Urohistory at UBC!! The first ever external review of the Department of Urologic Sciences took place on January 12 and 13, 2011 (Hard to believe that it’s almost 5 years since our transition from Division to Department status). Our colleagues Dr. Brian Warriner (Chair), Dr. Joseph Chin (UWO) and Dr. Michael Jewett (U of T) met with many of our Faculty and staff and produced a thoughtful and helpful critique of the current status of our academe and our strategic planning for the coming 5 years. The full report will be made available to our faculty in the near future for comment and discussion and I hope that we will be able to consider all recommendations, prioritize their implementation and raise our high standards even higher. I must thank our most loyal staff – Helen, Mae, Naomi, Willie and Fern – as well as Darcie Prosser of the Dean’s office, for organizing this most important event.

In this issue of the Department newsletter, we feature an exciting new development in our MIS/robotics research project, as we welcome TWO new daVinci robots to the Department. These purely research robots have been installed in Dr. Chris Nguan’s STELLAR facility at VGH and in Dr. Tim Salcudean’s Robotics and Control Laboratory (RCL) in Electrical and Computer Engineering at UBC. The goals of this highly collaborative research team, only one of three centres worldwide to have a formal research agreement with Intuitive Surgical (creator of the robot), are to develop image-guided surgical techniques and to integrate cellular diagnostics into the surgical field. I congratulate all the scientists, clinicians and students working in our MIS/robotics program who are destined to improve surgical outcomes for our urology patients.

Another recent highlight for our Prostate Centre was the funding of Drs. Art Cherkasov, Emma Guns and Paul Rennie to develop a new genomics field called computational chemogenomics. This new approach predicts how different chemicals or drugs will affect cancer tumours. Funding from Genome BC, Canadian Institutes of Health Research (CIHR) and the Vancouver Prostate Centre will enable development of novel classes of prostate cancer drugs to manage castrate resistance cancer. They will examine over 10 million compounds or chemicals looking for potential new drugs, and then using computational chemogenomics, essentially computer modeling in virtual 3D, to screen the compounds to gauge their potential effectiveness.
Congratulations to Dr. Ben Chew for being selected one of the CUA’s representatives for the EAU-CUA Scholar exchange in March 2011. Ben will be travelling throughout Europe visiting academic centres to exchange ideas about his fields of interest, metabolic stone disease and stent biology. Kudos also to Drs. Ryan Paterson and Roger Sutton for developing the CUA guidelines for the evaluation and medical management of kidney stone disease. This document will serve as a diagnostic and therapeutic guide for the many clinicians currently managing this highly prevalent problem. Amina Zoubeidi is to be congratulated on her Terry Fox Foundation Investigator Award. And lastly (but not least), we welcome our latest addition to our faculty, Dr. Dirk Lange. As a microbiologist, his research has focused on the use of Oxalobacter formigenes as a treatment option for hyperoxaluria and on bacterial infections associated with biomaterials of indwelling devices. He will undoubtedly enhance the already significant research productivity of the Stone Centre.

Well done to all and best wishes for a healthy, prosperous and productive 2011.
Dr. Dirk Lange is a microbiologist who earned his Ph.D. in Microbiology and Immunology from the University of Western Ontario (London, Ontario) on understanding the role of the capsular polysaccharide in the pathogenesis of *Campylobacter jejuni*. Dr. Lange completed his post-doctoral fellowship at The Stone Centre at VGH with Dr. Ben Chew, where he contributed significantly to the area of urinary biomaterial design, providing a basic science perspective to understanding ureteral stent related problems. Together with Dr. Chew he has authored several book chapters, original research and review articles on the topic of bacterial adhesion and biofilm formation to ureteral stents, and has been actively involved in the development of a novel biodegradable ureteral stent. In addition to this, Dr. Lange expanded the research program at the Stone Centre by spearheading studies aimed at understanding the role of oxalate transport across the intestinal epithelium in calcium oxalate kidney stone formation, and how it is affected by *Oxalobacter formigenes*, a commensal oxalate degrading bacterium that is absent in many hyperoxaluric kidney stone formers.

This work has contributed to shaping his current research interests, which pertain to understanding the role of bacteria in causing and treating urologic disease. Specifically he is working to characterize *Oxalobacter formigenes* at the microbiological level, as a better understanding of the bacterium and how it interacts with the intestinal epithelium will help to improve its potential use as a treatment for hyperoxaluria and recurrent kidney stone disease.

