this journal. With one issue published last year and the publication of the fall issue (this issue normally would appear in October/November) delayed, there have been some challenges for the Association to provide you, our members, with the CAPSIL.

The National Council has remained committed to bringing you this issue of the CAPSIL (an acronym for the Canadian Association of Pharmacy Students and Interns Letters as well

as a clever little pun) and to ensure that we continue to bring you the CAPSIL in the future. We have formed a committee within the National Council to support the publication of this edition and ensure that publication continues to occur in a timely manner.

For those of you keeping score, you may notice some changes with this edition. For example, you will now see a hybrid of Français and English articles, as well as much more. This is your journal and I hope you enjoy it. I look forward to continuing to work with the National Council and continuing to serve you, our members.

*Jonathan Mailman
CAPSI National President
3rd Year Pharmacy Student
Dalhousie University*



Jonathan Mailman
CAPSI National President
3rd Year, Dalhousie University

My Fellow CAPSI Members,

Welcome back to your studies, friends, colleagues, and CAPSI events! Even though we are only one-third of the way through this academic year, there have been many changes within the Association as well as with our partners. This year marks the creation of a new CAPSI chapter and the first year of CAPSI membership at the newest pharmacy faculty in Canada, the School of Pharmacy at the University of Waterloo. There are also several new programs in the works. Some are currently being implemented, such as the new Community Outreach Program prepared by the VP Education, designed to target high school students, and others are being worked on for implementation later on this year. This year unfortunately marks the end of the longstanding Apotex-CAPSI Backpack Presentation program.

This fall, in partnership with the Centre for Community Pharmacy Research and Interdisciplinary Strategies (COMPRIS), we brought you the second edition of CAPSI-COMPRIS Student Interview Guide; a handbook and interview tool designed to help you find an employer that will allow and support you to perform proper and full patient centered, pharmaceutical care. This year we will be carrying on with many of our programs from the past including our Community Outreach Program, our symposia, and our competitions. Building on the success of the Pharmacy Student Survey held last year as part of Moving Forward: Pharmacy Human Resources for the Future, this year we are planning on

engaging you once again with an online survey, this time dealing with your thoughts and views on the Canadian healthcare system.

As CAPSI members, through partnership, each and every one of you is also a member of the International Pharmaceutical Students' Federation. Due to the hard work over the past two years of the IPSF Liaison and Student Exchange Officer, and through this partnership, the Association will be able to nominate 18 Canadian pharmacy students to go abroad. If you are interested in travelling abroad for a summer experience away, learning about pharmacy in another country, I strongly recommend speaking with your local IPSF Representative.

This year, the Association's conference will be held on the far right hand side of country, in St. John's, NL. The Professional Development Week Planning Committee from Memorial University of Newfoundland has been working hard for the past two years to provide you with what I am confident will be an excellent conference. Your Executive and Local Representatives have been working hard, not only to represent you but to bring our programs and membership benefits to you, our members. I applaud the hard work and good job that each one of them has done so far, and look forward to what this year has to bring.

See you on the East Coast!



CAPSI Executive Council Updates

Your 2008-2009 CAPSI Executive Council is always hard at work, making school and professional practice a better place for pharmacy students across Canada. Here is what they have already accomplished so far this year, the latest projects underway and what CAPSI Executive has in store for the future.



Omolayo Famuyide
Past President

On June 2nd, 2008, official changeover for the 2008-2009 CAPSI National Executive Council took place at the Canadian Pharmacists Association in Victoria, BC. My past three years with the Association have certainly been filled with many challenges, rewards and memories I will never forget. I would like to take this final opportunity to thank the members of the 2007-2008 CAPSI National Council for their dedication and commitment to serving the Association, Canadian pharmacy students and making my term as President unforgettable.

As Past President, my primary role is to continue to supervise and overview the activities of the Association. In collaboration with the President, I am also dedicated to ensuring that our President-Elect will be ready to take the seat in June 2009. Most importantly, I continue to sit on meetings of the Association including the PDW 2009 conference in St. John's Nfld in order to provide a historical perspective to discussions of the Association. We recently released the 2nd edition of the Student Interview Guide, a tool I encourage you to all use whether this is your first or tenth job interview.

I also serve as Chair of the CAPSI National Council Ethics Committee and continue to represent students on the National Taskforce for the Blueprint for Action for Pharmacy. The taskforce and working groups met in Ottawa, ON Oct. 2-3rd, where I joined the Education and Continuing Professional Development Working Group as they worked on the final details of the implementation plan for this initiative. The results and work of the Blueprint are tentatively scheduled to be revealed at the CPhA 2009 conference in Halifax, NS. For more information about the Blueprint, please visit www.capsi.ca.



Jaris Swidrovich
President Elect

As the CAPSI National President-Elect, much of my work is done in sub-committees of the CAPSI National Council. I am the Chair of the Website Committee and the Constitution Review Committee. I am also a part of the Ethics Committee and the IPSF Student Exchange Selection Committee. I have worked diligently on updating and promoting the CAPSI National website, with the incredible help of our CAPSI National Webmaster, Abby Lau. The Constitution Review Committee and I are undergoing revisions to the CAPSI National Constitution to reflect new changes or deletions and will have it available on the website immediately following revisions and approval from the National Council. This committee is also examining the CAPSI Operating Manual, which is an operational document for the members of the Association, also found on the CAPSI National website.

I have done an extensive amount of work alongside the National President as well, including, but not limited to, creating and editing documents, establishing contact with other National Pharmacy student associations, and participating in a number of teleconferences. As the CAPSI National President-Elect, I will also begin work with the University of Saskatchewan College of Pharmacy and Nutrition to plan CAPSI's Professional Development Week Conference for 2011. I will be working with the PDW 2010 planning committee as well, which is set to take place in January 2010 in Toronto. Much of my time in the coming months will be reviewing applications for the 2009 IPSF Student Exchanges. We are excited to be able to send 18 students abroad this year and look forward to receiving many applications!

Although Jaris is no longer serving as President Elect, his time on council was very productive and his hard work deserves credit



Marie-Helene Irvine
VP Education

As VP Education of CAPSI National, I have had the privilege to work on many projects and initiatives for 2008-2009. When first elected at PDW 2008, I set many goals for myself and everything is going smoothly so far. Over the summer months, I prepared documents for all the CAPSI Competitions (Patient Interview Competition (PIC), Over-the-Counter (OTC) Competition, Student Literary Challenge and Compounding Competition) including patient cases for the OTC Competition and the PIC. Rest assured that I worked closely with all the local representatives to ensure that the cases are fair for all the Faculties of Pharmacy across Canada.

In addition to the competitions, I also developed a symposium guide for the local representatives. This guide serves to aid the local representatives in planning their local symposium on this year's very interesting topic: "The New Regulation of Pharmacy Technicians and the Evolving Role of Pharmacists". I hope that many of you will attend this very informative symposium taking place at your respective Faculty.

Currently, I am working on developing a new high school outreach program on sexual health. This initiative is going very well and I have had the support of many professors, peers, and educators. This program will allow pharmacy students to make presentations to high school students on topics such as contraception, sexually transmitted infections, HPV, and emergency contraception. Keep your eyes peeled for this new outreach program coming your way!

The position of VP Education can be challenging at times but it is also very rewarding. If you would like more information on this position or are interested in running for this position, feel free to get in touch with me via email at vped@capsi.ca to discuss the position further!



CAPSI Executive Council Updates



Jason Ross Wentzell
VP Communications

2008 – 2009 Student Agendas: The 08/09 Agendas were successfully printed by DUOCreative, shipped

to each of the 10 faculties and were promptly distributed to our CAPSI members within the first week of the semester. The book was very well assembled and printed in a quality consistent with previous years. The handbooks were also distributed to appropriate sponsors and stakeholders.

2009 – 2010 Student Agendas: Once again this year we have signed a one year contract with CU Media for the solicitation of advertising in the 09-10 handbook. In attempts to increase handbook revenue, we will be introducing an extended online advertising opportunity to select sponsors.

Distribution of Apotex Backpacks and iPharmacist Coupons: Apotex backpacks were successfully shipped to all faculties and presented to first year CAPSI members within the first few weeks of the semester. Apotex iPharmacist coupons were also sent out to all CAPSI members nationwide and distributed at the discretion of the local CAPSI reps.

Medisca - CAPSI Compounding Competition: Medisca has designed and sponsored a 5' x 2' banner to be displayed at each of the schools during the Medisca – CAPSI compounding competition.

New Initiatives:

McGraw-Hill/CAPSI Partnership: CAPSI and McGraw-Hill Publishing are actively discussing a partnership that will allow CAPSI members to receive certain publications at a discount price. The complete details of this initiative will soon be decided with the attempts to launch the program in second semester of this academic year.

I would like to sincerely thank and recognize the CAPSI Executive members and each of the Senior and Junior CAPSI representatives. Your hard work, advice and support have been greatly appreciated. If there are any questions or concerns, please do not hesitate to contact me (vpcomm@capsi.ca).



Leslie Dagg
Finance Officer

This is my second year as Finance Officer on CAPSI National council and it is great to be back

for another term. My last term ended with the preparation of the budget for the upcoming year. It was during this time that I realized CAPSI was about to embark on a very challenging year financially. The reasons are multi-faceted and somewhat geographically linked. Let me explain.

CAPSI National council meets face-to-face twice a year - once during the CPhA Conference, and the second time during PDW. This year CPhA was held in Victoria, BC and PDW will be held in St. John's, NF. This means CAPSI council must travel coast-to-coast to attend meetings this year. As we all know, increasing gas prices have contributed to rising travel costs, which creates a challenge for non-profit organizations like CAPSI, even when taking advantage of the best deals. Also, with the addition of Waterloo, there are extra costs not considered in prior years. This meant large cuts for the 2008-2009 year.

