

Editor's Note

The autumn has arrived and the leaves take on beautiful shades of red, yellow and orange before the trees discarded them as the wind blows. This is the time of year I most enjoy, where things take on a new direction. For me, the autumn always feels like the beginning of a new year. Students fill the halls and midterms are underway, and the department has some new faces and new objectives. This issue of the newsletter will give you a glimpse of the newest members, both on the academic and administrative side.

As editor of the newsletter, I would like to take this opportunity to acknowledge all the contributors to our inaugural issue this past summer, and express my heartfelt gratitude for making it a success! We received a great deal of positive feedback and we intend to keep on informing you of the latest news and activities throughout the pathology community. With a background in communications and science outreach, I was eager to take on the challenge of getting the newsletter publication off the ground. This worthy initiative allows me to express my creative side, and satisfy my desire to reach out to people; two enriching pursuits.

I would also like to take this occasion to tell you about one of our new departmental objectives; revitalizing the pathology website. As most of you would agree, this communication tool is underutilized and in need of a serious upgrade. The website has



tremendous potential not only as a promotional tool, but as a useful resource offering well-defined, timely and targeted information. We need to make a good first impression and pathology website 2.0 intends to make this goal a reality. I will be organizing brainstorming sessions with individual stakeholders over the next few weeks. I hope I can count on your support – all suggestions for improvements are welcome.

With improvements in mind, be sure to check out the article describing how MUHC Pathology is aiming to provide an efficient work environment while optimizing the quality of services and patient care (P.2) This project is already underway and

endeavors to improve operational performance by implementing Lean/Six Sigma methodologies and principles, inspired by the Toyota and Motorola production systems, and adapted to the needs of the healthcare industry. Lean strategies have already been applied to the design of the new Molecular Pathology Centre at the Jewish General Hospital. Read our feature on the MPC by Dr. Alan Spatz and Leon van Kempen (P.4)

Every issue also features an accomplished member of the department making significant contributions to the field - in this issue we focus on Dr. Qutayba Hamid, an expert in the field of respiratory disease

Finally we have an update from physicianhistorian Dr. Richard Fraser on the Pathology Medical Museum. The collection boasts of numerous bizarre specimens, but this one takes the prize (P.5)!

I hope you enjoy this issue as much as I have in putting it together. As always, we welcome your comments and feedback. You may reach me at:

carolynna.olha@mcgill.ca.

Carolynna Olha

Editor

Best Practice SIX SIGMA LEAN Continually improving Focus on reducing waste processes in relation to and its drivers throughout customer requirements the organization Results in faster creation of value at the lowest possible cost

Quality and Efficiency is MY responsibility: Lean/Six Sigma Initiatives at MUHC Technical Operations

The Department of Pathology at the MUHC recently underwent an evaluation of its end-to-end process by experts from Fujitsu Consulting (Canada). Sponsored by the Pathologistin-Chief Dr. Zu-hua Gao, MUHC Chief Manager Madame Marie Vachon and her team, this strategic initiative will ensure best practice in the department in terms of efficiency and providing the highest quality of care. Premiere healthcare institutions such as the Mayo Clinic and Johns Hopkins Hospital have utilized the Lean/Six Sigma performance improvement methodology to generate significant benefits for their patients, clinicians and employees.

The objectives of this initiative are:

- (1) Improve the quality and efficiency of the current MUHC work flow
- (2) Introduce the Lean/Six Sigma concept into the system by training leaders within the department
- (3) Help design and prepare the transition to the Glen Campus

Lean/Six Sigma is set of strategies, techniques, and tools for optimizing opera-

tional performance, inspired by the production systems at adapted and successfully applied to various economic sec-Lean/Six Sigma approach is the improvement of operational performance by standardizing protocols and streamlining processes by eliminating redundancies and inefficiencies to maximize the value-added activities and ensure continuous improvement of the optimized work flow process.

Improve Analyze Control Measure **Define**

cians evaluated the current state of how the work gets done. By involving the use of Lean tools, they were able to confirm defects that impede the effectiveness of the technical operations. As a result, two improvement opportunities were identified: 1) information flow, and 2) sectioning.

Now that these improvement opportunities have been identified, and a communication session with all employees has been completed, the next step will involve the Lean team working with frontline employees to come up with an implementation plan based on the Lean principles and methodolo-

For the standardization (Six Sigma) project, Dr. Gao has acquired the standard protocols of specimen grossing, cutting and staining from the Johns Hopkins Hospital and Mayo Clinic. These protocols will be compared with our existing

> protocols for the purpose of bench marking against the best practices in the world.