In addition to this, Dr. Lange is involved in collaborative work with Dr. Alan So and Dr. John Smit (Microbiology, UBC) aimed at studying the use of non-pathogenic bacteria in the treatment of superficial bladder cancer.

Dr. Lange is also interested in studying the role of inflammation in bacterial prostatitis patients in promoting prostate cancer formation.

To date Dr. Lange’s contributions to Endourology and particularly Stone Disease have been recognized by the Endourological Society with the “Best Endourology Paper” award at the World Congress of Endourology in 2009 and the “Best Research Presentation” at the World Congress of Endourology in 2010. He has been invited to speak at international stent symposiums on his work regarding biofilms and ureteral stents. In addition Dr. Lange has been recognized as a Vancouver Coastal Health Research Institute Rising Star for his contributions to research and mentorship of students and colleagues.

We are pleased to have recruited him to our department to further enhance our research involving microbiological causes of both urologic oncology and non-oncologic diseases. We believe he is a rising star in basic science and urologic research.
Dr. Mehdi Moradi is a research fellow with the Department of Electrical and Computer Engineering, University of British Columbia. Since early 2010, Mehdi holds a Prostate Cancer Training Award from the Department of Defense, Congressionally Directed Medical Research Program and works on developing image-based techniques to improve the delivery of image-based prostate interventions such as brachytherapy and prostatectomy. He also holds a Postdoctoral Fellowship from Natural Sciences and Engineering Research Council of Canada (NSERC). Mehdi is a Ph.D. graduate of Queen's University at Kingston Ontario where he developed a new approach for the analysis of ultrasound RF signals for tissue typing, targeting detection of prostate cancer.

In UBC, Mehdi works under supervision of Dr. Tim Salcudean from Electrical Engineering and Dr. Larry Goldenberg from Urologic Sciences. Their collaborative work includes the study of vibro-elastography, an ultrasound-based method for the study of elastic properties of tissue, and its potential application for improved visualization of prostate gland and detection of cancer. With help from Dr. Piotr Kozlowski (UBC MRI Center and Vancouver Prostate Center), Mehdi has also worked on a new method for the analysis of multi-parametric MRI data for prostate cancer detection that results in probabilistic maps of cancer.

Outside the research work, Mehdi spends his time skiing and hiking B.C. mountains and enjoying Persian music.

Dr. Collins is a senior scientist at the Vancouver Prostate Centre and a Director of The Microarray Facility. In addition, he is an associate adjunct professor at the University of California San Francisco (UCSF) Helen Diller Family Comprehensive Cancer Center and a visiting scientist at Lawrence Berkeley National Laboratory. He has held positions at Lawrence Livermore National Laboratory and Lawrence Berkeley National Laboratory at UCSF. His current research is best described as translational genomics where mathematics, genomics, computer science, and clinical science converge in diagnostics and therapeutics.

His work as a member of the UCSF Prostate SPORE has resulted in identification of a suite of DNA based biomarkers that show promise for predicting a patient’s risk of progression and metastasis. Dr. Collins invented and patented End Sequence Profiling (ESP) the forerunner of modern paired-end sequencing. ESP is a sequence-based method for determining the physical structure, complexity, and mutation load of tumor genomes and for direct detection of fusion genes and transcripts. Dr. Collins is now integrating array-based technologies and next generation sequencing technologies to radically cut costs and make very large-scale tumor genome projects and personalized oncology a reality in the near term.

Dr. Collins is on the Scientific Advisory Boards of the International Drug Discovery Science and Technology Conference (China), BIT Life Sciences Gene Conference (China), Genome British Columbia’s Molecular Lymphoma project, and Combimatrix Molecular Diagnostics. He is on the Organizing Committee of the Advances In Genome Biology and Technology (AGBT) Conference and serves on the editorial board of the Open Pathology Journal. His collaborations are extensive and global resulting in approximately 80 peer-reviewed manuscripts. He holds multiple patents, and has received numerous awards including the California Cancer Research Programs Cornelius L. Hopper Scientific Achievement Award for Innovation.
Library Research Workshop

Urology Resident and Fellows become Search Savvy

November 26, 2010 was the first Library Workshop for urology residents and fellows. Dean Giustini, one of UBC’s librarians, and myself paired up to create 3 workshops for the urology residents and fellows. The inspiration for this idea came from Cleo Pappas who is a librarian at the University of Illinois in Chicago. Cleo had set up a similar working document for students in the Master’s of Health Professions Program. I found these skills were highly practical and would have been valuable as a resident. As a result, Dean and I created similar workshops for the urology residents and fellows.