With my guidance, council worked extremely hard during our meetings at CPhA to cut unnecessary expenses and optimize revenue. After a few hours of budgetary discussions, council was able to approve the budget with a relatively small projected loss for the upcoming year.

Since CPhA, I have been reimbursing, invoicing, making deposits, following-up on unpaid accounts, and working with CAPSI's accountant to complete the 2007-2008 year end. I am happy to announce that the year end is complete and CAPSI had a surplus of \$11,692 for 2007-2008! Other projects include the development of financial policies to ensure consistency from year to year.

My experience with CAPSI has been a great journey and very fulfilling. I would encourage anyone interested to pursue a position on council.



Sara Rosaline Lavoratore
VP Interprofessional Affairs

Following the CPhA conference I have created

a position paper on the public vs. private health care debate. In addition, I have been in contact with the Canadian Interprofessional Student Network (CISN), the New Health Professionals Network (NHPN) as well as the National Health Science Student Association (NaHSSA). Currently, I am working on a "pharmacy page" for a booklet NaHSSA is creating for its 2009 conference. More information regarding NaHSSA's conference will be disseminated when it becomes available. One goal I have for this year is to establish interprofessionalism at the University of Waterloo. It was been a wonderful experience to be on CAPSI National thus far, and I look forward to working with the council for the rest of the year.

Interested in joining CAPSI Executive Council?

Here's your chance!

CAPSI National Executive Council is holding by-elections for several positions

See page 29 for more information and how to apply

Get involved!



CAPSI Executive Council Updates



Sharon Leung
IPSF Student
Exchange Officer

Although my term had a bit of a rocky start, things have become more focused and more successful than I imagined possible.

This year has turned out to be an overall success for the Student Exchange Programme in IPSF Canada. Due to the hard work of the nine IPSF local representatives, the IPSF Liaison and IPSF Student Exchange Officer, we have increased the number of CAPSI students able to go on exchange by 600%! Compared to the three students we sent this year, 18 CAPSI students will be able to participate in the Student Exchange Programme (SEP) in summer 2009.

Through encouraging students to contact pharmacists and the article published in the Canadian Pharmacists Journal about SEP, we were able to find many new host sites for international students. Pharmacy students from France, Spain, Singapore, Ghana, Rwanda, Serbia, Egypt, and Romania will volunteer in pharmacy related placements across the country this summer. Most will be in community pharmacies in the Greater Toronto area, however new this year we have a community placement in Montreal and two research positions at the University of British Columbia.

The role of Student Exchange Officer (SEO) is to not only arrange exchanges for incoming students, but to also coordinate with other SEOs to place outgoing students. Alison Wong from Montreal will be working in the Hospital de Barcelona for June and July. Vincent Ho is doing his exchange in Alexandria, Egypt in community pharmacy for two months. Carrie Roth from Toronto wanted to do SEP in an underdeveloped country and was placed in hospital in Ghana for the month of July with free accommodations.

We will continue to recruit hosts on an on-going basis to ensure a successful summer in Canada, and allow more Canadian students to go abroad in summer 2010.



Amy Smith
IPSF Liason

It has been an incredibly busy and exciting year for CAPSI and International Pharmaceutical Students'

Federation (IPSF) thus far! In August, I attended the IPSF World Congress in Cluj-Napoca, Romania, as a representative for Canadian Pharmacy Students. It was an unbelievable ten day congress with workshops on HIV/AIDS, humanitarian efforts, guest speakers, social events, and the General Assembly. The General Assembly occurs annually with the meeting of official IPSF representatives from many of the countries. Sharon Leung, CAPSI National Student Exchange Officer, and I provided a strong voice for CAPSI and participated in all aspects of the congress. Through CAPSI's participation in the World Congress, the initiatives and concerns of Canadian pharmacy students were heard around the world. It is crucial for CAPSI to continue to be involved with IPSF because it provides instant communication with student representatives from over 70 countries.

As a CAPSI member you are automatically a member of IPSF and are entitled to the many benefits that IPSF provides. In August 2009, the World Congress will be held in Bali, Indonesia and any IPSF member can attend. For more information please visit www.ipsf2009.org.

Local IPSF representatives will be holding HIV/AIDS Awareness Campaigns taking place across the country during the month of November. There are many exciting activities in the making so be sure to watch for details about a campaign at your university or contact your Local IPSF Representative.

If you have any questions about IPSF and how you can get more involved with pharmacy on an international level, contact me at ipsf@capsi.ca.

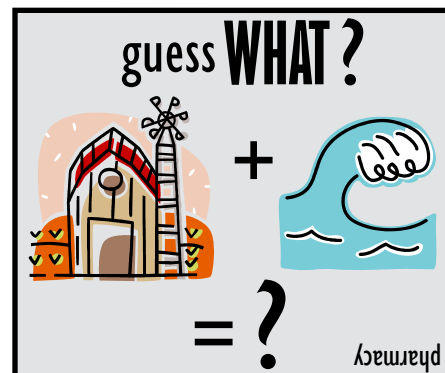


Alexander Vuong
Executive Secretary

The Executive Secretary performs many duties behind the scenes for CAPSI National. There are the usual secretary tasks: taking minutes, sending letters and email, photocopying, filing, tying up loose ends, etc. Since the CPhA conference in June, I have completed the CPhA 2008 Meeting Minutes, available online on the CAPSI website. I am also responsible for taking minutes at the fall CAPSI Video teleconference. I also handled the council turnover with stakeholders such as our lawyers. I am also on my email and answering questions that pharmacy students from across the country have about CAPSI. I also update the rest of the council on news and updates.

I am also chair of the membership committee and have begun updating the CAPSI Membership database of all of our members across the country. Duties also include making sure that our membership benefits (ie. backpacks, coupons, etc) are being distributed efficiently across the country. I also collect feedback on CAPSI Awareness Weeks and their Membership Drives for future years.

Most importantly, the secretary has a vote on the National Executive. This is where I get to get out from the back, and contribute as a team member. As secretary, I am able to give important feedback on issues surrounding pharmacy students. Like any position on the National Executive, there is huge opportunity to make a difference in the future of pharmacy





Rachel Neumann
Local CAPSIL Representative
3rd Year, University of British Columbia

GREEN *shift*

How many times have you heard the word “green” in the last three months? What does “green” even mean anymore? I’ve seen and heard it in so many commercials, I feel like they’re trying to sell me the environment. I’ve already got compact fluorescent bulbs and I’ve been taking the bus to work, but this got me thinking about what’s being done and what we as pharmacists can do.

Every BC resident received a \$100 Climate Action Dividend

This summer every adult and child resident of BC received a one time Climate Action Dividend cheque for \$100. The envelope included a pamphlet which encouraged recipients to make climate smart choices, buy energy efficient light bulbs or install insulation. (1) Combined with a new Carbon Tax in BC, more people than ever are thinking green and now have some spare funds to act on it.



What is the government doing for the environment?

Federal Conservative: According to the conservative party website, their policy is guided by the following principles, which include, “a belief that the quality of the environment is a vital part of our heritage to be protected by each generation for the next (3).” The October 16, 2007 Speech from the Throne also reads “Our Government will implement our national strategy to reduce Canada’s total greenhouse gas emissions 60 to 70 per cent by 2050 (2).” A nice thought – but we all know the old adage: money talks. “Budget 2008 also

supports the reduction of greenhouse gas emissions (3),” but doesn’t state what the figures will be.

Provincial Liberal: On the other hand, Budget 2008 deals extensively with the topics of healthy environment and stronger economy. They have introduced a progressive carbon tax which will generate “\$1849 million over the next three years (4).” But the tax is supposed to be returned to the taxpayers in the form of income tax reductions. Forty three per cent of the tax will go to reducing personal income tax for BC residents and will also feature income tax cuts to general corporate and small business tax, as well as offer tax credits to low income families.

What can pharmacists do for the environment?

In Canada, pharmacists are respected and trusted members of society, capable of influencing their patients’ attitudes as well as their health. Being a positive role model in the community is a good place to start. How can pharmacists specifically do their part to protect the environment? When asked what the most important thing pharmacists can do to protect the environment at work and at home, Susan Ogilvie, Director of Communications of the BC Pharmacists Association replied, “To encourage patients to return their old and unused medication.”

When medication is returned to the pharmacy, it can be disposed of correctly as medications that are rinsed down the sink or toilet can end up in the groundwater supply.

.... con't on page 13



Uppers and Downers

Drugs can be classified in many ways: most harmful versus least harmful and addictive versus non-addictive just to name a few. However, dividing drugs into two categories, uppers and downers, can also be one simple way of grouping the effects of drugs on the body. Here is an informative highlight of some familiar uppers and downers.

Uppers: The golden elixir for all university students: coffee, caffeine, and energy. Why do most students need this? Finals, midterms, and waking up early in the morning – need I say more? Caffeine can block receptors for adenosine, an inhibitory neurotransmitter. As such, caffeine removes adenosine's inhibitory influence on various neural pathways. In addition, caffeine is considered an upper/stimulate because it activates noradrenaline, dopamine and other pathways where cAMP is a second messenger. Clearly, caffeine affects the central nervous system by giving you a quick fix for mental alertness.

An average cup of coffee contains about 100 mg of caffeine while energy drinks like "Full Throttle" can vary from 80 mg up to 300 mg of caffeine. Other beverages and various drugs like "Wake Up" pills and even Ritalin may also have a stimulating effect on the body.

