

A close-up, high-magnification view of a petri dish containing a bacterial culture. The culture is visible as a complex, branching, and filamentous structure, likely a mold or a dense bacterial colony, growing on a dark agar surface. The petri dish is held by a gloved hand, and the background is dark and out of focus.

RESULTS MATTER...

*Eastern Ontario
Regional Laboratory
Association (EORLA)*

2014/15 Annual Report



About EORLA

History

The Eastern Ontario Regional Laboratory Association (EORLA) is a member-owned, non-profit organization encompassing the operation of 18 licensed, acute-care, hospital-based clinical laboratories that service clinical programs across the Champlain Local Health Integration Network (CLHIN) of Eastern Ontario.

EORLA laboratories provide diagnostic testing to both hospital inpatients and registered outpatients, performing a total of approximately 13 million tests annually. Comprehensive testing in the disciplines of Anatomic Pathology, Biochemistry, Molecular Diagnostics, Transfusion Medicine, Hematopathology, and Microbiology/Virology is performed.

All EORLA laboratories are accredited by the Institute for Quality Management in Healthcare (IQMH) and the Tissue Typing Laboratory at The Ottawa Hospital site is accredited by the American Society for Histocompatibility and Immunogenetics (ASHI). In May 2013, EORLA received full Bone Bank accreditation that is valid for a period of two years.

The EORLA Biochemistry Laboratory at The Ottawa Hospital is a designated facility under the Trillium Gift of Life Network Act.

Purpose

EORLA is a not-for-profit, charitable corporation created for the purpose of enhancing the quality, efficiency, sustainability and effectiveness of Laboratory Services provided to its Members.

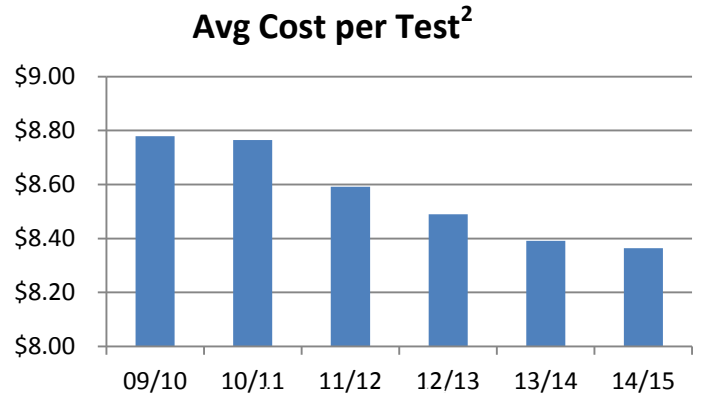
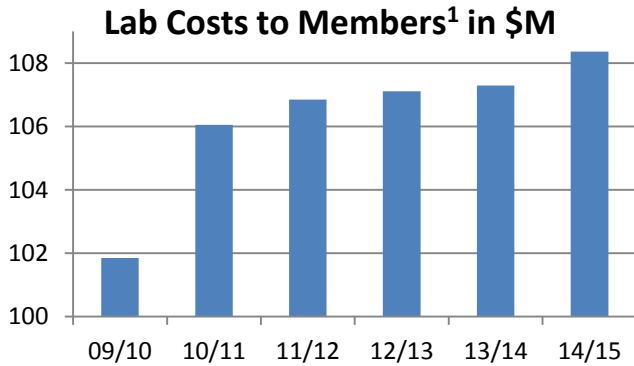
To achieve its purpose, EORLA agrees to deliver high-quality, patient-focused, consistent and efficient Laboratory Services to its members on a cost-effective and cost-recovery basis and also agrees to support the academic mission of those Members who have an academic mandate.

EORLA Member Hospital Sites

The Eastern Ontario Regional Laboratory is made up of the acute care hospitals within the Champlain LHIN. EORLA's 16 Member Hospitals are shown below.