The aim of the workshops was to familiarize the residents with UBC’s library system and resources associated with the library on-line. Specifically, access skills, how to do more refined searches based on urology literature, the use of bibliographic management software and the understanding and access of “grey” literature have been included.

One of the barriers to starting a research project is the difficulty of accessing the correct literature. This can be especially true as a new resident starting in UBC’s program if you are from a different university and library network. The goal of the workshops was put all the residents and fellows on “the same page” by working with them through the workshops. Residents brought their own laptops so they could practice these skills during the workshop. In addition to the access skills, residents also learned how to use RefWorks. RefWorks is bibliographic management software that is provided free by UBC. It allows you to generate a list of your references, format the references in your paper dependent on journal style you want and finally create a bibliography in which ever style is required. This resource can streamline the research process and hopefully will help residents when they are writing their papers.

Dean Giustini, one of UBC’s librarians, is also a great new resources for our residents. Residents have already started working on projects and are using Dean as a resource. Hopefully we can work on some collaborative projects together.

It is exciting to see the residents learn a new skill and become search savvy!

Dr. Jennie Mickelson
Co-Director, Undergraduate Program
The new daVinci Si dedicated research robot in the Surgical Technologies Experimental Laboratory and Advanced Robotics (STELLAR) facility, (Jim Pattison Pavilion, VGH) has arrived!

This has been a long time coming: part of a TWO robot purchase for research into image guided innovation and surgery, this robot forms one of the pillars of the translational research pipeline; one where bench side technical research is conducted at the sister lab in the Electrical and Computer Engineering (ECE) Department at UBC (Drs. Tim Salcudean, Robert Rohling and Purang Abolmaesumi) on a daVinci standard robot, brought to the STELLAR facility for preclinical assessment and trials on the daVinci Si unit, then up to the VGH OR for clinical trials on the daVinci S in OR 10. The two research robots were purchased with grant funding through a $13.38 million Canada Foundation for Innovation/BC Knowledge Development Fund award coordinated by the Institute for Computing, Information and Cognitive Systems at UBC. $5 Million of that award is targeted to research in computer-aided medical procedures and includes the robots as well as other imaging and high speed computing equipment.

Drs. Martin McLoughlin, Christopher Nguan, and Larry Goldenberg have been the key clinicians in driving the research agenda of the STELLAR facility forward, and currently the lab supports multimodal image capture, reformatting and analyses of two prototypical Urologic procedures: partial nephrectomy and radical prostatectomy. Drs. Salcudean, Rohling and Abolmaesumi represent a wealth of technical expertise within the ECE Dept at UBC and have already multiple seminal publications and conference presentations based on the collaborative work done thus far. Ms. Lilian Hudson, a prominent local philanthropist and friend to the Department of Urologic Sciences continues to be exceedingly generous in her support of the important work STELLAR is undertaking in advancing the field of Minimally Invasive Urologic Surgery.

The STELLAR facility has flourished as a result of cross Faculty collaborations realizing a common goal: to improve the patient experience and outcome through innovations in technology. These collaborations continue to extend with new investigators based in the Sauder School of Business, and Simon Fraser University coming aboard this year. As a Departmental resource, STELLAR welcomes collaborations with all clinicians and scientists who have an interest in advanced technologies for surgery. Please contact Dr. Christopher Nguan through the Department of Urologic Sciences if interested.
Editor’s Note:

In the late 1970s, Dr. P.J. Moloney was able to obtain special funding from the BC provincial government to open the first Urodynamic laboratory to be located at Shaughnessy Hospital. The Unit opened in 1980 and Dr. H. Fenster was appointed Director.

In September of 1988 University Hospital honoured Dr. Pat Moloney by naming the Urodynamics Lab after him: The Patrick J. Moloney Urodynamics Unit.

A few months later, in December 1988, Premier Bill van der Zalm made an official visit to the lab.