Caffeine affects your body from the brain to the muscles. Caffeine will certainly boost your brain activity and elevate your mood. Some researchers at Harvard Medical School have found that men who drink four cups of caffeinated coffee a day are half as likely to develop Parkinson's disease compared to those who do not drink coffee. This effect could possibly be due to caffeine keeping dopamine neurotransmitters active.

Other studies also have shown that consuming 140 to 400 mg of caffeine (in a pill or caffeinated soda form) prior to exercise can improve both speed and endurance of your workout. However, an article from Consumer Reports on health reported in its June 2006 issue that an intake of caffeine before exercise could constrict arteries thus decreasing blood flow to the heart during the workout. This could be a potential health hazard especially in those who have coronary heart problems. The result does not appear statistically significant due to its small number of subject ($n=18$) but the study does show clinically significant effect of caffeine on the body. Therefore, people should avoid caffeine drinks for a few hours before exercising if they have a history of heart problems.

Downers: The nocturnal elixir of many students: Beer, alcohol, and drowsiness. Now I will not bash alcohol, a beloved drink on campus, so I will be discussing about depressants in general. Downers or depressants are chemicals that affect the central nervous system (CNS). Different depressants act on different neuron receptors. But numerous depressants decrease CNS activity by affecting the neurotransmitter gammaaminobutyric acid (GABA). CNS depressants increase GABA activity thus producing the sedative and calming effect. Examples of depressants include heroin, benzodiazepines, barbiturates, and of course, alcohol.

A recent article in the Canadian Pharmacist Journal's January/February 2008 issue reports about young students and their use of opium. The Ontario Student Drug Use and Health Survey (OSDUHS) reports that nearly 21% of Ontario youth admit that they take prescription opioid pain relievers for non-medical purposes. OSDUHS has been Canada's lon

.... con't on page 9

Did *YOU* write this?!

As the position of CAPSIL Editor is passed on each year, some articles are lost in transition and do not grace the pages of the publication. In an attempt to find the owners of these orphaned pieces, they will be printed without credit and the author(s) are encouraged to contact the CAPSIL to claim fame -- capsil@capsil.ca



April Chan
CSHP National Student Delegate
4th year, University of British Columbia

CSHP *corner*

For those who have not heard of CSHP, it stands for the Canadian Society of Hospital Pharmacists, which is the national voice of pharmacists committed to the advancement of safe, effective medication use and patient care in hospitals and related health care settings.

If you're thinking of completing a hospital residency, it is never too early to join CSHP! Here are some benefits of student membership:

- Mentorship programs offered by CSHP's provincial branches: shadow a clinical pharmacist and see the day-to-day activities of a hospital pharmacist
- Access to the Pharmacists-in-Training Pharmacy Specialty Network, which brings together pharmacy students, hospital pharmacy residents, PharmD students and international pharmacy graduates in one fo-

rum so that they may converse and collaborate with each other

- Eligibility for:
 - o CSHP Hospital Pharmacy Student Award
 - o CSHP summer pharmacy internship at the national office
- Reduced registration rates for the Professional Practice Conference, the Summer Educational Sessions, CSHP Western Branches Banff Seminar and local branch symposiums and events
- The Canadian Journal of Hospital Pharmacy, published six times yearly
- Networking with hospital pharmacists who may be your future employers and peers
-and many more!

If you have questions or have an interest in getting involved with CSHP locally in your province, please contact your local CAPSI representatives or drop April a line at cshp.studentdelegate@gmail.com

.... con't from page 9

gest running adolescent survey about legal and illicit drug use. This survey questions students in grades 7 to 12 about their use of alcohol, tobacco, cannabis, and opioid pain relievers such as Tylenol No. 3 and Oxy-Contin.

Of the Ontario youth who take the opioids without medical reason 72.5% said they got the pills "from home". This survey raises concerns about the widespread use of prescription opioids among many young people. The data on prescription opioids has also sounded an alarm about the fact that young people are getting the drugs from their own family's medicine cabinets, which suggests intervention with families may be warranted.

What can pharmacists do to aid in a situation such

Uppers and Downers

as this? Pharmacist can raise awareness about opioid abuse among parents and the community as well. The article mentions "when [pharmacists] are dispensing to patients, they should stress that [prescription opioids] are significant medications and that people should have control over who gets access to them at home." Proper storage and returning unused medication to the pharmacy should be stressed when dealing with such potentially dangerous drugs. Be aware of potential abuse and hopefully a pharmacist's attention and diligence will make a difference in prescription opioid abuse.

1. Consumer Reports On Health. June 2006. Volume 18/Number 6. Consumer's Union. New York.
2. Canadian Pharmacists Journal. January/February 2008. Volume 141/Number 1.
3. Brody's Human Pharmacology. 2005.



CSHP Conference

“Ride the Tide”



Priscilla Gordon
Sr. CSHP representative, Nova Scotia
Dalhousie University

Hundreds of hospital pharmacists, pharmaceutical industry representatives, pharmacy residents and students descended on Saint John, NB this summer for the 61st Annual General Meeting and Educational Sessions.

Some of the opening events of the conference were a day tour of St. Andrews, a fierce game of golf at the prestigious Algonquin Golf Course and a fun, education filled scavenger hunt at the New Brunswick Museum in Market Square. Based on colored bracelets that attendees received in their event bags during registration, they were placed in groups and raced to be the first ones to answer all the questions pertaining to Atlantic history, culture and wildlife. Pharmacy students and residents then finished the night off in their own private section at the Boilerworks restaurant and bar.

The next morning found us bright eyed and bushy tailed (well, some of us were) as we warmed up for a fun 5km run. After we refueled with a lovely breakfast by the Market Square fountain, we headed to the Hilton Hotel and sat in on a very informative



session on controversies and issues in pharmacy. This talk was led by none other than our own Dr. Zed, along with many other well known hospital pharmacists. The rest of the day was filled with educational workshops, poster presentations (one of them by 4th year student Natalie MacDonald), great food and lots of prizes. I won an iPod nano! We ended this day with a Ceilidh and lobster at the Riverside Golf and Country Club overlooking the beautiful Kennebecasis River.

Monday morning dawned a little early for some (haha) but we enjoyed another day of workshops and plenary sessions. The main event that everyone was looking forward to later that night was the Past Presidents' Dinner and Dance at the Delta Brunswick Hotel. Everyone was dressed to the nines as we ushered out the past CSHP president, Carolyn Bornstein, and welcomed in the new president-elect, Richard Jones. The members of the winning scavenger hunt team (My team. Go Green!!!) were honored with prizes and applause. We ate, drank, and danced the night away to the rocking sounds of local cover band, Radio Factory.



.... con't on page 11



Joseph Blais
CAPSI Senior Representative
3rd year, University of Alberta

Canadian Pharmacy Practice Research Group: **Students Wanted!**

Pharmacy students are often told they are the future of pharmacy. I like to think of us not only as the future, but also as strong contributors to the present. Students are involved in many areas of the pharmacy profession and an often underpublicized area is that of pharmacy practice research.

Every year, Canadian pharmacy students become involved with pharmacy practice research. Take the following for example: Dean Baayens (University of Alberta, Class of 2009) became interested in pharmacy practice research after talking with Dr. Ross Tsuyuki, one of his professors and a well known leader in pharmacy practice research. Dean was the lead author on the joint CAPSI-COMPRIS Pharmacy Students Leading Pharmacy Practice Change: A Guide for Students to Negotiate for Patient-Centered Care. Dean's motivation for the guide was to inspire students to "experience the full potential of pharmacy practice."

Improving pediatric medication reconciliation at hospital discharge through use of an electronic form is a priority for University of Manitoba student Justin Ling (Class of 2010). Justin plans to have a poster of his project ready for presentations at the 2009 CSHP Banff Seminar and the CSHP Summer Educational Sessions. "We are trying to lay the foundation for changes in pediatric discharge, from a systems perspective," explains Justin. He finds this project exciting because he is creating something new that has the potential to transform and improve pediatric discharge care.

There is a network of Canadian pharmacy practice researchers that aims to facilitate the genera-

tion, dissemination and application of practice-based research. The Canadian Pharmacy Practice Research Group (CPPRG) was established to link pharmacy practice researchers across the country. Many members of the CPPRG are familiar faculty members at your university.

But the CPPRG isn't just for faculty and for pharmacists involved in research. It is also a place for students interested in, or involved in, pharmacy practice research. Students have helped to produce evidence that encourages practice change. Often times, fellow students only haphazardly discover their peers' research. The CPPRG provides students with another outlet to promote their work and to link with other researchers.

It costs nothing to join the CPPRG and is easy to do. You simply send an email to research@pharmacists.ca including your name, address, phone number, fax number and area of practice.

As the role of the pharmacist continues to evolve, pharmacy students are playing an active role in leading pharmacy practice research.

**For more information,
visit www.pharmacists.ca/research**

*Joseph wrote this article during his time
as a 2008 summer student at CPhA.*

.... con't from page 10

The last day of the conference came all too soon. Susan Mansour was one of the speakers on Interprofessional Education. Many of the students and residents attended the workshops pertaining to residency projects, research and publications. After a lunch symposium on Smoking Cessation in the 21st

CSHP Conference -- Ride the Tide

Century, we said goodbye to all the amazing people we met, packed up the car and headed back to Halifax.

I can't wait for next year.....See you at the 62nd Summer Educational Sessions in Winnipeg. August 8-11th, 2009!



