Department of Pathology,
Schulich School of Medicine & Dentistry

Annual Report 2012

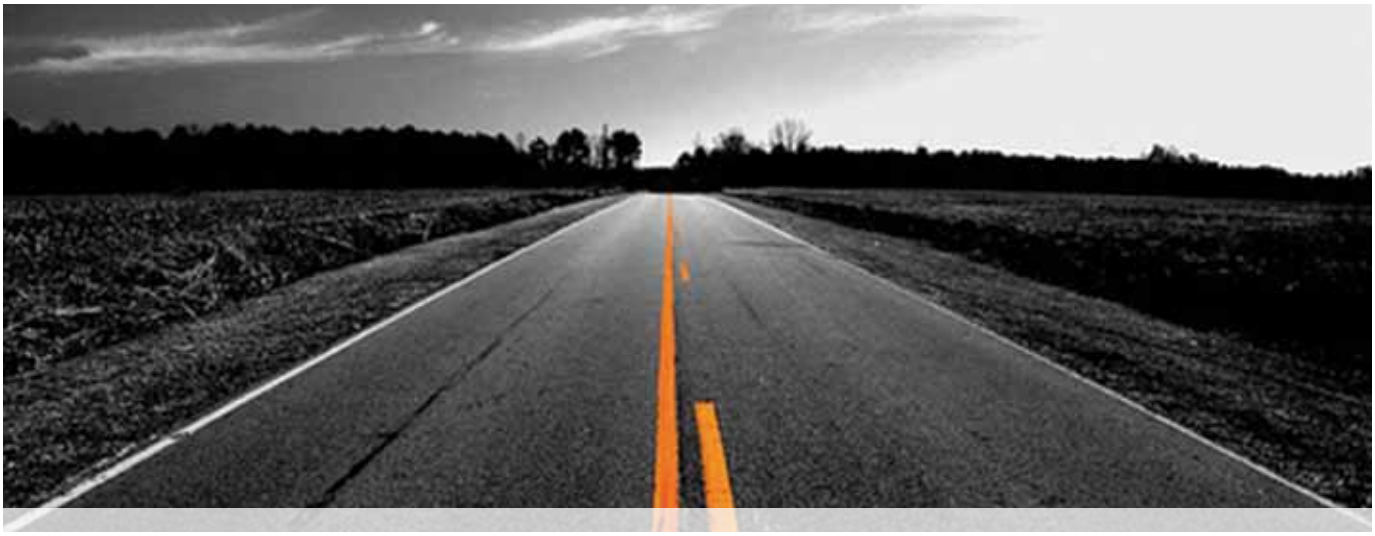
Change Ahead

Schulich
MEDICINE & DENTISTRY

London Health
Sciences Centre

St JOSEPH's
HEALTH CARE
LONDON

Western



Department of Pathology Annual Report 2012

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Vision, Mission and Values

The Department of Pathology fully supports the mission and values of the Schulich School of Medicine & Dentistry of Western University, London Health Sciences Centre and St. Joseph's Health Care London.

Vision

Provide state-of-the-art diagnostic pathology services while achieving excellence in pathology research and education.

Mission

Members of the Department of Pathology strive to provide a quality work environment that fosters unity, respect for diversity, teamwork and professional growth. We are committed to serve our:

Patients, by providing efficient, comprehensive and high quality diagnostic services for optimal patient outcome and health. We are committed to strategies that result in continuous improvement of the quality of our services.

Students, by providing the best student experience through outstanding educational programs for undergraduate, graduate and postgraduate students, and other health care professionals within a clinical and research intensive environment. We integrate continuing medical education programs into the departmental activities.

Scientific Research Community and Health Care Partners, by sharing expertise, fostering interdisciplinary collaboration, and providing exemplary educational and scientific resources. We are a strong clinical and basic science department and our research endeavors include basic science, clinical and translational research.

We provide research leadership by identifying our strong research strengths and enhancing research productivity with selective allocation of resources. We guide and collaborate with our regional partners to improve the diagnostic pathology services throughout Southwestern Ontario.

Society, by actively applying the art and science of pathology in educating the community in matters of health and disease.

Values

Team Work

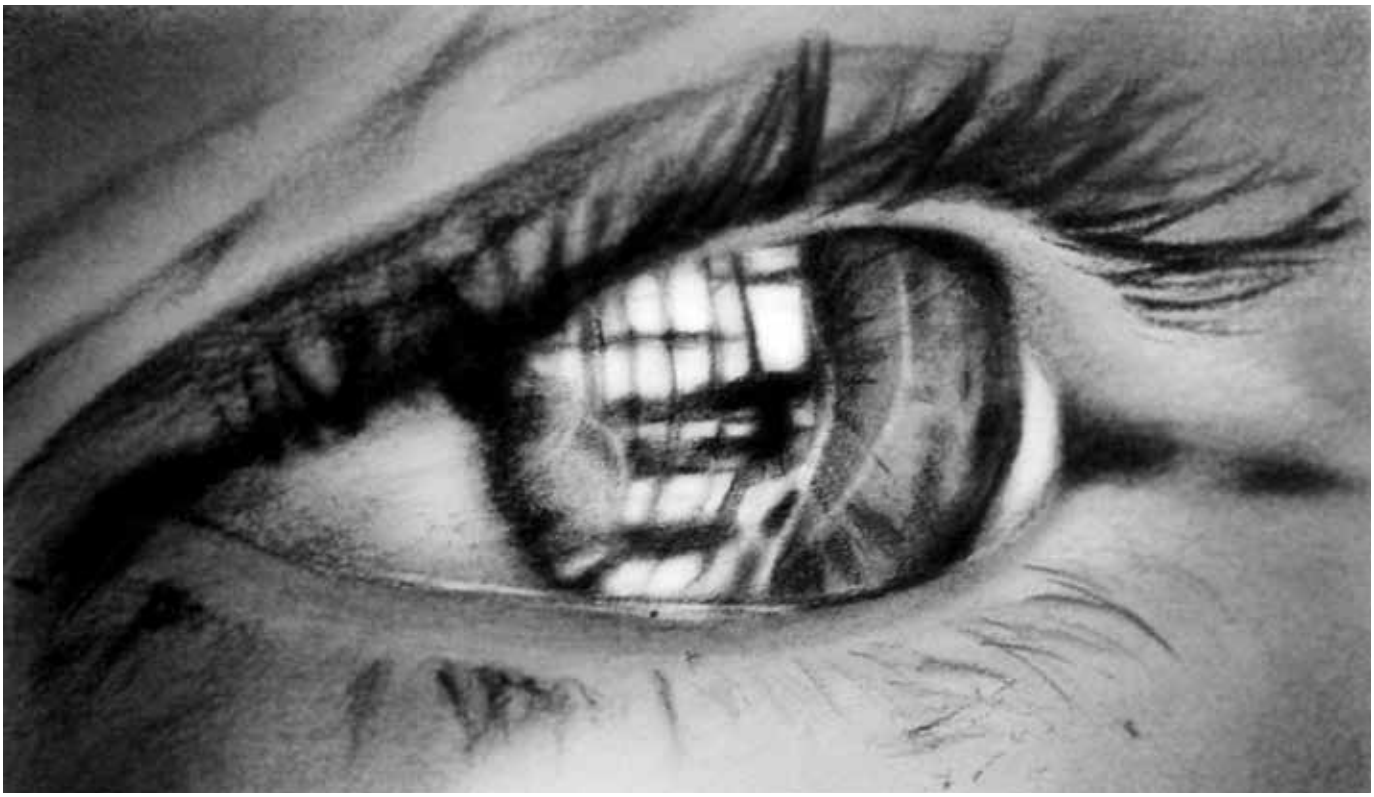
We believe in a team-based problem identification and problem solving methodology.
We believe in interdisciplinary networking.

Innovation

We are flexible and adaptable in order to meet the changing needs of society.
We strongly believe in continuous quality improvement to enhance clinical performance outcomes.

Leadership

We strongly encourage members to take leadership roles in education, research and management.
We support the leaders who guide our mission.



"We must become the change we want to see"

Mahatma Gandhi
(1869-1948)

Leadership Messages

Message from the Chair/Chief Dr. Subrata Chakrabarti

It is with great joy and pride that we bring you this fourth issue of the Department of Pathology Annual Report. This report outlines our Department's achievements during the past year. It has been a wonderful year full of excitement, challenges, opportunities and success.

Our greatest strength has been and continues to be our people. Our leaders, academic and professional staff, technical and office personnel at the University and in the hospitals have continued to demonstrate their commitment, hard work and passion to achieve a common goal. This positive approach has ensured our success as we continue to strive in teaching, research, and clinical service, the pillars of academic medicine.

During the year, our clinical team faced change as Ms. Alex Stuart, our administrative director of laboratory services, returned to British Columbia for personal reasons. This departure occurred during the amalgamation with Strathroy Hospital laboratory, however, Ms. Sue Volbrecht rose to this challenge and making this transition achievable.

At the same time, we were delighted to have been successful in recruiting four new faculty members. Welcome to microbiologists Drs. Delport and Zaharadis, pathologist Dr. Joanna Walsh and scientist Dr. Martin Duennwald. Dr. Christopher Howlett has redirected his career to a clinical scientist track.

The departmental graduate programs continue to thrive and this year our Pathologists' Assistant graduate program has been converted to a free standing professional program. We have initiated discussions with other Ontario institutes to expand this program.

Our Anatomical Pathology and Neuropathology residency programs have continued to maintain their success as evidenced again at the Royal College examinations with a continued 100% success rate.

The administration of the department also experienced change with the formation of an Executive Committee. This committee will handle strategic decision making at the highest level.

Congratulations are in order to many members of our department, including but not limited to the following:

- Dr. Jack Bend was inducted as a Fellow into the Canadian Academy of Health Sciences,
- Dr. M. Daria Haust was awarded the Queen Elizabeth II Diamond Jubilee Medal of the Governor General of Canada in June 2012,
- Dr. Lee Cyn Ang, our Neuropathology Program Director received the Schulich Award for Excellence in Education (Postgraduate) and
- Ms. Mair Hughes was presented with the Dean's Award of Excellence for Staff.

As we move forward in our journey, we will work to achieve our goals. Our strategic planning is in alignment with that of the Schulich School of Medicine & Dentistry and Western University. This year we have also started a strategic planning process for the clinical laboratory services.

Two long-term members of the department retired in the past year: Ms. Nancy Conron, former secretary to the Chair/Chief retired after 25 years of service and Professor Zafar Hussain, former Program Director of the residency program in Medical Microbiology, after 30 years. We will miss them and wish them well.

This past year has been an excellent experience for me. I know that with the commitment, enthusiasm and positive attitude of our staff and faculty, we will maintain an environment that allows our department to move forward as a team and simultaneously fulfill each person's aspirations. I am looking forward to another year of great success and accomplishment.

Message from the Dean

With a strong focus on teaching, research and clinical service, the Department of Pathology contributes to the overall mission of the Schulich School of Medicine & Dentistry. It is unique in its teaching role as students and learners in every stream of education across the School benefit from the specialized courses and programs the Department offers. Further, the department transcends the boundaries of the School, with faculty members contributing to the academic curriculum for the School of Nursing within the Faculty of Health Sciences.

With a solid foundation established over a number of years, the Department recently experienced new growth and change under the leadership of Chair, Dr. Subrata Chakrabarti.

The Department continued its commitment to its mission of excellence, welcoming several new faculty members in our basic science and clinical programs. Their expertise and areas of specialization will ensure continued growth of our research program and redevelopment of clinical residency programs.

This past fall, the Department welcomed the first class of the newly accredited Master of Clinical Science - Pathology Assistant Program. It is the only program of its kind in Canada that is accredited by the National Accrediting Agency for Clinical Laboratory Sciences. The successful achievement of the accreditation clearly exemplifies the Department's contributions to the School's visionary approach to education and research. I look forward to the continued development of this program as we work with academic colleagues across the province.

The new-year will provide additional opportunities for positive change for the Department as they commence their strategic planning process for the clinical laboratory services. Their work with all departments across the School will undoubtedly support the achievement of our vision to become a global leader in optimizing life-long health through innovations in research, education and active engagement with our communities.

Staff

Department of Pathology Quick Facts (at September 1, 2012)

Full Time Clinical Academics: **31**

Full Time Basic Scientists: **8**

Emeriti: **11**

Cross Appointees: **14**

Institute Scientists: **4**

Adjunct/MD: **11**

Limited-Duty Appointees: **7**

Western University Staff
(Full Time & Part Time): **8**

Pathology Trainees (2011-12)

Postdoctoral Fellows, Postdoctoral Associates and Visiting Scientists: **4**

Pathology Residents: **14**

Pathology Graduate Students: **36**

Bachelor of Medical Sciences (BMSc) Honours Program Pathology & Toxicology: **14**

Other Trainees (2011-12)

Undergraduate Medicine:

Meds I: **133** Western / **38** Windsor

Meds I: Observership: **1**

Meds II: **129** Western / **30** Windsor

Meds III: Electives: **4**

Meds IV:
(Primary Care Pathology **120**)
(Forensic Medicine **110**)

Meds IV Electives: **3**

Postgraduate Medicine (Resident Electives):

Neuropathology: **4**

Anatomical Pathology: **17**

Undergraduate Dentistry:

Dents 5304: (Section 001 – **56**; Section 003 – **13**)

Dents 5162: **56**

Dents 5170: **56**

Dents 5235: **56**

Bachelor of Sciences Nursing (BScN):

Path 2420A (001 Western): **125**

Path 2420A (003 CTF): **51**

Path 2420A (600 Fanshawe): **113**

Path 2420A (special Anatomy grad students): **5**

Undergraduate Medicine, Biological And Health Sciences:

Path 3240A/9240A: **154/16** (undergrad/grad students)

Path 3245B/9245B: **100/4**

Path 4400B/9540B: **40/4**

Path 4500B/9550B: **25/5**

Department of Pathology Faculty Appointees (at September 1, 2012)
Primary Appointment in Pathology

Professor, Chair/Chief

Subrata Chakrabarti

Professors

Professor MD

Lee Cyn Ang

David Driman

Bertha Garcia

Rob Hammond

Michael John

Mariamma Joseph

Rob Lannigan

Meg McLachlin

Madeleine Moussa

David Ramsay

Kamilia Rizkalla

Mike Shkrum

Professor MD/PhD

Subrata Chakrabarti

Professor PhD

Jack Bend*

Tom Daley (DDS)

Joan Knoll

Associate Professors

Associate Professor MD

Chris Armstrong

Helen Ettler

Jose Gomez Lemus

Keith Kwan

Carolyn McLean

Jessica Shepherd

Ted Tweedie

Bret Wehrli

Michele Weir

George Zahariadis

Associate Professor MD/PhD

Alan Tuck

Associate Professor PhD

Ted Ball**

Chandan Chakraborty

Mark Darling (DDS)

Candace Gibson

Assistant Professors

Assistant Professor MD

Nancy Chan

Johan Delport

Manal Gabril

Aaron Haig

Chris Howlett

Jeremy Parfitt

Elena Tugaleva

Joanna Walsh

Assistant Professor PhD

Martin Duennwald

Zia A. Khan

Professors Emeriti

George Cherian

John V. Frei

Joe Gilbert

Robert A. Goyer

Collette M. Giraudon

M. Daria Haust

Zafar Hussain

John Kaufmann

Mary Ellen Kirk

D. Ian Turnbull

George Wysocki

Cross Appointees

Professors

Paul Adams (Medicine)

Ann Chambers (Oncology)

Regna Darnell (Anthropology)

Guido Filler (Paediatrics)

Carol Herbert (Family Medicine)

Jim Koropatnick (Oncology)

*Weiping Min (Surgery/Lawson)****

Michael Strong (CNS)*

Charlie Trick (Biology)

Associate Professors

Sameer Elsayed (Medicine)

Cindy Hutnick (Opthamology)

*Tianqing Peng (Medicine/Lawson) ****

Assistant Professors

Tisha Joy (Medicine)

*Zhu-Xu Zhang (Medicine/Lawson) ****

** Distinguished University Professor*

*** Institute Scientists, primary appointment in Pathology*

**** Institute Scientists in clinical department*

Southwestern Ontario Medical Education Network (SWOMEN) & Rural Region Clinical Adjunct Professors

Pat Allevato (Windsor Regional Hospital)
Saad Awad (Chatham Kent Health Network)
Akram Elkeilani (Windsor Regional Hospital)
Ram Gidwani (Bluewater Health)
Mohamed Hakim (Windsor Regional Hospital)
Rosemary Lubynski (Bluewater Health)
Bassem Moussa (Chatham Kent Health Network)
Brian Rudrick (Grey Bruce, Owen Sound)
Sajid Shukoor (Hotel Dieu Grace Hospital, Windsor)
David Shum (Windsor Regional Hospital)
Pamela Smith (Windsor Regional Hospital)

Limited Duties Appointees

Peter Ainsworth (Schulich Medicine & Dentistry, Pediatrics)
Edith Arany (Schulich Medicine & Dentistry, Medicine) Assistant Professor
Tyrrel de Langley (Western University, Animal Care and Veterinary Services) Assistant Professor
Stephen Karlik (Schulich School of Medicine & Dentistry, Medical Imaging)
Victor Prabhakaran (Schulich Medicine & Dentistry, Biochemistry)
David White, Professor, Post Retirement
Xiufen Zheng (Schulich Medicine & Dentistry, Surgery) Adjunct Research Professor

Western University – Department of Pathology Staff

The Schulich School of Medicine & Dentistry staff team is a dedicated group of skilled individuals, who work hard to support the academic and research missions of the department. They are proud of the work they do and the important contribution and impact their efforts have on the department as a whole.

Mair Hughes (Administrative Officer), **Cecile Klerks** (Part Time Administrative Assistant), **Cheryl Campbell** (Undergraduate Program Assistant), **Liz Goldhawk** (Oral Pathology Administrative Assistant), **Linda Jackson-Boeters** (Departmental Technician), **Kathilyn Allewell** (Media Specialist), **Susan Stewart** (Residency Program Assistant), **Gail Heslinga** (Part Time Receptionist / Administrative Assistant). Not in photo: **Tracey Koning** (Graduate Program Assistant).

Awards, Honours & Distinctions (2011-2012)

Morris J. Finlayson Award, Canadian Association of Neuropathologists
– Dr. Murad Alturkustani

Schulich Award for Excellence in Education (Postgraduate) – Dr. Lee Cyn Ang

Joint Medical Advisory Committee (MAC) Award for hospital and Professional Staff who go "above and beyond the call of duty"
– Dr. Bertha Garcia

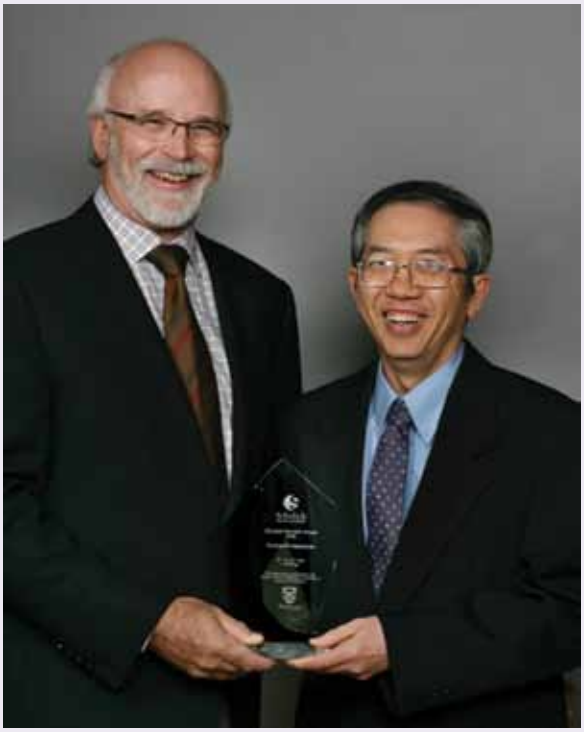
Vice Chair, Board of Directors, Canadian Health Information Management Association
– Dr. Candace Gibson

Lloyd A. Kennedy Pathologists' Assistant Award, Canadian Association of Pathologists
– Mike Graves

Queen Elizabeth II Diamond Jubilee Medal of the Governor General of Canada
– Dr. M. Daria Haust

Dean's Award of Excellence for Staff
– Mair Hughes, Administrative Officer

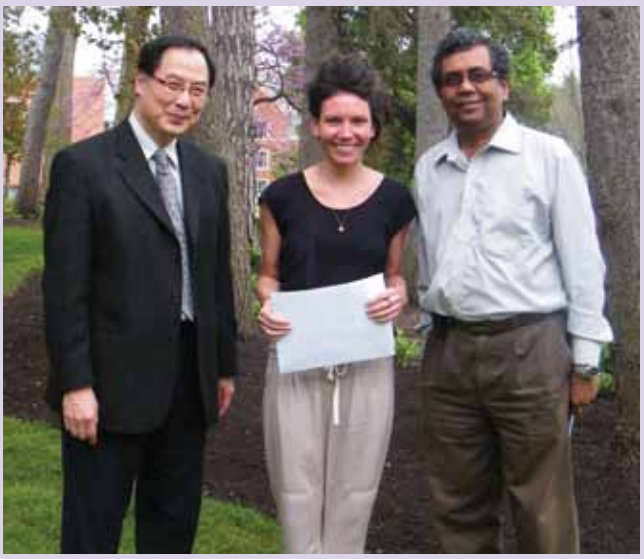
Hugh Curry Award in Cytopathology, Canadian Association of Pathologists
– Dr. Cady Pocrnich



Dr. Michael J. Strong and Dr. Lee Cyn Ang. Congrats to Dr. Ang for all of his hard work, he was awarded the Ellcellence in Education Award (Postgraduate)

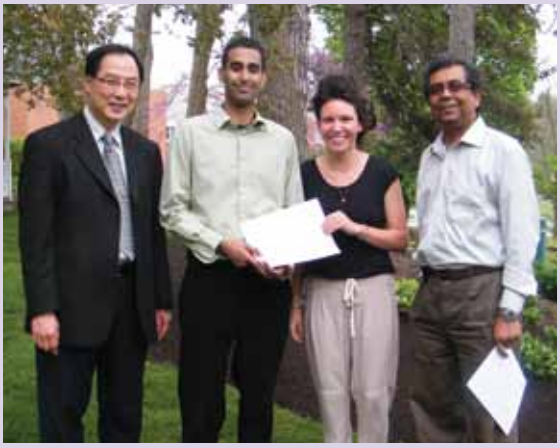
Dr. Michael J. Strong and Mair Hughes. We were thrilled this year when Mair Hughes was awarded the Dean's Award of Excellence for Staff.

Annual Pathology Research Day Awards



2012 Dr. M. Daria Haust Award for Best Presentation by a Graduate Student: Dr. Ming Tsao, Emily Keats (PhD) (supervisor Dr. Zia Khan) and Dr. Subrata Chakrabarti.

2012 Chair's Award for Best Presentation by a Resident: Dr. Emily Filter

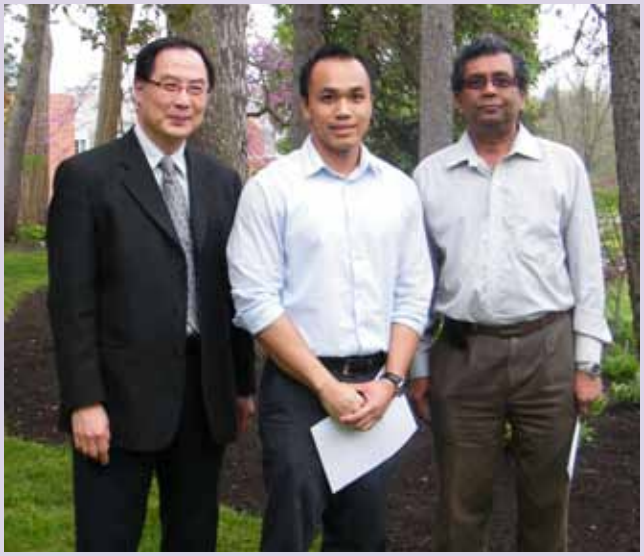


2012 Dr. Cameron Wallace Graduate Student Award in Pathology 2012: Dr. Ming Tsao, Wahab Khan (PhD) (supervisor Dr. J. Knoll), Emily Keats (PhD) (supervisor Dr. Zia Khan), and Dr. Subrata Chakrabarti.

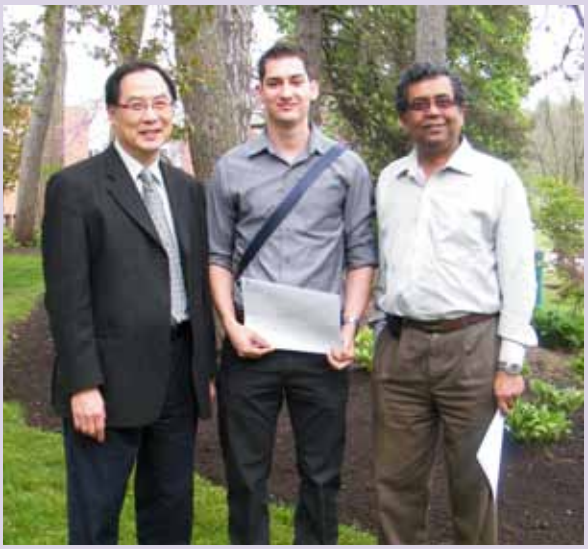
2012 Second Place Award for Best Presentation by a Resident: Dr. Ming Tsao, Dr. Iram Siddiqui and Dr. Subrata Chakrabarti.

Pathology Graduate Awards

2012 Dutkevitch Memorial Foundation Graduate Student Travel Award in Pathology: Arthur Lau (PhD), James Yip (MSc), Rebecca Ellis (MSc), Matthew Riopel (PhD) and Emily Keats (PhD)



2012 Second Place Award for Graduate Students: Dr. Ming Tsao, Arthur Lau (supervisor Dr. Zhuxu Zhang) and Dr. Subrata Chakrabarti.



2012 Best Poster Presentation by a Graduate Student: Dr. Ming Tsao, Alex Pavlosky (supervisors Drs. Anthony Jevnikar, Zhuxu Zhang) and Dr. Subrata Chakrabarti.