The next and final phase of the Lean/Six Sigma approach centers on knowledge transfer and ensuring that the optimized process is carried out consistently. This will allow the department to gradually take over leadership and independently improve performance and achieve sustainable results.

All things considered, the successful implementation of the Motorola and Toyota. This noteworthy approach has been Lean/Six Sigma best practice approach will result in significant benefits to the department of pathology at the MUHC. tors, including the healthcare sector. The ultimate goal of the Key changes will be implemented to provide a more stable, efficient and safe work environment for our clinicians and employees, and more importantly, minimize delays and improve the quality of services and care to our patients.

Carolynna Olha



Francis Poirier, an engineer and consultant with Fujitsu, working together with our multidisciplinary team of managers, pathologists and techni-



FOCUS Dr. Qutayba Hamid

Dr. Qutayba Hamid is an internationally renowned scientist in the field of Respiratory Disease and has been at the forefront of asthma and chronic obstructive pulmonary disease research for over 20 years.

He was born in Mosul, a 4000 year old city in northern Iraq in 1953. After obtaining his medical degree from Mosul University, he pursued postgraduate studies at the University of London in the United Kingdom where he earned his PhD under the direction of Dame Julia Polak, one of the longest surviving recipients of a heart and lung transplant in the UK. Given Canada's strong reputation for respiratory research, Dr. Hamid travelled to Montreal from London in 1993 to build on his academic accomplishments and advance his distinguished career in Respiratory Medicine. He joined McGill University as an Associate Professor of Medicine and Pathology and was appointed as Research Director of the Meakins-Christie Laboratories. While at the Meakins, Dr. Hamid further developed his interests in respiratory disease and was instrumental in changing its respiratory research focus from classic physiology to pathophysiology. In recognition of his accomplished work in research on asthma, COPD and airway inflammation, he was appointed Director of the Meakins-Christie Laboratories in 2008.

Dr. Hamid is currently a Professor of Medicine at McGill University and is an Associate Director at the Research Institute of the McGill University Health Center. He holds the prestigious James McGill Chair and clinical Strauss Chair in Respiratory Medicine, and was recently elected to be a fellow of the Royal

Society.

In 2004, Dr. Hamid was part of a research team whose landmark study identified a new

therapeutic target in controlling asthma, and to date he has published over 450 scientific articles in prominent international journals and has contributed more than 150 chapters and review articles. In addition to these scholarly pursuits, Dr. Hamid is also the Co-Editor of the Journal of Clinical and Experimental Allergy, Section Editor for the Journal of Allergy, Asthma, and

Clinical Immunology, and the editor of 2 textbooks for Respiratory Cell and Molecular Biology and Respiratory Physiology.

His research draws millions of dollars in grants from the FRSQ and CIHR on an annual basis and his lab is an important training ground for respiratory professionals in Montreal and continues to attract graduate students and postdoctoral fellows from all over the world.

PATHOLOGY SCIENTIFIC LECTURE SERIES

Sponsored by:





Past Lectures

May 30

Dr. Maziar Divangahi

"Eicosanoids Regulate Macrophage Immunity to Pulmonary Infection"

October 16

Dr. Wedad Hanna

"Differential Diagnosis of Breast Cancer Cases"

Upcoming Lecture

Dr. Richard Fraser

"The Maude Abbot Medical Museum: 1823—2013"

November 20, 2013

4:00 p.m. – 5:00 p.m. Duff Medical Building, Room 112 3775 University St



Revolutionizing Molecular Pathology at the JGH

The advent of targeted therapies for cancer and other diseases has put molecular pathology at the center stage for clinical decision making. Whereas analysis of germ line mutations in cancer has always been part of our molecular diagnostic laboratory portfolio, the identification of actionable driver mutations in cancer, as well as prognostic gene expression signatures, have significantly changed the landscape of tumor diagnosis and the role of pathology therein. In addition to classical surgical pathology reports, a molecular pathology report is often needed to guide the most effective therapy for the individual patient. This requires high quality molecular pathology with low turnover time. With quality control and assurance in mind, a state-of-the-art 8000 ft² molecular pathology center (MPC) has been constructed at the Jewish General Hospital that will be dedicated to clinical service, training of our residents in molecular pathology, and research in biomarker discovery and validation. This MPC will be located at the heart of the Segal Cancer Center (SCC), on the 6th floor, and will officially open on November 25th, 2013. The resources and expertise of the Centre represent an important addition to molecular pathology at McGill and Quebec, both for research and for clinical needs.