Fiona Huang
CSHP Pharmacy Summer Intern 2008
4th year, University of British Columbia

A Dynamic Summer Internship at CSHP

This summer, I had to choose between backpacking in London, Paris and Amsterdam or accepting the position of Pharmacy Internship at the Canadian Society of Hospital Pharmacists (CSHP) in Ottawa. Although it was a tough decision, I did not want to give up the opportunity to be connected to the world of hospital pharmacy and to explore the inner workings of a national pharmacy organization.

My internship kicked off in early June with the Canadian Pharmacists Association (CPhA) Annual National Conference in Victoria, British Columbia. Along with Myrella Roy, CSHP Executive Director, I represented CSHP at the conference and attended joint officer meetings with CPhA and the Canadian Association of Pharmacy Students and Interns (CAPSI). I also attended several educational sessions and got the latest scoop on pressing issues, such as the launch of the Blueprint for Pharmacy: The Vision for Pharmacy and the final recommendations of Moving Forward: Pharmacy Human Resources for the Future study.

At CSHP's national office in Ottawa, I participated in a number of meetings, including the monthly Executive meetings and those of various committees and task forces. I also had a one-day orientation about the programs managed by the Canadian Agency for Drugs and Technologies in Health, during which I learned about the Common Drug Review and the Canadian Optimal Medication Prescribing and Utilization Service. In addition, I also had a one-day orientation to the pharmacy services at the Children's Hospital of Eastern Ontario and the Ottawa Hospital General Campus, and a half-day orientation to the programs managed by CPhA.

When I wasn't participating in meetings and orientations, my time in the office was spent responding to inquiries from members and potential members on professional practice issues and Society business. I

assisted the staff with the preparation for the Annual General Meeting and Educational Sessions and performed other clerical duties. In collaboration with the staff and Council members, I also completed a number of projects such as creating and conducting an online CSHP 2015 Self-Assessment Tool Survey, which will be launched nationally in the fall, and drafted the application for trade-mark registration of CSHP acronym and logo with the Canadian Intellectual Property Office. My largest project was the review of the text for a hospital pharmacy management brochure originally drafted by the CSHP Hospital Pharmacy Management Leadership Task Force. The focus here was to understand the shortage of pharmacy managers and to promote and to encourage pharmacists to become part of the pharmacy management team.



Fiona Huang and Desarae Davidson at the 2008 CSHP Annual General Meeting in Saint John, New Brunswick.

.... con't on page 13



.... con't from page 7

Green Shift

Ogilvie states that “[The Medication Return Program] is a value to the environment and the patient... it’s easy for the patient to take advantage of.”

Responsible Fuel Consumption

The Provincial government has introduced a new carbon tax which applies to all types of fossil fuel. In the local media people are grumbling about the increased gas prices, but have they stopped to think about how this will affect everything else in life? Any commodities which are shipped by truck, train, plane or barge will increase in price due to fuel surcharges.

College of Pharmacists is the regulatory body responsible for overseeing pharmaceutical distribution companies. Will the patients end up bearing the increasing distribution costs? However, Ogilvie says “It’s still too early to see how the price of oil will affect the consumer (2).”

Recycling, Energy Efficiency and Water Conservation

Energy efficient light bulbs, appliances, etc. are all things that everyone can do at home to help and they are also principles which may be applied when designing or remodeling a pharmacy.

Perhaps you’ve heard the ads on the radio; “We won’t run out of water. Will we?”
-- <http://www.goblue.org/>

Start planning today for a greener tomorrow!

1. http://www.smartchoicesbc.ca/EN/smart_choices/
2. Interview with Susan Ogilvie, July 22/08, 11:00 am
3. The Conservative Party of Canada Website
Founding Principles: <http://www.conservative.ca/EN/4679/>
Speech from the Throne: <http://www.conservative.ca/EN/4679/>
Responsible Leadership for Uncertain Times: <http://www.conservative.ca/EN/2972/>
4. <http://www.bcliberals.com/EN/309/11429?PHPSESSID=ff38d88467e96a468f0016b0932>

.... con't from page 13

A Dynamic Summer Internship At CSHP

The highlight of my internship with CSHP was the Annual General Meeting and Educational Sessions in Saint John, New Brunswick. There, I actively participated in meetings with Executive, Council, Strategic Planning Committee, Hospital Corporate members, and the Research and Education Foundation Board; attended all the social events; and represented CSHP with other members of Executive in joint officer meetings with the New Brunswick Pharmacists’ Association. I also had the opportunity to participate in the Residency Mentorship Program and discovered a career avenue that I would like to pursue upon completing my pharmacy degree. In addition, I attended several educational sessions and had the opportunity to network with the various hospital pharmacy leaders from across the nation.

This summer at CSHP allowed me to gain further insight into what hospital pharmacy has to of-

fer. The chance to experience and learn how CSHP functions nationally in the great city of Ottawa, while working closely with the CSHP staff and leaders of hospital pharmacy, is one that I would not hesitate to recommend to other students. My summer with CSHP has truly re-energized my passion and commitment to hospital pharmacy practice. I definitely made the right decision to accept this internship. Backpacking in Europe can wait for another time!

I am extremely grateful to have worked closely with Myrella Roy, to have been inspired by other executive officers and Council members, and to be part of a prestigious organization that has such hardworking staff and dedicated volunteers. I wish to thank all the CSHP staff, Executive, and Council for providing me with this tremendous learning experience. This marks the beginning of my pursuit of a hospital pharmacy career!



Brittany Churchill
Local CAPSIL Representative
Memorial University of Newfoundland

ANOTHER OVERNIGHTER!

The Advantages of a Good Night's Sleep

Most students have been told that a good night's sleep is beneficial and may have even advised others that they need more sleep. Yet how many of us actually practice what we preach? Whether you are trying to cram in that last page of notes or spend that last hour out with friends, there are so many other activities that take up students' time. With our heavy course loads, this is particularly true for Pharmacy students. It's often hard to justify getting the requisite 7.5 – 9.5 hours (3) of sleep each night. You may feel as though you are sacrificing study time; however, if you don't get enough sleep, you may build up a "sleep debt" (3) that will ultimately take a toll on your school work and your personal life.

Many students see sleep as an activity that can be forfeited for other "more important" pursuits. Students may feel that they are giving themselves advantages in school by denying themselves sleep. However, a lack of adequate sleep (less than 7 hours per night) (1) can build up over time. Being sleep-deprived can negatively effect a person's emotional well-being, as well as their memory, motivation and self-control. Many students that report having insufficient sleep also have "a greater frequency of stress". (2)

Even though it may not be healthy, many young people still avoid sleep for various reasons. According to one study, students with higher GPA levels have been found to get less sleep than others (3). This could be due to a willingness to sacrifice sleep for higher grades, which may be unhealthy. However, another study found that students who stayed up later on weekends (and did not make up for sleep lost during the week) actually had poorer grades. (1) So, it seems that if you are going to sacrifice sleep on certain days (for example: before an important exam), you need to

be willing to catch up on your sleep at another time.

Another important factor in the sleep habits of university students is the use of energy drinks. Many students use these beverages to help ward off sleep. While caffeine does have a stimulating effect (which can help you stay awake) it also causes heart palpitations and headaches (2), among other adverse effects. As future pharmacists, as well as current students, we need to be aware of this as more and more young people continue to use these energy drinks.

Ultimately, as students our time is limited. Sometimes sleep must be sacrificed in order to achieve our academic goals, however this should not become a habit. By maintaining a balanced sleep schedule, you will be more alert, motivated, and better able to make sound decisions. This is important now, and also in your future career as a pharmacist.

1. Allen, R.P. Social factors associated with the amount of school week sleep lag for seniors in an early starting suburban high school. *Sleep Res.* 1992; 21: 114.
2. Malinauskas, B.M., et al. (2007). A survey of energy drink consumption patterns among college students. *Nutrition Journal*, 6: 35.
3. Stolzar, M. (2006). *Paying for Sleep: An Economic Analysis of Time Allocation and Productivity among College Students.* (Thesis, Stanford University, 2006).





Jean-Phillipe Boucher
Pharmacy Student
2nd year, Université Laval

La Pharmacie pour la vie

Un jour, alors que j'étais au Cégep et que quelqu'un m'a demandé en quoi j'allais étudier à l'université, j'ai immédiatement répondu : pharmacie. Cette personne m'a ironiquement fait remarquer que mon surnom — JP — pouvait également signifier Jeune Pharmacien. Mais ce n'est pas pour cette raison que j'ai choisi la pharmacie, ni pour l'argent ni pour autre chose accessoire d'ailleurs. En fait, si j'ai choisi la pharmacie, c'est à cause de la passion que j'éprouve pour elle, passion qui m'a été transmise il y a bien longtemps par un homme que je n'oublierai jamais. En fait, mon histoire de passion pour la pharmacie commence en 5e année du primaire. Oui, oui, alors que j'avais à peine dix ans ! Je me rendais alors à l'hôpital pour je ne sais plus quelle maladie. Après examen, le médecin de garde me donne un antibiotique ; il me dit que c'est un nouveau traitement, et donc je retourne chez moi avec l'échantillon de l'antibiotique. A priori, tout semblait magnifique, seulement je suis allergique à la pénicilline. Bien entendu, j'ai fait une réaction suite à la prise du médicament. Alors je suis retourné à l'hôpital, où on m'a directement hospitalisé. Ayant été prévenu, mon médecin de famille est venu m'examiner. Mon état se détériorait de jour en jour, et ce dernier ne savait pas ce que j'avais. Puis, un matin, je le vois entrer avec un gros livre, accompagné par une seconde personne qu'il me présente comme étant un pharmacien. Faisant preuve d'une insensibilité et d'une froideur hors du commun, mon médecin m'annonce que je suis atteint de la C. difficile (et je parle bien de la tristement célèbre *Chlostridium difficile*, et non pas de la *Caterium difficile* que nous avons éradiquée au cours de l'initiation!). À cette époque, le C. difficile était beaucoup moins connu qu'aujourd'hui ; par conséquent, les traitements étaient loin d'être comme ceux que l'on retrouve présentement. Et c'est là que le pharmacien est entré en ligne de compte. Ce dont je me souviens, c'est que mon médecin a dit "bonne chance" au pharmacien et qu'il est parti. Immédiatement, le pharmacien m'a rassuré et puis il s'est mis à me parler. Encore aujourd'hui, je suis subjugué devant