Undergraduate Student Awards

2012 Fred Lewis Award (for the student with the highest mark in the course, Pathology 3240a): Andrew MacDonald

2012 Gold Medal Award (for the BMSc. Pathology/ Toxicology student with the highest grade): Deelan Patel

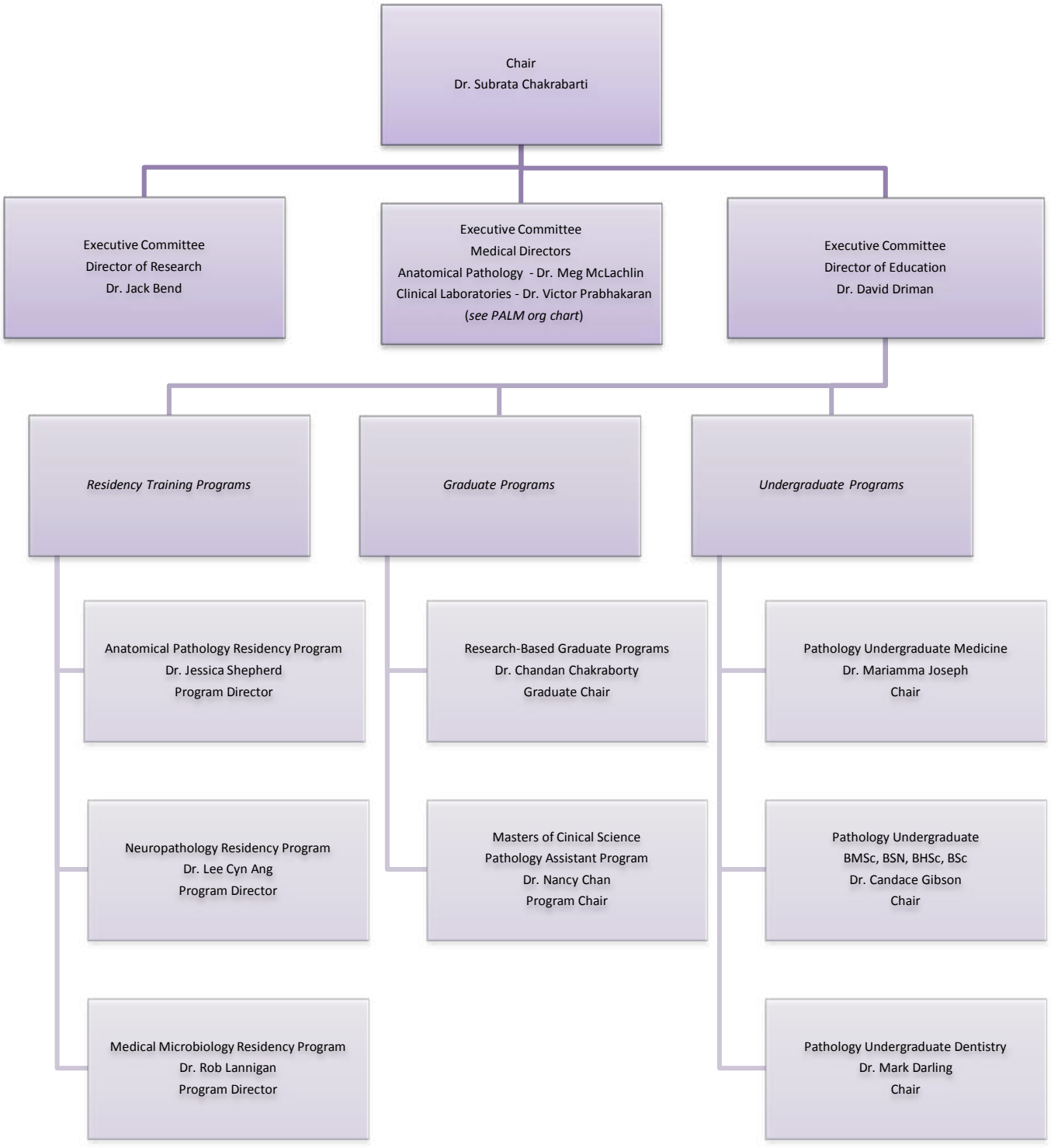
2012 Colin Anderson Award (for the student with the highest mark in the course, Pathology 3240b): Samantha Hershenfeld

Faculty Awards

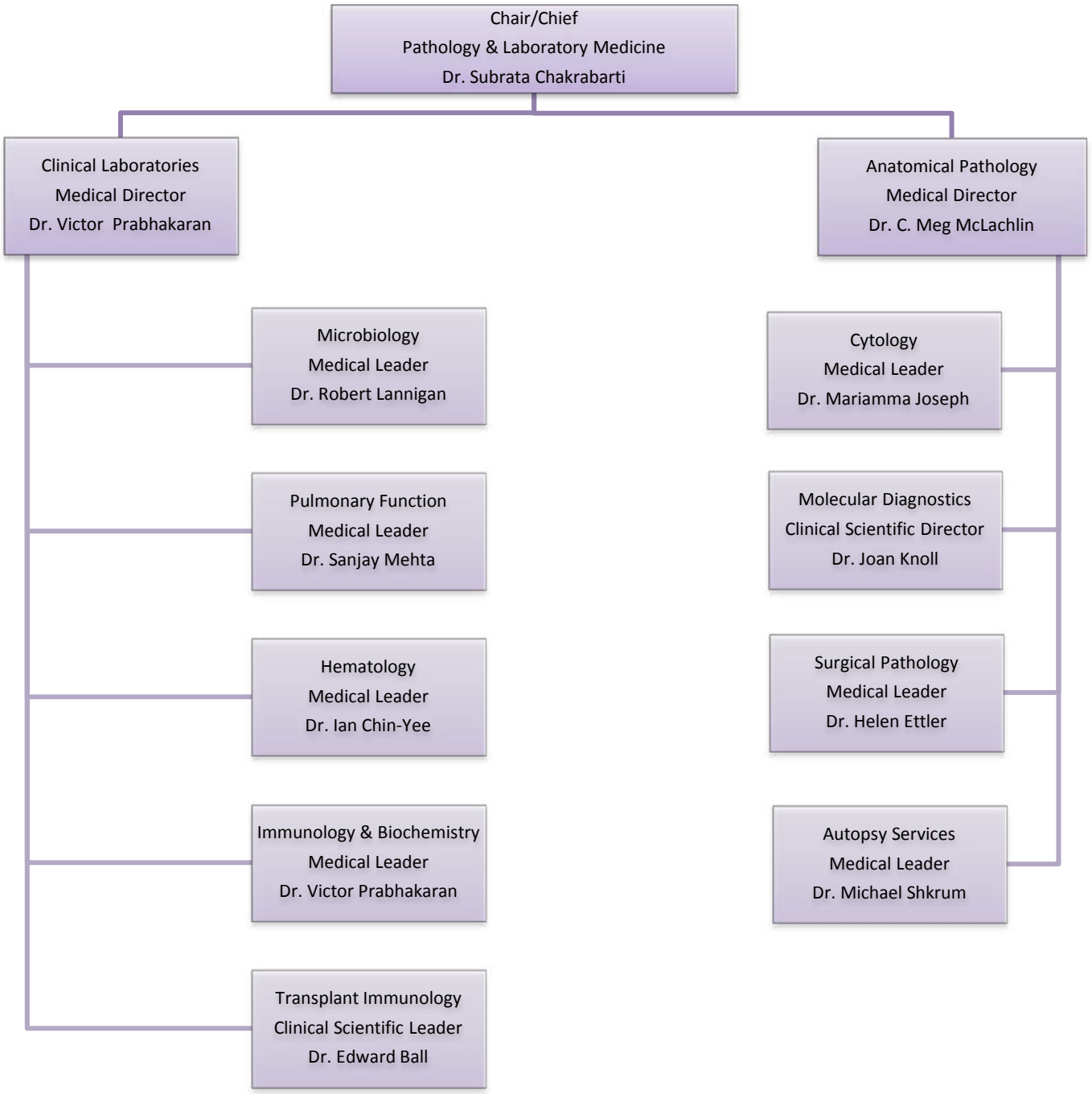
2011 Dr. M.E. Kirk Award for Excellence in Resident Education2011: Dr. Hector Li and Dr. Keith Kwan

Organizational Charts

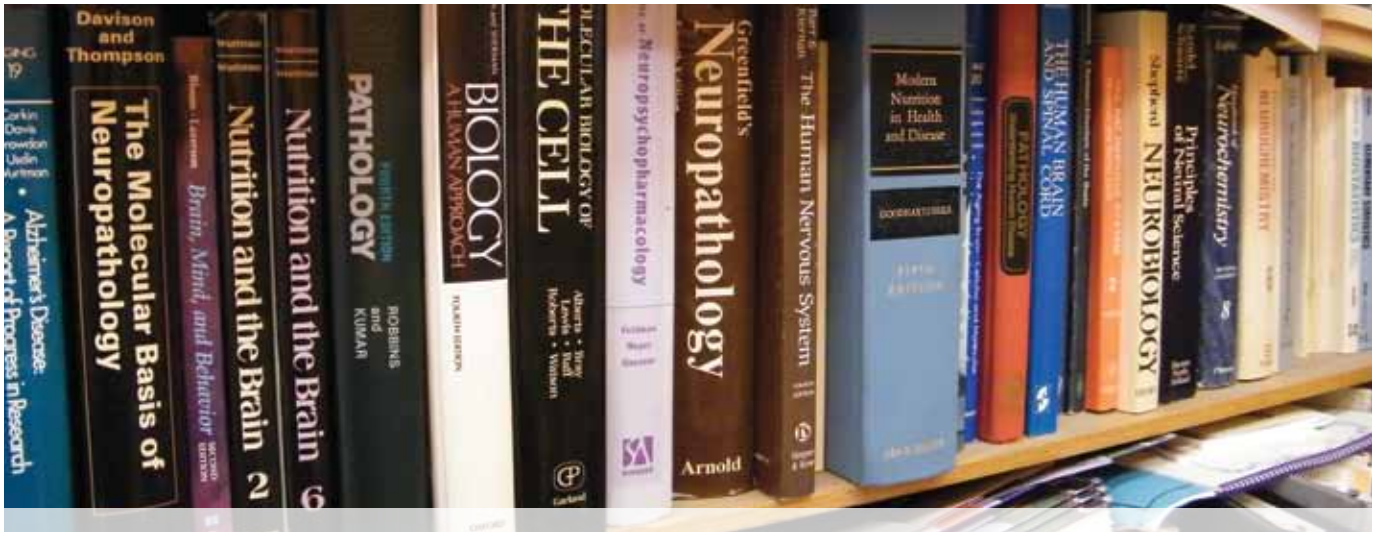
Department of Pathology, Schulich School of Medicine & Dentistry Organizational Chart



Department of Pathology & Laboratory Medicine, London Health Sciences Centre and St. Joseph's Health Care London Organizational Chart



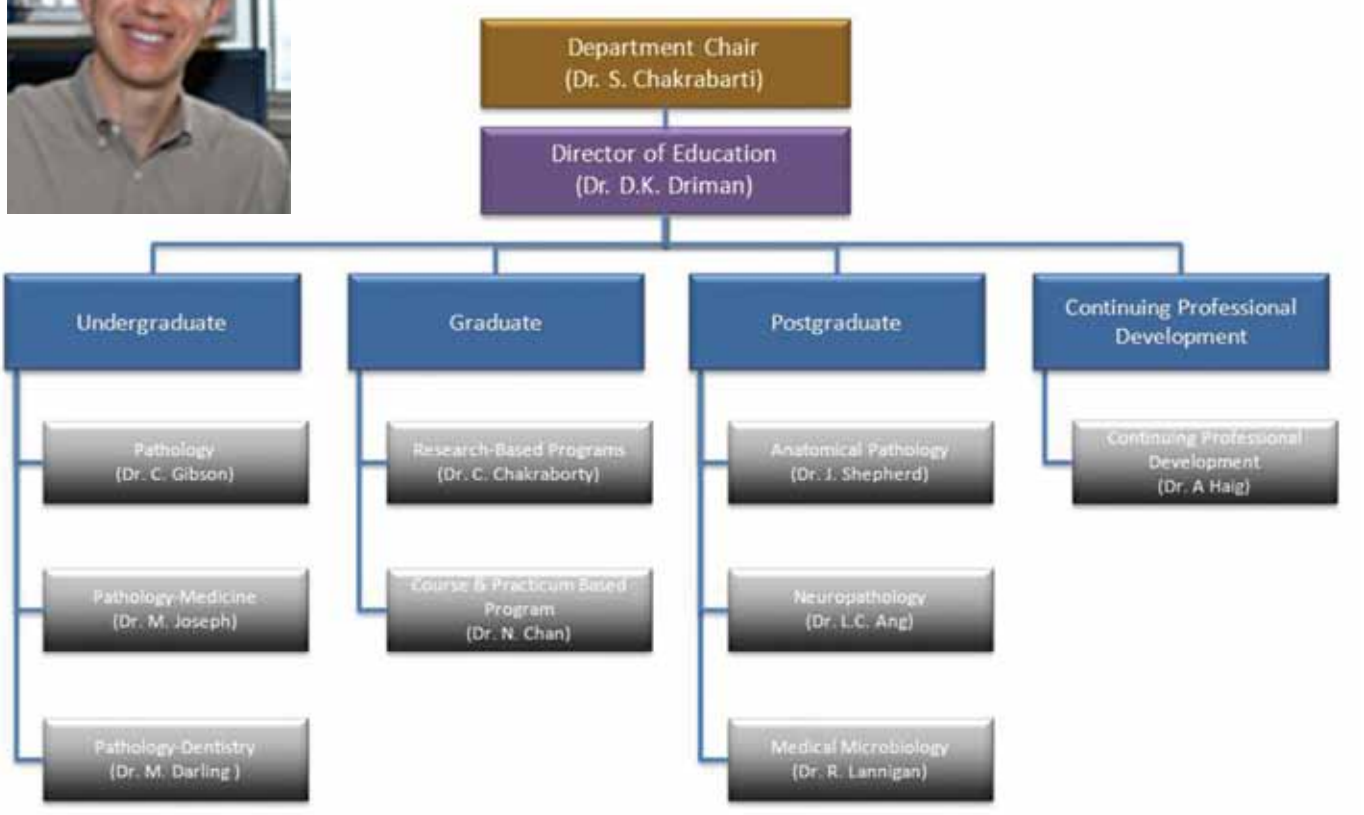
Please see www.lhsc.on.ca/lab/org_chart.htm for the full organizational chart for Pathology Labratory Medicine



Education Reports

Department of Pathology Education Report
Director of Education, Dr. David Driman

The Education Committee oversees the educational activities of the department.



The following is a summary of activities in each of the educational areas over the past year.

Undergraduate Programs

As can be seen from the complete report, the numerous courses in which teaching of non-medical/dental undergraduates occurs involves many students and faculty members, and the intake of students in the Pathology and Toxicology module of the BMSc program continues to increase. Two new courses in health informatics were introduced over the past year. Over the next year, consideration is being given to introducing new courses, such as an introductory histopathology course and molecular mechanisms of disease course. In Undergraduate Pathology-Medicine, a variety of activities to promote medical student understanding of Pathology have been implemented. Information sessions have been given to the Meds I and II classes to orient students to pathology as a career, and the way in which observerships are structured and administered has been revised with a core group of faculty members involved. Lunchtime multi-header microscope sessions have also been introduced. All of these activities will be refined over the next year. In addition, the development of a pathology course for final year students is under discussion. In Undergraduate Dentistry, teaching has been re-organized over the past year and some refinements in organization will be made. The courses continue to offer dental students high-quality education in oral pathology.

Graduate Programs

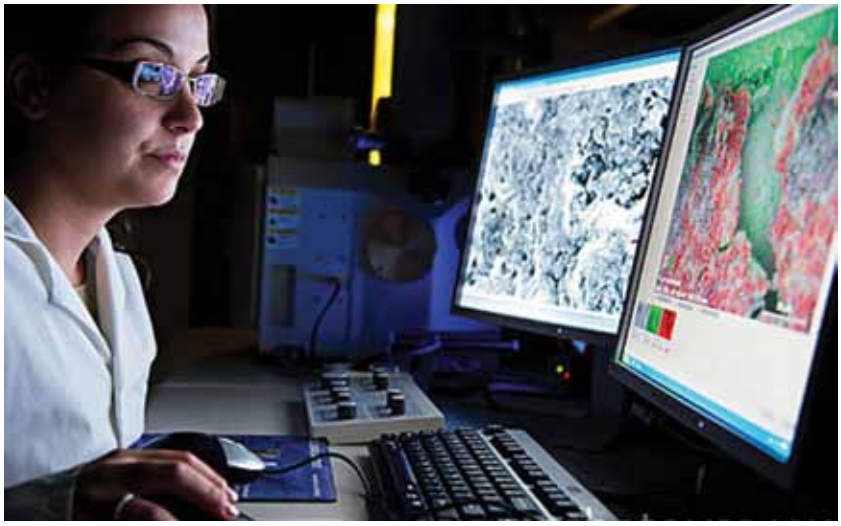
The research-based graduate program has continued to strengthen and grow over the past year, and faculty members have been successful in recruiting high quality research students into their laboratories. While growth of the program has been hindered somewhat by the lack of graduate supervisors, the department has been successful in recruiting a basic scientist and a clinician scientist over the past year, and this should help to allow this program to expand over the next year and beyond. The Master of Clinical Science (MClSc) Pathologists' Assistants program, which is accredited by the National Accrediting Agency for Clinical Laboratory Sciences, is expanding enrollment to six students and the University of Toronto has agreed to partner with us, in taking 2 students in the second (practical) year of the program. Two of the three graduating students from the past year found employment as Pathologists' Assistants and the third was accepted to medical school.

Postgraduate Programs

Both the Anatomical Pathology and Neuropathology residency programs have a full complement of excellent trainees and all residents were successful at the Royal College examinations in 2012. Both programs were recently reviewed by the Royal College as part of the review of all Schulich School of Medicine & Dentistry residency programs. As of the time of writing this report, the final accreditation status has not been received but the provisional report was for full accreditation for the Neuropathology program and provisional accreditation for the Anatomical Pathology with an internal review in 2 year's time. By this time the perceived deficiencies would have been corrected. The Medical Microbiology program remains inactive but this program is to be re-activated within the next year with the goal of offering PGY1 entry in the 2014 CaRMS match.

Continuing Professional Development

Under the new leadership of Dr. A. Haig, changes have been made to our Continuing Professional Development programs. The departmental Grand Rounds and the Dr. Zhong Research Seminars now take place on alternating months. A full roster of Grand Rounds speakers is in place for the 2012-13 year and the aim is to webcast these to surrounding community hospitals to enhance outreach. A Cytopathology CME event is to be held in the spring of 2013 and the Departmental Noon Rounds will be videoconferencing with the Windsor pathology group once per month.



Undergraduate Programs

The Department of Pathology has had a long standing commitment to teaching students at the undergraduate level within Schulich Medicine & Dentistry and the Faculty of Health Sciences. The Department of Pathology offers undergraduate pathology courses and training to medical students, dental students, nursing students, and several undergraduate pathology courses in the joint specialization in Pathology and Toxicology, open to students in the BMSc/BSc programs.

Undergraduate BScN / BMSc
Report of the Undergraduate Chair, Dr. Candace Gibson

BScN (NURSING)

An online course (Pathology 2420A – Pathology for Nursing Students) in general and systemic pathology is offered to the nursing students in the 4 year collaborative Western University/Fanshawe College Bachelor of Science, Nursing (BScN) program and in the 2 year Compressed Time Frame (CTF) nursing program at Western University.
This is a broad survey course providing a general understanding of fundamental mechanisms of disease processes. The first half of the course presents pathogenesis of diseases common to all organ systems; the second half concentrates on disease in most of the major organ systems including cardiovascular, respiratory, gastrointestinal, genitourinary, and central nervous systems. Format: 2 lecture hours/wk or equivalent online delivery with 1 tutorial hour/wk, 0.5 credit course. Enrollment limited to students in the Western/Fanshawe College collaborative BScN program.

BMSc – Pathology & Toxicology

In 2005 Pathology introduced a Bachelor of Medical Sciences Honors Specialization and a Specialization in Toxicology & Pathology offered conjointly with the Department of Physiology & Pharmacology. In the following year, full administration of the program was transferred to the Department of Pathology and the specializations were renamed Pathology & Toxicology.

Scope of the BMSc Program

We offer two modules in the Bachelor of Medical Sciences (BMSc) program:

- Honors Specialization in Pathology & Toxicology
- Specialization in Pathology & Toxicology

Students enter these modules in the second year following a general first year taken through the Faculty of Science (that includes introductory chemistry, physics, mathematics and biology courses). The study of Pathology attracts outstanding students and the honors specialization in Pathology & Toxicology has the distinction of having the highest entrance average among the BMSc modules.

The program underwent its first SUUPR review in 2010-11, along with the other modules/programs within the BMSc program at the Schulich School of Medicine & Dentistry and was given a “GOOD QUALITY” rating. The program will be reviewed again in seven years and several initiatives are underway to continue to grow and maintain the program.

Courses Offered

Pathology 3240A - Understanding Disease Mechanisms

This is a survey course for students in the biomedical sciences, health sciences or science programs. The emphasis is on understanding general mechanisms of disease (e.g. inflammation, immunity, injury, neoplasia, disturbed hemodynamics) in all organ systems. Offered through the Department of Pathology in the Schulich School of Dentistry and Medicine. 26 hours of lecture, 0.5 credit course.

Pathology 3245B – Diseases of Organ Systems

Building on the knowledge of general disease mechanisms presented in Pathology 3240A, this lecture-based course introduces students to specific diseases of major organ systems (e.g. cardiovascular system, respiratory system, renal system, gastrointestinal system, reproductive system, central nervous system and musculoskeletal system). 26 hours of lecture, 0.5 credit course.

Pathology 4400B - Environmental Pathology

The course involves the pathology of occupational and environmental diseases, including information on recent developments and basic mechanisms involved in these diseases. Recognition of occupational and environmental diseases, early diagnosis, mechanisms of cell injury and regeneration, and the effects of a wide variety of toxic drugs, chemicals and ultra violet and ionizing radiation are included. 26 hours of lecture, 0.5 credit course.

Pathology 4500B- Introduction to Forensic Sciences

Pathology 4500 focues on the Examination of the medico legal framework investigating the nature and circumstance of certain deaths. These forensic investigations involve experts in different disciplines assisting the coroner and police in resolving cases. Forensic pathology examines the effects of disease, particularly in sudden death, and effects of various external agents on the human body. 26 hours of lecture, 0.5 credit course.

Pathology and Toxicology 4980E – Seminar and Research project

i) This is a senior thesis course and includes theory and practice of laboratory techniques, laboratory safety, appropriate use of experimental models, ii) an independent research project supervised by faculty, iii) oral and written communication skills, including the preparation of a research proposal and final written research project report. Minimum 11 laboratory hours per week plus 3 seminar hours per week, 1.5 credit course.

Interfaculty/Collaborative Courses

Pathology/MHI 4100F – Health Informatics

Fundamentals of Health Informatics (HI) including an overview of the health care system; computer systems; communications/ information theory; data types, standards, quality, uses and users; and HI applications are preferable. Uses of computers in health care with emphasis on various clinical support and clinical information systems and the electronic health record and its achievability is also introduced. 2 lecture hours, 2 laboratory/tutorial hours per week, 0.5 credit course.

Pathology/MHI 4110G – Health Information Management

The flow, management and use of health data across integrated health care facilities, clinical information systems and the care continuum is examined. Implementation of complex health information systems is also explored, including security and privacy of health information, adoption of new technologies, team and project management. 2 lecture hours, 0.5 credit course.

MRIP6005 – 'Pathology' Course for Fanshawe College

The course of Pathology for Imaging Sciences (MRI) focusses on a basic introduction to the mechanisms of disease and to the morphology and clinical characteristics of a broad spectrum of disease entities. Student are introduced to the basic medical terminology used to describe various pathologic conditions occurring in the human body (including introduction/causes of diseases; cell adaptation, injury and death; congenital and genetic diseases; inflammation, cell damage and repair; hemodynamic pathology and neoplastic diseases). Discussion also involves the structural defects, inflammatory and infectious conditions, traumatic conditions, degenerative disorders, congenital abnormalities and neoplasms of different systems. These systems include musculoskeletal (joints, bone), head (brain) and neck, thorax (spine, respiratory system, mediastinum, cardiovascular), pelvis (male and female reproductive systems, kidney and urinary system) and abdomen. 51 hours, 3.0 credit course

Undergraduate Course Enrolment Data

Enrolment in the Pathology courses has been steady and increasing in recent years due to the increased intake of medical science students. Interest in these courses, particularly in the third year introductory survey courses, is high and expected to increase in the next year. Enrolment in the 4th year forensic science course is limited in part because of the sensitive nature of the material (i.e. it is not appropriate as a general interest course) and also because it is given in conjunction with the 4th year medical student elective in Forensic Pathology. The BMSc students receive part of their instruction along with these students.

Undergraduate Course	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Path 240A	162	---	---	---	--
Path 3240A	---	148 + 12 grads	159 + 15 grads	154 + 16 grads	183 +7 grads
Path 2420A	265 + 4 grads	279 + 11 grads	283 + 5 grads	289 + 5 grads	299
Path 3245B	---	80 + 4 grads	91 + 4 grads	100 + 4 grads	129 + 4 grads
Path 4100F	---	---	---	---	2 + 4 grad
Path 4110G	---	---	---	---	3 + 1 grad
Path 4400B	42 + 2 grad	32 + 3 grads	39 + 3 grads	40 + 4 grads	51 + 3 grads
Path 4500B	25 + 2 grad	27 + 3 grads	22 + 3 grads	25 + 5 grads	25 + 4 grads
Path-Tox 4980E	10	9	5	14	15
MRIP6004/6005	---	---	---	5	10

Objectives of our Undergraduate Program

The objectives of our introductory third year pathology courses (Pathology 3240A and 3245B) are to give students a general knowledge and understanding of disease and to give the student some of the basic descriptive vocabulary and an understanding of disease processes and their underlying molecular mechanisms.

In our advanced courses in the 4th year, we offer a more in-depth study of two areas of current interest in pathology – environmental pathology and forensic pathology. These courses reflect not only the interest and importance of these areas within pathology but also reflect interests and areas of strength in research among our faculty members.

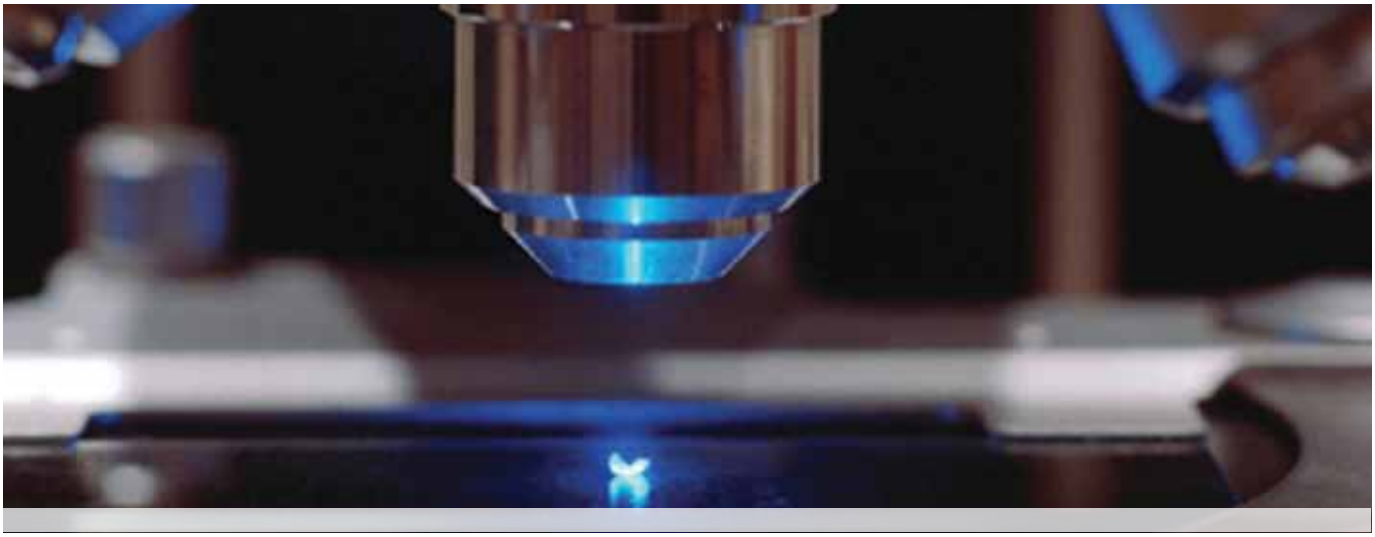
The objective of the 4th year senior research project is to introduce the student to the study of pathology within a basic science or clinical pathology research laboratory under the guidance of a pathology faculty member. The majority of the supervisors of 4th year students are also members of the graduate faculty in Pathology. Additionally several opportunities are offered for clinically based research.