The Centre has been designed according to Lean principles to optimize sample flow and to minimize turnaround time. A crucial part of this concept is the implementation of a specific molecular pathology laboratory information and management system (MP-LIS) for sample registration, routing the sample into the appropriate process with corresponding standard operating procedures (SOPs), assurance of maintenance and proper interfacing with MPC equipment, as well as inventory management and, importantly, standardized reporting. Clinical Laboratory Improvement Amendments (CLIA) accreditation for standardized clini-

pursued is opening. will also pursued in the control of the contro

cal laboratory testing will be pursued immediately after the opening. CLIA accreditation will also position the MPC for molecular testing in the context of clinical trials to develop FDA-approved clinical tests.

New equipment has been purchased to increase our molecular testing capabilities with optimized security and performance. We recently expanded our existing platform with the nCounter nanoString technology for targeted expression analysis working in formalin fixed paraffin embedded (FFPE) material, and we are in the process of acquiring a next generation sequencer. In addition, the MPC will be equipped with liquid handlers and RNA/DNA analyzer to automate the setup of DNA/RNA extraction, DNA/RNA quality analysis, PCR reaction set up, and library preparation for targeted sequencing. This will minimize hands-on time and increase assay robustness. Newly purchased equipment such as the nCounter and the personal sequencer are of diagnostic grade. This equipment will allow us to shift from single gene to multiplex testing for equivalent or lower running costs, and increased security and performance. This is of particular importance when only scarce tissue is available for analyses, or when the foreseen rapid progression of a disease requires to think ahead of alternative strategies.

Molecular pathology is a rapidly evolving field and we need to rethink the organization of the molecular pathology rotations in order to better adapt these to the specific resident's level and expectations. We are working on programs that will provide training in molecular pathology for our residents. Residents and students will be involved as much as possible in the development and validation of clinical relevant technologies and tests.

Interestingly, the MPC will be in close connection with the Clinical Research Unit (CRU) of the JHG and the rest of the SCC environment, increasing the visibility of Pathology as a cornerstone of cancer management. This will also streamline the sample flow from the CRU to the MPC resulting in minimal delay between taking a biopsy and preparing the tissue for analysis. The MPC will be of critical importance in selecting patients for the appropriate biomarker-driven phase II trials conducted at the CRU,

but also within large phase III trials and biopsy-driven trials conducted by the Quebec Consortium de Recherche en Oncologie Clinique (Q-CROC). The MPC has a dedicated space to store up to 120,000 frozen biopsies. The JGH has a consenting system to collect biospecimens (tissue, and blood), as well as the possibility to go back into our archive to retrieve prior samples for analysis. This repository of frozen tissues with detailed information of surgical and molecular pathology and clinical follow up are an invaluable source for the discovery of novel drugable biomarkers as future therapies.

The collaboration between Q-CROC and the MPC has resulted in the acquisition of a sophisticated software package that allows the extraction and integration of data from multiple different sources (clinical and pathology datasets, targeted and whole genome sequencing data, expression and mutation datasets), to support the identification of homogeneous sub-groups of patients based on any specific question, e.g., evolution or therapeutic response. This close interaction between clinical care and research, the latter supported by significant competitive funding and partnerships, is key in any progress made in the personalized medicine era, in oncology or in any other field.

In addition to providing excellent service in molecular pathology and research, our department is also investing in the development of a functional JGH Pathology website, as well as providing an on-line resource of information for cancer patients regarding molecular pathology. The intention of this web portal is to streamline the ordering of molecular pathology tests while engaging with patients.

With the opening of the MPC, we look forward to developing strong interactions with our partners at McGill and in Quebec to better serve the population under the guidance of the Agence.

Alan Spatz , MD, Leon van Kempen, PhD

Teamwork

Accreditation Canada



Big changes to come!

During the month of September, surveyors from Accreditation Canada came to assess the Department of Pathology. This inspection involves an external peer review process that is an important step in verifying our professional practices. During the visit, the surveyors recognized that our affirmative approach to the quality and improvements in our services is a culture that is well established in pathology. The management and new direction of our Quality Assurance efforts were also noted, while stressing the importance of maintaining it across-the-board. In the context of harmonization and with the big changes to come, the pride and enthusiasm of our team for their work, was unmistakable. Some

Standing Left to Right: Jim Dixon, Elizabeth O'Kill, Dr. Kevin Watters, Andréa Gomez, Paul Lee, Anna Lis, and Marie Vachon Seated Left to Right: Laurie Ball, Melissa Trickey, Linda Maloney, and Jennifer Pamplin

improvements are required, but overall we are on the right track.