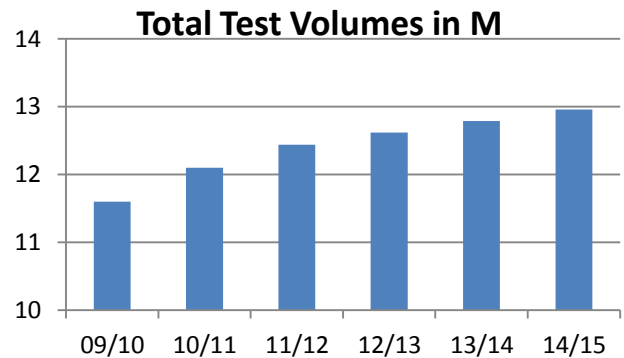


Financial/Operational Trends



¹ For 2009/10 to 2011/12 reflects hospital lab trial balance information. For 2012/13 on reflects EORLA charges to Members plus estimated member depreciation for lab assets

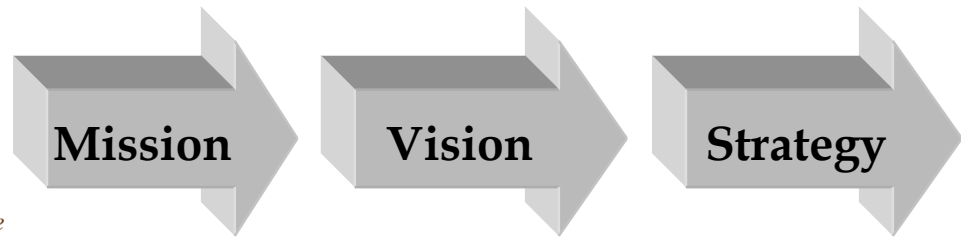
² Includes all expenses including Medical/Scientific Staff and equipment depreciation



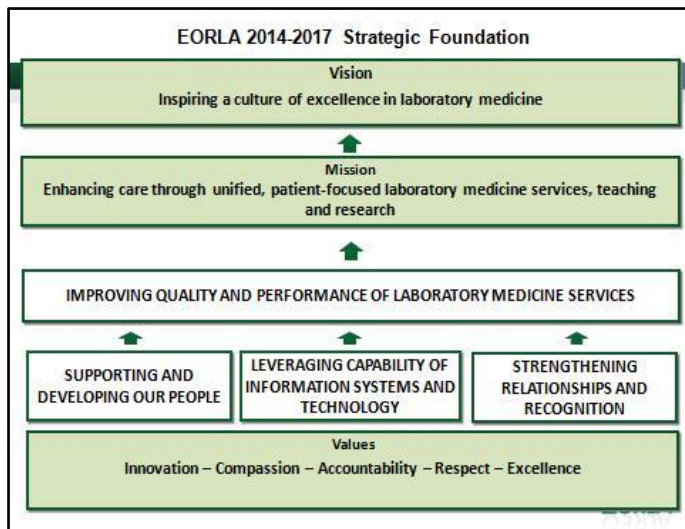
The selected financial data presented below is derived from the financial statements of EORLA, which have been audited by an independent registered public accounting firm.

Fiscal Year Ended March 31

In thousands	2011	2012	2013	2014	2015
Statement of Operations Data:					
Total Revenue	\$2,110.5	\$3,706.4	\$93,528.8	\$109,402.8	\$115,985.0
Total Expense	\$2,110.5	\$3,706.4	\$90,696.0	\$109,231.6	\$113,918.4
Net Surplus / (Deficit)	-	-	\$2,832.8	\$171.1	\$2,066.5
Balance Sheet Data:					
Cash	\$6,784.1	\$6,139.3	7,757.4\$	\$10,709.3	\$6,840.0
Total Assets	\$18,881.7	\$18,415.8	\$33,542.9	\$36,269.0	\$37,745.6
Net Working Capital	(\$7,051.2)	(\$6,855.3)	(\$5,867.5)	(\$6,008.7)	(\$3,615.4)
Total Net Assets	-	-	\$2,832.8	\$3,004.0	\$5,070.5



We are pleased to report that the formal strategic planning process has been completed and we have moved into the metric development and monitoring stage. Throughout the year the development and validation process sought broad feedback and engagement. Being the first strategic plan, broad participation was essential to our success. Over the final quarter of 2014-15 we incorporated the regional discipline leaders' long range plans into the three year strategic directions horizon. Following this, the 2015-16 operating plan was fully linked to our strategic directions.