Priorities/Considerations for the Future

- We will review courses and offerings – possible introduction of a histopathology course (4th year level with ACB 3319 – histology as a prerequisite) and a molecular mechanisms of disease course.
- We have introduced two new courses in health informatics that are offered at the graduate level and are available to our senior undergraduate students and will form part of a newly proposed interdisciplinary module in Medical Health Informatics across the Faculty of Science (through the Department of Computer Science) and the Schulich School of Medicine & Dentistry (through the Department of Pathology with participation of other biomedical science departments). Note: this program, an Honors Specialization in Medical Health Informatics, was approved for initiation in September 2012.
- Monitor the upcoming changes in Toxicology that will occur in the Department of Physiology & Pharmacology with retirements, etc – possibility of offering a molecular toxicology course through Pathology; this will be more fully investigated and developed in the coming year (2012- 2013)
- We have increased our intake of students in 2nd, 3rd and 4th years of the Pathology & Toxicology module; enrolment in 4th year, at the moment, is capped at 15 which is the maximum number of students who can be reasonably accommodated with current research resources and faculty members.
- We will monitor the increased intake of students in the first year of the BMSc program that has occurred in 2010 and 2011 as part of the general increased intake of students at Western University and adjust intake of students within the 3rd and 4th year lecture based courses to accommodate them accordingly (the first increase will impact the department in 2012-13). Note: we did increase the class size for 2012-2013 in Pathology 3240A to 250 and Pathology 3245B to 200.

Pathology & Toxicology – Student Projects 2011-2012

Student	Supervisor	Title of Project
Cameron, Ian	Dr. Savita Dhanvantari	Determining the role of proglucagon cleavage by furin and its effects on regulated secretion in neuroendocrine cells
Carlton, Karen	Dr. Tyrrel deLangley	Comparative mouse histopathology: phenotyping mice with modified retinoblastoma gene expression
Chueng, Kevin	Dr. Steve Karlik	Comparison of various protein factors in mice with experimental allergic encephalomyelitis and in humans with multiple sclerosis
Fan, Josiah	Dr. Weiping Min	DSPE–PEG–PEI functionalized carbon nanotubes: the development of a novel siRNA delivery system for RNA interference in murine cells
Fu, Angel	Dr. Zhuxu Zhang	Interaction of DN-Treg cells and CD4+CD25+Foxp3+ Treg cells and its relevance on transplant immune tolerance induction
Goertzen, Cameron	Dr. Rob Hammond	Digital quantitative pathology of carotid atheromas: 3D correlative studies with ultrasound, PET/CT and MRI
Goodman, Chris	Dr. Jorge Burneo	Functional evaluation of malformations of cortical development: using fMRI and H1-MRS to aid in the treatment of complex epilepsies
Leon-Cheon, John	Dr. Xiufeng Zheng	The role of glutamate receptors in breast cancer development
Mian, Muhtashim	Dr. Candace Gibson	Effectiveness of virtual microscopy as a teaching tool
Patel, Deelan **Gold Medal Winner in Path/Tox	Dr. Cindy Hutnik	Mechanisms underlying excess extracellular matrix deposition in the trabecular meshwork in glaucoma
Ruiz, Michael	Dr. Subrata Chakrabarti	Investigating the involvement of endothelial derived microRNA-200b to angiogenic and inflammatory processes in diabetic neuropathy
Shabbeer, Imran	Dr. Chris Howlett	Immunohistochemical analysis of gastroenteropancreatic neuroendocrine tumours (GEP NETs): a tissue microarray study
Smith, David	Dr. Cindy Hutnik	Identifying biomarkers of ocular surface disease in glaucoma patients
Smoka, Mahabba	Dr. Edith Arany	Effects of olive oil supplementation on PPAR regulation and coactivator activation in placental tissues from maternal diabetic rats
Stuart, William	Dr. Rennian Wang	Pancreatic beta (INS-1) cell support by two- and three-dimensional fibrin gels



Undergraduate Medicine
Report of the Undergraduate Medicine Chair, Dr. Mariamma Joseph

During the past year, our faculty continued to be actively involved in various Med I and Med II courses which run simultaneously from the London and Windsor programs. In each course, there are Pathology lectures, Patient Centred Context Integration and Application (PCCIA) small group tutorials, and lectures in various other subject areas as appropriate to that system. As indicated by the italicized names below, Pathology faculty play a strong leadership role in these courses. Our faculty and residents in collaboration with Windsor Pathologists deliver a wide variety of Pathology Small Group Discussions to Med I and Med II students which are highly regarded by medical students. Last year we continued to offer Meds III – Clinical Clerkship Pathology Electives and Meds IV – Clinical Electives to a number of med students. We also offered our popular Meds IV Integration, Consolidation & Enrichment (ICE) courses “Primary Care Pathology Course” and “Forensic Medicine Course”.

Last year our faculty took extra efforts to increase the number of one- on- one Observership Program opportunities offered to the Med I and Med II medical students (10 students). We also introduced two innovative teaching methods to connect with a larger number of students in order to promote visibility of Pathology to medical students early on and to enhance student consideration of Pathology as a career choice. In March 2012, in conjunction with the Pathology Interest group, we organized a class room lecture during lunch time titled “An Introduction to the Multifaceted Field of Pathology” which was well received by students. In May 2012, we offered an interactive group observership “Multi-head Microscope Teaching: An Undergraduate Pathology Observership” in which 14 students with special interest in Pathology came to our department in small groups during lunch time to observe and experience the life of a pathologist in an academic hospital. Through this experience, students also learned some basic skills in the work up of a variety of real case scenarios.

Activities in Progress

We are currently conducting an in-depth review of the exit competency document created by Dr. Jason Ford, Canadian Association of Pathologists, Undergraduate Medical Education Working Group. It is believed that during clerkship, medical students need to be exposed to a variety of clinically relevant Pathology practice topics such as laboratory function, quality management, diagnostic pitfalls and limitations of biopsy. We would like to create a list of objectives customized for our medical students and slowly thread these into the clerkship curriculum through lectures or self-directed learning modules. We plan to discuss these ideas with our faculty and Undergraduate office.

The first two years of the medical curriculum provide the students with a solid grounding in the basic and clinical sciences. These two years are each divided into a series of systems-based courses:

Med I Courses

- Introduction to Medicine
- Blood & Oncology (Course Co-Chair, *Dr. K. Rizkalla*)
- Infection & Immunity
- Skin (Course Chair, *Dr. M. G. Joseph*)
- Heart & Circulation (Course Co-Chair, *Dr. E.Tweedie*)
- Respiration & Airways
- Genitourinary System

Med II Courses

- Digestive System & Nutrition
- Endocrine & Metabolism
- Reproduction (Course Co-Chair, *Dr. M. Weir*)
- Musculoskeletal System
- Emergency Care
- Neurosciences, Eye & Ear
- Psychiatry & Behavioural Sciences

The **third and fourth years** of the medicine curriculum include a 52 week integrated Clerkship (Medicine 5475), Clinical Electives, and the Med IV Integration, Consolidation and Enrichment.

Meds III – Clinical Clerkship Pathology Electives (Co-ordinators *Drs. H. Ettler, A. Haig and K. Kwan*) – 1 student

During the 2 weeks of Medicine rotation, the clerks, under the direct supervision of a pathologist or pathology

resident, participate in the examination and interpretation of biopsies from various body sites. The clerks also have the opportunity to participate in the gross examination of surgical specimens pertinent to the practice of medicine, for example: colectomies from ulcerated colitis, thyroidectomies for thyroid cancer, etc. The clerks have the opportunity to follow-up on some of these resections by reviewing their microscopic findings the following day. Clerks are also encouraged to participate in the examination of frozen sections as required. Opportunities are also presented to participate in the autopsy service, the emphasis being on clinico-pathological correlation. In most instances there is ample opportunity to discuss the clinical aspects of some of the biopsies with the clinicians and pathologists as a team.

Meds IV – Clinical Electives (Co-ordinators *Drs. H. Ettler, A. Haig and K. Kwan*) – 7 students

The Department of Pathology offers an option in Clinical Anatomical Pathology to Phase IV medical students during Blocks I, II, III and IV at each of the teaching hospitals. The student/s may initially observe and later participate in the routine activities of the Clinical Department of Pathology. The student are assigned to a staff pathologist for direction and supervision. The supervisor negotiates with the student the terminal objectives of the rotation and the student's learning goals. It is also possible for the student to select a topic of interest for in-depth study during the four week period related to a specific disease process, or specific organ system, or diagnostic procedure, e.g. electron microscopy, immunohistochemistry, cytology, molecular pathology, etc. An elective in Clinical Anatomical Pathology is viewed favourably by Program Directors of various medical and surgical disciplines.

Meds IV - Integration, Consolidation & Enrichment (ICE: Medicine 5402)

Primary Care Pathology Course (Course Coordinator *Dr. B. Garcia*)- 51 students

This course is most suitable for those considering a career in: Family Medicine, Internal Medicine, Paediatrics, Gynaecology and Surgery. It is, however, appropriate for practically all medical career choices with the exception of research and administration. Syllabus and Course Structure: Dermatopathology, laboratory hematology and hematopathology, Gastrointestinal Pathology, General Primary Care Issues (including, but not limited to: breast lumps, Fine Needle Aspiration Biopsy (FNAB), lumps/bumps of head and neck, clinical laboratory including renal function and urinalysis, prostate cancer), Gynepathology (including pap smears), Pediatric Pathology, and Current Issues are persecuted.

Forensic Medicine Course (Course Coordinator, *Dr. M. Shkrum*) - 24 students

Forensic Medicine is a specialized area of Medicine which not only deals with how disease causes sudden death, but also examines the injurious effects of various external agents (e.g., firearms, poisons, blunt trauma, etc.) on the human body. This course outlines topics of practical importance and is be given by experts in the various fields of interest. The opening lecture discusses deaths requiring notification of the coroner. The course concludes with the role of a medical expert in the legal system.

Undergraduate Dentistry
Report of the Dentistry Education Chair, Dr. Mark Darling

Within the dental school curriculum, instruction in general and systemic pathology is introduced in the first year. A number of courses in pathology and oral pathology are also offered to undergraduate and postgraduate dental students.

Dentistry 5162 - Systemic Pathology – Dr. J.A. Gomez, Course Coordinator
A component of the General Medicine Unit, this systems-based course runs sequentially with Human Physiology, Pharmacology, Systemic Anatomy and Medicine. The course examines specific aspects (etiology, clinical presentation, macroscopic and microscopic features, and pathogenesis) of common human diseases relevant to the practice of dentistry. Taught to first year dental students. Lectures 23 hours.

Dentistry 5170 - Oral Diseases I – Drs. M. Darling and T. Daley – Course Coordinators
This is an integrated course covering the common diseases of the teeth, periodontal and periapical tissues; specifically caries, gingivits, periodontitis, pulp disease, periapical inflammation, regressive dental conditions and dental anomalies. Taught to first year dental students. Lectures 43 hours, Labs 1 hour.

Dentistry 5235 - Oral Diseases II– Drs. M. Darling and T. Daley – Course Coordinators
This integrated course combines oral medicine, oral pathology and oral radiology to cover a variety of diseases that affect the hard and soft tissues of the mouth, head and neck. Taught to second year dental students.
29 lecture hours, 5 lab hours, 0 clinic hours (Total 34 hours).

Dentistry 5335 - Oral Diseases III – Drs. M. Darling and T. Daley – Course Coordinators

This course is a continuation of Oral Diseases II, including wider aspects of odontogenic, salivary, mucocutaneous and connective tissue diseases.

Lectures 30.5 hours, Labs 6 hours.

Dentistry 5304 - Oral Pathology (ITD1 only) – Dr. T. Daley – Course Coordinator

This course is a comprehensive review of the more common diseases affecting the orofacial region and jaws, excluding dental caries and periodontal diseases. (Covers 1st, 2nd and 3rd year Oral Diseases).

Lectures 47 hours.

Graduate Education Programs

Historically, the Graduate Program in Pathology at Schulich School of Medicine & Dentistry was available for only a limited number of students. A few years ago this trend changed due to the introduction of some innovative strategies by the previous graduate chair Dr. Subrata Chakrabarti.

These strategies included:

- the introduction of a part-time graduate stream at both the MSc and PhD levels,
- the recruitment of several clinician scientists and basic scientists from other departments to cross appointments in our Pathology Graduate Program,
- the introduction of a collaborative graduate program in environmental pathology and ecosystem health,
- by launching a course based Pathologists' Assistant (PA) graduate program now a free standing MCISc program.

For these reasons the program has experienced continuous growth for several years. Like most other departments at the Schulich School of Medicine & Dentistry, the number of graduate students in Pathology has reduced to some extent in recent years. This is a result of the low success rate of grant funding at the national level. Further growth in our graduate program has also been limited by the number of graduate faculty members in our department. This has largely been due to a lack of resources, specifically space, making it impossible for the department to recruit new scientists.

Research Based Graduate Program
Report of the Graduate Chair, Dr. Chandan Chakraborty

Research training is provided both at the MSc and PhD levels. This is an integrated research program and investigation occurs at the molecular, cellular, tissue, whole organism, and clinical levels. Students carry out supervised research in various thematic areas, including cancer, diabetes, transplantation, stem cell biology, neurodegenerative diseases, cardiovascular diseases, developmental defects, molecular genetics and toxicology. The goal of our graduate program is to create tomorrow's researchers; scientists who will make significant original contributions to the global understanding of disease diagnosis and mechanisms. Graduates from our program are qualified for a diverse set of careers including academia, government, and the pharmaceutical industry and have been successful in each of these sectors. To further address the specific need for tomorrow's scientists and to train clinician-researchers, an under-resourced profession in Canada, we have initiated a successful part-time research based graduate program.

We believe that our research-based graduate program can expand further, however, continued growth has been hindered by the lack of sufficient graduate supervisors. This is in sharp contrast to several other programs at Schulich Medicine & Dentistry where lack of expansion is due to lack of qualified student applicants. During the last 13 years, the overall number of basic science faculty (including Oral Pathologists) appointed in Pathology has increased by only two. This is significantly lower than the incremental faculty recruitment that has occurred in several other departments over the same time frame. As the new Chair and Chief of Pathology and Laboratory Medicine, Dr. Subrata Chakrabarti was able to negotiate two faculty positions (one basic scientist and one clinician scientist) and laboratory space for them. Basic scientist, Dr. Martin Duennwald was appointed in September, 2012 and Dr. Chris Howlett transferred to the clinician researcher position during the summer. In addition, in September 2012 the Division of Medical Microbiology, Department of Pathology, was successful in recruiting a Medical Microbiologist with strong research background. These talented individuals will be accepting graduate student(s) in our program and will help to further grow our research-based graduate program.

Graduate Student Enrollment

In the past several years we have experienced an unparalleled growth in our pathology graduate education program. For example, from a total of 14 MSc and 6 PhD students in September of 2005, enrollment increased to 36 MSc and 11 PhD students in September of 2010. This is due to several reasons discussed above. Our achievements fulfill the mandate of our University to increase graduate student enrollment. Our faculty members are very successful in recruiting high quality research students into their research laboratories.

Pathology Graduate Program Enrolment

Academic Year	MSc FT	MSc PA FT	MSc PT **	MSc Total	PhD FT	PhD PT	PhD Total	Total FT	Total PT	Total
2005-2006	11	0	3	14	5	1	6	16	4	20
2006-2007	9	0	4	13	3	2	5	12	6	18
2007-2008	10	4	4	18	5	1	6	19	5	24
2008-2009	9	8	3	20	4	2	6	21	5	26
2009-2010	15	8	6	29	5	2	7	28	8	36
2010-2011	18	8	10	36	9	2	11	35	12	47
2011-2012	13	8	7	28	12	2	14	28	14	42

Note: Students who are on a Leave of Absence are not included in this data

** MSc PT – 2 Oral Maxillofacial Students are included even though they are not counted until the 4th year of their degree.

Faculty supervisors and research areas

The Pathology Department currently has 39 Pathology faculty members approved for graduate student supervision, some of whom are heavily involved in the Pathologist Assistant training program. Several of these individuals are also members of interdisciplinary graduate programs. See our Pathology website at www.uwo.ca/pathol for a full listing of our graduate faculty.

Department of Pathology Research Graduate Education Committee (2011-13)

Dr. Chandan Chakraborty (Graduate Program Chair)
Dr. Jack Bend, Director of Research
Dr. Zia A. Khan
Dr. Candace Gibson
Dr. Nancy Chan (Program Director, PA program)
Dr. Madeleine Moussa
(representative from PA program)
Matthew Riopel (Graduate Student Representative)
Dr. Subrata Chakrabarti,
(Chair/Chief, Department of Pathology)
Ms. Tracey Koning
(Ex-Officio – Graduate Affairs Assistant)

Master of Clinical Science (MClSc) Pathologists' Assistant Program
Report of the Program Director, Dr. N. Chan

Program Overview

Our Master of Clinical Science (MClSc) Pathologists' Assistant Program (PA) is the largest of such programs in Canada and the only one accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). In their first year, students complete courses in general/systemic pathology, anatomy and embryology, histology, infectious diseases and pathology, forensic pathology, and environmental pathology. In their second year, students complete rotations in autopsy and surgical pathology, a research project, and 2 months of a community hospital rotation. Upon graduation, the students are highly skilled professionals in hospital pathology laboratories, assuming a significant responsibility for the initial examination and dissection of all surgically removed tissues and to a variable extent, for the dissection of bodies during postmortem examination.

PA Program Enrollment

This is a highly competitive program in which we receive approximately 25 applications each year, of which four students are accepted. This year's first year class (2011-2012 academic year) includes one student from the United States. The reputation of the program as Canada's only program accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) is increasing, as we are seeing more applicants from the United States. Job postings are also forwarded to our office from the States.

We currently accept four new students per year and are limited primarily due to space in the second year of training. During this practicum year, students alternate between the autopsy suite as well as the "gross room", where specimens from all surgeries in London and surrounding areas are examined. We hope to eventually double the number of students, and seek partners in the training, which may include Windsor and Hamilton. This option will

require further exploration. The University of Toronto has agreed to partner with us and take two students for the second year training.

PA Program Graduates – Career Opportunities

There is a well-documented need for well-trained PAs in Canada. There are about 225 community laboratories in Ontario and the majority of them do not have a PA, largely due to demand exceeding supplies. We expect that if well trained PAs are available, each of these laboratories will hire at least one. The larger centers potentially will recruit more than one. Although the academic centres in Ontario have PAs, suitably trained PA's are in very short-supply.

Additional possibilities for employment exist in other provinces as well as in the forensic centres. It is also expected that over the next several years this need will continue to increase because of the severe shortage of practicing pathologists and pathologists-in-training, required to meet escalating clinical demands.

Graduating trainees in 2011-2012 include one student who will work as a pathologist's assistant in Lethbridge, Alberta; one student will work as a PA's in Halifax, Nova Scotia; one student entered medical school at the University of Toronto and one student took a leave of absence.

Course & Practicum Based Graduate Education Committee

Dr. C. Chakraborty (Research-Based Graduate Program Chair)
Dr. Nancy Chan (Program Director; new)
Dr. Mike Shkrum (Medical Director)
Dr. Subrata Chakrabarti (Chair/Chief, Department of Pathology)
Dr. Madeleine Moussa
Mr. Mike Graves (Clinical Coordinator)
Dr. Rick Mann, Regional Supervising Coroner (Community Member)
Ms Tracey Koning (Graduate Program Administrator)
Ms Katherine Greenall (PA student representative)

Future Directions

This is an innovative new program with room to grow. The Pathology Graduate Program went through an Ontario Council on Graduate Studies (OCGS) review in 2010, and we had our site visit on May 2011. In the spring of 2012 the program was approved as a stand-alone professional program. Future plans include expansion to accommodate more students.

Graduate Student Presentations & Publications

Presentations

1. Kleiman, A, **Keats, EC**, Khan, ZA. Insulin-like growth factor 2 increases hemangioma stem cell growth without altering differentiation. Presented at the 2011 J Allyn Taylor International Prize in Medicine Symposium, London, ON, November, 2011

2. **Keats, EC**, Khan, ZA. Unique cellular responses of stem cell-derived endothelial and mesenchymal cells to high levels of glucose. Presented at the 2011 J Allyn Taylor International Prize in Medicine Symposium, London, ON, November, 2011

3. **Keats, EC**, Khan, ZA. Potential role of mesenchymal stem cells in increased adipogenesis in diabetes. Present ed at the 2nd Annual Diabetes Research Day, London, ON, November, 2011

4. **Keats, EC**, Khan, ZA. Stem cell-derived endothelial cells are resistant to the adverse effects of glucose: implications for therapeutic vasculogenesis. Presented at the 2nd Annual Diabetes Research Day, London, ON, November, 2011

5. **Iftekar, A**, Peng, T. SIRT1 signalling promotes lipopolysaccharide-induced TNF-alpha expression in cardiomyocytes. Presented at the Matrix Dynamics Group, University of Toronto, December 12, 2011

6. **Keats, EC**, Khan, ZA. Changes in activity and differentiation of mesenchymal progenitor cells contribute to the pathogensis of diabests. Presented at the London Health Research Day, March, 2012

7. **Henley, P**, Bend, JR. Platform presentation. Community-Based Ecosystem Health Research Project at Walpole Island First Nation. Earth Day Colloquium, Western University, London, ON, April 13, 2012

8. **Henley, P**, Bend, JR. Platform presentation. Community-Based Ecosystem Health Research Project at Walpole Island First Nation. Transcending Borders – Towards Global Health Conference, London, ON, April 28, 2012

9. **Henley, P**, Bend, JR. Pesticide Exposure and Health in Naivasha, Kenya: Perceived vs. Real Risk. Transcending Boarders – Towards Global Health Conference, London, ON, April 28, 2012

10. **Keats, EC**, Khan, ZA. Unique cellular responses of stem cell-derived vascular cells to high levels of glucose. Presented at the Till & McCulloch Meetings, April, 2012

11. **Keats, EC**, Khan, ZA. Insulin-like growth factor-2 provides autocrine signals for stem cells expansion and prevents full cellular differentiation in infantile hemangioma. Presented at the Till & McCulloch Meetings, April, 2012

12. **Brackstone, M**. Concurrent neo-adjuvant chemo/radiation in locally advanced breast cancer-markers to predict treatment resistance. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

13. **McMillan, C**. WNT5A promotes breast cancer progression in the presence of VANGL1. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

14. **Dubrick, J**, Wang, R. Role of Men1/Menin during islet cell development in the human fetal pancreas. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

15. **Lau, A**, Jevnikar, A. Receptor interacting protein 3 (RIP3) regulates tubular epithelial cell injury and inflammation following renal ischemia reperfusion injury. (Oral)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

16. **Yip, J**, Zhang, ZZ, Regulation of NK cell-mediated tubular epithelial cell death and kidney ischemia-reperfusion injury by NKR-P1 receptors and Cir-b. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

17. **Henley, P**, Bend, JR, Community-based ecosystem health at Walpole Island First Nation: possibility of an enhanced risk for type 2 diabetes and neurodevelopmental deficiencies from exposure to environmental contaminants in a few members. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

18. **Siu, L**, Min, WP. Novel non-covalent functionalization of carbon nanotubes for siRNA delivery. (Oral)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

19. **Chen, D**, Min, WP. Targeted siRNA silencing of IDO in dendritic cells using mannose receptor-conjugated liposomes: a strategy for treatment of melanoma. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

20. **Keats, EC**, Khan, ZA. Unique cellular response of stem cell-derived vascular cells to high levels of glucose. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

21. **Khan, W**, Knoll, J. Nanocopic analysic of centromere topography and chromatin accessibility during metaphase. (Oral) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

22. **Clifford, A**, Chambers, A, Tuck, AB. The role of the transcriptional regulator TBX3 in the transition from non-invasive to invasive breast cancer. (Poster)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

23. **Pavlosky, A**. Zhang, ZZ. The role of RIP3 in cardiac allograft transplantation. (Poster)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

24. **Trieman, C**, Chambers, A, Tuck, AB. The role of tumour suppressor S100A2 in early breast cancer progression. (Poster)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

25. **Tejeda Saldana**, Y, Rieder, M. Beyond E. coli: a novel approach for detecting non-0157 E.coli in food and water. (Poster) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

26. **Ni, R**, Peng, T. Calpain is increased in mitochondria which contributes to mitochondrial ROS generation in the development of diabetic cardiomyopathy. (Poster)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

27. **Mortuza, R**, Chakrabarti, S. Reduction of SIRT1 in hyperglycemia causes accelerated gain in endothelial cells through a FOXO1 mediated pathway. (Poster)Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

28. **Woodford, R**, Daley, T, Human Kallikreins (KLK) as biomarkers for diagnosis of odontogenic cysts and tumors. (Poster) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

29. **Cuddy, K**, Daley, T. Expression of human kallikrein proteins 3 & 11 in maxillofacial cysts and tumours. (Poster) Presented at the Annual Pathology Research Day, London, ON, May 4, 2012

30. **Hamilton, B**, Ang, LC. Her2neu amplification is strongly associated with 1p/14q co-deletion in recurrent meningiomas. Great Lakes Chromosome Conference, Toronto, ON, May 17, 2012

31. **Henley, P**, Bend, JR. Increased hair cortisol in a Canadian First Nation. Society of Hair Testing Conference. Toronto, ON, June 27, 2012

32. **Mortuza, R**, Chen, S, Feng, B, Chakrabarti, S. Hyperglycemia mediated accelerates aging in vascular endothelial cells. Presented at the 71st American Diabetes Association Conference in San Diego, June 28, 2011

33. **Feng, ZC**, Riopel, M, Li, J, Wang, R. Improved β-cell proliferation and function in c-Kit;Fas Double mutant mice. Presented at the71st American Diabetes Association Conference in San Diego, June 28, 2011

34. **Keats, EC**, Khan, ZA. Unique cellular responses of adult blood-derived endothelial progenitor cells and mature endothelial cells to high glucose. Presented at the71st American Diabetes Association Conference in San Diego, June 28, 2011

35. **Keats, EC**, Khan, ZA. High levels of glucose cause increased matrix protein production by human mesenchymal stem cells without altering cell growth, proliferation, and differentiation. Presented at the71st American Diabetes Association Conference in San Diego, June 28, 2011