tant de désir d'aider ; j'étais sûr que non seulement il pouvait me guérir, mais qu'en plus il le voulait. Dans cet hôpital où tout inspirait le désespoir, la morosité, le malheur et la maladie, le pharmacien était ma source d'espoir, de lumière, de bonheur et de guérison. Faible, chétif, mal en point, désespéré, emprisonné entre quatre murs blancs, j'étais comme seul au monde. Mais le pharmacien était mon confident; ce que j'appréciais le plus, c'était quand il venait me voir entre Les Simpsons et Henri pis sa gang juste pour me réconforter. Et finalement, trois jours après mon hospitalisation, le traitement qu'il m'avait conçu s'est avéré efficace, de sorte que j'ai pu retourner chez moi. À travers toute cette histoire, ce qui m'a marqué le plus, c'était la différence entre mon médecin de famille et le pharmacien. J'ai gardé contact avec ce pharmacien (alors que j'ai changé de médecin de famille...). Dans mon esprit d'enfant de dix ans, je voyais le pharmacien comme un super héros. Je voulais être pharmacien, et non pas pompier, policier ou astronaute comme la plupart des jeunes de mon âge. Un jour, je lui ai demandé comment je pourrais jamais le remercier pour tout ce qu'il a fait pour moi. Et il m'a répondu : "Si ton rêve est de devenir pharmacien comme moi, alors accroche-toi y. Et juste de savoir que tu continueras bien après moi à prodiguer des soins pharmaceutiques constitue une plus grande richesse pour moi que tout ce que ce tu pourrais m'offrir". Et maintenant que je suis en pharmacie après m'avoir accroché de toutes mes forces à ce rêve, j'ai juste envie de dire : "La pharmacie, pour la vie !". Pourquoi ? Tout simplement parce qu'un homme avant moi avait eu non seulement le courage de le dire mais également la fierté de le faire. Tout simplement parce que cet homme dégageait une telle aura de passion et qu'il avait l'air tellement heureux. Tout simplement parce que cet homme, nouvellement retraité, a tout fait au long de sa carrière pour aider les autres. Tout simplement parce que je veux rendre hommage à cet homme. Tout simplement parce que cet homme a changé ma vie...



Kayleigh Gordon
Local CAPSIL Representative
University of Manitoba

The Practice of Pharmacy *Past, Present and Future*

The practice of pharmacy had been around for well over a millennium and as the profession is progressing rapidly to a greater and brighter place, it is easy to forget the beginnings. However insignificant and primal the early practice of pharmacy may seem, it is important to remember that these were the bases which we have built the current profession on.

Pharmacy is defined by Webster dictionary as “the art of preparing and dispensing drugs and medications”. The word pharmacy itself is believed to have roots in the Greek term “pharmakon” which translates to remedy. Though it is difficult to state where it definitely started, it is believed that pharmacy began with priests using nature in a trial and error method to benefit people’s physical and psychological state. Earliest records are attributed to the apothecaries of Babylon as early as 2000 B.C. As would be expected further contributions to the practice can be attributed to the Greeks, Romans and Egyptians who began to believe less within myths to explain the world around them and more so in what was actually around them. As more was learned, the Romans, Egyptians, and Greeks became leaders in crude composition procedure which would dominate in practice for many years onward.

The practice itself also went through a vast amount of change and advancement with the development of elixirs and powders, though quite crude compared to those of today. Throughout the centuries following the Greeks, important distinctions were made such as in 300 A.D. when the separation of the practice of medicine and pharmacy occurred, portrayed in the form of two Arabian brothers Damian the apothecary and Cosmos the physician. The Arabians did not only contribute to this important distinction but were also the first to have drug stores, known as apothecary

shops. Continued interest in the field of pharmacy and using drugs for human treatment lead to the creation of collections of drug knowledge known as pharmacopeias, of which the first official one originated in Florence, Italy. Boards of apothecaries’ were attributed with creating these pharmacopeias and were well established in France as well as London where they were responsible for compounding and dispensing drugs as well as giving pharmaceutical advice. Such apothecaries’ have paved the way for the practice of pharmacy as we know it in the nineteenth and twentieth century.



The development of the profession and the contributions of many different higher thinkers is much more extensive than discussed above; however, pharmacy practice as we know it began to be molded and shaped as early as the nineteenth century. During this time, pharmacists began preparing very crude isolations of drugs and were dispensing them on their own accord as they were self-appointed and solely in charge of protecting consumers from fraudulent medicines. However effective these medicines were, sometimes it was for unknown and horrible reasons. For example, pharmacists during this period who formulated their own products under their own names

.... con't on page 17



.... con't from page 16

The Practice of Pharmacy Past, Present and Future

often worked with opium to relieve pain and even a baby's colic. Though seeming quite effective at the time, the consequences of addiction often followed. Even though a lot was unknown, we do owe the innovation and early development of aspirin as well as other drugs still currently in use to the pharmacists of this time.

In the twentieth century, much more advancement proceeded and the creation of the pharmacy industry occurred. Another huge change within this century was the intervention of the government by regulation. By the 1930s, most pharmacists were required to have a bachelor's degree in science and in some areas a pharmacy license also became a requirement. It almost seemed as if there was a drugstore in every corner. By the 1950s, more momentum was gained with the discovery of penicillin and many were treated with what seemed to be this "miracle" of the time. However, it was soon discovered more consideration had to be given when administering the antibiotic as some reacted very negatively while some did not react at all. An important distinction also came about in the 1950s as the Food and Drug Act separated drugs into either prescription or over the counter entities. As time progressed into the 1960s and 1970s, pharmacy became an incredible prosperous business with the creation of many pharmaceutical chains rather than corner stores. By operating in larger extents, these chains made it cheaper to access drugs for the public; however, the profit created by such chains began to overshadow the patient centered care which we focus on today.

Presently, pharmacy is a large and developing field. Progress had been made as more drugs have

been developed, but more scrutiny has been placed on exactly what the role of the pharmacist is. More drug creation and intake leads to more drug interaction which was previously never explored. The clinical pharmacist ultimately studies how the drugs interact in the body which benefits the patient directly. The overwhelming attitude toward practice, currently, is the focus on the patient and their well-being. Many programs have been enacted where the pharmacists develop care plans for the patients' as well as follow up on the use of the drug to ensure the patients' safety and efficacy of the drug. As we continue to move into the future, the growth of our practice is very exciting.

Though it is difficult to sum up many thousands years of pharmacy evolution into one article, it is very apparent that the profession has gone through incredible changes. The future of practice offers the possibility that pharmacists will be prescribing on their own accord. With this change, the potential of the pharmacist to help and care for the patient is given a new booster and will never need a refill. It cannot decide ultimately how pharmacy will be practiced in the future but the path the profession treks down will be the one students of today create.

1. <http://www.lindsaydrug.com/newhist.htm>
2. http://books.google.ca/books?id=B2f3TdUfUWwC&pg=PA3&lpg=PA3&dq=early+pharmacy&source=web&ots=WRODf-7xxK&sig=xkRuZMGnCXgSN8YYeqx8jLH4OHs&hl=en&sa=X&oi=book_result&resnum=4&ct=result#PPA4,M1
3. http://www.drugstoremuseum.com/sections/level_info2.php?level=3&level_id=26
4. <http://query.nytimes.com/gst/fullpage.html?res=940DEEDA153AF934A25757C0A96E948260&sec=health&spon=&pagewanted=5>





Teresa Nguyen
Local CAPSIL Representative
3rd Year, University of Saskatchewan

Healthcare around the World: *V i e t n a m*

Hi everybody! I'm back again writing for CAPSIL this year. My summer was amazing since I got the great opportunity to travel to Southeast Asia – specifically Thailand and Vietnam. My first visit to Asia was a culture shock but it definitely opened my eyes to a whole new level of health care services and issues, among other things. I want to write about pharmacies and health care stories from around the world in the hopes to rouse Canadian interest in learning about the differences and similarities in health care of countries around the world. For this article, I will focus on Vietnam's pharmacies because I spent the majority of my vacation there. I will describe the retail pharmacies in Vietnam and the AIDS orphanage that I visited.

In Vietnam, only those who are lucky enough to gain admission into university can become a pharmacist after two years of study and the entrance competition into such schools is quite fierce. There are two main pharmacy schools affiliated to the University of Medicine and Pharmacy in Hanoi and Ho Chi Minh City. In addition, there are also some pharmacy technician programs in less recognized pharmacy colleges in other parts of the country.