The plan will guide all of our actions. While this represents a significant milestone for us, in these times of significant change it is important to view strategic planning as an ever green process, so the leadership team will continue to evaluate and closely monitor directions to ensure alignment is maintained.

The vision reflects our aspiration as a team and the work we do in continuous pursuit of excellence in laboratory medicine. Guided by our values, acting as one team in everything we do, we hold a unified view of what is possible. We make a difference in patient care; we bring value to our Members. Our vision is an affirmative view of how we work together, how we interact with our member organizations and that it is possible to build an outstanding regional laboratory.

Our mission articulates the motivation that we individually hold as we come to work each day. We believe that everything we do is for the sole purpose of enhancing the care of the patients in our member hospitals. The use of the word 'unified' is deliberate as we feel it offers a uniquely EORLA element: it reflects that we are a regional network and that we work as a unified group regardless of where we are within the network are one team, and while we are an independent organization, we are in synchronicity with our member organizations, playing a vital role in the team of care.

Our values are the shared beliefs that we have agreed are most important to us and that we collectively hold. They define our professional relationships and our professional behaviours. We look to our values of Innovation, Excellence, Compassion, Accountability and Respect to serve as the broad principles guiding everything we do.

The Strategic Directions are the broad change themes that we need to pursue, as a unified team to move towards our vision. These are the priority areas that will address the critical challenges that affect the ability of EORLA to achieve our vision. They are designed to augment and build on our strengths and to control and mitigate identified weaknesses; further, they enable EORLA to respond to the external threats and ultimately enable us to bring value to our Members through identified opportunities.

We have identified four key areas that require our focus. As our first strategic plan we believe that these respond to the feedback we received from our various stakeholders. Our plan has a three-year horizon and therefore we took a very realistic approach to the scope of the activities that we would seek to complete in this period. Each direction has strategic targets and these have been subsequently linked to our 2015-16 operational work plans. Work is underway to finalize the metrics and monitoring process by which we will assess our progress.

Tremendous amounts of work, by many in our organization enable this effort to be completed. We want to thank everyone for their input and look forward to executing on our plans.

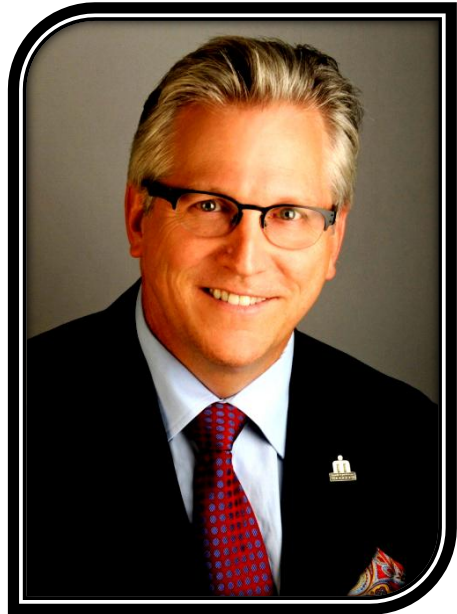
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Welcome from the Chair of the Board of Directors, Dr. Bernard Leduc

The Eastern Ontario Regional Laboratory Association (EORLA), now in its third year of operation, has continued its work towards full integration of Hospital Laboratory Medicine Services in the Champlain Local Health Integration Network (LHIN). Our spectrum of operations ranges from small rural hospitals to large Academic Health Sciences Centers. Our mission is to enhance care through unified, patient-focused laboratory medicine services, teaching and research.