Picture on the right: Opening of the Dr. Patrick J. Moloney Urodynamics Unit, Shaughnessy Site, University Hospital

THE DR. PATRICK J. MOLONEY URODYNAMICS UNIT

Dedicated to a respected Surgeon and Teacher whose vision and determination established the Urodynamics service at the Shaughnessy Site

University Hospital, September 1988

Group Picture: (L to R) Dr. Howard Fenster (Head of Urology and Director of Urodynamics), Mrs. Lillian van der Zalm, Health Minister Peter Dueck and Premier Bill van der Zalm.
### Awards and Recognition

<table>
<thead>
<tr>
<th>Student / Faculty</th>
<th>Last Name</th>
<th>First Name</th>
<th>Academic Rank</th>
<th>Sponsor/Donor</th>
<th>Name of Award/Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Faculty</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afshar</td>
<td>Kourosh</td>
<td>Assistant Professor</td>
<td>Department of Urologic Sciences</td>
<td>Undergraduate Teacher of the Year</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Peter</td>
<td>Assistant Professor</td>
<td>Canadian Cancer Society Research Institute</td>
<td>Research Grant</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>Peter</td>
<td>Assistant Professor</td>
<td>VCHRI Team Grant</td>
<td>Research Grant</td>
<td></td>
</tr>
<tr>
<td>Masterson</td>
<td>John</td>
<td>Clinical Professor</td>
<td>BCCH - OPSEI</td>
<td>Excellence in Education Award with Distinction</td>
<td></td>
</tr>
<tr>
<td>Nguan</td>
<td>Christopher</td>
<td>Assistant Professor</td>
<td>Department of Urologic Sciences</td>
<td>Postgraduate Teacher of the Year</td>
<td></td>
</tr>
<tr>
<td>So</td>
<td>Alan</td>
<td>Assistant Professor</td>
<td>WSAUA</td>
<td>James L. Goebel Grand Prize-Best Poster</td>
<td></td>
</tr>
<tr>
<td>Wright</td>
<td>Jamie</td>
<td>Clinical Professor</td>
<td>Vancouver Coastal Health</td>
<td>Clinical Excellence Award</td>
<td></td>
</tr>
<tr>
<td>Zoubeidi</td>
<td>Amina</td>
<td>Assistant Professor</td>
<td>Prostate Cancer Foundation</td>
<td>Young Investigator Award</td>
<td></td>
</tr>
<tr>
<td>Zoubeidi</td>
<td>Amina</td>
<td>Assistant Professor</td>
<td>Terry Fox New Investigator Awards</td>
<td>New Investigator Award</td>
<td></td>
</tr>
<tr>
<td><strong>Student (Resident/Fellow/PhD)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friedman</td>
<td>Boris</td>
<td>Clinical Fellow</td>
<td>Department of Urologic Sciences (&amp; Ob/Gyn)</td>
<td>2nd Prize-NWUS Resident/Fellow paper</td>
<td></td>
</tr>
<tr>
<td>Lack</td>
<td>Nathan</td>
<td>PhD</td>
<td>Department of Urologic Sciences</td>
<td>4th Annual Lorne D. Sullivan Lectureship and Research Day—Best Basic Science Presentation</td>
<td></td>
</tr>
<tr>
<td>AbuGhosh</td>
<td>Zeid</td>
<td>Clinical Fellow</td>
<td>Department of Urologic Sciences</td>
<td>4th Annual Lorne D. Sullivan Lectureship and Research Day—Best Clinical Research Paper</td>
<td></td>
</tr>
<tr>
<td><strong>MD Undergrad Student</strong></td>
<td>Nelson</td>
<td>Hilary</td>
<td>MD Undergrad 2nd year</td>
<td>Department of Urologic Sciences</td>
<td>Balfour Scholarship</td>
</tr>
</tbody>
</table>

---

**UPCOMING 2011 MEETINGS**

* AUA will be held at the Walter E. Washington Convention Centre, Washington, DC – May 14-19

* 5th Annual Lorne D. Sullivan Lectureship and Research Day will be held at Gordon and Leslie Diamond Health Care Centre Lecture Theatre, Vancouver, BC – June 15

* CUA will be held at Fairmont The Queen Elizabeth, Montreal – June 19-21

---

Please send your comments or suggestions regarding the newsletter to:
Helen Wong, Administrative Manager, Department of Urologic Sciences
Gordon & Leslie Diamond Health Care Centre
Level 6, 2775 Laurel Street, Vancouver, BC  V5Z 1M9

**Editor**
Dr. Howard Fenster, Clinical Professor, Department of Urologic Sciences, UBC

**Design/Layout**
Naomi Liu

www.urology.ubc.ca