Publications

1. **Khan, WA**, Knoll, JH, Rogan, PK. Context-based FISH localization of genomic rearrangements within chromosome 15q11.2q13 duplicons. Mol Cytogenet 4(1):15. 2011 Aug

2. Jiang, N, Zhang, X, Zheng, X, **Chen, D**, Zhang, Y, **Siu, LK**, Xin, HB, Li, R, Zhao, H, Riordan, N, Ichim, TE, Quan, D, Jevinkar, AM, Cheng G, Min, WP. Targeted gene silencing of TLR4 using liposomal nanoparticles of preventing liver ischemia reperfusion injury. Am J Transplant 11(9):1835-44 2011 September

3. Feng, B, Chen S, **McArthur K, Wu, Y**, Sen, S, Ding, Q, Ross, D, Feldman, R, Chakrabarti, S. miR-146a-Mediated Extracellular matrix protein production in chronic diabetes complications. Diabetes. 60:2975-2984, 2011 September

4. Hernandez-Alejandro, R, Zhang, X, Croome, KP, Zheng, X, Parfitt, J, **Chen, D**, Jevnikar, A, Wall, W, Min, WP. Reduction of liver ischemia reperfusion of injury by silencing of TNF-β gene with shRNA. J Surg Res. 176(2):614-20, 2011 Nov

5. Li, R, Zheng, X, Popov, I, Zhang, X, Wang, H, Suzuki, M, Necochea-Campion, RD, French, PW, **Chen, D**, Siu, L, Koos, D, Inman, RD, Min, WP. Gene Silencing of IL-12 in dendritic cells inhibits autoimmune arthritis. J Transl Med. 31;10:19. 2012 Jan

6. Feng, ZC, Donnelly, L, Li, J, Krishnamurthy, **M, Riopel**, M, Wang, R. Inhibition of Gsk3β activity improves β-cell function in c-KitWv/+; male mice. Lab Invest. 92(4):543-55 2012 Apr

7. **Keats, EC**, Khan ZA, Vascular stem cells in diabetic complications: evidence for a role in the pathogenesis and the therapeutic promise. Cardiovasc Diabetol 11(1):37. 2012 April

8. **Henley P**, Hill J, Moretti M, Jahedmotlag Z, Schoeman, K, Koren G, Bend JR. Relationships between exposure to polyhalogenated aromatic hydrocarbons and organochlorine pesticides and the risk for developing type 2 diabetes: a systematic review and a meta-analysis of exoposures to 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin(TCDD) Toxicol & Environ Chem 2012, 94(5): 814-815. 2012 May

9. Feng, ZC, Li, J, Turco, BA, **Riopel, M**, Yee, SP, Wang R. Critical role of c-Kit in beta cell function: increased insulin secretion and protection against diabetes in a mouse model. Diabetologia. 55(8):2214-25, 2012 May

10. **Park, NI**, Rogan, PK, Tarnowski, HE, Knoll, JH. Structural and genic characterization of stable genomic regions in breast cancer relevance to chemotherapy. Mol Oncol. 6(3):347-59. 2012 Jun

11. **Keats, EC**, Khan, ZA. Unique responses of stem cell-derived vascular endothelial and mesenchymal cells to high levels of glucose. PLoS ONE 7(6): e38752, 2012 June

12. Roach, EE, Chakrabarti, R, Park, NI, **Keats, EC**, Yip, J, Chan, NG, Khan, ZA. Intrinsic regulation of hemangioma involution by platelet-derived growth factor. Cell Death Dis. 3: e328, 2012 June

Published Abstracts

1. Kleiman, A, **Keats, EC**, Khan, ZA. High glucose enhances adipogenesis in human mesenchymal stem cells without alterin their growth, proliferation, and migratory capacity. Can J Diabetes 35, A127, 2011

2. **Keats, EC**, Khan, ZA. High glucose causes impairment of mature endothelial cells but not adult endothelial progenitor cells. Can J Diabetes 35, A126, 2011

Online resources

1. **Henley, P**, "Tackling Antimalarial Drug Resistance in Kenya" in http://www.africaportal.org/articles/2011/11/14/tackling-antimalarial-drugresistance-kenya

2. **Henley, P**, "Preventing Preventable Cervical Cancer in Kenya" in http://www.africaportal.org/articles/2012/09/10/preventing-preventablecervical-cancer-kenya

Report

1. **Henley, P**. "Pesticide Exposure and Health in a Community from Naivasha, Kenya: Perceived vs. Real Risk" to the Centre for International Governance and Innovation (CIGI) on 2011-08-31.

Graduate Student Awards (2011-2012)

- **Ontario Graduate Scholarships**: Caroline Trieman, MSc Candidate (Research Program), Connor MacMillan, MSc Candidate (Research Program), Emily Wilkins, MSc Candidate (PA Program), Wahab Khan, PhD (Research Program), Arthur Lau, PhD (Research Program), Yuexiu Wu, PhD (Research Program).
- **Wahab A. Khan** (PhD candidate, supervisor Dr. Joan Knoll) received the Graduate Thesis Research Award Fund (2011-2012).
- March 7, 2012, **Emily Keats**' abstract was selected as one of the top entries in this year's Trainee Abstract Competition (Till & McCulloch Meetings (Stem Cell Meetings).

- Pathology Graduate students won 3 out of 13 Poster Competition Awards at the London Health Research Day on March 20, 2012. **Arthur Lau** (Supervisor: Dr. A. Jevnikar) - first place award for his presentation in the "Transplantation & Surgical Innovation" category. **Matthew Riopel** (Supervisor: Dr. R. Wang) - first place award for his presentation in the "Cancer, Cell Biology & Regenerative Medicine" category. **Emily Keats** (Supervisor: Dr. Z. Khan) - first place award for her presentation in the "Clinical Investigation and Metabolic Disease" category.
- We are delighted **Rui Ni** won an award for the Best Poster Presentation at the Department of Medicine's Research Day on May 24, 2012.
- **Di Chen**, PhD Candidate with Dr. Wei-Ping Min, was awarded the Gold medal at the 2012 Canadian Health Research Forum in Winnipeg, Manitoba. Di was one of 10 Schulich graduate students who attended this meeting.

Postgraduate Programs

The Department of Pathology offers training programs in Anatomical Pathology and Neuropathology; the Medical Microbiology program is currently inactive. These programs fulfill the requirements of the Royal College and are fully accredited. The training programs may be used to embark on a career in either an academic or community hospital setting.

The Department is a combined clinical and basic science department. As such, our training programs offer a range of clinical experiences and opportunities for research. Programs approved by the Royal College of Physicians and Surgeons are offered in:

I. Anatomical Pathology (Program Director, Jessica Shepherd)
II. Medical Microbiology (Program Director, Robert Lannigan)
III. Neuropathology (Program Director, Lee Cyn Ang)

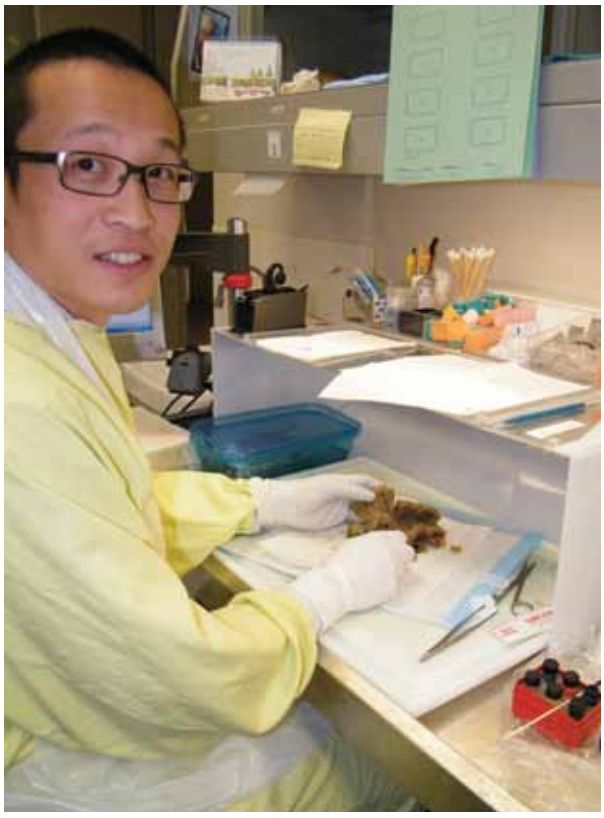
For information on the Residency Training Programs please visit: http://www.uwo.ca/pathol/postgraduate/index.html

Graduating Trainees – 2011-2012

Dr. Hector Li Chang– Anatomical Pathology
Dr. Adina Irimies – Anatomical Pathology
Dr. Murad Alturkustani – Neuropathology

Anatomical Pathology Resident Training Program
Report of the Program Director, Dr. J. Shepherd

There were 12 residents in Anatomical Pathology in 2011-12. The residents (PGY2-5) are primarily located at one site, the University Hospital Department of Pathology, and only go off-site for Frozen Section coverage or to attend academic events or rounds. They have the benefit of the Regional Forensic Unit also being on-site, as well as a parallel Neuropathology Program, so there is much beneficial sharing of facilities and educational interaction, as well as the formal rotations offered in these areas.



Twenty seven full-time faculty, Anatomical Pathologists, participated in teaching and mentoring our residents. All pathologists cover two or more subspecialty areas, as members of subspecialty teams. On any given day, most pathologists are on site and interact with one another in the handling of service and consult work. This results in a comprehensive and cohesive learning experience for the residents, with broad practical exposure and opportunity for role-modeling. In addition to pathology residents, there was a steady stream of off-service residents and medical students doing electives, as well as observers, such that the working space in the residents' rooms was almost always filled to the seams.

There were many educational rounds, including daily Gross Room rounds, weekly Forensic and Surgical Pathology

rounds, at least every two weeks Subspecialty Microscopy rounds, monthly Journal Club, Grand Rounds and Intensive Care Unit rounds, as well as many on-site and off-site Interdisciplinary rounds and Tumour Boards. Residents were involved in teaching medical students in small group sessions, as well as each other, through oral presentations in rounds and as minor components of their weekly Academic Half Days. Residents, with the exemption of the PGY5s, presented their research at the Pathology Annual Research Day in May, along with the graduate students from Pathology at Western.

In the CaRMS match, both of our PGY1 positions were matched, one in the first iteration and the other in the second iteration. The program had two PGY1 residents, two PGY2 residents, two PGY3 residents, four PGY4 residents and two PGY5 residents. In Spring 2012, both PGY5 residents passed the Royal College specialty examinations, and were accepted into subspecialty fellowship training, one at University Health Network hospitals (Toronto), and the other in our own department.

Neuropathology Resident Training Program
Report of the Program Director, Dr. L.C. Ang

The significant positive change during the past year has been the relocation of the Neuropathology residents' room into a more spacious and quiet environment. It has also been a challenging year as the program prepared itself for Royal College Accreditation in October 2012.

The residents not only actively participate in service but are excellent teachers to other residents rotating through the program. An Inter-University Agreement has been signed with University of British Columbia which enables our residents to do rotations for Pediatric Neuropathology in Vancouver in order to augment the training in this area. The small number of teachers has also made organization of formal teaching difficult and time consuming for so few individuals, but this has been overcome by organizing our journal club, teaching sessions and self-assessment assignments along the format of a curriculum so that all the relevant topics can be covered. As there are very few positions available for neuropathologists in Canada, career planning for current residents can be difficult and recruitment of future residents, quite challenging.

This program has 3 residents, one in PGY5 (Murad Alturkustani), one PGY4 (Fahd Al-Sufiani) and one in PGY3 (Sumit Das). Throughout the year, a number of Anatomical Pathology residents, Neurology residents and Neurosurgery residents completed their electives in our program. One of our Neuropathology residents spent 3 months in a rotation for Pediatric Neuropathology at the Hospital for Sick Children, University of Toronto.

The 3 full-time faculty members in Neuropathology (Drs. Ramsay, Hammond and Ang) are involved in the training of the residents in Neuropathology as a specialty (approximately 3 years), and more than 25 Anatomic Pathologists are involved in the training of these residents in their one year compulsory rotation in the specialty of Anatomical Pathology. The program administration has been provided by Ms. Mair Hughes and Ms. Susan Stewart at Schulich Medicine & Dentistry.

Almost all clinical teaching is concentrated at the University Hospital. In addition to teaching during brain cutting and microscopic sign-out sessions, there is a weekly unknown slide session as well as Teaching Seminar for Neuropathology residents. For Anatomic Pathology teaching, residents are required to attend the Wednesday noon rounds with the Anatomic Pathology residents where surgical biopsies are presented and the Forensic Pathology Rounds teaching where general forensic pathology is being taught. Pathology Grand Rounds and the Robert Zhong Research Seminars are held every month. For teaching in Clinical Neurosciences, there are the Grand Neuroscience Rounds every Tuesday morning for neurosurgery and neurology cases, the epilepsy rounds and neuroradiology rounds weekly, and neuromuscular rounds monthly, all of which residents are to attend. A monthly Neuropathology Slide Teaching Session on the Clinical Neurological Sciences Academic Half-day is being held for all Neuropathology, Neurology and Neurosurgery residents.

Dr. Alturkustani has been successful in passing the Royal College specialty examination for Neuropathology in June 2012. All 3 Neuropathology residents presented papers at the Canadian Association of Neuropathologists' Annual Meeting in Vancouver in October 2011 and our senior resident, Dr. Murad Alturkustani won the Morrison H. Finlayson Award for his presentation.

Medical Microbiology Resident Training Program
Report of the Program Director, Dr. R. Lannigan

The Medical Microbiology Residency Program of the Schulich School of Medicine & Dentistry is a five-year training program and is approved by the Royal College of Physicians and Surgeons. The program is currently inactive however plans are in progress to reactivate the program. Medical Microbiology is the branch of medicine concerned with the prevention, diagnosis, and treatment of infections and communicable diseases. The training is aimed at developing skills in the following spheres of activity:

- Clinical consultations on the investigation, diagnosis and treatment of patients suffering from infectious diseases
- Direction of infection control programs across healthcare facilities
- Prevention and epidemiology of communicable diseases
- The scientific and administrative direction of the diagnostic microbiology laboratory
- Teaching at all levels
- Research in basic and applied Medical Microbiology

The Medical Microbiology Program is one of the smaller programs at Schulich Medicine & Dentistry and usually has only one or two postgraduates at any given time. The program offers a broad-based experience in laboratory and clinical areas; the five year training includes mandatory and elective rotations. The program works very closely with the divisions of adult and paediatric infectious diseases. Infectious diseases consultants participate actively in structuring and supervision of resident training. Monthly rounds, journal club are jointly held. Participation of infectious disease consultants in academic half days of Medical Microbiology is valuable. The residency committee strongly believes that a good foundation in clinical medicine, especially in infectious diseases is the best foundation for a Medical Microbiologist.

The program encourages research and most of our residents have had several publications in peer-reviewed national and international journals and made presentations at national and international meetings. Historically, graduates of our program have been successful at the Canadian certification examination of the Royal College of Physicians and Surgeons. They also have found diverse and rewarding careers.

These are very exciting and challenging times for Medical Microbiology and infection control. New and emerging infectious agents are being discovered, diagnostic methodology is changing rapidly. During the past years, Medical Microbiologists have been at the fore front in the fight against SARS, Avian and Swine flu and West Nile Virus just to name a few.

2011-12 members of the Medical Microbiology Residency Training Committee

Dr. Anne-Marie Bombassaro (Clinical Pharmacist, Infectious Diseases)
Dr. Zafar Hussain (Section Head, Bacteriology) Retired December 2011
Dr. Michael John (Medical Director, Infection Prevention & Control)
Dr. Robert Lannigan (Program Director, Medical Leader, Medical Microbiology)
Dr. Sameer Elsayed (Infectious Disease Consultant, Adult)
Dr. Marina Salvadori (Infectious Disease Consultant, Paediatrics)
Dr. Marvin McGavin (Associate Professor, Western University, Microbiology & Immunology)
Dr. Ian James Stuart (Resident Representative)

Trainees at July 1st 2012

Anatomic Pathology

William Stecho PGY1
David Garcia Marquez PGY1
Brian Schick PGY2
Qi Zhang PGY2
Allison Osmond PGY3
Rebekah Jacques PGY4
Cady Pocrnich PGY 4
Mara Caragea PGY5
Iram Siddiqui PGY5
Emily Filter PGY5
Sami Siddiqui PGY5
Murad Alturkustani PGY5 (effective August 28th, 2012)
Adina Irimies CF

Neuropathology

Murad Alturkustani, PGY5

Das Sumit, PGY4

Fahd Al Sufiani, PGY5

Resident Awards

- **Dr. Murad Alturkustani** was awarded the Canadian Association of Neuropathologists' top scientific honour, the Morris J. Finlayson Award, at the Canadian Association of Neuropathogists' Annual Meeting 2011.
- **Dr. Iram Siddiqui** received the USC Teaching Honour Roll Certificate for the 2010-2011 Academic Year.
- **Dr. Emily Filter** received the Chair's Award for Best Presentation at Pathology Research Day 2012 held on May 4th, 2012.

Resident Publications & Presentations

1. **Al Sufiani F**, Ang LC. Neuropathology of temporal lobe epilepsy - review article. Epilepsy Research and Treatment (Hindawi Pub). Received 1 September 2011; Revised 20 January 2012; Accepted 7 February 2012.

2. **Al Sufiani F**, Jiang YJ, W. T. Blume, Ang LC. Institutional review of epilepsy resection specimens with focal cortical dysplasia. Canadian Association of Neuropathologists Annual Meeting. Vancouver, British Columbia, September 2011.

3. **Alemayehu M**, Zajac M, Pape C, Siddiqui I, Sacks D, Di Guglielmo J, Bhattacharya M. β-arrestin regulates lysophosphatidic acid-mediated invasiveness of human breat tumnor cells via Rap1 and IQGAP1. Oncogene. ONC-2011-00959 (Under Review).

4. **Alturkustani M**, Ang LC. Rosette-forming glioneuronal tumour of the 4th ventricle in a NF1 patient. Can J Neurol Sci. 2012 Jan;39(1):95-6.

5. **Alturkustani M**, Ang LC. Two unusual causes of vertebral artery rupture with subarachnoid hemorrhage. Abstract No. 16 in 51th Annual Meeting, September 14th – 17th, 2011. Canadian Association of Neuropathologists.

6. **Alturkustani M**, Derry K, Tsoi M, Gibson E, Crukley C, Fenster A, Spence JD, Youssef G, deKemp R, Beanlands R, Yarofeyeva Y, Yaffe M, Hammond R. The role of 3D digital quantitative histopathology coregistration to ultrasound, PET-CT and MRI (Canadian Atherosclerosis Imaging Network). Abstract No. 17 in 51th Annual Meeting, September 14th – 17th, 2011 Canadian Association of Neuropathologist.

7. **Caragea M**, Sy J, Parfitt JR, Driman DK Tumour budding in stage IIA colorectal carcinoma: a new semi-quantitative method of assessment Department of Pathology, University of Western Ontario, London, Canada; Department of Anatomical Pathology, Concord Hospital, Sydney, Australia Canadian Association of Pathologists 2011.

8. **Cargea M**, Allevato P, Hamm C, Xu J, Rizkalla K. In Situ Mantle Cell Lymphomas: Case Report of a New Entity in Hematopatholgy. Canadian Journal of Pathology 2012; Volume 4, Issue 1:29-31.

9. **Chan SM**, Gabril MY, Zbieranowski IJ, Sugar LM, Yousef GM, Bjarnason GA, Sherman CG Xp11.2 Translocations in Adult Renal Cell Carcinomas with Clear Cell and Papillary Features. Mod Pathol. 23 (suppl. 1): 196A Feb 2012 (Abstract # 814).

10. **Chan SM**, Lee L, Chin J, Gomez JA, Moussa M, Yousef GM, Gabril MY Should Fuhrman Grading in Clear Cell Renal Cell Carcinomas Be Based on Nucleoli Only? Mod Pathol. 23 (suppl.1): 195A Feb 2012 (Abstract # 813).

11. **Filter E**, Gabril MY, Gomez JA, Wang P, Izawa J, Chin J, Moussa M Incidental Prostate Pathology in Cytoprostatectomy Specimens: Is Partial Prostate Sampling Adequate? Mod Pathol. 23 (suppl. 1): 204A Feb 2012 (Abstract # 848).

12. Haji F, **Alturkustani M**, Parrent A, Megyesi J, Gulka I, Hammond R. Simple partial seizures in a 70-year- old female. Can J Neurol Sci. 2011 May;38(3):507-11.

13. **Jacques R**, Goble-Ferguson S, Raminhos A, Weir M. Utility of Retrospective Review of Non-Gynecological Cytology Cases. Mod Pathol 25 Supp 2:500A, 2012.

14. **Li Chang H**, Leeper WR, Chan G, Quan D, Driman DK Infarct-like Necrosis: A Distinct Form of Necrosis Seen in Colorectal Carcinoma Liver Metastases Treated With Perioperative Chemotherapy. Am J Surg Pathol 2012;36:570–576).

15. Lu C, McFarland MS, Nesbitt RL, Williams AK, Chan S, Gomez-Lemus J, Autran AM, **Al-Zahrani A**, Chin JL, Izawa JI, Luyt LG, Lewis JD Ghrelin receptor as a novel imaging target for prostatic neoplasms. Prostate. 2011 Sep 14. doi: 10.1002/pros.21484.

16. Nichols AC, Whelan F, John B, Dhaliwal S, Dowthwaite S, Chapeskie C, Read N, Palma DA, Fung K, Venkatesan V, Hammond AJ, Franklin JH, **Siddqui I**, Wehrli B, Kwan K, Koropatnick J, Mymryk JS, Barrett JW, Yoo J. Ki-67 expression predicts radiotherapy failure in early glottic cancer. Journal of Otolaryngology-Head & Neck Surgery. JOTO-Oct-2011-0269.R1.

17. **Pocrnich CE**, Shao Q, Liu H, Feng MM, Harasyn S, Savage M, Khimda S, Laird D, Hutnik CM The effect of connexin43 on the level of vascular endothelial growth factor in human retinal pigment epithelial cells Graefes Arch Clin Exp Ophthalmol, 2012 Apr;250(4):515-22. Epub 2011 Dec 3.

18. **Pocrnich CE**, Weir M On-Site Adequacy Assessments of Fine Needle Aspiration Biopsies. Mod Pathol 25 Supp 2:505A, 2012.

19. **Pocrnich CE**, Weir MM. On-Site Adequacy Assessments of Fine Needle Aspiration Biopsies. Canadian Association of Pathologists. 2011/06.

20. Rizek P, Seitelbach M, **Alturkustani M**, Leung A, Fraser JA. Sellar and parasellar intravascular lymphoma mimicking pituitary apoplexy. J Neuroophthalmol. 2012 Mar;32(1):33-7.

21. **Shibani A**, Tugaleva E, Wehrli B, Weir MM. Cytology Immunomarker Validation Study: A Comparison and Evaluation with Immunohistochemistry. Canadian Association of Pathologists. 2011/06.

22. **Siddiqui I**, Khan ZA, Chakrabarti S. Stem Cell Phenotype in Cirrhosis and Hepatocellular Carcinoma. United States and Canadian Academy of Pathology's 101st Annual Meeting,March 17-23, 2012 in Vancouver, BC, Canada.

23. **Siddiqui I**, Wei, MM. Morphological Effects of Chemotherapy on Ovarian Serous Adenocarcinoma. United States and Canadian Academy of Pathology's 101st Annual Meeting, March 17-23, 2012 in Vancouver, BC, Canada.

Alumni Update

Dr. Mathieu Castonguay (Anatomical Pathology 2011), completed a fellowship in the United States and is now a staff pathologist at Dalhousie University, Nova Scotia. **Dr. Susanne Chan** (Anatomical Pathology 2011) completed a fellowship in Toronto and is now a staff pathologist in Markham, Ontario, and **Dr. Areej Shibani** (Anatomical Pathology 2011) continued on as a Fellow at London Health Sciences Centre under the supervision of Dr. Lee Cyn Ang in Neuropathology.

Continuing Professional Development
Report of the Director, Continuing Professional Development, Dr. Aaron Haig

The Department of Pathology Continuing Professional Development Committee coordinates a variety of general and subspecialty pathology rounds, and assists in accreditation of these rounds through the Royal College of Physicians and Surgeons of Canada.

Pathology Grand Rounds occur on a bimonthly basis during the academic year (October to June). Speakers come from a variety of centers and disciplines and have traditionally been highly rated by our attendees. Additionally, "interesting case" rounds and numerous subspecialty rounds are held weekly and provide excellent learning opportunities for our residents and staff.

We have recently implemented the use of video teleconferencing and web casting to broadcast a number of our rounds to surrounding community hospitals, as well as to staff located in satellite offices throughout London.

2012 Pathology Grand Rounds

Date	Speaker	Topic
Feb 8th, 2012	Dr Rick Mann Regional Coroner	"The Seven Deadly Scenarios"
Apr 11th, 2012	Dr. Marina Savadori Department of Pediatrics	"Vaccines – It's a Whole New World"
May 9th, 2012	Dr. Christopher Licskai Department of Respirology	"Is Breathing a Risk Factor for Cardiopulmonary Disease? The Health Effects of Air Pollution"
Jun 13th, 2012	Dr. Terence J. Colgan Mount Sinai Hospital, Toronto	"Genotyping Hydatidiform Moles – Bridging the Gap Between Morphology and Molecular Pathology"
Oct 13th, 2012	Dr. Jacques Guilbert CMPA	"Pathologists and the CMPA: Medico-legal Issues in the Practice of Pathology"

Research Reports

Department of Pathology Research Report
Director of Research, Dr. J. Bend

Overview

Over the past year, the Department has made major inroads in its plans to enhance its research capacity, capability, productivity and impact. To this effect, the Department has been able to increase its faculty complement of both basic and clinical researchers and develop a significantly larger and more comprehensive graduate program. This relatively small core is comprised of very productive research faculty and cross-appointees in both Basic Science and Clinical Departments at the Schulich School of Medicine & Dentistry, and in the Faculties of Science and Social Science. The researchers in the Department of Pathology have continued to maintain and grow their respective research programs.

Schulich Medicine & Dentistry has built strong research capacity and expertise in a number of areas, including cancer, cardiovascular science, biomedical imaging, infection and immunity; and has identified health system challenges including health inequities faced by Aboriginal peoples and existing and emerging global threats to health. Researchers from the Department of Pathology are active participants in these areas.

Scope of our research

Members of Pathology are a critical component of many of Schulich Medicine & Dentistry's research programs and initiatives. Our faculty members have played and continue to play leading roles in some of the research areas of recognized excellence, and a collaborative role in others. Members of our department collaborate with investigators from Robarts Research Institute, Lawson Health Research Institute, and the London Regional Cancer Institute within Schulich Medicine & Dentistry and with other faculties at Western.

Departmental Research Programs

Research in Pathology includes both investigator-driven research, initiated by the core members of the department, and collaborative research with members of other departments. Members of the Department of Pathology are involved with, and are key players in almost every signature program of the Schulich School of Medicine & Dentistry. Listed below are a few specific research programs in which the Department of Pathology plays a major role.