Our first strategic plan has set the orientations for the next three years in order for us to reach our vision of inspiring a culture of excellence in laboratory medicine. Working with the leadership team, we have made significant progress in establishing standardized Quality Indicators across the 18 laboratory sites. This enables us to benchmark performance and share best practices. We also are proud to report that we have successfully completed a cycle of laboratory accreditation by the Institute for Quality Management in Healthcare with an average compliance of over 95%.



We are also making significant progress in providing laboratory orders & results to the Ontario Laboratory Information System (OLIS) data repository. Six of our sites are now live in OLIS and we should complete this important project in the next year. This allows physicians anywhere in the province to access our results, providing better quality of care. As we are making progress towards complete regional integration of services, standardization and quality improvement, we are also conscious of our Member Hospital pressures in the current fiscal environment.

All of this could not have happened without the dedication, hard work and constant engagement of more than 900 employees, medical and scientific staff. I want to recognize the work of the EORLA leadership team and that of my colleagues on the Board of Directors. All are living our values of Compassion, Accountability, Respect, Excellence, and Innovation to deliver outstanding patient-centric medical laboratory services in a fiscally responsible manner.

I hope that you will enjoy reading about our progress in this report.

Thank you,

Bernard Leduc

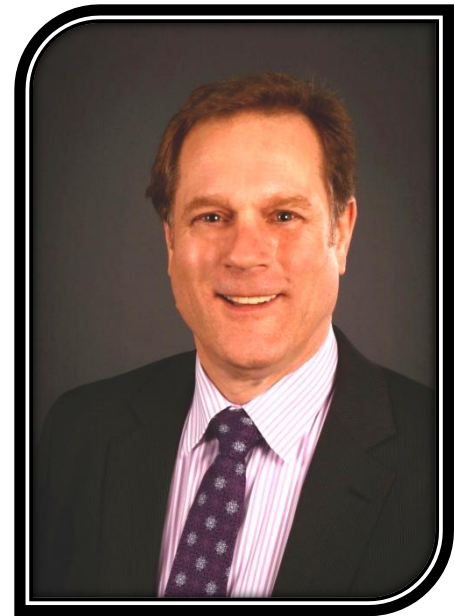
EORLA Board of Directors for 2014/2015

Board Member	Professional Title	EORLA Governance Appointments
Mr. Jeffrey Dale	CEO, Snowy Cloud Inc.	Finance and Audit Committee - Member, Community Board Member
Ms. Jeanette Despatie	President & CEO, Cornwall Community Hospital	Patient Safety and Quality Committee - Member, Board Member approved by the Eastern Regional Hospitals
Mr. Patrick Dion	Managing Partner, Greenbridge Consulting	Governance Committee - Member, Community Board Member
Mr. Eric Hanna	President & CEO, Arnprior Regional Health	Patient Safety and Quality Committee - Chair Board Member approved by the Western Regional Hospitals
Dr. Bernard Leduc	President & CEO, L'Hôpital Montfort	Board - Chair, Governance Committee - Chair, Board Member approved by L'Hôpital Montfort
Mr. Alex Munter	President & CEO, Children's Hospital of Eastern Ontario	Governance Committee - Member, Board Member approved by Children's Hospital of Eastern Ontario
Dr. Sherry Perkins	Head and Laboratory Director, Division of Biochemistry, The Ottawa Hospital, Acting Head, Division of Biochemistry, CHEO	EORLA Medical and Scientific Advisory Committee (EMSAC) - Member, Governance Committee - Member, Board Member approved by the University of Ottawa
Dr. Virginia Roth	Director, Medical Affairs and Patient Advocate, The University of Ottawa	Patient Safety and Quality Committee - Member, Community Board Member
Mr. Tom Schonberg	President & CEO, Queensway-Carleton Hospital	Board - Vice-Chair, Governance Committee - Member Board Member approved by Queensway-Carleton Hospital
Dr. John Veinot	Head, Department of Pathology and Laboratory Medicine, The Ottawa Hospital, CHEO and The University of Ottawa	EORLA Medical and Scientific Advisory Committee (EMSAC) – Chair Board Member appointed as EORLA Chief, Medical and Scientific Officer
Mr. Nicholas Vlacholias	Chief Financial Officer, Children's Hospital of Eastern Ontario	Board - Secretary-Treasurer, Finance and Audit Committee - Chair, Community Board Member
Mr. Cameron Love	Executive Vice-President, Chief Operating Officer, The Ottawa Hospital	Finance and Audit Committee - Member, Board Member approved by The Ottawa Hospital