I saw a number of modern retail pharmacies in western-style shopping malls in Ho Chi Minh City. These look similar to most Canadian pharmacies while some others in older districts are generally dimly lit and indistinguishable from other retail stores. Normally, people do not need a doctor's prescription to purchase medications so all available drugs are considered as "over the counter". However, for security reasons, it appears that most medications are placed either on shelves accessible only to the store pharmacist or in a locked glass counter. This system is similar to Canada's Schedule II drugs that are available without a prescription but 'behind the counter'

where only the pharmacist has access to them. There is a prominent presence of herbal medications such as packages of ginseng in many pharmacy stores and these too are kept behind glass counters. Since none of the staff in the pharmacies I visited gave consent to my interview or picture taking, it was difficult to get first-hand information about pharmacy practice in Vietnam.

Most of what I learned about the Vietnamese pharmacy system came from the local people whom I talked to. Since people do not need prescriptions for medication, patients would not go to doctors' office unless it was an emergency. In many cases, those who do not feel well tend to go to a pharmacy where they describe their symptoms to the pharmacy staff and then wait for a recommendation. In this scenario, the patient counselling just seems like what many Canadian pharmacists would do for OTC medications (ex) cough and cold medication recommendations. However, a big difference is the fact that Vietnamese pharmacists can



.... con't on page 19



.... con't from page 18

Healthcare around the World: Vietnam

recommend and sell prescription drugs, such as antibiotics, without a doctor's prescription. In addition to patient counselling practice, Vietnamese pharmacists also have prescribing rights. Without adequate training in diagnosis, pharmacists in Vietnam prefer that patients come in with their own diagnosis and ask for the specific medications for that specific illness. This practice encourages people to 'self-diagnose' themselves and then go to a pharmacy for the drug they think they need.

Vietnam's health care system is not strictly regulated compared to our Canadian system either. As a result, there is a serious potential of drug related problems and drug abuses in a system that doesn't require physicians' prescriptions and proper patient records. However, it may be argued that "polypharmacy" drug abuse in Vietnam tends to be less significant because most people just don't have enough money to support such a habit. As well, all the pharmacies I visited did not have any narcotics like Oxycodone or even Tylenol beyond 500 mg strength. On a funny note, even my tour guide mentioned that he had tried finding Methylphenidate in a pharmacy but couldn't find it! This article is not intended to be critical of another country's health care system but rather demonstrates to us Canadians how fortunate we are to have patient safeguards in place, like the pharmacy regulations that we take for granted.

The Vietnamese authority is promoting a health care system that focuses on specific issues such as the HIV and AIDS sector. Pharmacy universities in Vietnam are looking at the role pharmacists can play in the treatment and management of HIV/AIDS. (1) This disease sector is an important issue to address in Vietnam as it is approaching epidemic proportions in the country over the past 20 years. During my street explorations, I noticed several big, bold HIV/AIDS awareness and prevention posters in Hanoi and Ho Chi Minh City. However, some healthcare workers have complained that the government has not done

enough to help the people who are inflicted with the disease.

I had the chance to visit an AIDS orphanage with my family when I was in Ho Chi Minh City. There, I learned from the orphanage director, a Catholic priest named Father Gioan, that AIDS still has such a dreaded stigma that many AIDS affected mothers are shunned from their communities and numerous affected children were deserted by their families and ostracized at schools. This particular orphanage cares for about 50 children ranging from newborns to teenagers. Although most of the children do not have parents, some mothers who are shunned by their families stay with their children at the orphanage even after they have given birth. There are counselling services available and the orphanage director also has medical training as a physician. The orphanage outreach workers provide counselling to the adults who have contracted disease and help the older children to rehabilitate themselves into society.

The orphanage relies mainly on donations to pay rent and buy medications. It is quite a struggle for the staff at this orphanage because the government refuses to provide help and the neighbourhoods surrounding the orphanage keep away because of its stigma. Looking into a medicine cabinet in the director's office, I found bottles of pain relievers like acetaminophen and erythromycin antibiotics. The AIDS orphanage has a limited supply of anti-virals because they are so expensive in Vietnam. Most of the medications are donated from outside of the country, as well, some visitors to Vietnam bring drugs from their country to donate to the orphanage.

I saw and learned a great deal about the Vietnamese health care system during my visit. The observed gaps in the quality of Vietnamese health care demonstrates how lucky the average Canadian really is when it comes to our health care system.

1. <http://pharmacy.ucsf.edu/news/2005/announce-en.pdf>



James P.S. Hoi
Pharmacy Student
3rd Year, University of British Columbia

Aboriginal Experience

As a UBC pharmacy student entering my Junior (3rd) year in university, I often find myself seeking out for opportunities and experiences that would enable me to widen my scope and perspective of the profession and practices here in British Columbia. This summer, I was given that unique opportunity when I was selected by the UBC College of Health Disciplines to undertake the endeavor on embarking on a trip to the Xyolhemeylh camp in the Sto:lo nations reserves to conduct workshops and to discover and learn of the culture and lives of aboriginal community there. It was my first time stepping foot into an Indian reserve so I was very excited. Along with me were 6 other students from the healthcare fields of Medicine, Dentistry and Occupational Therapy making up our 'UBC students' team.



Photo credit: Rena Tabata

When we first arrived, our team received a warm welcome by youth leaders and we were told of the amenities, campsites and rules pertaining to the cultural practices of the community that emphasizes the importance of respect and honoring those who are

more elderly, experienced and wise. No later after we were setup, we were given an official introduction in the 'circle of life' where we were greeted with traditional Indian songs. We were addressed as part of the nation's extended family and given prayers of blessings by the elders present. It was a new and exciting experience and I felt humbled by the elaborate reception and communal hospitality shown to us. What was more intriguing though was the energy and enthusiasm of the children and kids who greeted us ceaselessly, asking our names, age and our field of study in UBC.

During the length of our stay, we were also exposed to and learned a lot of the cultural aspects of the community. I had the opportunity to witness the practice of 'smudge', the traditional cleansing using incense from burned cedar leaves and tobacco that is spread around the body using a feather. This is usually carried out as part of the prayer to rejuvenate and renew the mind to prepare for a new day, week or future. The youth leaders took strong initiative as well, to organize small workshops on how to make bracelets- using cedar roots and how to tie and make the Indian band drums, out of deer hide that needed to be dried in open air. We also had the chance to watch an exhilarating Slahal (an Indian guess game) and savor some of the traditional meals and teas.

Our workshop was overall a success. Having an interdisciplinary team enabled us to deliver our presentation and answer questions from different angles and view points of the healthcare profession on issues ranging from stress management and nutrition,

.... con't on page 21



.... con't from page 20

to drug abuse and sexual health. We had many questions from the audience of kids, who were very keen on looking for answers on their health care enquiry.

On our last day of the trip, we were presented a special Indian song and dance in appreciation of our time spent in the reserves. I take back with me not only the invaluable experiences, but also a deep sense of pride of serving in different parts of the province, both as a student and a resident of Richmond. I would highly encourage all students, be it university, college or high school, and especially those who are enrolled or interested to be in the healthcare profession, to consider participating in these programs to learn a lot more of the importance of healthcare – at the same time, make many new friends and have fun!

Aboriginal Experience



Photo credit: Rena Tabata

Behind the Profession In Front of the Issues

The Canadian Pharmacists Association would like to wish you all the best for a great year!

Membership in CPhA is free to all pharmacy students.



CANADIAN
PHARMACISTS
ASSOCIATION

ASSOCIATION DES
PHARMACIENS
DU CANADA

Visit www.pharmacists.ca and click on



and join today!





Jonathan Mailman
CAPSI National President
3rd Year, Dalhousie University

Interview with **Larry Pereira**

Last April I had the opportunity to sit down for a cross-country telephone interview with CAPSI's newest Honourary Lifetime Member, **Mr. Larry Pereira**. This interview gave me an opportunity to learn much more about him, his life, his work, and his family.

Where are you from originally and where did you grow up?

Well, I would say I come from an interesting background. Born in Calcutta India in 1938. Immigrated to Wales in 1947 and to Sedgewick Alberta in 1951. Schooling – boarding school in both India and England and finally “freedom” in the public system in Canada. The small town allowed me the opportunity to experience and participate in all sports and I still am very active in tennis and golf.

Where did you meet your wife and can you tell me a little more about your family?

I met my wife Phil in Calgary. Phil is a Vice Principal at a high school in West Vancouver. Our daughter Chris and son-in-law Bill live in North Vancouver (with [our] two grandchildren), son Rob in Montreal are teachers while our youngest daughter Charla is a graphic design artist in Seattle.

What is your favorite international city and why?

Florence with Prague a close second. The history, arts, culture and the lifestyle with wonderful wine, beer and food.

What is your favorite Canadian city and why?

Vancouver and the “Best Coast.” The outdoors and the opportunities that it affords. Golf and tennis all year round!!!

What is your most memorable life experience?

The birth of the children and grandchildren.

You graduated from Pharmacy at UofA in 1963. What other degrees do you hold, or did you go straight into pharmacy?

In those times when you came out of high school, with not much in the way of counseling as to what was offered in university. I took a pre-dent year which was basically an arts and science year. Decided dentistry wasn't for me. On the advice of my hometown pharmacist, I took a year off where I apprenticed with Sprague Drug in Edmonton and went back into Pharmacy the following year. I took four years to achieve my degree and retrospectively had too good a time with the social part of Fraternity and Pharmacy.

What other memberships or volunteer things have you done in the pharmacy world?

Local membership with industry organizations in each of the cities where I was located. Involved with Pharmacy at the National level where I have worked with the Canadian Foundation for Pharmacy and their Pillar of Excellence awards for BC.

Industry representative for the Federation of International Pharmacists convention which was held in Vancouver in 1997.

Received the Friend of Pharmacy award for 2008 by the BC Pharmacy Assoc. in recognition of my volunteer work with Pharmacy in BC.