1. Cancer research

The Department of Pathology has a strong presence in the field of cancer research in both the experimental and clinical areas. The key researchers in this area are Drs. Chandan Chakraborty, Joan Knoll, Alan Tuck and Ann Chambers (cross-appointee from Oncology) (Breast Cancer); Madeleine Moussa and Jose Gomez (Prostate Cancer); Kamilia Rizkalla (Hematologic Malignancies); David Driman and Jeremy Parfitt (Gastrointestinal and Hepatobiliary Cancer); Mariamma Joseph (Skin and Pulmonary Cancers); Meg McLachlan and Michele Weir (Gynecological Cancers); Bret Wehrli (Soft Tissue Tumors); Lee Cyn Ang and Robert Hammond (Neurological Cancer); and Thomas Daley and Mark Darling (Oral Cancers).

The researchers in this area have received their funding from Canadian Institutes of Health Research (CIHR), Canadian Breast Cancer Foundation (CBCF), Ontario Research Fund (ORF) and other national and international organizations. Several pathologists are also heavily involved in clinical trials. Department members continue to produce high quality publications in basic, clinical and translational aspects of cancer research.

Colorectal Cancer

Dr. David Driman's current research is predominantly in the area of colorectal cancer, specifically looking at the following: (1) Inter-observer variation in rectal cancer regression grading following neoadjuvant therapy; (2) evaluation of venous invasion in colorectal cancer; (3) inter-observer variation in the pathological reporting of colorectal polyps. In these projects Dr. Driman has worked with pathology residents, as well as collaborators at the University of Toronto and in the UK, as well as an international study group on rectal cancer regression grading. Several publications have already resulted from this research. Work is also progressing on co-authoring the colorectal cancer chapter in a major gastrointestinal pathology textbook, due for publication in 2013.

Breast Cancer

Dr. Tuck's research interests are focused mainly on the cellular and molecular mechanisms of breast cancer malignancy. In collaboration with Dr. Ann Chambers (cross-appointee from Oncology), Dr. Tuck is studing 1) the molecular controls of the early stages of breast cancer progression, 2) the factors important in metastasis and tumour dormancy, in both experimental and clinical settings and 3) the role of specific factors, such as the secreted phosphoprotein osteopontin, in the malignancy of breast cancer and other tumours.

2. Vascular biology research

Vascular biology researchers have focused their attention on chronic complications of diabetes (Dr. Subrata Chakrabarti), cardiovascular (Dr. Tianqing Peng), stem cell research (Dr. Zia A. Khan) and delineating the mechanisms of islet development in the pancreas (Dr. Edith Arany). This research has continued to receive funding from CIHR, Canadian Diabetes Association (CDA), and the Heart and Stroke Foundation of Ontario (HSFO).

Mechanisms of vascular repair and homeostasis

The focus of Dr. Zia A. Khan's research is on understanding the mechanisms of vascular repair and homeostasis with emphasis on vascular stem cell differentiation and postnatal blood vessel formation. His research team uses in vitro and in vivo model systems to study the biology of primary vascular stem cells and to elucidate the signaling mechanisms. The two main branches of Dr. Khan's research deal with understanding the role of stem cells in hemangiomas (in which it is believed there is unregulated activity of stem cells) and diabetes (representing impaired activity of the stem cells to repair the damage). These research projects are funded by CIHR and CDA, and have already resulted in several publications.

3. Environmental pathology research

The Department of Pathology has a large number of researchers who are involved in environmental pathology research and has established a graduate program in ecosystem health. This group has members from several departments including the Departments of Clinical Neurological Sciences (Jorge Burneo); Family Medicine (Carol Herbert, Amardeep Thind); Pediatrics (Michael Rieder, Gideon Koren [Ivey Chair in Molecular Toxicology], and the Faculties of Science (Irena Creed, Biology; Charlie Trick, Biology [Ivey Chair in Ecosystem Health]) and Social Science (Bradley Corbett, Sociology [Statistics Canada]; Regna Darnell, Anthropology). These new additions to the Pathology Graduate Program complement existing research expertise in the Department (Jack Bend, Subrata Chakrabarti, Chandan Chakraborty, Bertha Garcia and Rob Hammond). The research efforts have received funding from Assembly of First Nations-Health Canada Environmental Contaminants Program, the Association of Universities and Colleges of Canada, Western international curriculum funds and the International Development Research Centre (IDRC).

4. Genetics research

The department has been successful in recruiting and repatriating a highly qualified and seasoned researcher in molecular pathology and cytogenetics from the United States (Dr. Joan Knoll). Dr. Knoll has already received Canada Foundation for Innovation (CFI) funding for translational molecular / molecular cytogenetics research infrastructure and has graduated her first MSc student in Pathology. This will further increase our research activity in this area.

5. Medical Microbiology research

Dr. Rob Lannigan has two major areas of research. Coastal Cities at Risk is a transdisciplinary international project funded through the IDRC. The project is looking at adaptations that could be adopted by coastal megacities at risk due to climate change. The focus is mainly on flooding and storm surges. The cities are Lagos, Manila, Bangkok

and Vancouver. Part of the project is to develop a model of city resilience and this consists of multiple inputs. Health is one of the required inputs and Dr. Lannigan is working with Dr. S. Simonovic (Engineering) and 2 PhD students to develop the health input. The project also involves economists, geographers, sociologists and climate scientists from across Canada and around the world. The project is progressing.

The other area of research is related to applied research in bringing new technologies to the diagnostic microbiology laboratory. This is being conducted in collaboration with industry and other colleagues from Western. It is becoming more challenging to carry out such research due to the new procurement processes that hospitals have to follow.

6. Motor Vehicle Saftety Investigation

Dr. Michael Shkrum is a forensic pathologist who conducts autopsies on victims of trauma. His research focus is on the mechanisms of injuries due to motor vehicle collisions. He is the Director and Principal Investigator of the Motor Vehicle Safety (MOVES) Research Team based in the Department of Pathology, Schulich School of Medicine & Dentistry at Western University. The MOVES Research Team, through a contractual commitment between Western and Transport Canada, collects data on motor vehicle collisions in Ontario under the direction of Transport Canada. Transport Canada sets motor vehicle standards for the protection of the public. Its research programs depend on real world data to determine the effectiveness of vehicle design including safety features in preventing injury and death. Dr. Shkrum's team is one of the investigative teams in Canada. The current focus is on fatal collisions in southwestern Ontario, and Dr. Shkrum's role is to collect and interpret data from the Office of the Chief Coroner. He is also a co-Principal Investigator on an AUTO 21 grant (Government of Canada) which will fund a study of fatal pediatric cases arising in motor vehicle collisions also based on data at the Office of the Chief Coroner. The Principal Investigator is Dr. Andrew Howard (orthopedic surgeon at the Hospital for Sick Children, Toronto). Dr. Shkrum is supervising a MSc candidate (Shayan Shekari). He is also exploring collaborative initiatives with the Faculty of Mechanical Engineering (Mechanical, Automotive and Materials Engineering) at the University of Windsor.

7. Digital Pathology Image Analysis

Dr. Rob Hammond has been involved in digital pathology image analysis with partners: Dr. Bryan Richardson (Maternal-Fetal Medicine), Dr. David Spence (Neurology and Clinical Pharmacology, Robart's Research Institute), Dr. Terry Peters (Robart's), Dr. Aaron Fenster (Robart's), Dr. Robert Beanlands (Ottawa Heart Institute) and other members of CAIN (Canadian Atherosclerosis Imaging Network). Successes: publications, grants (CAIN2; Canadian Atherosclerosis Imaging Network), awards (Finlayson Award at Canadian Association of Neuropathologists meeting in 2011 to Dr. Murad Alturkustani, a senior Neuropathology resident working on the CAIN project).

8. Transplant research

Research in transplantation (clinical and experimental) is one of our Department's focus areas, and has demonstrated strong growth during the last year. The backbone of the xenotransplant program is the expertise of people such as Drs. Bertha Garcia, David White and Weiping Min (cross appointees from Surgery), and Zhu-Xu Zhang (cross appointee from Medicine).

Transplantation Core Laboratory

Dr. Aaron Haig is in the process of taking over from Dr. Bertha Garcia, as the Director of the core laboratory of the Multi-Organ Transplant Program's (MOTP) experimental arm, which resides in Pathology. This group of researchers is funded from CIHR, HSFO, MOTP, National Institutes of Health (NIH), and other national and international organizations. Research in this field has been very productive with a large number of publications in high impact journals.

9. Research in Education

Education research is also a large part of our faculty commitment. Our faculty members continue to play key roles in the development of innovative research methodologies and implement them at all levels of education. Drs. Bertha Garcia and Candace Gibson are leaders at Schulich Medicine & Dentistry in this area.

10. Other Research

As mentioned earlier, the areas above represent some of the research activity and expertise of the Department. A large amount of collaborative research occurs within Pathology and with other basic and clinical departments at Schulich Medicine and Dentistry, which is dependent upon the active, key participation of our departmental members.

Faculty research interests

Adams*: Hemochromatosis, liver diseases

Ang: Neurodegenerative and neurotoxic diseases, CNS tumours

Arany: Diabetes, mechanisms of islet development

Bend: Mechanisms of toxicity of endogenous and exogenous chemicals, oxidative stress, attenuation of adverse drug reactions; environmental toxicology in First Nations and at Lake Naivasha, Kenya

Chakrabarti: Chronic diabetic complications, diabetic retinopathy, diabetic cardiomyopathy, extracellular matrix proteins, epigenetics, natural products

Chakraborty: Intrauterine growth retardation (IUGR), preeclampsia, tumour progression, cell migration/invasion, cell signalling

Chambers*: Molecular oncology, mechanisms of tumour progression and metastasis

Daley: Oral pathology, salivary gland research, clinical research

Darling: Oral pathology, salivary gland research, clinical research, salivary gland neoplasia, mucocutaneous diseases

Driman: Gastrointestinal, hepatic and pancreaticobiliary pathology

Garcia: Transplantation, animal models, ecosystem health in South America

Gibson: Neurochemical pathology, CNS ageing & neurodegeneration transmitter release; research in communications and education

Hammond: Cerebrovascular disease, brain development, high field MRI/neuropathology correlates, neuroinflammation, neuromuscular disease, brain tumour biology

Karlik*: Multiple sclerosis, experimental allergic encephalomyelitis, apoptosis, chemokine signalling, integrin-mediated neuroinflammation, spinal cord trauma

Khan: Vascular stem cells, vasculogenesis, angiogenesis, endothelial cells, perivascular cells, diabetes, cancer, extracellular matrix

Knoll: Molecular cytogenetics, medical genetics, molecular and cancer genetics, genomics, bioinformatics

Koropatnick*: Metallothionein and resistance to radiation and chemotherapeutic drug treatment; siRNA therapy

McLachlin: Cervical cancer screening, HPV

Min*: Immunomudulation, transplant tolerance, gene silencing, siRNA therapy

Peng*: Cardiovascular disease, heart failure

Strong*: Motor neuron disease, neurofilament metabolism, aluminum neurotoxicity

Tuck: Breast cancer, metastasis, progression, cell and molecular biology, translational research

Zheng: Immunomodulation, transplant rejection,

(*= indicates cross appointees)

Summary Publication Data (July 1, 2011 to June 30, 2012)

	Published Peer reviewed journal articles	Published Books & Book Chapters	Published Abstracts	Totals
MD/CTA	58	3	17	78
PhD/Scientists	24	1	6	31
Cross Appointees	42	0	3	45
Totals:	124	4	26	154

Summary Invited Scientific Lectures and Presentations (July 1, 2011 to June 30, 2012)

	International	National	Provincial	Local	Totals
MD/CTA	22	16	8	11	57
PhD/Scientists	4	0	0	0	4
Totals:	26	16	8	11	61

Summary New Grant Funding Data (July 1, 2011 to June 30, 2012)

	# Awards	Total Award	2011-12 Funding
Externally Funded – PI	17	$2,652,551	$903,548
Externally Funded – Co-Inv	12	$8,354,688	$1,895,843
Internally Funded – PI	20	$204,256	$148,254
Internally Funded – Co-Inv	4	$129,136	$119,136
Total Grant Funding:	53	$11,340,631.00	$3,066,781.00

Building of research infrastructure

The Pathology Department continues to provide a significant amount of research infrastructure, which is organized as core facilities at London Health Sciences Centre (LHSC) or Schulich Medicine & Dentistry to facilitate research of investigators in London. It is our goal to support as many researchers as possible with this infrastructure.

1) Tissue preparation facility
2) Transplant histology lab
3) Tissue and Archives
4) Ontario Institute for Cancer Research (OICR) tissue collection
5) Morphometry core
6) Real-time PCR core
7) Palm Laser Dissection
8) Shared MultimediA Resource and Teaching Centre (SMART) Centre

Postdoctoral Fellows, Postdoctoral Associates, Visiting Scientists

Dr. Biao (Francis) Feng (Dr. Chakrabarti) - Pathogenetic mechanisms of chronic diabetic complications

Dr. Subhrojit Sen (Dr. Chakrabarti) – Effects of ginseng on chronic diabetic complications

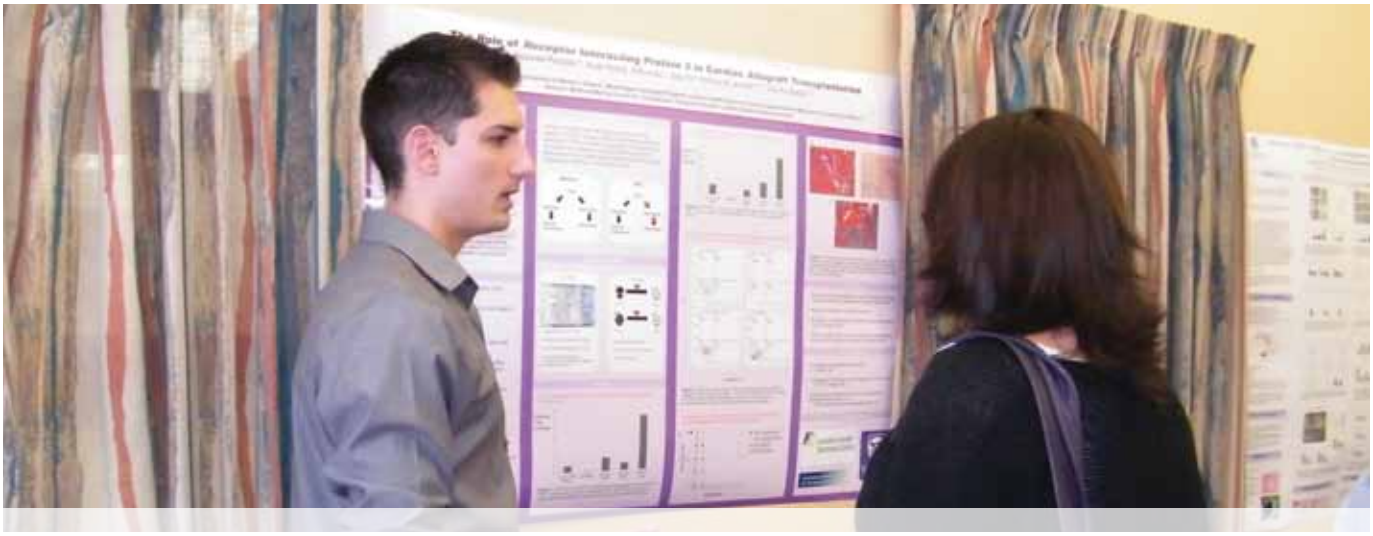
Dr. Linbo Zhang (Dr. Chakrabarti) – Fibroblast Growth Factor in chronic diabetes complications

Robert Zhong Research Seminars

In 2006, the Department of Pathology Research Committee initiated a monthly research seminar, named after Dr Robert (Zheng) Zhong, with the purpose of capturing the research interests of our department and the wider university and hospital community. The objectives are to enhance our departmental basic and clinical science research, and to improve communication within the department and between departmental members and other researchers in the city. It is an important forum for research staff and faculty to present their work, get feedback on their research from the whole group, and stimulate new ideas and initiate collaboration. These seminars are focused on a broad audience including basic scientists, pathologists, clinicians, residents and graduate students. The seminars are accredited by the Royal College, Maintenance of Certification program.

2011-2012 Zhong Research Seminars

Date	Speaker	Topic
Oct 4, 2011	Dr. Ann Chambers Distinguished Oncology Scientist and Director, Pamela Greenaway-Kohlmeier Translational Breast Cancer Research Unit, London Regional Cancer Program and Canada Research Chair in Oncology, Western	Tumor Metastasis and Dormancy: Experimental Studies and Clinical Implications
Nov. 1, 2011	Dr. Frank Beier Canada Research Chair in Musculoskeletal Health	Molecular Pathways Driving Osteoarthritis
Jan. 31, 2012	Dr. Adrian M. Owen Canada Excellence Research Chair in Cognitive Neuroscience & Imaging	Disorders of Consciousness
Apr 2, 2012	Dr. Lorelei Lingard Director, Centre of Education and Research Innovation	Medical Education Research & Scholarship: The Field, The Centre, and Your Research Pathway
June 4, 2012	No presentation - Cancelled	No presentation - Cancelled



2012 Annual Pathology Research Day
Dr. Alan Tuck, Coordinator

Pathology Research Day is an annual event organized to recognize research excellence and promote collaboration, targeting our clinical and basic science faculty members, residents, postdoctoral and clinical fellows, MSc and PhD students and technical staff. This full day event allows our trainees to present their research in oral presentations and poster sessions. Research Day was held this past year on May 4, 2012. Our guest speaker was Dr. Ming Tsao of the Department of Pathology, University Health Network, Toronto. His presentation was titled "Molecular Pathology of Lung Cancer." Pathology Research Day is accredited by the Royal College, Maintenance of Certification program.

2012 Research Day Awards

- Chair's Award for Best Presentation by a Resident – **Dr. Emily Filter**
- Second Place Award for Best Presentation by a Resident – **Dr. Iram Siddiqui**
- Dr. M. Daria Haust Award for Best Presentation by a Graduate Student – **Emily Keats** (PhD candidate, Z. Khan supervisor)
- Second Place Award for Graduate Students – **Arthur Lau** (PhD candidate, Z. Zhang supervisor)
- Best Poster Presentation by a Graduate Student – **Alex Pavlosky** (MSc candidate, A.Jevnikar, Z.Zhang, supervisors)

Challenges Ahead

Pathology has continued to make excellent progress in research during the past year, however this growth of research potential is limited by the shortage of high quality wet laboratory research space and adequate space for core facilities. While we have many success stories, there are risks involved when the new recruits find themselves trying to operate in substandard facilities and inadequate research space. Another challenge for all investigators is the decrease in available research funds (due to difficult economic times) that has also impacted negatively on our research endeavors.

Publications

Peer Reviewed Journal Articles (July 1, 2011 to June 30, 2012)

BOLD = Pathology Primary Appointee

ITALIC = Pathology Cross Appointee

58 MD

24 PhD

42 CROSS

124 TOTAL

1. Mackenzie IR, Ansorge O, ***Strong M***, Bilbao J, Zinman L, **Ang LC**, Baker M, Stewart H, Eisen A, Rademakers R, Neumann M. Pathological heterogeneity in amyotrophic lateral sclerosis with FUS mutations: two distinct patterns correlating with disease severity and mutation. Acta Neuropathol. 2011 Jul;122(1):87-98.

2. Al Sufiani F, **Ang LC**. Neuropathology of temporal lobe epilepsy. Epilepsy Res Treat. 2012;2012:624519.

3. Hallock A, Hamilton B, **Ang LC**, Tay KY, Meygesi JF, Fisher BJ, Watling CJ, Macdonald DR, Bauman GS. Neurocytomas: Long-term experience of a single institution. Neuro Oncol. 2011 Sep;13(9):943-9.

4. Alturkustani M, **Ang LC**. Rosette-forming glioneuronal tumour of the 4th ventricle in a NF1 patient. Can J Neurol Sci. 2012 Jan;39(1):95-6.

5. Neumann M, Bentmann E, Dormann D, Jawaid A, DeJesus-Hernandez M, Ansorge O, Roeber S, Kretzschmar HA, Munoz DG, Kusaka H, Yokota O, **Ang LC**, Bilbao J, Rademakers R, Haass C, Mackenzie IR. FET proteins TAF15 and EWS are selective markers that distinguish FTLD with FUS pathology from amyotrophic lateral sclerosis with FUS mutations. Brain. 2011 Sep;134(Pt 9):2595-609.

6. Diodati D, **Ang LC**, Kertesz A, Finger E. Pathologic evaluation of the supraoptic and paraventricular nuclei in dementia. Can J Neurol Sci. 2012 Mar;39(2):213-9.

7. Elzagallaai AA, Koren G, **Bend JR**, Rieder MJ. In vitro testing for hypersensitivity-mediated adverse drug reactions: challenges and future directions. Clin Pharmacol Ther. 2011 Sep;90(3):455-60.

8. Sen S, Chen S, Feng B, Wu Y, Lui E, **Chakrabarti S**. Preventive effects of North American ginseng (Panax quinquefolium) on diabetic nephropathy. Phytomedicine. 2012 Apr 15;19(6):494-505.

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11. Sen S, Chen S, Feng B, Wu Y, Lui E, **Chakrabarti S**. American ginseng (Panax quinquefolius) prevents glucose-induced oxidative stress and associated endothelial abnormalities. Phytomedicine. 2011 Oct 15;18(13):1110-7.

12. Feng B, Chen S, McArthur K, Wu Y, Sen S, Ding Q, Feldman RD, **Chakrabarti S**. miR-146a-Mediated Extracellular Matrix Protein Production in Chronic Diabetes Complications. 2011 Nov;60(11):2975-84.

13. Sen S, Chen S, Wu Y, Feng B, Lui EK, **Chakrabarti S**. Preventive effects of North American Ginseng (Panax quinquefolius) on Diabetic Retinopathy and Cardiomyopathy. 2012 May 8. doi: 10.1002/ptr.4719.

14. Zuo Y, Wu Y, **Chakraborty C**. Cdc42 negatively regulates intrinsic migration of highly aggressive breast cancer cells. J Cell Physiol. 2012 Apr;227(4):1399-407.

15. Alvarez MM, **Chakraborty C**. Cadmium inhibits motility factor-dependent migration of human trophoblast cells. Toxicol In Vitro. 2011 Dec;25(8):1926-33.

16. Saso J, Shields SK, Zuo Y, **Chakraborty C**. Role of Rho GTPases in human trophoblast migration induced by IGFBP1. 2012 Jan 30;86(1):1-9.

17. Roach E, Chakrabarti R*, Park NI, Keats EC, Yip J, **Chan NG, Khan AZ**. Intrinsic regulation of hemangioma involution by platelet-derived growth factor. Cell Death Dis. 2012 Jun 21;3:e328.

18. Ribot EJ, Martinez-Santiesteban FM, Simedrea C, Steeg PS, ***Chambers AF***, Rutt BK, Foster PJ. In vivo single scan detection of both iron-labeled cells and breast cancer metastases in the mouse brain using balanced steady-state free precession imaging at 1.5 Tesla. J Magn Reson Imaging. 2011 Jul;34(1):231-8.

19. McGowan PM, Simedrea C, Ribot E, Foster PJ, Palmieri D, Steeg PS, Allan AL, ***Chambers AF***. Notch1 inhibition alters the CD44hi/CD24lo population and reduces the formation of brain metastases from breast cancer. Mol Cancer Res. 2011 Jul;9(7):834-44.

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22. Mutrie JC, **Tuck AB**, ***Chambers AF***. Osteopontin increases breast cancer cell sensitivity to specific signalling pathway inhibitors in preclinical models. Cancer Biol Ther. 2011 Oct 15;12(8):680-90.

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31. Patriquin CJ, **Chin-Yee IH**, Kovacs MJ, Lazo-Langner A, Keeney M, Hsia CC. Study of Octaplex dosing accuracy: an in vitro analysis. Thromb Haemost. 2012 Feb;107(2):248-52.

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47. Messenger DE, **Driman DK**, Kirsch R. Developments in the assessment of venous invasion in colorectal cancer: implications for future practice and patient outcome. Hum Pathol. 2012 Jul;43(7):965-73.

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123. ***Zhang Z-X, Min W-P***, Jevnikar AM. Use of RNA Interference to Minimize Ischemia Reperfusion Injury. Transplant Rev (Orlando). 2012 Apr;26(2):140-55.

124. Su Y, Huang X, Wang S, Yin Z, ***Min W-P***, Jevnikar A, ***Zhang Z-X***. Double negative Treg cells promote nonmyeloablative bone marrow chimerism by inducing T-cell clonal deletion and suppressing NK cell function. Eur J Immunol. 2012 May;42(5):1216-25.

Published Abstracts (July 1, 2011 – June 30, 2012)

BOLD = Pathology Primary Appointee
ITALIC = Pathology Cross Appointee
17 MD
6 PhD
3 CROSS
26 TOTAL

1. White NMA, Khella HWZ, Grigull J, Adzovic S, Youssef YM, Honey RJ, Stewart R, Pace KT, Bjarnason GA, Jewett MAS, Evans AJ, **Gabril MY**, Yousef GM. “miRNA Profiling in Metastatic Renal Cell Carcinoma Reveals a Tumor Suppressor Effect for miR-215”. Mod Pathol. 23 (suppl.1): 251A Feb 2012 (Abstract # 1055).

2. Khella HWZ, White NMA, Faragalla H, **Gabril MY**, Boazak M, Dorian D, Khalil B, Bao TT, Pasic MD, Honey RJ, Stewart R, Pace KT, Bjarnason GA, Jewett M, Yousef GM. “Exploring the Role of miRNAs in Renal Cell Car cinoma Progression and Metastasis through Bioinformatic and Experimental Analyses”. Mod Pathol. 23 (suppl. 1): 218A Feb 2012 (Abstract # 913).

3. Filter E, **Gabril MY, Gomez JA**, Wang P, Izawa J, Chin J, Moussa M. “Incidental Prostate Pathology in Cyto prostatectomy Specimens: Is Partial Prostate Sampling Adequate?”. Mod Pathol. 23 (suppl. 1): 204A Feb 2012 (Abstract # 848).

4. Chan SM, **Gabril MY**, Zbieranowski IJ, Sugar LM, Yousef GM, Bjarnason GA, Sherman CG. “Xp11.2 Translocations in Adult Renal Cell Carcinomas with Clear Cell and Papillary Features”. Mod Pathol. 23 (suppl. 1): 196A Feb 2012 (Abstract # 814).

5. Chan SM, Lee L, Chin J, **Gomez JA, Moussa M**, Yousef GM, **Gabril MY**. “Should Fuhrman Grading in Clear Cell Renal Cell Carcinomas Be Based on Nucleoli Only?”. Mod Pathol. 23 (suppl.1): 195A Feb 2012 (Abstract # 813).

6. White NMA, Youssef YM, Jung K, Fendler A, Stephan C, **Gabril MY**, Yousef GM. "The microRNA-Kallikrein Axis of Interaction: A New Dimension in the Pathogenesis of Prostate Cancer". Mod Pathol. 23 (suppl.1): 468A Feb 2012 (Abstract # 1950).