A Word from the CEO, Craig Ivany

Laboratory medicine plays a critical role in the delivery of health care. Up to 70% of a medical chart can be laboratory results, 85% of all medical decisions rely on laboratory information and 100% of all cancers diagnosis requires a laboratory pathology report. With such a significant role, it may surprise many to learn that lab medicine represents less than 4% of the provincial health care budget. EORLA contributes to the successful delivery of health care by providing our 16 member hospitals with a high quality and cost effective laboratory system.

EORLA is not a typical laboratory integration model. When the health leaders of the Champlain LHIN conceived the idea of EORLA in the early 2000s, they envisioned this model to be greater than the sum of its parts: a laboratory system that brings value to all of its members from Cornwall to Deep River and that supports the uniqueness of each organization. The leaders should be applauded for their foresight, as they created an engine of change that has the capability to provide sustainable, high quality laboratory system in an evolving provincial and global landscape.



While we have a blueprint for EORLA, much of what we are doing requires all of us to think differently about the delivery of service and to drive change. In pursuit of this change we have to take care to understand the impact on our staff and our capacity to absorb change. We can never lose sight of the strong commitment our team holds for patient care and it is as much for them, as it is for our member hospitals and their patients, that we must be successful.

2014 – 2015 was a challenging year that tested our mettle, with a great deal of focus on improving the cost effectiveness of our operations. Through this document you will find many examples of our work. I would like to highlight just a few. At the beginning of the year we unveiled revised quality metrics, which provide us and our members with the right tools to focus on enhancing laboratory quality. In July, we extended our Anatomic Pathology system to Cornwall, an effort that required complex coordination of many key stakeholders. Our new Molecular Oncology Diagnostic Laboratory was established in partnership with TOH and OHRI and commenced testing in February. The Microbiology Team extended its service to 24 hour/7 day service and added MALDI-TOF testing, both enabling improved turnaround time to support antimicrobial stewardship. The EORLA team supported Deep River and Glengarry to improve community laboratory services in partnership with Lifelabs. Of final note, we successfully completed the Institute for Quality Management in Healthcare (IQMH) accreditation audit cycle with the completion of the TOH laboratories audit in October. Throughout EORLA we achieved an average compliance of over 95%.

In closing, a sincere thank you is sent to everyone who is a part of the EORLA effort. To our staff and medical and scientific teams, for living our mission and values each day and your contribution to delivering high quality patient care in an ever changing environment, we are grateful for everything you do. To our Member organizations and clinical staff, thank you for your continuing support, guidance and feedback which will help us better meet your needs. Finally, to the EORLA Board of Directors, thank you for your insight, perspective and commitment providing us the direction to achieve our mission.

Craig Ivany

Chief Medical and Scientific Officer Note, Dr. John Veinot

Another year seems to have flown by quickly. We faced many challenges this year and celebrated many achievements and successes. However, it was not an easy year. Hospitals had budget constraints and we did our part to help continue to provide the best patient care. We worked together to become ready for possible Ebola patients. Our leadership in this area was something to be proud of, as the plans developed in our region were adopted as a model elsewhere.