So when did you first get involved with CAPSI professionally?

Had contact with students through the Faculties of Pharmacy but didn't really get involved until I took on the role of External/Professional Affairs in 1994 with

.... con't on page 23



.... con't from page 22

Interview with Larry Pereira

Astra. I was involved with PDW in Winnipeg in 1997, providing class rings as an initiative for attendance at the educational sessions. Astra continued this involvement in the following years until I retired in 2000.

What motivated you to become involved with CAPSI in the first place?

The enthusiasm and drive that CAPSI exemplifies. The motivation that you have to define pharmacy and the students place in that definition. From an industry perspective the willingness of CAPSI to sit down with us to develop win-win situations through open discussion.

What did pharmacy students bring back into your life?

Enthusiasm and the opportunity to share the experience gained through my years in the industry.

What is your favorite memory of CAPSI or a CAPSI event?

The favorite memory I have of course is being nominated and then receiving the Honorary Lifetime Membership.

I have received awards through my years in industry but the Honorary Lifetime Membership award came from the heart and means the most to me. To earn the respect of you all, the feeling I had when I was nominated and to get this recognition for something I enjoyed so much, what better award or feeling could there be? Guy Genest and I talked about this relationship many times and we both feel the same way.

If another professional came to you and asked you why they should get involved with the students what would you say to them?

I would say that the students are the future leaders of pharmacy and this can be shown both on a national and provincial basis. I think they are being short sighted if they are not getting involved with CAPSI. The rewards that can be obtained from the opportunity

of working with a positive, motivated group of individuals both personally as well as for their company are boundless. Prescribing rights for pharmacists is a prime example of this.

Where do you see the profession heading in the future – where to you see the biggest change?

Pharmacists as part of the interdisciplinary health group. You will be recognized as the experts in drug therapy and the prescribing rights initiative is an example of this happening. Certainly organized pharmacy is working to this end but there is a great deal to be done and this is where you as new graduates should be involved.

If you were to pass on advice to students in the pharmacy schools across the country – what are your words of wisdom?

GET INVOLVED. Be involved with your local student group and certainly get involved with CAPSI and with PDW. It offers so much potential to broaden the scope of what you think pharmacy is all about. PDW provides you an opportunity to interact with students across the country and is a convention that is second to none.

Now that you have retired for the second time, how do you plan on keeping yourself busy?

I have volunteered and have been accepted for the 2010 Olympics/Para-Olympics. I am still in contact with UBC Faculty of Pharmacy as well and will look to volunteering as needed in those areas. Tennis, golf, travel and grandchildren.

Do you have anything you would like to add?

I don't think I can ever say it enough: how much I have enjoyed working with CAPSI. It has been the highlight of my career and I don't say that lightly. I have had the opportunity of many wonderful experiences in Industry and Pharmacy but nothing to compare with my CAPSI experience. I want to thank you all.



Jennifer Day
National CAPSIL Editor
4th Year, University of British Columbia

So there I was – meeting potential employers dressed in my fuzzy slippers and penguin pajamas, proudly sporting a fresh coffee stain on my tank top. A picture of professionalism, armed with morning breath and hair a rat would happily nest in. It would sound like a nightmare if it wasn't a dream come true. Confused? Let me explain.

Career Forward, a virtual career fair that took place bright and early on Saturday, October 26th, was the first of its kind. Advertised as “A virtual job fair for Canadian health care professionals,” Career Forward was open to pharmacists, pharmacy technicians, medical interns, doctors and respective students across Canada.

The idea was the same as a regular job fair – only these booths were digital and, sadly, there were no free pens. Each company had a booth that I could click on and access job postings, contact information, company literature and more. As well, each station was complete with a live representative who greeted me and answered any questions I had about the company and its postings. Employers included Shoppers Drug Mart, the Canadian Forces, CENTRESante and Health Authorities from different provinces, among numerous others. With the click of my mouse, I was on-line chatting with Health Match BC and sending a resume to Costco Wholesale Canada. All this from the comfort of my living room and I didn't even have to brush my teeth.

Eager participants who signed up for the free event were given a sign-in name, password and the opportunity to post resumes and other certificates into a virtual “briefcase”. This briefcase also boasted sections including employer contact information which

Handshaking is **SO** analog

was updated each time I interacted with a business representative, a message board, and a job basket where interesting positions could be saved and later applied to, as well as saved information from booths I had visited. The site also provided reminder pop-ups to alert participants to other events taking place.

In addition to the job fair, there were a number of interesting lectures that participants were able to take part in at the “conference hall.” I picked up some helpful financial hints from Mike Sullivan, president of Cubic Health Inc, as he presented “Securing Your Financial Future.” Bill Gates beware. Since the job fair spanned most of the day and all the lectures were saved on the site, I was able to tame my hair and walk my dog without missing a beat.

The “resource centre” was also a virtual jackpot, full of interesting articles ranging from therapeutics to advice on workplace management, all contributed by The Medical Post and Pharmacy Post, publications for the medical community and sponsors of the event. The site even allowed me to download all the resources available on to my desktop so I could read them later at my leisure. You know, for when I wasn't busy discussing interview times with Canada Safeway.

I may not have walked away from Career Forward with a re-usable bag full of free stuff and carcinogen-leaking water bottles, like at a regular job fair, but I did leave with many new business contacts and a job interview. I also signed off feeling like a virtual pioneer as I had embarked on a new journey for career fairs every where. Davey Crocket had his raccoon skin hat; I have my virtual briefcase.



Sara Rosaline Lavoratore
CAPSI Vice President of Interprofessional Affairs
4th year, University of Toronto

We have a great health care system, *right?*

As many of you are aware, there are numerous complaints about our health care system; some argue that wait times are too long or that we don't have access to new health technology. The reason health care has become such a contentious issue is that the cost of providing it to every Canadian has increased exponentially over the past ten years. To circumvent the rising cost of health care, governments have discussed creating a private health sector.

When people hear about private health care, they immediately think of the American health care system. The United States of America is the only industrialized country without universal health coverage; approximately 45 million people in the United States live without health care coverage, so naturally, Canadian's worry that our universal health care system will be turned into a private, profit-driven system. (1) Many feel that universal health care is a fundamental Canadian value; this was demonstrated by awarding Tommy Douglas, "the father of Medicare", the title of greatest Canadian. (2) However, some of the best health care systems in the world have a public-private mixed health care system.

In 2000, the World Health Organization released an assessment of the world's health systems. France's health care system ranked number (1), Canada ranked 30th, while the United States ranked 37th. Other Mediterranean European countries such as Italy and Spain ranked within the top ten. (3)

So, what makes the French system so great? France's health care system has a national social insurance system as well as complementary voluntary health insurance. France provides its citizens with a basic level of health care and anything beyond that level of care is

available through the voluntary health insurance. Those with low levels of income that might not be able to purchase the voluntary health insurance have it provided free. Having a two-tiered health care system allows for a decreased financial burden on the government as well as greater access to new health technologies. Both Italy and Spain have similar health care models. (4)

Overall, the debate of whether Canada should continue to enhance its publically funded health care system or move towards a two-tiered system is ongoing. This year CAPSI will be polling our members regarding this discussion, so look forward to this survey later on.

1. <http://www.nytimes.com/2007/08/12/opinion/12sun1.html>
2. http://www.cbc.ca/greatest/top_ten/nominee/douglas-tommy.html
3. <http://www.photius.com/rankings/healthranks.html>
4. http://www.euro.who.int/eprisa/main/who/progs/chhfra/system/20050131_1



UNIVERSITY OF TORONTO
LESLIE DAN FACULTY OF PHARMACY

INDUSTRIAL PHARMACY RESIDENCY PROGRAM

LESLIE DAN FACULTY OF PHARMACY

UNIVERSITY OF TORONTO

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, 2008 to May 1, 2009. The participating companies for the 2009 – 2010 term are: Baxter Corporation, Eli Lilly Canada Inc., ESI Canada Inc., GlaxoSmithKline Inc., Hoffmann-LaRoche Inc., Janssen-Ortho Inc./Ortho Biotech, 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**



Mike Mitchell
Pharmacy Student
4th year, University of Saskatchewan

ACTOR Article

Are Catchy Titles Overshadowing Results?

During the latest therapeutics death march, my class woefully plodded its way through cardiac medications and the wheelbarrow of studies concerning each drug. It was somewhere between the PROVE IT and DREAM study that I noticed that every single study had some catchy acronym attached to it. Don't believe me yet? Here are some gems I discovered, looking only at statin studies: REVERSAL, ASTEROID, TNT, SPARCL and, my personal favourite, MIRACL. Yes, they actually named their drug study MIRACL. Who cares how good the study is? It's the MIRACL study! It has to be good.

The issue here is how much time researchers are devoting to figuring out these clever names and whether that time that would be better spent on proper study design or quality result analysis. In the end, it won't be the hard facts of the study one remembers, but

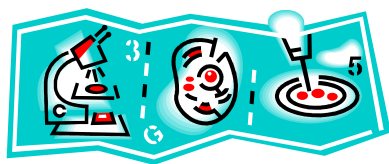
instead the catchy name and drug class it dealt with. Perhaps the goal of these catchy titles is to distract us from the low quality of the study or as a marketing tool similar to Pepsi. Take this article as an example. I could have written a much better article, but instead spent so much time thinking up an acronym that I ran out of time. But I did come up with the ACTOR article and people will remember a catchy name.

Since I'm all about suggesting contest ideas for other people to organize, I propose we have a CAPSIL contest* to find the catchiest drug study name one can invent. You have to include the acronym and what it stands for. And if you're lucky, maybe one of the drug companies will buy the name off you and use it for their next sub-par study.