We wish to acknowledge all of the work and effort made by all the members of our pathology team. A team that will face great challenges to come, but with a desire to move forward together and meet those challenges head-on.

Thank you to everyone, your contribution makes a difference!

Osler specimen 42. Hairball (Trichobezoar)

Where is the Osler "hairball"?

The hairball (bezoar) was one of the best "known" specimens of the Osler collection when it was on public display in the Pine Street entrance of the Patho-

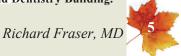
logical Institute from 1963 to 2002. Many individuals – from medical students and physicians to the medically unsophisticated such as building cleaners and couriers – were aware of it and commented on its absence when the display was dismounted. This specimen, along with nearly 2000 other flu-

id-preserved specimens (including all of the Osler and Abbott Collection specimens), were recently moved from the Duff Medical Building basement rooms to the Strathcona Anatomy and Dentistry Building. Over the months of July and August, the specimens were inspected and about 200, in poor shape, were discarded. Those remaining were carefully packed and carried across the street to a storage room on the second floor in the Strathcona. Next to this storage area is a large room in which part of the original McGill Medical Museum was located, and which will become a display area showcasing this unique and fascinating collection.



Work Study student, Sadig Niftullayev (U2 Anatomy and Cell Biology), places specimen on shelf in the Strathcona

Medical and Dentistry Building.





Dr. BRUCE CASE

Dr. Bruce Case, renowned researcher on asbestos exposure and lung cancer, has returned from a yearlong sabbatical only a short time ago. Over the past year, Dr. Case was busy providing his input as a member of the Dean's multidisciplinary planning committee for the McGill Faculty of Medicine "Asbestos Conference 2013", a free full-day academic conference, open to the public, that focuses on the topic of asbestos. The conference was held on campus at the Faculty Club on October 1st. More information can be accessed via http://www.mcgill.ca/asbestosconf13/.



More recently, by invitation of the American Conference Institute, Dr. Case participated in a panel discussion at the "15th National Advanced Forum on Asbestos Claims & Litigation", held in New York City on October 7, 2013. He also gave a talk in the first plenary session of "Inhaled Particles XI" (IPXI), organized by the British Occupational Hygiene Society (BOHS), held in the city of Nottingham, UK on September 23-25. The Symposium, held by the BOHS every five to seven years, brings together experts in human exposure, hazard and risk assessment, occupational hygiene, epidemiology and occupational medicine. Per BOHS, "Inhaled Particles has been the event at which all of the key developments in occupational and public health associated with airborne particles have been aired and debated". Dr. Case has attended and presented at all symposia since "Inhaled Particles VI" at Cambridge University in 1985, in Edinburgh (1991), Cambridge again twice (1996; 2001), and Sheffield (2008). Contents of all can be found at http://www.inhaledparticles.org.uk/.

This year, Dr. Case presented on the subject of mesothelioma titled, "Mesothelioma incidence from occupational asbestos exposure in fully developed economies: differences in recent rates and trends and possible explanations". A copy of his abstract can be found at http://www.inhaledparticles.org.uk/files/2013/08/0058-B-Case.pdf.

Dr. MANON AUGER

Congratulations to Dr. Manon Auger on the publication of three scientific papers:



"Accuracy and False-positive Rate of the Cytologic Diagnosis of Follicular Cervicitis: Observations from the College of American Pathologists Pap Educational Program."

Auger M, Khalbuss W, Nayar R, Zhao C, Wasserman P, Souers R, Thomas N, Moriarty AT. Arch Pathol Lab Med 2013;137:907-911

http://www.archivesofpathology.org/doi/abs/10.5858/arpa.2012-0184-CP

"Spontaneous Nipple Discharge: Is it worth it? Performance of Nipple Discharge Preparations in the College of American Pathologists Interlaboratory Comparison Program in Non-Gynecologic Cytology."

Moriarty AT , Schwartz MR, Laucirica R,. Booth CN, **Auger M**, Thomas NE, Souers R,. Cytology of Arch Pathol Lab Med 2013;137:1039-1042 –

http://www.archivesofpathology.org/doi/abs/10.5858/arpa.2012-0231-CP

"Cytomorphology of Boerhaave's syndrome: a critical value in cytology." Khalbuss WE, Hooda S, Auger M. Cytojournal 2013;10:8 http://www.cytojournal.com/article.asp?issn=1742-6413;year=2013;volume=10;issue=1;spage=8;epage=8;aulast=Khalbuss

WELCOME - ISABEL BOLIVAR



For those of you who haven't had the pleasure of meeting the Chair's new assistant or sampling her mouthwatering home-baked goods, meet Isabel Bolivar.