The medical scientific and the operations staff continue to work together. We continue to optimize ways of communication, and better ways to help each other. We work together to serve our members, patients and their families. Congratulations to the team! Together you are making a difference.

We see the strength of EORLA as helping each other. Movement of some services has occurred this year, and we continue to work on improving service to our partners. There is much interest from outside our organization to learn how it is we work well together. Great teams consisting of great dedicated people is key.

Strategic planning was very active this year. There was a real effort for consultation during the process. Thank you for participating and sharing your opinions. As a result, under the direction of the Regional Discipline Leads, the regional discipline plans are fully aligned with the plan and we look forward to further refinements and enhancements going forward.

EORLA Pathology and Laboratory Medicine operate out of approximately 18 sites. Several of these are academically oriented, some are community hospital oriented, some deliver extensive regional care, and several serve our Francophone community. Every site is unique, and all are important partners in EORLA. Each site is committed to, and consistently delivering excellence in patient care through high quality test results. As a laboratory network we offer anatomic pathology, biochemistry, microbiology, virology, hematopathology, transfusion medicine, tissue typing, forensic pathology, and genetics services to our region and beyond. Molecular oncology, a new service, was developed this year and we are excited to see the impact this will have on patient care.

We continue to transfer medical and scientific staff over to EORLA. This is almost complete. Working as a regional team is now possible. Our Regional Discipline leads have worked with their groups on quality measures, standardization and planning of service delivery.

We had many academic achievements this year. We participated in consensus conferences, developed provincial and national guidelines and presented papers and posters at provincial, national, and international meetings. Several staff have played leadership roles provincially, nationally, and internationally within our organizations. Several participated in leadership training, and quality and patient safety training.

In the education realm we make large contributions to the undergraduate medical teaching curriculum, residency training, training of fellows, and in the teaching in the Faculty of Science and Health Sciences. We have several residency programs in anatomic pathology - general pathology, medical microbiology, and hematopathology and transfusion medicine. We have participated in several reviews of our programs, all with success. Our Department at the University, Reference laboratories, and EORLA had an external review this year and results are anticipated soon. We know there will be excellent suggestions made to help us achieve even greater successes.



Pathology and Laboratory Medicine Grand Rounds is going well, now comprising a combination of talks from medical and scientific staff as well as operations staff. Planning for next year is underway by Dr. Alfredo Walker and his team. Dr. Chi Li has planned another excellent Research Day for the Department. Several continuing professional development courses were given this year and were well received.

These accomplishments are only possible through the hard work from all of you. People are our most valuable resource. In the coming year we will try to focus on wellness, communication and accountability.

Thank you again for your dedication. Together we make a difference.

We will continue to provide excellent pathology and laboratory medicine services to our patients and their families.

JOHN P. VEINOT - MD, FRCPC

- Chief Medical and Scientific Officer, EORLA
- Department Head/Medical Director, Department of Pathology and Laboratory Medicine – The Ottawa Hospital
- Department Head/Medical Director, Department of Pathology and Laboratory Medicine – Children's Hospital of Eastern Ontario (CHEO)
- Chairman, Department of Pathology and Laboratory Medicine, University of Ottawa

Dr. Veinot is a Cardiovascular Pathologist at the Ottawa Hospital, CHEO, University of Ottawa and the University of Ottawa Heart Institute where he has worked since 1994. He is a Full Professor at the University of Ottawa and a Clinical Investigator at the Ottawa Hospital Research Institute. He is past - President of the International Society for Cardiovascular Pathology.

Dr. Veinot completed his undergraduate training at Acadia University, pursued Medical School at Dalhousie Medical School and completed a rotating internship at Victoria Hospital, London Ontario. He did a Residency in Anatomical Pathology at Queen's University, Kingston, Ontario. Dr. Veinot completed his Fellowship in Cardiovascular Pathology at the Mayo Clinic, Rochester MN.