7. AlTurkustani M, Derry K, Gibson E, Crukley C, Fenster A, Spence JD, Brennan J, deKemp R, R Beanlands, Yarofeyeva Y, Yaffe M, **Hammond RR**. 3D Radiology/Pathology Correlates in Carotid Atheroma (Canadian Ath erosclerosis Imaging Network). Digital Pathology Association, 2011 Annual Meeting, San Diego, October 2011.

8. Goubran M, Khan AR, Crukley C, Buchanan S, Cantor D, Santyr B, de Ribaupierre S, Mirsattari S, **Hammond R**, Parrent A, Peters TM. Robust registration of sparsely sectioned histology to ex-vivo MRI of temporal lobe resections. Imaging Research Laboratories, Robarts Research Institute, Division of Neurosurgery, Department of Clinical Neurological Sciences, Department of Pathology, Department of Biomedical Engineering, The University of Western Ontario, London, Ontario, Canada.

9. Milburn S, Conkey B, Peters G, Schofield S, Standon B, Stuart JI, John M, **Lannigan R**, Hussain Z, **Delport J**. Comparison of two Rapid Membrane Immunoassays and the Illumigene LAMP for the detection of Clostridium difficile. American Society for Microbiology 112th General Meeting, June 16-19, 2012, San Francisco, CA.

10. Howie R, **John M**, Clark J. Assessing the impact of bedpan processing modifications and environmental cleaning education on hospital hand hygiene. Community and Hospital Infection Control Association Canada 2012 National Education Conference, June 16-21, 2012, Saskatoon, Saskatchewan.

11. Milburn S, Conkey B, Peters G, Schofield S, Standon B, Stuart JI, **John M**, Lannigan R, Hussain Z, **Delport J**. Comparison of two Rapid Membrane Immunoassays and the Illumigene LAMP for the detection of Clostridium difficile. CACMID-AMI Canada 2012 Annual Conference, May 3-5, 2012, Vancouver, BC.

12. Hayward V, Temple C, **Joseph MG**. Webcasts for clinical clerks - An innovative way for improving the family physician's knowledge and competence in managing skin lesions.. Platform presentation by V Hayward at the 16th Congress of the International Confederation for Plastic Reconstructive and Aesthetic Surgery, Fairmount Hotel, Vancouver, Canada, May 22-27, 2011.

13. Keats E, **Khan ZA**. High levels of glucose cause increased matrix protein production by human mesenchymal stem cells without altering cell growth, proliferation, and differentiation. Diabetes 60 (supp 1), 1621, 2011.

14. Siddiqui I, **Khan ZA, Chakrabarti S**. Stem cell phenotype in cirrhosis and hepatocellular carcinoma. Lab Invest 92, 180A, 2012.

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17. Chen S, Chakrabarti R, Chen M, **Chakrabarti S, Khan ZA**. High glucose-induced vascular endothelial growth factor expression is mediated by the interaction of extra domain-B fibronectin with β1 integrin in endothelial cells. Can J Diabetes 35, A128, 2011.

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20. Pocrnich CE, **Weir M**.. On-Site Adequacy Assessments of Fine Needle Aspiration Biopsies. Mod Pathol 25 Supp 2:505A, 2012.

21. Jacques R, Goble-Ferguson S, Raminhos A, **Weir M**. Utility of Retrospective Review of Non-Gynecological Cytology Cases. Mod Pathol 25 Supp 2:500A, 2012.

22. Siddiqui I, **Weir M**.. Morphological Effects of Chemotherapy on Ovarian Serous Adenocarcinoma. Mod Pathol 25 Supp 2:296A, 2012.

23. Lau A, ***Zhang Z-X***, Wang S, Yin Z, Jevnikar AM. Receptor interacting protein 3 (RIP3) regulates tubular epithe lial cell (TEC) injury and inflammation following renal IRI. Canada Society of Transplantation meeting, Quebec City, Canada, Feb.25, 2012.

24. Su Y, Lian D, Huang X, Wang S, **Garcia B**, ***Min W***, Jevnikar A, ***Zhang Z-X***. Establishment of nonmyeloablative bone marrow chimerism by double negative Treg cells through inducing T cell clonal deletion and suppressing NK cell function. Canada Society of Transplantation meeting, Quebec City, Canada, Feb.25, 2012.

25. Yip J, Lau A, Wang S, Yin Z, Huang X, Jevnikar A and ***Zhang Z-X***. Regulation of NK cell-mediated tubular epi thelial cell death and kidney ischemia-reperfusion injury by NKR-P1 receptors and Clr-b. Canada Society of Transplantation meeting, Quebec City, Canada, Feb.25, 2012.

26. Lau A, ***Zhang Z-X***, Shek K, Wang S, Jevnikar A. Glycyrrhizic acid (GZA) can block HMGB1 mediated tubular epithelial cell. London Health Research Day, Mar. 22, 2012.

Book Chapters (July 1, 2011 to June 30, 2012)

BOLD = Pathology Primary Appointee

ITALIC = Pathology Cross Appointee

2 MD

1 PhD

1 CROSS

4 TOTAL

1. **Khan ZA, Chakrabarti S.** Glucose-induced cellular signalling in diabetic retinopathy.. In: Visual Dysfunction in Diabetes: The Science of Patient Impairment and Health Care. Tombran-Tink J, Barnstable CJ, Gardner TW (Eds.). Humana Press. 13, 211-232, 2012.

2. **Ramsay DA,** Ramos Medina V, Palomo Gomez I, Palomo Rando J L. "Microscopic Forensic Pathology of Head Injury," Practical Manual of Forensic Histopathology, Blanco Pampin J and Salguero Villadiego M (eds.), Nova, New York, 2012.

3. ***Chambers AF***, Vandenberg TA, **Tuck AB**, Allan AL, Rodenhiser DI. Emerging science with regard to 'cancer stem cells' - Looking at different molecular phenotypes in that category and dissecting out triple negatives. ASCO 2011 Breast Cancer Symposium Education Book.

4. MacMillian CD, ***Chambers AF***, **Tuck AB**. Progression of early breast cancer to an invasive phenotype. Breast Cancer Metastasis and Drug Resistance - Challenges, Progress and Prospects.

Presentations (July 1, 2011 to June 30, 2012)

International

1. Beaucage KL, Xiao A, Grol MW, Holdsworth DW, Sims SM, **Darling MR**, Dixon SJ. "Absence of P2X7 Nucleotide Receptors Leads to Abnormal Fat Distribution in Mice." American Society for Bone and Mineral Research Annual Meeting. San Diego, California, USA. September 16-20, 2011.

2. Kim S, Jackson-Boeters L, **Darling M**, Rieder M, Hamilton D. "Nifedipine Induces Expression of Periostin and αSMA in Gingival Tissue." AADR and CADR annual meeting. Tampa, Florida, USA. March 21-24, 2012.

3. Poon R, Su N, Ching V, Khaoli M, **Darling M**, Grushka M. "Unstimulated Salivary Flow is Decreased in Burning Mouth Patients." AADR and CADR annual meeting. Tampa, Florida, USA. March 21-24, 2012.

4. Copete M, **Darling MR, Daley TD**. “Ectomesenchymal Chondromyxoid Tumor Of The Oral Cavity: Report Of Three Cases.” American Academy of Oral and Maxillofacial Pathology Annual Meeting, Minneapolis, MN, USA. June 22-27, 2012.

5. Filter E, **Gabril MY, Gomez JA**, Wang P, Izawa J, Chin J, **Moussa M**. “Incidental Prostate Pathology in Cytoprostatectomy Specimens: Is Partial Prostate Sampling Adequate?” Poster Presentation, United States and Canadian Association (USCAP), Annual meeting. 2012/03.

6. Chan SM, **Gabril MY**, Zbieranowski IJ, Sugar LM, Yousef GM, Bjarnason GA, Sherman CG. “Xp11.2 Translocations in Adult Renal Cell Carcinomas with Clear Cell and Papillary Features”. Poster Presentation, United States and Canadian Association (USCAP), Annual meeting. 2012/03.

7. Khella HWZ, White NMA, Faragalla H, **Gabril M**, Boazak M, Dorian D, Khalil B, Bao TT, Pasic MD, Honey RJ, Stewart R, Pace KT, Georg A Bjarnason GA, Jewett M, Yousef GM. ““Exploring the Role of miRNAs in Renal Cell Carcinoma Progression and Metastasis through Bioinformatic and Experimental Analyses””. Poster presentation, United States and Canadian Association (USCAP), Annual meeting. 2012/03.

8. White NMA, Khella HWZ, Grigull J, Adzovic S, Youssef YM, R Honey RJ, Stewart R, Pace KT, Bjarnason GA, Jewett MAS, Evans AJ, **Gabril M**, Yousef GM. ““miRNA Profiling in Metastatic Renal Cell Carcinoma Reveals a Tumor Suppressor Effect for miR-215””. Platform Presentation, United States and Canadian Association (USCAP), Annual meeting. 2012/03.

9. White NMA, Youssf YM, Jung K, Fendler A, Stephan C, **Gabril M**, Yousef GM. “The microRNA-Kallikrein Axis of Interaction: A New Dimension in the Pathogenesis of Prostate Cancer”. Poster Presentation, United States and Canadian Association (USCAP), Annual meeting. 2012/03.

10. Chan SM, Lee L, Chin J, **Gomez JA, Moussa M**, Yousef GM, **Gabril MY**. “Should Fuhrman Grading in Clear Cell Renal Cell Carcinomas be based on Nucleoli Only?” Poster Presentation, United States and Canadian Association (USCAP), Annual meeting. 2012/03.

11. Goubran M, Khan AR, Crukley C, Buchanan S, Cantor D, Santyr B, de Ribaupierre S, Mirsattari S, **Hammond R**, Parrent A, Peters TM Robust registration of sparsely sectioned histology to ex-vivo MRI of temporal lobe resections. SPIE, 2011.

12. AlTurkustani M, Derry K, Gibson E, Crukley C, Fenster A, Spence JD, Brennan J, deKemp R, Beanlands R, Yarofeyeva Y, Yaffe M, Hammond R. 3D Radiology/Pathology Correlates in Carotid Atheroma (Canadian Atherosclerosis Imaging Network), Digital Pathology Association, 2011 Annual Meeting, San Diego, October 2011.

13. Sabene Cocker M, McArdle B, deKemp R, Lum C, Youssef G, **Hammond R**, Yerofeyeva Y, Hill A, Stotts G, Renaud J, Brennan J, DaSilva J, Tardif JC, Spence JD, Beanlands R. "Interobserver Variability of 18F-FDG PET/CT Carotid Imaging, A Sub-study of the Canadian Atherosclerosis Imaging Network (CAIN)." ACC 2012, Chicago.

14. Gibson E, Crukley C, **Gomez J, Moussa M**, Bauman G, Fenster A, Ward AD. "3D prostate histology reconstruction informed by a quantified tissue cutting and deformation parameters." 2011/10/01.

15. Gibson E, Crukley C, **Gomez J, Moussa M**, Chin JL, Bauman G, Fenster A, Ward AD. "Fiducial-based registration of digital histopathology to ex vivo prostate MRI". 2011 Joint American Association of Physicists/ Canadian Organization of Medical Physicists Meeting. Vancouver, Canada. 2011.

16. Milburn S, Conkey B, Peters G, Schofield S, Standon B, Stuart JI, **John M, Lannigan R, Hussain Z, Delport J**. Comparison of two Rapid Membrane Immunoassays and the Illumigene LAMP for the detection of Clostridium difficile. Poster presentation. American Society for Microbiology 112th General Meeting, June 16-19, 2012, San Francisco, CA.

17. **Lannigan R**, Luginaah. "Coastal Cities at Risk (CCaR) - International Training Workshop Workshop Session: "Health Impacts of Climate Change Caused Disasters". Coastal Cities at Risk (CCaR). 2012/04/26.

18. **Lannigan R**, Luginaah. "Coastal Cities at Risk (CCaR) - International Training Workshop Workshop Session: "Health Impacts of Disasters". Coastal Cities at Risk (CCaR). 2012/04/23.

19. Navarro N, Zhang X, Zheng X, **Parfitt J**, Jevnikar A, Hernandez R, Wall W, Min W, Quan D. "ICAM-1 shRNA Attenuates Liver Injury After Warm Ischemia Reperfusion". International Liver Transplantation Society (ILTS). 2012/05.

20. Rakovitch, **Tuck AB** et al. "Long-term rates of breast cancer in a population of women with ductal carcinoma in situ treated by breast-conserving surgery". Annual Meeting of the American Society of Clinical Oncologists. 2012/06/01.

21. Bramwell VH, **Tuck AB**, Chapman JW, Anborgh PH, Postenka CO, Shepherd L, Pritchard KI, Han L, Wilson C, Pollak M, Chambers AF. "Studies of a malignancy-associated protein, osteopontin, in NCIC CTG MA.14, a randomized trial of tamoxifen vs. combined tamoxifen and octreatide LAR in adjuvant treatment of women with early breast cancer." CTRC-AACR 34th Annual San Antonio Breast Cancer Symposium. 2011/12/06.

22. MacMillan CD, Leong HS, Souter LH, Chambers AF, **Tuck AB**. "WNT5A Overexpression Promotes Breast Cancer Progression in the Presence of VANGL1." American Society for Cell Biology Annual Meeting. 2011/12/03.

23. Rasty G, Crafter S, Park A, Kuni D, **Weir MM**, Wolfson A, Yawney L, Gun-Munro J, Flynn G. "Digital Cytopathology and Whole Slide Imaging and Its Role in Cytology Education and Proficiency Testing Programs". United States and Canadian Academy of Pathology. 2012/03.

24. Pocrnich CE, **Weir MM**. "On-Site Adequacy Assessments of Fine Needle Aspiration Biopsies". United States and Canadian Academy of Pathology. 2012/03.

25. Siddiqui I, **Weir MM**. "Morphological Effects of Chemotherapy on Ovarian Serous Adenocarcinoma". United States and Canadian Academy of Pathology. 2012/03.

26. Jacques R, Goble-Ferguson S, Raminhos R, **Weir, MM**. "Utility of Retrospective Review of Non-gynecological Cytology Cases". United States and Canadian Academy of Pathology. 2012/03.

National

1. AlSufiani F, Jiang YJ, Blume T, **Ang LC**. "Institutional review of epilepsy resection specimens with focal cortical dysplasia". Canadian Association of Neuropathologists. 2011/09.

2. Das S, **Ang LC**, Ramsay, DA. "Metastasis of papillary thyroid carcinoma into anaplastic meningioma". Canadian Neuropathologists Association. 2011/09.

3. Alturkustani M, **Ang LC**. "Two unusual causes of vertebral artery rupture with subarachnoid hemorrhage". Canadian Association of Neuropathologists 51st Annual Meeting. 2011/09.

4. Caragea M, Smith PM, **Howlett C, Parfitt JR, Chakrabarti S**. "Progressing mulitcystic mesothelioma of the liver". Canadian Association of Pathologists. 2011.

5. Milburn S, Conkey B, Peters G, Schofield S, Standon B, Stuart JI, **John M, Lannigan R, Hussain Z, Delport J**. Oral presentation. Comparison of two Rapid Membrane Immunoassays and the Illumigene LAMP for the detection of Clostridium difficile. CACMID-AMI Canada 2012 Annual Conference, May 3-5, 2012, Vancouver, BC.

6. **Driman DK**. "Introduction to the Royal College Exam and How to Perform at Your Best". Annual Canadian Association of Pathology Residents Review Course. March 2012.

7. Caragea M, Sy J, **Parfitt JR, Driman DK**. "Tumour budding in stage IIA colorectal carcinoma: a new seni-quantitative method of assessment". Canadian Association of Pathologists. 2011.

8. Youssef G, deKemp R, **Hammond R**, Yerofeyeva Y, Lum C, Hill A, Stotts G, Renaud J, Brennan J, Tardif J, Spence JD, Beanlands R. Role of FDG-PET in Imaging of Carotid Atherosclerotic Plaque - FDG PET substudy of the Canadian Atherosclerosis Imaging Network Project-II, Canadian Cardiovascular Society, Vancouver, October 2011.

9. Cocker M, McArdle B, deKemp R, Lum C, Youssef G, **Hammond R**, Yerofeyeva Y, Karavardanyan T, Adeeko A, Hill A, Stotts G, Renaud J, Brennan J, Alturkustani M, Hammond L, DaSilva J, Tardif JC, Spence D, Beanlands R. "Immunohistochemical Validation of [18F]-Fluorodeoxyglucose as a Novel Biomarker of Inflamed Vulnerable Carotid Plaque: a Sub-Study of the Canadian Atherosclerosis Imaging Network (CAIN)." MFI (Molecular and Functional Imaging) Symposium, Ottawa, ON, June 2012.

10. Alturkustani M, Derry K, Tsoi M, Gibson E, Crukley C, Fenster A, Spence D, Youssef G, deKemp R, Beanlands R, Yarofeyeva Y, Yaffe Y, **Hammond R**. "The Role of 3D Digital Quantitative Histopathology Co-registration to Ultrasound, PET-CT and MRI (Canadian Atherosclerosis Imaging Network)". Canadian Association of Neuropathologists 51st Annual Meeting, Vancouver, BC. 2011/09. (Dr. AlTurkustani received the Morris H. Finlayson Award for this conference's most outstanding scientific presentation).

11. Chiu J, Thompson GW, Austin TW, Hussain Z, **John M**, Bombassaro AM, Elsayed S. Antimicrobial Prescribing Practices for Catheter Urine Cultures. Canadian Hospital Pharmacist's 2012 Professional Practice Conference, February 5th, Toronto, Ontario.

12. Howie R, **John M**, Clark J. Assessing the impact of bedpan processing modifications and environmental cleaning education on hospital hand hygiene. Poster presentation. Community and Hospital Infection Control Association Canada 2012 National Education Conference, June 16-21, 2012, Saskatoon, Saskatchewan. (Awarded best first abstract).

13. Parfitt J. "Pathology Gastroenterology presented at Canadian Association of Pathologists Annual Residents Review Course". Canadian Association of Pathologists Annual Residents' Review Course. 2011.

14. **Parfitt J**. "Pathology of the GI Tract". Canadian Association of Pathologists Annual Residents Review Course. 2012/03.

15. Irimies A, **Parfitt J, Gabril MY, Joseph M**. "Malignant Skin Tumours with Combined Epithelial and Melanocytic Components: Two Case Reports and Review of the Literature". Poster Presentation, Ontario Association of Pathologists (OAP), Annual meeting. 2011/10.

16. **Weir M**. "Gross Pathology. Annual Canadian Association of Pathology Residents' Review Course." 2012/03.

Provincial

1. **Driman DK**. "Pathological reporting of colorectal adenomas and serrated polyps". Gastroenterology & GI Surgery Gut Club, Waterloo ON, April 2012.

2. Irimies A, **Parfitt J, Gabril MY, Joseph M**. "Malignant Skin Tumours with Combined Epithelial and Melanocytic Components: Two Case Reports and Review of the Literature." Ontario Association of Pathologists. 2011/10.

3. Gibson E, Crukley C, Gaed M, **Gomez J, Moussa M**, Chin J, Bauman G, FensterA, Ward AD. "Validation of direct registration of whole-mount prostate digital histopathology to ex vivo MR images, Medical Image Computing and Computer-Assisted Intervention (MICCAI) Prostate Cancer Imaging Workshop, Toronto, Canda, September 2011.

4. **Joseph M**. "Skin rash - How to avoid a non specific diagnosis? A multidisciplinary approach." Chatham Kent Health Alliance. 2012/06/08.

5. **McLean CA**. "Case 1: MEN1 with: duodenal gastrinoma with liver and nodal metastasis; pancreas with well differentiated pancreatic endocrine tumour and microadenomatosis. Case 2: Gallbladder with cholelithiasis, "limy bile", and focal mucosal calcification." Ontario Gut Club. 2012/05/25.

6. **McLean CA**. "Case 1: Submassive hepatic necrosis in familial hemophagocytic lymphohistiocytosis." Ontario Gut Club. 2011/11/18.

7. **Parfitt J**. "Pathology of Drugs Effects in GI Tract". McMaster Pathology Grand Rounds. 2011/10.

8. **Tugaleva E**. "Pathology of Hanging". 2011 Annual Education Course for Coroners and Pathologists. 2011/11/18.

Local

1. **Driman DK**. "Update in Synoptic Reporting of ColorectalCancer" UWO/CCO CME Event, Ivey Spencer Leadership Centre. November 2011.

2. **Garcia B**. "Anatomy & Cell Biology Seminar Series". Department of Anatomy & Cell Biology. 2012/01/13.

3. **John M**. "Topic: "Sticking It To Syphilis". Therapeutics in Action 2011, Pharmacy Services LHSC. 2011/11/23.

4. **Joseph MG**. "Practice of cytopathology current and looking into future." Cytotechnologists' Week, LLSG, University Hospital. 2012/04/24.

5. Caragea M, McRae S, Marshall K, **Joseph M**. "Utility of Endobrochial Ultrasound-guided Fine Neede Aspiration Biopsy (EBUS-FNAB) in Evaluating Lung Carcinomas, LHSC Experience and Lessons Learned." 2012/05/04.

6. **Joseph MG**. “Skin rashes: Can you make a diagnosis”. Dermatology Update 2011, A CME event for primary care physicians, organized by CME office, Schulich Shool of Medicine and Dentistry.. 2011/09/24.

7. **Joseph MG**. “Lentigo maligna/Lentigo maligna melanoma: A pathologist’s perspective.” Melanoma Rounds, London Regional Cancer Program. 2011/09.

8. **Lannigan R**. “Clostridium difficile Protection Plan”. CTV London News. 2011/10/19.

9. Jacques, R, **Shkrum MJ**. “Hospital Autopsy Quality Control and Assurance: The London Health Sciences Centre Experience”. 2012/05/04.

10. **Tuck AB**. UWO and Cancer Care Ontario. “Update in Synoptic Reporting, Colorectal, Breast, Endometrium, Prostate Cancer; “Breast Cancer Synoptic Reporting”. Ivey Spencer Leadership Centre. 2011/11/05.

11. **Tuck AB**. “Canadian Surgery Forum 2011. Invited seminar on “High Risk Pathology – Borderline Lesions of the Breast”, post-graduate CSSO course: Assessing and Managing the Patient at High Risk for Breast Cancer.” London Convention Centre. 2011/09/15.

Grant Funding

External Funding (July 1, 2011 to June 30, 2012)

1. Richmond C, **Bend JR (Co-I)**. CIHR community based grant. “First Nations Perceptions of the Health Impact of Living Near a Solid Waste Facility. Total Funding $25,000. From 2011/06 to 2012/05.

2. Ferguson S, **Bend JR (Co-I)**. Ontario Ministry of Research & Innovation research resource grant. “London Regional Cell and in Vitro Imaging Facility.” Total Funding $469,400. From 2007/04 to 2012/03.

3. Trick C, **Bend JR (Co-I)**. International Development Research Centre – Environment & Natural Resources Management. “Pending Crisis at Lake Naivasha, Kenya: diagnosis and treatment of threats to ecosystem health during climate change. Total Funding: $600,000. 2008/05 to 2012/04.

4. **Chakrabarti S (PI Canada)**; Li X (PI China). CIHR China-Canada Joint Health Research Initiative. “Preventative Effects and the Mechanism of action of a Novel Mutant of Fibroblast Growth Factor on Diabetic Cardiomyopathy.” Total Funding: $146,100. 2011/01 to 2013/12.

5. **Chakrabarti S (PI)**. Canadian Diabetes Association. “Pathogenesis of diabetic retinopathy”. Total Funding: $275,000. 2010/07 to 2013/06.

6. **Chakrabarti S (PI)**. Actelion Pharmaceuticals Inc. “Effect of Macitentan treatment on diabetic nepropathy”. Total Funding: $30,000. 2010/07 to 2012/06.

7. **Chakrabarti S (PI)**. FTA Ontario Research Fund. “Preventative Effects of Ginseng”. Total Funding: $196,000. 2008/08 to 2013/03.

8. **Chakrabarti S (PI)**. Heart and Stroke Foundation of Ontario. “Vasoactive factors in diabetic heart disease”. Total Funding: $134,888. 2011/07 to 2013/06.

9. Baumann G (PI), **Gómez JA (Co-I), Moussa M (Co-I)**. CIHR Team in Image Guided Prostate Cancer Management. “Histopathologic Validation of Pre-operative Prostate Cancer Imaging”. Total Funding: $4,642,805. 2008/04 to 2013/03.

10. **Hammond RR (Co-I)**, Spence D (PI). Canadian Atherosclerosis Imaging Network (CAIN), funded by CIHR and the Heart & Stroke Foundation of Canada. Pathology Image Analysis Core. Total Funding: $25,000. 2010/07 to 2012/06.

11. **John MA**,(Site investigator) Loeb M (PI). Ontario Ministry of Health & Long Term Care. “A randomized control trial of surgical masks vs N95 respirators to prevent influenza in health care workers.” Total Funding: $ 250,000. 2009 to present.

12. **John MA**. “Canadian Nosocomial Infection Surveillance Program (CNISP)”. Total Funding: $7,000 per year to provide hospital profiles/quarterly reports.

13. **John MA** (Site Investigator). “Development of a National Surveillance System for Central Venous Catheter Bloodstream Infections (CNISP).” Total Funding: $3,000 per year 2007 to present.

14. **John MA** (Site Investigator). “National Surveillance of Methicillin Resistant Staphylococcus aureus in Candian Acute Care Hospitals (CNISP)”. Total Funding: $ 7,500 per year 2000 to present.

15. **John MA** (Site Investigator). “National Surveillance of Vancomycin Resistant Enterococcus faecalis and faecium in Candian Acute Care Hospitals (CNISP).” Total funding: $ 2,500 per year. 2000 to present.

16. **John MA** (Site Investigator). “Surveillance for Clostridium difficile associated diarrhea (CDAD) within acute care institutions (CNISP).” Total Funding: $3,000/year 2008 to present.

17. **Khan ZA (PI)**. Canadian Institutes of Health Research. “Cellular and Molecular Basis of Infantile Hemangioma Pathogenesis”. Total Funding: $219,813. 2009/10 to 2012/09.

18. **Khan ZA (PI)**. Canadian Diabetes Association. “Vascular Stem Cells in Diabetic Complications”. Total Funding: $189,000. 2009/07 to 2012/06.

19. **Khan ZA (PI)**. Heart & Stroke Foundation of Canada, New Investigator Award. Total Funding: $300,000. 2010/07 to 2015/06.

20. **Lannigan R (Co-I)**, McBean G, Snidvongs A. International Development Research Centre (IDRC), Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council. “International Research Initiative on Adaptation to Climate Change (IRIACC) Coastal Cities at Risk (CCaR): Building Adaptive Capacity for Managing Climate Change in Coastal Megacities.” Total Funding: $1,250,000. 2011/03 to 2016/06.

21. Bauch C (PI), **McLachlin CM (Co-I)**. Canadian Institutes of Health Research (CIHR), Infection & Immunity. “Cervical Cancer Screening in the Era of HPV Vaccination: using mathematical and economic models to guide screening policy.” Total Funding: $228,000. 2008/07 to 2011/12.