The moment we knew Laura was set to retire, our steadfast determination, despite the budget crisis, pressed on for a replacement. With luck on our side, and an uncompromising Chair, Isabel came to us looking for a new challenge, and has been a delightful addition to the administrative team.

Her cheery demeanor, resourcefulness, readiness to help, and sense of humor shine through every day. Isabel has a technical background and worked as a Senior Research Technician in the Calcium Research Lab at the RVH for over 20 years. Her lab expertise and knowledge of the inner workings

of the MUHC are both value-add. Welcome Isabel, we are so pleased to have you join the Department of Pathology!

CLAUDIA MARTINS - PhD Thesis Defense

Claudia Martins will be defending her PhD in Pathology on October 30, 2013. Her thesis entitled "The role of metastasis suppressor gene *KISS1* in uveal melanoma" brings new insight on recently identified molecular targets related to metastatic uveal melanoma. The thesis consists of *in vitro* studies and an animal model for this disease. Most importantly, techniques for the detection of very small molecules (microRNAs) in human tissue are to be presented. Claudia in-



tends to continue working in a cooperative setting at the Henry C. Witelson Ocular Pathology Laboratory, at the McGill Gynecological Oncology Division, and at the MUHC Melanoma Clinic, focusing on molecular targets for different types of melanoma.

FAREWELL to Laura and Cecile - Now the Fun Starts!



After an impressive 37 years of service to McGill University, Laura Fiorita and Cecile Williams retired on August 30th. In hon-

or of their pending departure, the department hosted a celebratory luncheon to say good bye to our delightful colleagues. We had a great turn out and several members of the department communicated their parting wishes and shared some



witty anecdotes and touching memories. We wish them good luck in all their future endeavors and hope they will enjoy their retirement by keeping themselves engaged and happy with their friends and family.





Appointments & Recruitment

Dr. Morag Park Associate Member, Department of Pathology



Dr. Morag Park was appointed as an Associate Member of the Department of Pathology on August 1, 2013.

Dr. Park is a James McGill Professor in the Departments of Biochemistry, Medicine and Oncology at McGill University, where she holds the Diane and Sal Guerrera Chair in Cancer Genetics. She is also the current Scientific Director of the CIHR Institute of Cancer Research.

She has a long standing interest in the molecular mechanisms of cancer. More recently her interests include how changes in the tumor microenvironment modulate breast cancer progression. Dr. Park founded the Breast Cancer Functional Genomics Group, which integrates breast cancer sample collection, laser capture microdissection microarray-based gene expression profiling and signature validation, and includes members

from basic research, informatics as well as clinical surgery and pathology.

Dr. Park has published over 100 papers in peer-reviewed journals. Her work has been recognized with numerous awards including becoming a Fellow of the Royal Society of Canada.

Chunhai "Charlie" Hao, M.D., Ph.D.

Dr. Charlie Hao, a Canadian-trained neuropathologist, has been recruited to the Department of Pathology. He will begin his appointment early next year as an Associate Professor and will divide his time equally between his research activities and clinical practice at the Montreal Neurological Institute. After completion of his residency at University of Western Ontario, Dr. Hao was recruited first to University of Alberta and then to Emory University in Atlanta Georgia. In addition to his neuropathology practice, he has maintained an active research lab focusing on genomic diagnosis and targeted therapies of cancers. He's received seventeen research grants from various agen-



cies including the CIHR and NCIC in Canada, and the NIH and NCI in the US. Dr. Hao has published more than eighty articles, served in the CIHR and NIH grant review panels, and received two distinguished investigator



awards. He is an editorial member of two journals, organizing committee member of ubiquitin research and drug discovery, and member of the Canadian/American Association of Neuropathologists, American Association for the Advancement of Science, American Association of Cancer Research, American Society for Biochemistry and Molecular Biology and American Society for Investigative Pathology.

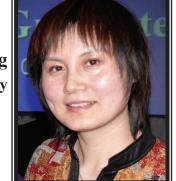


Dr. Mona Alameldin
Assistant Professor, Department of Pathology

Dr. Alameldin recently completed her Fellowship in Gastrointestinal and Liver Pathology at Western University in London Ontario. She joined the Pathology team at the Jewish General Hospital in September.