*There is actually no such contest... thanks Mike.

Thank you CAPSI Gold Club members for your sponsorship:





RESEARCH PROFILE

Christine Leong, Class of 2010 — University of Manitoba

Christine was hooked on neuropharmacology research following an introduction to one of her professors, Dr. Mike Namaka, a clinical pharmacist who specializes in this area of practice. She took the initiative and enthusiastically approached Dr. Namaka, expressing an interest in working with him in his area of research, particularly Multiple Sclerosis (MS) research.

“MS was a condition I was interested in learning more about and if I could learn how I can use my knowledge in pharmacy to improve the living conditions for patients with MS, I was determined to learn how.” explains Christine.



This year, Christine’s project focuses on the role of Superantigen producing *Staphylococcus aureus* in the Etiology of Relapsing Remitting Multiple Sclerosis (RRMS). MS is characterized by inflammation of central nervous system fibers which may result in nerve demyelination and presentation of symptoms. The cause of this inflammatory response is yet to be determined, and one possibility is the presence of *S. aureus* that can produce specific toxins leading to an overactive immune response. Christine meets with patients from three groups: patients with RRMS undergoing an attack, patients with RRMS not undergoing an attack, and patients without MS. During her meetings, she is required to collect a simple nasal swab and patient information including a medical history, a medication history and an allergy assessment.

For students interested in research, Christine recommends that you “Get to know your professors, and think about an area of pharmacy that interests you. Don’t be afraid to try new things especially if it’s something that you are passionate about.”

Christine plans to work as a clinical pharmacist in a hospital setting. She is also a 2008 Merck Frosst Summer Research Student Program Award, Faculty of Pharmacy Undergraduate Research Studentship, Consortium of Multiple Sclerosis Center (CMSC) Scholarship and Student Travel Award winner. She is actively involved with the Canadian Association of Pharmacy Students and Interns in the position of CAPSI Senior Representative for the University of Manitoba.

**Christine can be reached at
christineleong21@gmail.com.**

Karoland St-Pierre
Pharmacy Student
3rd year, Université Laval

La Soirée de Remise des Sarraus

Le cours d'introduction à la pharmacie vient à peine de se terminer que c'est déjà la frénésie. Nous avons 45 minutes, top chrono, pour nous préparer à la soirée et nous nous devons d'être à l'heure puisqu'on nous a bien avertis qu'un tout petit retard mettait en péril le bon fonctionnement de la soirée. Nous nageons dans l'inconnu. Les deuxièmes années nous ont parlé de cette soirée et ils en conservent un merveilleux souvenir mais nous ne pouvons imaginer à quel point la soirée que nous allons vivre sera marquante.



À notre arrivée à l'entrée du pavillon Palasis-Prince, le stress est à son maximum. Malgré tous les efforts des gentils bénévoles pour nous faire taire, l'ambiance est survoltée. Ils doivent donc crier encore plus fort pour nous donner les dernières directives et nous faire prendre les rangs. Après plusieurs vérifications nous sommes prêts à vivre ce moment unique : nous sommes les seuls au Québec à bénéficier d'un tel accueil.

Lorsque les invités ont tous pris place dans la salle, c'est maintenant à notre tour d'entrer. Sur une musique protocolaire nous défilons fièrement en réalisant peu à peu toute l'ampleur de la cérémonie. De nombreux dignitaires et professeurs ainsi que le personnel de soutien se sont déplacés pour l'occasion,

tous à l'exception d'une chaise apparemment. Les allocutions de bienvenue nous ont fait réaliser à quel point nous étions privilégiés de pouvoir faire partie du monde de la pharmacie. Une fois les discours terminés, nous sommes montés tour à tour sur la scène pour recevoir, des mains du doyen, notre sarrau et notre épinglette. Ces objets sont non seulement les symboles de notre future profession mais aussi les symboles de notre entrée dans la famille de la faculté de pharmacie. C'est tous ensemble que nous avons revêtu notre sarrau pour la première fois.

On nous a bien dit que la blouse blanche est un privilège et qu'il est accompagné de responsabilités que nous nous devons de respecter. Par l'affirmation solennelle, nous nous sommes engagés à être des « ambassadeurs pour notre faculté, notre université et notre profession ». La soirée de remise des sarraus est sans doute un moment très important dans notre cheminement d'étudiant et elle restera dans nos mémoires. Maintenant, le plus difficile est à venir mais peu importe les embûches qui se retrouveront devant nous, il n'y a qu'une seule chose à se dire : "La pharmacie pour la vie !"

La soirée de remise des sarraus en chiffres

- 1** faculté au Québec offrant cet accueil
- 3** performances du Galien
- 4** mois de préparation et de travail acharné
- 11** personnes formant le comité organisateur
- 20** bénévoles qui ont veillé au bon déroulement de la soirée
- 25** professeurs titulaires sur la scène
- 98%** de participation des étudiants de première année
- 157** étudiants en première année présents
- 490** personnes qui ont assisté à la soirée de remise des sarraus



CAPSI National Executive Council BY-ELECTIONS

CAPSI National is holding by-elections at your school
for the following:

Executive Council positions for 2009-2010

- President**
- President-Elect**
- VP Education**
- CAPSIL Editor**

Application: 1) Nomination form 2) Letter of Intent
3) CV 4) Videotaped speech

Contact: Your local CAPSI Sr. or Jr. rep for details and
for videotaping instructions

View: www.capsi.ca for position descriptions

DEADLINE: Wednesday February 4, 2009

From the publisher of Martindale

FASTtrack

FASTtrack is a new series of indispensable study guides created especially for pharmacy students.

Each book provides concise, bulleted information, key points, tips and an all-important self-assessment section which includes MCQs, case studies, sample essay questions and worked examples. Visit the FASTtrack website, www.fasttrackpharmacy.com, for extra MCQs, sample online content and much more . . .



FASTtrack:
Managing Symptoms in
the Pharmacy

Author(s): Alan Nathan
ISBN: 978 0 85369 727 5
Product: Paperback
Format: 234 x 156mm
Extent: 256pp
Publication date:
October 2007
Price: \$29.95



FASTtrack:
Pharmaceutical
Compounding and
Dispensing

Author(s): Chris Langley,
Dawn Belcher
ISBN: 978 0 85369 700 8
Product: Paperback
Format: 234 x 156mm
Extent: 224pp
Publication date:
October 2007
Price: \$29.95



FASTtrack:
Physical Pharmacy

Author(s): David Attwood,
Alexander T Florence
ISBN: 978 0 85369 725 1
Product: Paperback
Format: 234 x 156mm
Extent: 192pp
Publication date:
October 2007
Price: \$29.95



FASTtrack:
Pharmaceutics -
Dosage Form and Design

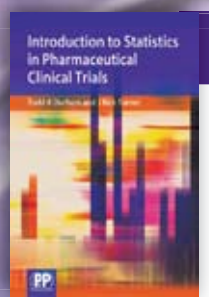
Author(s): David Jones
ISBN: 978 0 85369 764 0
Product: Paperback
Format: 234 x 156mm
Extent: 160pp
Publication date:
October 2008
Price: \$29.95



FASTtrack:
Complementary
and Alternative
Medicine

Author(s): Steven B Kayne
ISBN: 978 0 85369 774 9
Product: Paperback
Format: 234 x 156mm
Extent: 200pp
Publication date:
October 2008
Price: \$29.95

Other Texts and References



**Introduction to Statistics
in Pharmaceutical Clinical
Trials**

Author(s): Todd A Durham and
J Rick Turner from Campbell
University
ISBN: 978 0 85369 714 5
Product: Paperback
Format: 246 x 189mm
Extent: 240pp
Publication date:
April 2008
Price: \$49.95



**Physicochemical
Principles of Pharmacy**
Fourth Edition

Author(s): Alexander T
Florence
and David Attwood
ISBN: 978 0 85369 608 7
Product: Paperback
Format: 246 x 189mm
Extent: 512pp
Publication date: 2006
Price: \$65.00



**Pharmaceutical
Compounding and
Dispensing**

Author(s): John F Marriott,
Keith A Wilson, Christopher A
Langley and Dawn Belcher
ISBN: 978 0 85369 575 2
Product: Paperback
Format: 246 x 189mm
Extent: 296pp
Publication date: 2006
Price: \$75.00



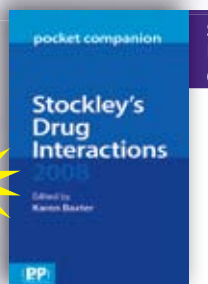
**Clinical
Pharmacokinetics**

Edited by: Soraya Dhillon
and Andrzej Kostrzewski
ISBN: 978 0 85369 571 4
Product: Paperback
Format: 234 x 156mm
Extent: 280pp
Publication date: 2006
Price: \$55.00



**Pathology and
Therapeutics for
Pharmacists Third Edition**

Author(s): Russell J Greene and
Norman D Harris
ISBN: 978 0 85369 690 2
Product: Paperback
Format: 246 x 189mm
Extent: 1008pp
Publication date: April 2008
Price: \$85.00



**Stockley's Drug
Interactions Pocket
Companion 2008**

Edited by: Karen Baxter
ISBN: 978 0 85369 757 2
Product: PVC
Format: 180 x 100mm
Extent: 576pp
Publication date: 2008
Price: \$45.00

Available at your medical bookstore (www.lb.ca/medbookmall)
or at www.PharmPress.com

(all prices are in USD and are subject to change without notification)

(PP)