22. **Moussa M (Collaborator)**, Ward AD(Co-PI). This project was (partially) funded through the Cancer Imaging Network of Ontario (CINO) supported by Cancer Care Ontario with funds from the Ministry of Health and Long-Term Care. “Evaluation of 18F-choline PET/CT imaging for prostate biopsy guidance using digital pathology-based 3D prostate cancer maps and 3D TRUS-guided targeted biopsy”. Total Funding: $70,000. 2011/05 to 2013/05.

23. **Shkrum MJ (Co-PI)**, Howard A (Co-PI). Network Centres of Excellence, Automobile of the 21st Century (AUTO 21). Fatal Child Injuries in Real World Crashes. Total Funding: $40,000. 2012/04 to 2014/03.

24. **Shkrum MJ (PI)**. Transport Canada. “MOVES: Motor Vehicle Collision and Motor Vehicle and Vehicle Equipment Defect Investigations.” Total Funding: $778,750. 2010/10 to 2013/03.

25. Rakovitch E, **Tuck AB (Co-I)**. Canadian Breast Cancer Research Alliance. “Ductal carcinoma in situ: A population-based analysis.” Total Funding: $254,875. 2007/01 to 2012/12.

26. Koropatnick and 10 others, **Tuck AB** (Collaborator). Canadian Institues of Health Research. “London strategic training initiative in cancer research and technology transfer”. Total Funding: $325,000. 2009 to 2015.

27. Turley E, **Tuck AB** et al (co-applicants). Canadian Breast Cancer Foundation - Ontario Region. “The role of RHAMM/HMMR in breast cancer susceptibility and progression”. Total Funding: $144,646. 2011 to 2014.

28. Chambers AF, **Tuck AB** et al. Breast Cancer Society of Canada. “Studies of Osteopontin as a Biomarker in Breast Cancer Clinical Trials”. Total Funding: $52,500. 2010 to 2011.

29. Winquist E, **Tuck AB**. Ontario Institute for Cancer Research. “OICR Translational Research Team Award”. Total Funding: $337,862. 2010 to 2013.

Internal Grant Funding (July 1, 2011 to June 30, 2012)

1. **Ang LC**. Pathology Internal Funds for Academic Development. “Neuropathic Findings in Epilepsy Associated Deaths”. Total Funding: $5,000. 2012/02 to 2014/01.

2. **Ang LC**. Pathology Internal Funds. “Neuropathology Residency Program - teaching and research development”. Total Funding: $3,000. 2011/07 to 2012/06.

3. **Driman DK**. Pathology Internal Funds for Academic Development. “LHSC Experience with Hepatic Resection for Metastatic Cancer (Chemotherapy Effect in Hepatic Resections for Metastatic Colorectal Adenocarcinoma)”. Total Funding: $3,041. 2011 to present.

4. **Driman DK, Parfitt J**, Caragea M, Sy J. Pathology Internal Funds for Academic Development. “Tumor budding and perineural invasion are independent and reproducible prognostic factors in colorectal carcinoma.” Total Funding: $5,000. 2010/01 to 2011/12.

5. **Driman DK**, Li Chang H. Pathology Internal Funds for Academic Development. “Comparison of Lymph Node Harvest in Colorectal Carcinoma Patients with or without Routine Use of GEWF Solution”. Total Funding: $5,000. 2010/09 to 2012/08.

6. **Gabril M**. Pathology Internal Funds for Academic Development. The Clinicopathological Characteristics, Immunohistochemical Profile and Prognosis of Clear Cell Papillary Renal Cell Carcinomas. Total Funding: $5,000. 2012/05 to 2014/04.

7. **Garcia B**. LHSC Multiple Organ Transplant Program. Total Funding: $70,000. 2011/08 to 2012/09.

8. **Hammond RR**. Pathology Internal Funds for Academic Development. “High field MRI/Neuropathology correlative studies”. Total Funding: 5000. 2009/03 to 2011/07.

9. **Howlett C**. Pathology Internal Funds for Academic Development. “Validation of IHC in detection of Her2/neu overexpression in gastric cancer and comparison to FISH technique”. Total Funding: $2,000. 2012/02 to 2014/01.

10. **Howlett C**. Pathology Internal Funds for Academic Development. “Evaluation of the value of an elastic tissue stain in identification of large vessel invasion in lung carcinoma”. Total Funding: $2,000. 2010/04 to 2012/03.

11. **Howlett C**. Pathology Internal Funds for Academic Development. "Investigation of plasma cell proliferations in association with metastatic carcinoma to the bone marrow." Total Funding $3,000. 2010/12 to 2012/11.

12. **Hussain Z**, McGavin M (PI). Western Academic Development Fund. "Population dynamics of Staphylococcus aureus carriage in hemodialysis patients and association with adverse infections rates." Total Funding $20,000. 2010 to 2012.

13. **Khan ZA**. Lawson Health Research Fund, IRF-44-10. "Vascular stem cells as therapeutic targets for chronic diabetic complications". Total Funding: $15,000. 2011/07 to 2012/06.

14. **Moussa M**. Department of Pathology Internal Funds for Academic Development. "Incidental Prostate Pathology in Cystoprostatectomy Specimens". Total Funding: $3,080. 2012/05 to 2014/04.

15. **Moussa M**. Department of Pathology Internal Funds for Academic Development. "Localization of PLA2R antibody in membranous nepropathy and clinical correlation". Total Funding: $5,000. 2010/07 to 2012/06.

16. **Parfitt J, Howlett C, Driman D, McLean C, Chakrabarti S**, Xu J, AlamEldin M. Department of Pathology Internal Funds for Academic Development. "Validation of CISH in assessing Her2/neu amplification in gastric cancer with comparison to FISH techniques". Total Funding: $5,000. 2012/03 to 2014/02.

17. **Ramsay DA (PI)**, Megyesi J (Co-Director). London Brain Tumour Research Fund Foundation. ""Canadian Brain Tumour Tissue Bank", Ongoing Annual Maintenance Grant 1998 - present ($80,000 per annum)". Total Funding: $960,000. 1998 to 2011.

18. **Rizkalla K**. Schulich School of Medicine & Dentistry. Undergraduate Medical Education Summer Student Project. Total Funding: $4,251. Spring 2011.

19. **Rizkalla K**. Pathology Internal Funds for Academic Development. "Creation of New Assignments & Cases for the BLOOD Course" Total Funding: $5,000. 2011/03 to 2013/04.

20. Chambers A, **Tuck AB**. London Regional Cancer Program Small Grants for Cancer Research and Training. "Molecular Controls of Early Breast Cancer Progression: Role of Wnt/PCP pathway members Wnt5a and VANGL1." Total Funding: $24,885. 2011/07 to 2012/06.

21. **Tuck AB**. London Regional Cancer Program Small Grants for Cancer Research and Training. "Pre-signaling targets to block malignancy-promoting effects of osteopontin on breast cancer." Total Funding: $49,884. 2009/01 to 2010/12.

22. Gratton R, **Weir MM**. Schulich School of Medicine & Dentistry. “Development of Podcast Review Modules for Reproduction Course (Meds 2), The University of Western Ontario”. Total Funding: $4,251. 2011/07 to 2011/08.

23. **Weir MM**. Schulich School of Medicine & Dentistry. “Development of Cytology Proficiency Testing Modules.” Total Funding: $3,000. 2010/01 to 2011/12.

24. **Wehrli BW, Weir MM**. Pathology Internal Funds for Academic Development. “Immunomarker Validation Study for Cytology, The University of Western Ontario”. Total Funding: $5,000. 2010/01 to 2012/01.

Clinical Service Reports

Pathology and Laboratory Medicine (PALM)
Report of the Administrative Director (A), Sue Volbrecht

The Pathology and Laboratory Medicine (PALM) department – formerly known as London Laboratory Services Group (LLSG), a joint venture of London Health Sciences Centre and St. Joseph's Health Care London provides a range of routine and specialized laboratory testing and clinical consultation to support the diagnosis and treatment of patients within Southwestern Ontario, as well as nationally and internationally. The thirty laboratory departments and 439 staff situated city-wide at London Health Sciences Centre and St. Joseph's Hospital were responsible for more than 7 million tests in 2012.

Highlights for the past year

LLSG Academic Symposium Series – "The Multi-transfused Patient"

On November 5, 2011, the Blood Transfusion Laboratory presented their annual symposium at the Best Western Plus Lamplighter Inn and Conference Centre.

The 2011 year topic was "The Multi-transfused Patient". There were 123 participants in attendance from throughout Southwestern Ontario. The symposium was sponsored by LLSG, Orbcon and Canadian Blood Services.

Purchased Services Agreement between LLSG and Middlesex Hospital Alliance

On November 25, 2011 an agreement was approved for LLSG to provide professional administration to operate the Ontario Laboratory and Specimen Collection Centre License owned by the Strathroy Middlesex General Hospital (SMGH). Professional administration includes a designated Laboratory Medical Director and Divisional Medical Leaders as required for hematology, blood transfusion, chemistry, microbiology/infection control, and point-of-care. Pathology specimens will be referred from the Middlesex Health Alliance to LLSG. This agreement is the first of its kind in the Thames Valley region between academic and community hospitals. It coincides with the retirement of

the pathologist at SMGH. Community hospitals that do not have the critical mass or volume of work to support core pathology services are challenged to both recruit pathologists and to maintain quality standards. An opportunity to seek out a partnership with a larger centre is therefore a strategically sound step, especially for a relatively small community hospital.

Microbiology and Infection Control Initiatives

The Microbiology laboratory in collaboration with Infection Control and Prevention (IPAC) introduced a new testing and reporting protocol to "deflag" patients previously positive for Methicillin-Resistant Staphylococcus Aureus (MRSA). The new broth culture testing method is more sensitive and allows "deflagging" of patients on the basis of one negative broth culture, rather than waiting for 3 successive negative swab culture results. Deflagging of patients who are no longer MRSA positive results in fewer patients with bed isolation requirements which enables better patient flow and access through the hospital as well as decreased costs associated with isolation supplies.

Also, a new Polymerase Chain Reaction (PCR) test was introduced to use for confirmation of Clostridrum difficile toxin. It provides a C. difficile positive result the same day as the specimen is taken which is an improvement to the old process which could take up to 48 hours to provide this information. This new test is of great benefit to our patients and is used in conjunction with the older testing method to provide accurate and timely results.

Ontario Laboratory Accreditation (OLA)

The laboratory received certificates of accreditation for all licensed sites: Biochemical Genetics Laboratory, Reese Laboratory, St. Joseph's Health Care, South Street Hospital, Victoria Hospital and University Hospital. The certificates are valid four years until November 2015.The accreditation assessment determines conformance to the OLA explicit requirements (Version 5). These requirements are based on ISO standards 15189:2007(E) *Medical Laboratories- Particular Requirements for Quality and Competence, ISO 15190:2003(E) Medical Laboratories-Requirements for Safety, ISO 22870:2006(E) Point of Care Testing (POCT) Requirements for Quality and Competence and CSA Standard Z902-10 Blood and Blood Components February 2010*.This accomplishment acknowledges the dedication of laboratory staff to producing quality results that aid in diagnosing, managing and treating patients.

High Sensitivity Troponin T (hs-TnT)

The Core Laboratories introduced a high sensitivity Troponin T (hs-TnT) assay as of February 1, 2012. This replaces the 4th generation Troponin T assay. Dr. Vipin Bhayana worked diligently with the cardiologists, Emergency Department physicians, and other groups to provide necessary education and to develop an information sheet which was distributed to physicians and other health care workers prior to the test method change.

Hospital Accreditation by Accreditation Canada

The laboratories and blood services teams participated in the 2012 hospital accreditations for both London Health Sciences Centre and St. Joseph's Hospital and received 100% compliance with the service excellence standards for these areas. This included assessment of over 282 criteria.

LLSG Academic Symposium Series – "Love it or Lean it"

On Saturday, May 12, 2012, London Laboratory Services Group (LLSG) offered an education symposium which included a hands-on application of Lean & Six Sigma tools and presentations from LLSG laboratories on how they implemented Lean process improvements.

There were 32 participants from throughout Southwestern Ontario including Grey Bruce, Owen Sound, Public Health Laboratories, Canadian Blood Services and Toronto.

Ontario Laboratory Information System (OLIS)

OLIS is the provincial repository of laboratory information that supports the Ontario eHealth Strategy. LHSC is leading an implementation project for the London and regional hospitals to participate in data transfer from the regional shared Cerner Laboratory PathNet information system and reciprocal viewing of the laboratory data stored in the provincial laboratory repository. The transfer payment agreement between eHealth Ontario and London Health Sciences Centre for the OLIS implementation project has been signed. Deliverables include: laboratory data from London and participating hospitals populating the OLIS provincial repository, implementation of Clinical Viewer for healthcare providers to see data held in the repository, and a plan for the secondary use of provincial data by research. A kick-off meeting for this project was held June 12, 2012 with completion planned for March 2013.

Electronic Department Ordering – Pathology and Blood Transfusion

The Blood Transfusion Laboratory worked with the Information Technology Services department and the PathNet Team to implement online e-orders for blood products. This initiative ensures proper and consistent documentation to support the issuing of blood products. In April 2012 the roll-out of e-orders was successfully implemented at St. Joseph's, Parkwood and the London Regional Cancer Program with Victoria Hospital and University Hospital following over the next month.

The Pathology Laboratory initiated a similar e-order project for tissue specimens collected in various ambulatory clinics and operating rooms in the London hospitals. By September 2012, the majority of programs that collected pathology samples were online. This initiative enables tracking of the specimens from collection to receipt in the pathology laboratory and ensures consistent labeling of samples which supports best quality and patient safety.

Surgical Pathology Metrics

On June 25th the Surgical Pathology Laboratory unveiled their "Dashboard". This metrics tool tracks daily workload which is divided and displayed as key components within the process. Numbers are posted each morning on the white board in the pathology department hallway. The staff can see their daily accomplishments, note patterns of practice, and have a quick snapshot of progress and the contribution of the laboratory staff to patient care.

Laboratory Leadership Announcements

This has been a year of great change for the Pathology and Laboratory Medicine Leadership team due to organizational structure changes and numerous retirements. It is anticipated that a full leadership team will be in place by January 2013.

Medical and Scientific Leadership Announcements 2012

Medical Director Anatomical Pathology

• Dr. CM McLachlin – oversees surgical pathology, cytology, autopsy pathology and molecular diagnostics

Medical Director Clinical Laboratories

• Dr. V. Prabhakaran – oversees immunology, biochemistry, hematology, microbiology, transplant immunology, pulmonary function (LHSC), point-of-care

Medical Leader Surgical Pathology

• Dr. Helen Ettler

Section Head Gross and Histopathology

• Dr. Keith Kwan

Section Head Bacteriology

• Dr. Johan Delport

Administrative Leadership Announcements 2012

Laboratory Administrative Director

• Mike Kadour has accepted this role starting January 7, 2013

Laboratory Managers Recruitment

• Rich Bak, Manager Quality and Client Support

• Sue Milburn, Interim Manager Pathology

Laboratory Coordinators Recruitment

• Jennifer Bell, Coordinator Core Laboratory and Transplant Immunology (UH office)

• Vily Choperena, Coordinator Specialty Chemistry

• Kathy Demopoulos, Coordinator Core Laboratory (VH office)

• Mary Emanuel, Coordinator Molecular Diagnostics

• Renee Dickey, Support Coordinator Specimen Receiving Area

Senior Medical Director Appointment

Dr. C. Meg McLachlin has been appointed Senior Medical Director (SMD) of Diagnostic Services along with five others appointed to Cancer, Medicine, Mental Health, Surgery and Women & Children.

The SMD role is a key element for the hospital renewed leadership structure with a direct accountability to the Integrated Vice President, Medical Affairs and Medical Education. This new leadership model is aimed at broadening physician engagement in strategic planning and decision making.

Working collaboratively with the Chair/Chiefs and hospital administration, the SMD will play a vital role in finding solutions to the fiscal and system challenges ahead as we move forward to achieving our emerging vision at LHSC of “Exceptional Experiences, Extraordinary People, and Engaging Partnerships”.

Accessing the Laboratory Test Information Guide through Cerner PowerChart

As a result of a LEAN initiative, it is now easy for healthcare staff to access the Laboratory Test Information Guide and Specimen Collection Guide by using the link created within Cerner PowerChart.

Thank you to Manuella Giuliano, Quality & Process Improvement Specialist (LLSG), Sheona Baker, Clinical Informatics Specialist, David Schaus, Laboratory Information System Support Technologist, and the Helpdesk for making this valuable resource more readily available to all staff.

Freedom of Information and Protection of Privacy Act (FIPPA)

As of January 1, 2012, hospitals were designated as institutions under FIPPA so that, after that date, anyone has the right to make a request for access to a wide range of information held by hospitals. In order to comply with this legislation the laboratory formed a FIPPA project team which completed the following work:

- Updated the LLSG Record Retention Guide and Electronic File Directory Guideline and posted them on the LLSG website http://www.lhsc.on.ca/priv/lab/policy/docrec.htm A file structure was created to better organize electronic records
- Paper records were reviewed, retained or discarded
- Inventories of electronic, paper and film records were submitted to the Freedom of Information Office
- Eight presentations were given with 222 staff members in attendance to hear about FIPPA and the impact that this act is having upon the hospitals and LLSG

A special thank you is extended to the members of the FIPPA project team to acknowledge their contribution and assistance as LLSG is becoming access ready. Sponsor: Sue Vollbrecht; Lead: Viki Massey; Team members: Yvonne Chambers, Sharon Delanghe, Kathy Demopoulos, Laurie Floyd, Sue Ford, Fran Richards, Eva Marie Smith, Brittany Standon, Joyce Stenson.

Pathology Laboratories
Report of the Pathology Laboratories Manager, Sue Milburn

The Pathology Laboratories at London Health Sciences Centre include the following facilities under the designated coordinators.

Support Coordinator – Laurie Floyd

- Pathology Clerical Support Group

Coordinator – Mike Graves

- Autopsy Services
- Grossing Room
- Specimen Receiving Area
- UH Pathology Medical Laboratory Assistant Team

Coordinator – Donna Murphy

- Anatomical Pathology
- Ancillary Pathology (which includes Electron Microscopy)
- Immunopathology and Neuropathology
- Cytology (including the Reese Laboratory)

Coordinator – Alan Stuart (Interim role from Sept 2011 to Sept 2012)

- Molecular Diagnostics:
  - o Biochemical Genetics
  - o Cytogenetics
  - o Molecular Biology (includes Molecular Pathology)

Our focus is on service, education and research. Service challenges include managing the increases in volumes and complexity of the testing while incorporating new testing. We have been successful in supporting the technical component in the laboratory. In education, the Pathology Laboratories are actively involved in the teaching of students in the Medical Laboratory Technologist (MLT) and Medical Laboratory Assistant (MLA) programs.

We are very proud to provide the only accredited Pathologists' Assistant program in Canada, in which the teaching opportunities have been fully embraced by our technical staff. This is called the Master of Clinical Science (Pathologists' Assistant) program.

At the University site, we amalgamated the medical laboratory assistants in the pathology portfolio to form the UH Pathology MLA Team. This has allowed us flexibility to better address our growing requests.

We take an active approach with research programs, in collaboration with both hospital and government funded sources. Our laboratories supply technical support and expertise to outlying regional facilities.

Pathology Laboratories July 2011 - June 2012 statistics

<table>
<tr><th colspan="10">Staff Numbers (122)</th></tr>
<tr><td>Clerical Support (FT/PT)</td><td>Coordinators / Support Coordinators</td><td>Lab Assistants (FT/PT)</td><td>Pathologist's Assistants</td><td>Research Associates & Assistants</td><td colspan="2">Technologists (FT/PT,Cas)</td><td colspan="3">Scientists</td></tr>
<tr><td>20 / 1</td><td>3 / 1</td><td>9 / 5</td><td>8</td><td>2 / 1</td><td colspan="2">65 / 6</td><td colspan="3">1</td></tr>
<tr><th colspan="10">Approximate Statistical Averages July1 2011- June 30 2012</th></tr>
<tr><th colspan="10">Histopathology / Cytology</th></tr>
<tr><td rowspan="2">Autopsy # Hospital Cases</td><td rowspan="2">Coroners Cases</td><td rowspan="2">Surgical Cases</td><td rowspan="2">Intra-Operative Consultation Reports</td><td rowspan="2">Slide Counts (includes Autopsy/ Coroners)</td><td rowspan="2">Block Counts (includes Autopsy/ Coroners)</td><td rowspan="2">Rapid Processing</td><td colspan="3">Cytology</td></tr>
<tr><td>Gyn</td><td>Non-Gyn</td><td>FNA</td></tr>
<tr><td>242</td><td>429</td><td>49705</td><td>1521</td><td>445371</td><td>209528</td><td>330</td><td>18951</td><td>8913</td><td>2344</td></tr>
<tr><th colspan="10">Molecular/Genetics</th></tr>
<tr><td colspan="5">Cytogenetics</td><td>Molecular Biology</td><td>Molecular Pathology</td><td colspan="3">Biochemical Genetics</td></tr>
<tr><td></td><td colspan="4">Sign-Off</td><td rowspan="2">Specimens</td><td rowspan="2">Specimens</td><td colspan="3" rowspan="2">Tests</td></tr>
<tr><td>Initial Handling & Report</td><td>Abnormal Case</td><td>Complex Case</td><td>Normal Case</td><td>Oncology Case</td></tr>
<tr><td>4024</td><td>735</td><td>455</td><td>1835</td><td>1932</td><td>5204</td><td>341</td><td colspan="3">5819 (+90 for prep)</td></tr>
</table>

Anatomical Pathology – Reports from Medical Leaders

Surgical Pathology
Report from Medical Leader, Dr.H.Ettler

The Department of Pathology is staffed by 27 pathologists, 3 of which are dedicated neuropathologists. There are also 2 oral pathologists within the Schulich Medicine & Dentistry Pathology Department. In January 2012 Dr. Helen Ettler was appointed medical leader of Surgical Pathology. She is ably assisted by the sections heads of electron microscopy (Dr. M. Moussa), histology and gross room (Dr. K. Kwan) and immunohistochemistry (Dr. B. Wehrli). The combined clinical research position was filled by an internal candidate and comes with significant protected research time. Following our assumption of pathology services for the Strathroy Hospital, there were 2 vacant positions for Anatomical Pathologists. One position has been filled with a new pathologist, Dr. Joanna Walsh, with subspecialty expertise, who began in September 2012. The other position has been reposted in the fall of 2012.

Surgical Pathology is actively involved in service, education, quality and research with individuals contributing their time to each area in differing amounts. Our subspecialty teams are fully developed with pathologists with expertise and interest, each dedicated to several teams. This has improved consistency and quality in reporting and has been well received by our clinical colleagues. This has also allowed for our increased involvement in multidisciplinary Tumour Boards.

Specimen volumes, particularly in Gastrointestinal (GI) biopsies, continue to increase. There were 48 600 surgical specimens in 2011. All teams are facing increasingly lengthy and complex reporting requirements. At present we have more than 70 synoptic reports, many of which were introduced in the last 6 months. The length of these Cancer Care Ontario (CCO) mandated synoptics, as well as the not always user friendly Cerner computer system, has been a source of frustration. However, with perseverance and ongoing education from our CCO lead, Dr. D. Driman, our rate of completed reports has markedly improved.

The consultation service also faces increasing demand from pathologists in our Local Health Integration Networks (LHINs) and beyond. The number of pathologists across Ontario providing this type of consultation service seems to be decreasing, making our consultation service highly sought after. These consults add increased pressure to our busy internal case load.

The department continues to have a strong quality assurance program, "PIQM". Most activities are in line with those outlined in the Standards 2Quality guidelines. This program is currently led by Dr. Helen Ettler. Protected time is provided to ensure this program continues to grow and improve.

The department does face several challenges and opportunities. The complexity of surgical pathology material will likely increase further, with clinicians requesting more complex immunohistochemistry and molecular testing to help manage patients. While our department has molecular expertise, this will place a strain on resources and pathologist time. Regional initiatives and increasing workload are additional challenges.

Autopsy Service / Southwestern Ontario Regional Forensic Pathology Unit Report from Medical Leader/ Director, Dr. M. Shkrum

The Autopsy Service continued to foster its commitment to teaching and research in 2011-12. Dr. E. Tweedie was certified by the Royal College through the Practice Eligibility Route in forensic pathology. Drs. Tugaleva and Shkrum became co-supervisors of a MSc candidate - Audrey Blanchard, a Pathologists' Assistant at LHSC. She is conducting a study of infant organ weights. Dr. Shkrum, the Director of the Motor Vehicle Safety Research Team at Western, was a co-applicant on an AUTO 21 grant which is funding an additional MSc student (Shayan Shekari, 2012 - Present). His study will focus on fatal child injuries in motor vehicle collisions. Both projects will use the database of the Office of the Chief Coroner.

Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

Strengths:

- Staff (see below)
- Manageable volume of cases and diverse case mix
- Strong teaching at various levels at Western University and outside
- Pathologists' Assistant program
- Evolving research foci particularly with the Office of the Chief Coroner

Weaknesses

- Increasing volume and complexity of surgical/cytology cases has meant reduced number of senior pathologists doing autopsies
- Increased documentation (e.g. organ retention) and required protocols in coroners' cases has posed professional risks for pathologists

Opportunities

- Increased service and teaching demands has translated into increased hiring of professional and support staff, increased teaching material for residents and other trainees and enhanced research possibilities

Threats

- Collapse of community hospital autopsy services has led to an increased number of coroners' cases from outside of London referred to LHSC. Also an increased demand for private autopsies without formal agreements with community hospitals

Program Description / Stats

Staff

- 3 certified forensic pathologists
- 7 other pathologists with interest in doing autopsies ("Autopsy Team")
- 3 neuropathologists, one of whom specializes in forensic neuropathology
- Very experienced technical specialist
- 8 highly competent Pathologists' Assistants

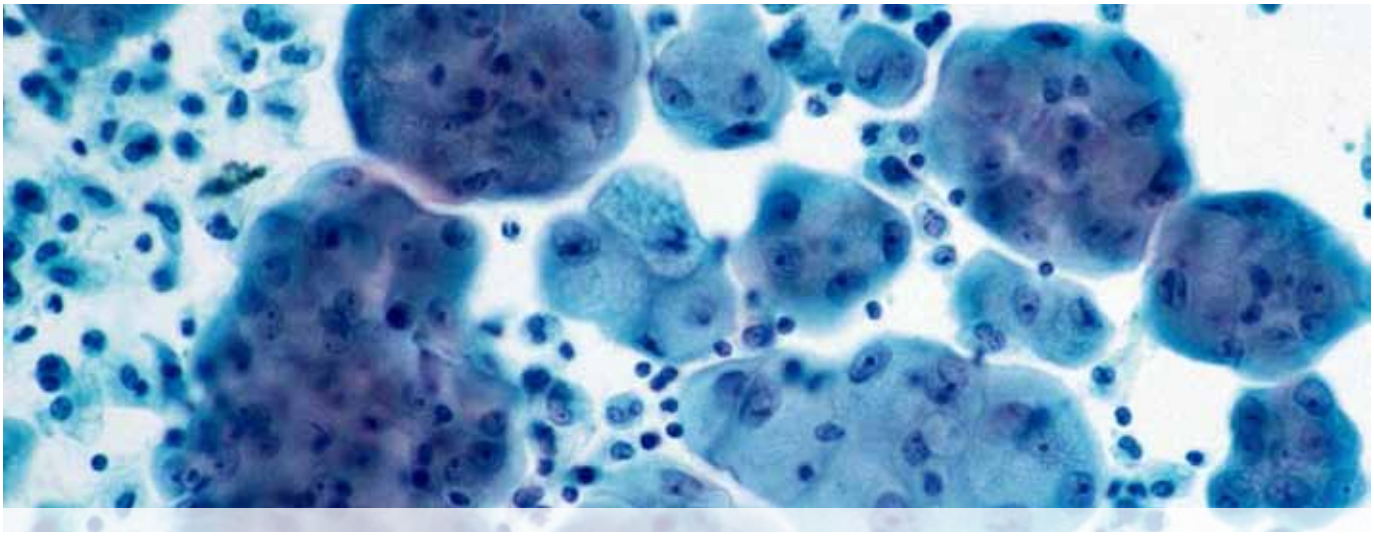
Facilities

Autopsy Suite – University Hospital

Hours of Operation (effective Jan.1/12)
Monday to Saturday 8 am to 4 pm (Sunday service in exceptional cases)

Scope of Practice

The autopsy service at LHSC, in addition to conducting postmortem examinations for the clinical services on behalf of families, is a regional forensic pathology unit not only performing autopsies for local coroners but also assisting in medical legal investigations of complex deaths (e.g. homicides, pediatric deaths) in Southwestern Ontario. In 2011, there were 507 autopsies done at LHSC. Of these, 370 were coroners' cases and 137 were hospital-consent cases. There was an overall case decrease of 3% from 2010 (#=522 cases); however, the number of cases referred outside of London increased from 126 to 132 cases.