Dr. Hangjun Wang Assistant Professor, Department of Pathology

Dr. Wang completed two Fellowships at the Memorial Sloan-Kettering Cancer Centre in New York, one in Oncological Surgical Pathology, and another in Thoracic Pathology. She joined the Pathology team at the Jewish General Hospital in July.



Condolences



Dr. Esther Lamoureux, 1952 - 2013

MD FRCPC Pathology

Assistant Professor in the Department of Pathology, McGill University

Passed away in Montreal, on Saturday, September 28th, 2013 at the age of 61. Dr. Lamoureux was a pathologist at Montreal's Jewish General Hospital. She worked as a professor at McGill University from 1988 to 2011. Author and co-author of numerous publications in digestive and pulmonary pathology, Dr. Lamoureux was also the Director of McGill's Pathology Residency Program from 1999 to 2003 and was honored on numerous occasions for the quality of her teaching.

Dr. R. D. Clarke Forbes, 1938 - 2013

MD FRCP Pathology

Professor Emeritus, McGill University

Passed away in Toronto on July 17, 2013. Dr. Forbes was an invaluable member of the Department of Pathology for over 20 years and one of the foremost pathologists in transplantation.

Dr. Gregory Charles Catzavelos, 1953 - 2013

MD FRCPC Pathology

Assistant Professor in the Department of Pathology, McGill University

Passed away in Rossland, Canada on July 9, 2013. Dr. Catzavelos was an excellent breast pathologist and clinical teacher who worked at the MUHC from 2001 to 2007.





Community Events

50th ANNUAL ANDRÉ AISENSTADT MEMORIAL CLINICAL DAY

"Integrative Pathology in Personalized Medicine"

The program, which is open to medical staff, will honour Dr. Marie-Laure Brisson from the Dept. of Pathology at the Jewish General Hospital.

The annual event is named for Dr. André Aisenstadt, Honourary President of the JGH and a key figure in creating the hospital's Foundation. Dr. Aisenstadt, who died in 2001, was particularly interested in supporting teaching and learning among undergraduate students at McGill University, especially in the field of internal medicine.

When:

Wednesday, October 23, 2013

Where:

Block Amphitheatre (B-106)

Jewish General Hospital 3755 Cote Ste-Catherine Montreal, Quebec





Block Amphitheatre Room B-106 Tel: (514) 340-8222 ext. 5220

50th ANNUAL ANDRÉ AISENSTADT MEMORIAL CLINICAL DAY

INTEGRATIVE PATHOLOGY IN PERSONALIZED MEDICINE

A symposium in honour of DR. MARIE-LAURE BRISSON

Wednesday, October 23, 2013 8:00 – 15:00

André Aisenstadt Memorial Clinical Day October 23, 2013

INTEGRATIVE PATHOLOGY IN PERSONALIZED MEDICINE

8:00-8:15 Welcoming Remarks Mark A. Wainberg, PhD

8:15-8:30 An Appreciation: Alan Spatz, MD, Mark Lipman, MD Response: Marie-Laure Brisson, MD

Session 1 Chair: Marie-Laure Brisson, MD

8:30-9:15 Bogdan Czerniak, MD, PhD Genomic Approaches to Bladder Carcinogenesis

9:15-10:00 Guilherme Brandao, MD Integrative Pathology: the Lung Cancer Paradigm

10:00-10:15 Question period

10:15-10:30 Health break

Session 2 Chair: Alan Spatz, MD

10:30-11:15 Christoph H. Borchers, PhD Quantitative Assessment of Predictive Biomarkers

11:15-12:00 John Quackenbush, PhD
Turning the Deluge of Data Into Precision
Medicine

12:00-12:15 Question period

12:15-13:15 Lunch

Session 3 Chair: Mark Lipman, MD

13:15-14:00 J. Charles Jennette, MD
From Bright's Disease to Personalized Therapy
for Rapidly Progressive Glomerulonephritis

14:00-14: 45 Randy D. Gascoyne, MD Hodgkin Lymphoma: From Discovery to Clinical Translation

14:45-15:00 Question period & end of session

Do you have a news story? The McGill Department of Pathology Newsletter is published four times a year (July, October, January, and April). It is available by email and on the Department webpage at http://www.mcgill.ca/pathology/newsletter

If you would like to submit an article or receive the newsletter by email, please contact the Editor at carolynna.olha@mcgill.ca

Deadline for submissions to the Winter issue is December 20th, 2013