Cytology
Report from the Medical Leader, Dr. M. Joseph

The Cytology division within the Department of Pathology is run by a team consisting of the Medical Leader, Coordinator, 9 cytotechnologists, 1.5 lab assistants and 12 pathologists of which 4 are Cytopathologists. We provide a wide range of diagnostic services to our physicians and deliver expert cytology consultation service to our regional pathologists. The strength of our division lies in its resources. Our team members strongly believe in a patient centered approach to cytology practice and we are passionate about education and quality assurance.

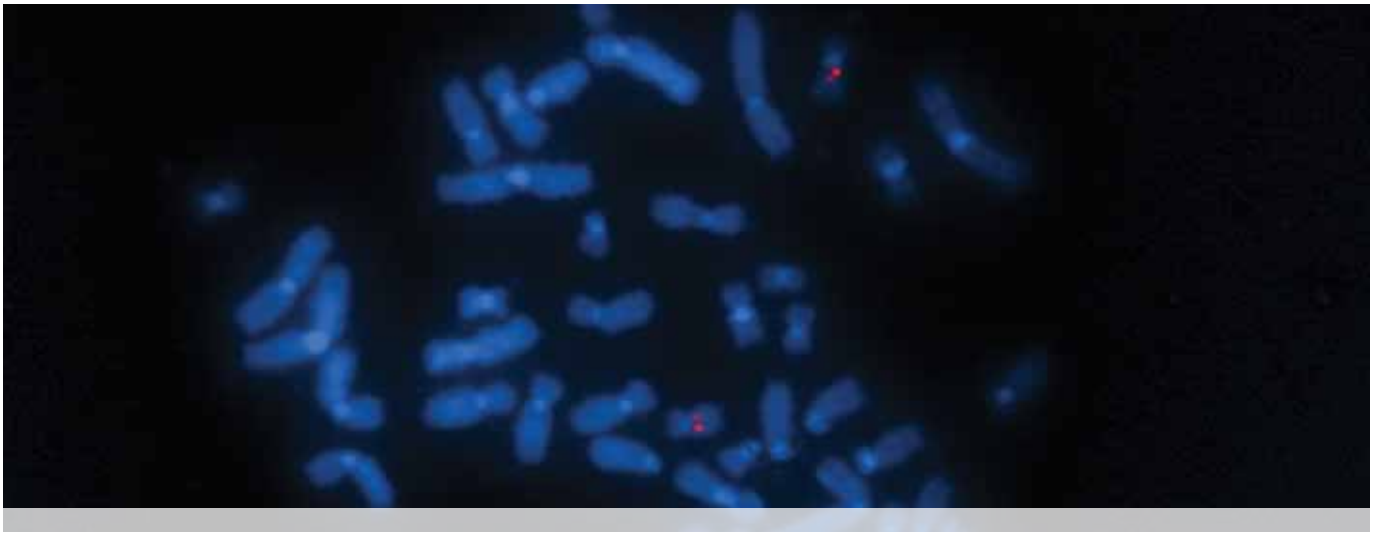
For the year 2011-2012, we processed 27,318 samples in the cytology laboratories. Our cytotechnologists continue to provide the Rapid Onsite Evaluation (ROSE) service to clinicians for Fine Needle Aspiration Biopsy (FNAB) cases (1045 cases last year). Our cytology team established an organized ROSE service for two recently introduced technically challenging procedures Endobronchial Ultrasound-guided Fine Needle Aspiration (EUS-FNA) and Endoscopic Ultrasound-guided Fine Needle Aspiration (EBUS-FNA) by working closely with the clinicians and management. Although we experienced some “growing pains”, this team approach allowed for continuing education, understanding and dialogue to benefit patient care. We published our positive experience on ROSE procedure in the most recent FOCUS magazine.

Education, a major thrust of our cytology division continues to thrive in our division. Our monthly “Medical Leader’s Multi head Microscope Rounds” for cytotechnologists has been designed to create a stimulating educational environment which we believe enhances team relationships. We redesigned our Royal college accredited “Monthly Cytology Rounds” by including current topics , cytology E conference and journal club in an attempt to improve communication and interaction. Our team members are actively involved in the ongoing teaching of Pathology residents and cytology fellows. In addition several of our cytotechnologists are Clinical Educators with the Michener

Institute of Health Sciences. Our team is also planning a cytology CME day for community pathologists and cytotechnologists "Practice of Cytopathology – Recent Advances" on April 6, 2013.

We run a robust Quality Management Program in our cytology division. Our team is proud of our ongoing quality assurance (QA) and control programs with useful statistics generated on individual and lab performances. A recent QA project on EBUS procedure is being presented at the November 2012 American Society of Cytology meeting in Las Vegas. We are pleased to state that physicians from our cytology team participate on the executive board of the Canadian Society of Cytology, Canadian Coalition for the Prevention of Cervical Cancer as well as in the Scientific Committee of the Quality Management Program and Licensing Service of Ontario Branch of the Ontario Medical Association. The above roles have led to a number of important peer reviewed publications in Pathology journals.

Cytology is an evolving science. In the future there is opportunity and a need to develop many molecular tests on small cytology samples. We plan to work with our molecular pathologists to initiate these tests. Our challenge lies in resources. There is increasing demand for ROSE service at Victoria and St. Joseph campuses. We believe the Laboratory's success is linked to its interdisciplinary team work and efficient use of resources. In order to succeed, cooperation and collaboration are required among all key stakeholders.

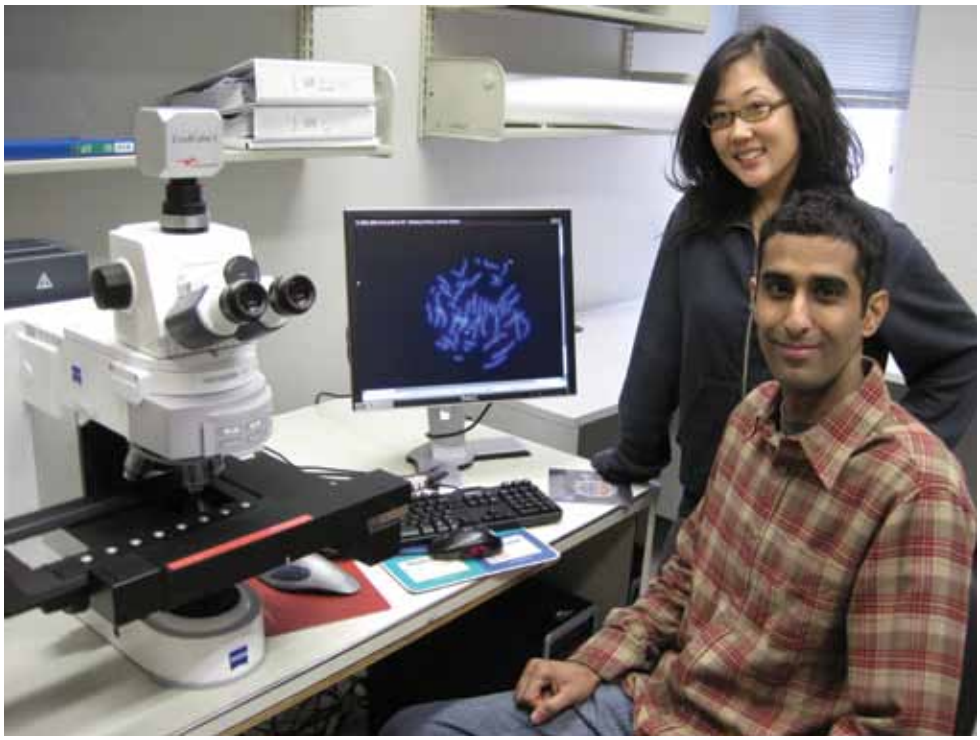


Molecular Diagnostics
Report from the Clinical Scientific Leader, Dr. Joan H.M. Knoll

Molecular Diagnostics (formerly called Molecular Pathology) at LHSC is comprised of Biochemical Genetics, Cytogenetics and Molecular Genetics (which includes Molecular Pathology) and is a member of the Provincial Regional Genetics Program. Each laboratory is headed by a specialized PhD and/or MD with administrative, laboratory and certified molecular genetic and/or cytogenetic technologist staff. The Biochemical Genetics Laboratory (one of 4 in Ontario) provides testing and therapeutic monitoring for inherited metabolic disorders provincially and nationally. The Cytogenetics Laboratory (1 of 11) serves more than 1.6 million people in Southwestern Ontario; and provides routine chromosome analysis/karyotyping and molecular cytogenetic testing for inherited diseases (prenatal, perinatal and postnatal) and cancer. Fluorescence In Sit Hybridization (FISH) testing is performed on many paraffin-embedded tumours specimens which is specialized expertise among cytogenetics laboratories. In the past year, microarray technology has been introduced and validated for congenital chromosome anomalies and will be validated for certain cancers next year. Molecular Genetics (1 of 8) performs a wide variety of gene tests for inherited disorders (eg. hemachromatosis, peripheral neuropathies, cystic fibrosis, etc), mitochondrial disorders, predictive cancer testing (breast cancer, colon cancer), somatic diseases (such as leukemia and lymphoma) and therapeutic monitoring (for leukemia). It serves as a reference laboratories for multiple tests provincially and performs testing nationally. Our clinical tests require licensure through the Ontario Ministry of Health and Long Term Care.

Test volumes and complexity continue to increase significantly each year (10-20 per cent increase for each specialty). The greatest increases are in cancer testing (with more than 50 per cent of the workload associated with the Cancer Genetics Program) but provincial newborn screening and new breast cancer screening regiments continue to increase test volumes in Biochemical Genetics and Molecular Genetics. During this past year, Molecular Genetics participated in the Ontario Breast Cancer Screening Program and saw a substantial increase in the number of patients tested

for BRCA1 and BRCA2 mutations. In Cytogenetics, the greatest increase in test volume also occurred for cancer (ie. for routine chromosome analysis and FISH tests). Additionally, the Cytogenetics laboratory participated in the Canadian Anaplastic Lymphoma Kinase (CALK) clinical trial phase II project for lung tumours.



The number of diseases that can and should be tested at the DNA and RNA level are increasing and the testing strategies and platforms are changing rapidly. Molecular testing for most inherited diseases is advancing to the use of gene panels and high throughput, complete gene sequencing platforms so that many genes can be scrutinized simultaneously. During the past year, we integrated our molecular units. Our challenge is to get investment and financial support for more people (ie. accredited doctorate level specialists to improve our depth of professional coverage and certified technologists) and new technology (automation and next generation sequencing technology). This will allow us to better serve our patient population by keeping pace with the medical and scientific advancements, actively participating in repatriating out-of-country genetic tests, and in anticipating and planning for the future.

Molecular Diagnostics also plays an active role in teaching of undergraduate students, graduate students, medical technology students (from Michener Institute), residents and fellows at LHSC and Schulich Medicine & Dentistry; and contributes to the medical and scientific literature with more than 8 published papers from its' members and numerous conference presentations.

Clinical Laboratories
Reports from Medical Leaders

Medical Microbiology
Report from the Medical Leader, Dr. R. Lannigan

This last year has seen some major changes to the Microbiology Section. We have been able to recruit a replacement microbiologist for Dr. Hussain, who retired. Additional 1.5 positions will also be filled in the near future, bring our compliment up to 4.5 which is more in keeping with an operation of this size. The new faculty will allow us to take advantage of our laboratory expertise and continue with our residency training program.

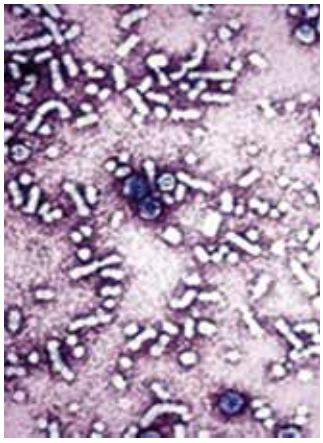
We also were able to purchase new, state of the art, capital equipment (MALDI-TOFF; Mass Spectrometer), for the rapid identification of microorganisms, which will help streamline our workflow and also help support some novel approaches to such programmes as antimicrobial stewardship. We have also had changes on the technical side of our operations in that Sue Milburn, our co-ordinator has moved to Pathology, leaving a gap in our management that is being ably filled by David Schaus. The opportunity to recruit for this position is seen as a plus for the department. We have been able to keep to our budget this year but budget challenges will continue at least for the foreseeable future.

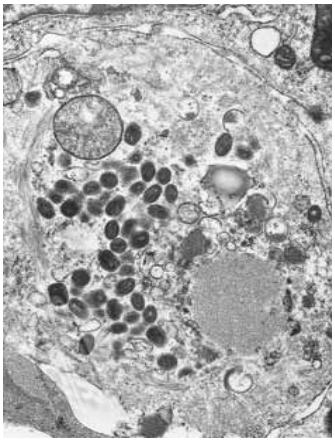
Our section has been strengthened by new recruitment on the medical side, weakened by the departure of Sue Milburn. Opportunities exist for us to exploit our new capital equipment to streamline and improve workflow and support programmes. Threats relate to budget pressures and the strong likelihood that the Computerized Physician Order Entry (CPOE) process that will be deployed in the next budget cycle will increase laboratory utilization at least in the short term.

Program Description / Stats

Staff: 4.5 Medical Microbiologists, 37 MLT's 3 virology MLT's, 8 Microbiology MLA's. 1 Virology MLA. 2 secretarial support.

Facilities: The facilities are located on the 10th floor of B wing at LHSC Victoria campus. It is a city-wide facility. The hours of operation are 0700-2300, 7 days a week. We are a full service Microbiology Diagnostic laboratory service. We handle 240,000 samples of varied types in a year.





Pulmonary Function Laboratory
Report from the Medical Leader, Dr. S. Mehta

This remains a challenging time in the LHSC Pulmonary Function Laboratories for several reasons:

Services are still required at 3 sites, including high-level needs at South Street Hospital, stretching staff thin, and making workload variable. Many clinic days are busy with high patient volumes, whereas other days, without clinics, can be relatively quiet.

Impending retirement of senior full-time technician (October 2012) will challenge us to cover all sites adequately over the next few months till closure of South Street Hospital and consolidation of Pulmonary Function Technology (PFT) services at Victoria Hospital.

New equipment, software, and data gathering/reporting procedures have required much new training, with some glitches/errors in appropriate data management for physician reporting.

We have also made significant gains this past year.

Purchase of new PFT equipment to replace non-serviceable out-of-date equipment. This has allowed us to have up-to-date similar, standardized equipment across all LHSC Pulmonary Function Laboratories, facilitating training of technicians, improving consistency of workflow, and allowing more flexibility with distributing staff across the 3 PFT laboratories.

Wendy Stratton, now in her 2nd year as Coordinator responsible for Pulmonary Function Laboratories, has developed a solid understanding of the laboratories, and has helped us work through important issues, e.g. upcoming moves, staffing deployment and posting/hiring issues.

SWOT analysis

Strengths

- Highly trained, personable staff that not only do great PFT/exercise testing, but also relate to patients very well
- High quality, standardized equipment across all LHSC PFT labs
- High volume service which serves multiple clients: community doctors, LHSC medical services (especially Respirology, Medicine, Cardiology, Neurology, General Surgery, Thoracic Surgery, Cardiovascular Surgery, Hematology, Pediatrics)

Weaknesses

- Multiple temporary moves for the Victoria Hospital Laboratory already, and more upcoming
- Very poor, outdated, non-serviceable equipment for years – largely redressed
- More experienced staff, with several retirements over past few years

Opportunities

- Explore appropriate increased volumes by increasing service to Middlesex community and Southwestern Ontario LHIN

Threats

- New Ministry of Health directive regarding cutting technical fees for labs province-wide; reduced support for laboratories operational costs
- Additional temporary moves for the Victoria Hospital Laboratories upcoming; obviously disruptive to workflow, not ideal
  for patients (difficult access, finding lab, poor state of some physical space), and affects staff morale.
- Need to close PFT laboratories at South Street Campus in January, and integrate high-volume testing needs
- Challenge of aging staff beginning to retire - a number of years has passed since the PFT Laboratories has had a job posting

Looking ahead

- Final new PFT laboratories location at Victoria Hospital to set up and finally settle into a 2-site PFT Laboratories model
- Focus then on integrating PFT laboratories reports into Cerner/power chart Electrontic Patient Records

Program Description/Stats

Staff

Six full time Pulmonary Tech IV, and one casual

Facilities

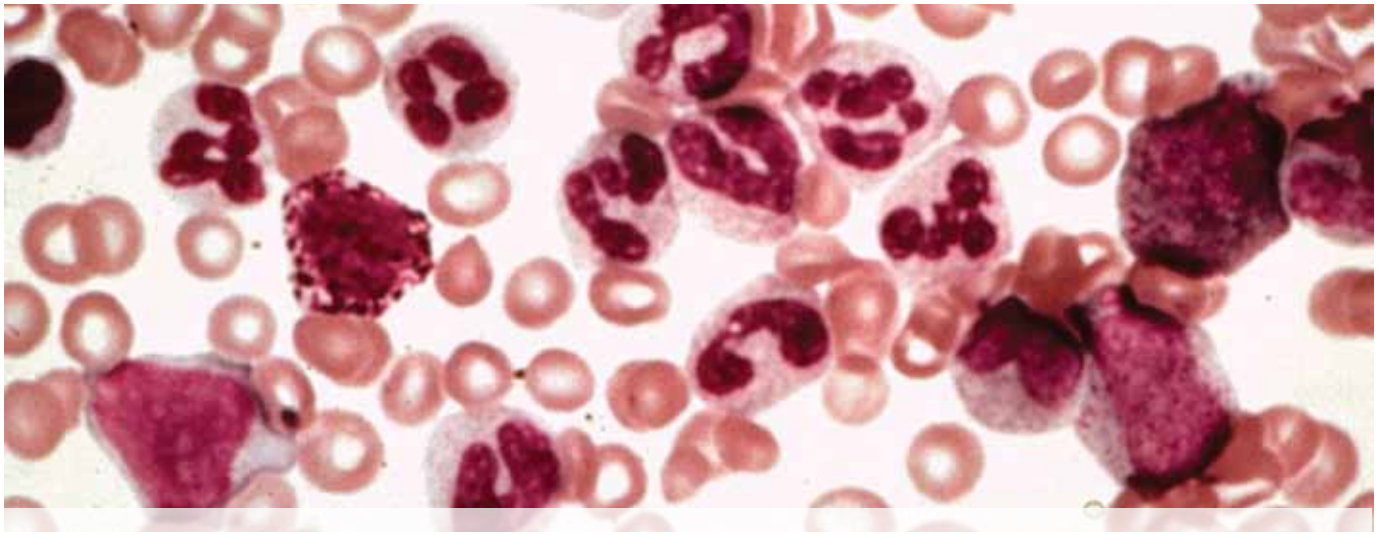
SSC,VH,UC

Hours of Operation

8 to 4, Monday to Friday

Scope of Practice-Pulmonary Function Testing

- Blood gases
- Lung volumes by nitrogen washout or body box
- Spirometry
- Diffusion
- Mips and Meps
- Methacholine
- Stage 1 exercise
- Exercise Induced Bronchoconstriction
- Oximetry
- Six minute walk
- Shunt
- Home O2 assessment



Hematology and Blood Transfusion Laboratories
Report from the Medical Leader, Dr. Ian Chin-Yee

Hematology

Executive Summary

- Installation and verification of 9 Hematology analyzers across three sites (University Hospital, Victoria Hospital, St. Joseph's Health Care)
- Installation and verification of 6 Coagulation analyzers in two sites (VH, UH)
- Validation of Hematology analyzers, involving extensive testing of hardware, software and LIS was performed at VH site
- Educational rounds – for technologist and residents monthly

SWOT analysis

Strengths

- New instrumentation was implemented without any negative impact to the service which allowed for increased productivity and staff reductions
- Strong liaisons with clinical services
- Provincial , national and International leadership in Quality Management Program Laboratory Services (QMPLS) and International Society of laboratory Hematology (ISLH)
- Strong support for training program for hematology fellows in laboratory hematology

Weaknesses

- Loss of managerial and senior experienced staff

Opportunities

- Publication of Hematology and Flow Cytometry and collaboration with basic sciences groups at London Reginal Cancer Program (LRCP)
  (see appended partial list of publications)

Threats

- Reducing budget with increasing consumable costs and personnel costs

Program Description/Stats

Staff

10 FTE's plus Coordinator

Facilities

Located at VH, D Block, space is adequate

Hours of Operation

8 to 5, Monday to Friday with 24 hour on-call

Scope of Practice

All areas provide service for Southwestern Ontario and beyond.

- Hemostasis and Thrombosis
  - o Hypercoaguable Screening
  - o Hemophilia/Factor Deficiency Testing
  - o Platelet Aggregation
  - o Heparin Induced Thrombocytopenia Testing
  - o Monitoring of Anticoagulant Therapy

- Investigational Hematology
  - o Malaria Speciation
  - o Hemoglobinopathy Testing
  - o Anemia Testing
  - o Bone Marrow Testing

- Flow Cytometry
  - o Leukemia/Lymphoma Diagnosis
  - o Fetal Maternal Hemorrhage Screening
  - o Lymphocyte Subset Analysis
  - o Stem Cell Enumeration

Blood Transfusion Laboratories (BTL)

Executive Summary

- Milestone 2, Phase 2 (M2P2): With the transfer of neonatal and obstetrical care to Victoria Hospital the need for transfusion support services was greatly reduced at SJHC. The BTL no longer provides on site testing and currently supports transfusion needs at SJHC utilizing the BTL at both University and Victoria Hospital. Processes have been put in place to ensure urgent or stat needs will be met without impact on patient safety. This change has provided significant cost savings to the department and has allowed the department to reinvest a portion of these savings to purchase additional automation to improve efficiency
- Successful introduction of Prothrombin Complex (PCC)
- Computerized Order Entry for blood products
- Ontario Intravenous Immuno Globulin (IVIG) strategy
- Support for transfusion services at Strathroy
- Successful management of blood product inventory during transition of Canadian Blood Services to Brampton
- OLA accreditation (4 years, maximum award)
- Clinical Trials – ABLE, PREPARES
- Educational program - Regional CME symposium and training for residents – anesthesia, hematology

SWOT analysis

Strengths

- Strong liaison with clinical services – transfusion safety officer, perioperative blood conservation program, medical director
- Representation on Provincial Blood Advisory (ORBCON, OBAC)
- Representation on QMPLS

Weaknesses

- Support for at least full time Blood transfusion medical director
- Capital equipment
- Retirement of senior technologists with loss of expertise

Opportunities

- Regionalization of transfusion services

Threats

- Inadequate support for regionalization
- Ongoing support for stem cell transplantation

Looking Ahead

Increasing number of referral specimens for antibody investigation from region

Program Description/Stats

Staff

28 FTE, 4 casual

Facilities

2 blood transfusion laboratories servicing 3 hospital sites and referral specimens

Hours of Operation

24 hours a day, 7 days a week

Scope of Practice

Blood transfusion services for population of Southwestern Ontario including fetal maternal support to specialized programs in stem cell transplantation

Clinical Biochemistry & Immunology
Report from the Medical Leader, Dr. Victor Prabhakaran

The Professional staffing is stable. The administrative staffing is quite labile with some fluidity still to be addressed. The strength of the laboratories is their continued efficiency in test utilization. Increasing demands in test menu and volumes are being addressed within the current budget. The move to the 10th floor of the B wing of the Victoria Hospital of the Specialty Laboratories and the Biochemists has made operations much more efficient. We continue to enjoy a privileged position as a desirable referral laboratories for client institutions from all across Canada and even from some places in the United States e.g., to our Trace Elements Laboratory.

SWOT Analysis

Strengths

- committed, experienced, professional, administrative and technical staff who value quality above all and are “utilization” conscious almost to a fault

Weakness

- Aging staff

Opportunities

- Fine tuning of our laboratories as a referral laboratory, making them profit centers e.g., Trace Element Labratory (TEL) and Immunology. Also, to enhance partnerships, such as with Roche

Threats:

- The limited resources, including low volume of professional staff, implies just being able to get the clinical work done i.e., put out quality results. Academic activities therefore suffer, although valiant efforts are

made by the Biochemists to keep an active teaching schedule going at Western University Biochemistry. The 3386B Course is the best rated course in all of Biochemistry, including the basic Biochemistry courses.

- Potential loss of aging staff and difficulty replacing them.

Looking Ahead

We are looking forward to anticipated stability in the Administrative Leadership, likely to begin in early January 2013.

Program Description / Stats

Staff

1 MD Biochemist, 4 PhD Biochemists, 1 office staff, 97 Technologists, 45 Technicians and 2 Clerks

Facilities

All of the Specialty Laboratories including Immunology are located on the 10th floor of the B wing of the Victoria Hospital. There are two large Core Laboratories, one at VH and the other at UH. There is also a modest sized Core Laboratories at SJHC.

Hours of Operation

The Core Laboratories operate 24/7 at UH and VH and from 7am to 11pm at SJHC; the Specialty Laboratories work 8 am to 4 pm during regular week days

Scope of Practice

Full service Biochemistry and Immunology Laboratories, which are also referral Laboratories

Acknowledgements

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