In September 2010, Dr. Veinot took on the role of Chairman of the Department of Pathology and Laboratory Medicine at the University of Ottawa, Department Head at The Ottawa Hospital and the Children's Hospital of Eastern Ontario and the Medical Scientific lead of the Eastern Ontario Regional Laboratory Association (EORLA).

EORLA Laboratory Medical/Scientific Staff

2014/15 was an extremely busy year for EORLA's medical/scientific team as we underwent Laboratory Accreditation - IQHM Peer Assessments at all sites with success. Under the combined requirements of IQHM and the Ministry of Health and Long Term Care Laboratory Licensing and Specimen Collection Act, our dedicated team of individual hospital site laboratory medical/scientific directors are ultimately responsible for the quality and safety of laboratory services.

Our medical/scientific staff take pride in the clinical, analytical and administrative expertise and leadership they bring to EORLA's unique regional laboratory model. From the large urban academic sites to the rural hospital locations, our Biochemists, Hematopathologists, Microbiologists, Pathologists and Virologists strive to ensure that all patients and physicians within the Champlain LHIN hospital network receive timely and equal access to the same high quality laboratory medicine services. Sub-specialty 24x7 on-call support is provided to the entire region. Physicians and other health care providers have full access to a large team of laboratory medical/scientific staff with an extensive breadth and depth of expertise in almost all areas of laboratory medicine.



Photo: Kyla Norris

Over the last year, under the leadership of the Regional Discipline Heads and Dr. Nathalie Lepage-Chair EORLA Quality Management Subcommittee, the medical/scientific teams have finalized quality indicators to ensure EORLA is aligned with clinical program needs and current evidenced based standards.

Several EORLA member hospitals implemented new Laboratory Information Systems (LIS). Ensuring these new LIS's are configured appropriately to accurately communicate laboratory results has been a major undertaking, as has the post go live stabilization of these new systems

The medical/scientific team has worked hard to ready EORLA's Ontario Laboratory Information System (OLIS) initiative to ensure the quality and integrity of laboratory result transmission to the OLIS provincial repository. Most sites are completed- a huge task.

The Medical Scientific staff participated in EORLA's strategic planning and each Regional division has prepared a multi-year plan to deliver quality care to the region.

Regional Discipline Heads

In 2012, Regional Discipline Heads were appointed in the four main areas of laboratory medicine. As leaders, they are responsible for ensuring that the region's services in their discipline are aligned, focused and delivering the high quality, patient focused care that defines EORLA. Their expertise and knowledge is supporting staff throughout EORLA's Member Hospitals.

Anatomical Pathology



Dr. Diponkar Banerjee
MBChB, FRCPC, PhD
Regional Discipline Head –
Anatomical Pathology

What is Anatomical Pathology?

Anatomical pathology is a medical specialty that is concerned with the diagnosis of disease based on the gross, microscopic, chemical, immunologic and molecular examination of organs, tissues, and whole bodies (autopsy). Pathology is important because 70-80 per cent of health care decisions involving diagnosis or treatment are based on a pathology investigation. 100 per cent of cancer treatment plans require a pathologist's report.

Anatomical Pathology

The Division of Anatomical Pathology provides formal and informal medical and technical support to EORLA member hospitals, in the sense that it seeks to provide excellent, world class medical care for the patients within the Champlain LHIN. It also supports the teaching role of the University of Ottawa, with regards to undergraduate, graduate student and resident training, as well as supporting the EORLA technical and medical staff training. The division also supports and encourages research by staff members and residents.

The Division of Anatomical Pathology issues reports for over 94,000 surgical pathology cases, 21,000 cytology cases, 300 hospital autopsies and almost 600 forensic autopsies annually.

One of the other primary services provided by the division is consultations to colleagues in the region. There are some 1,500 consults done a year received from within the Ottawa region, within the province of Ontario and other provinces.

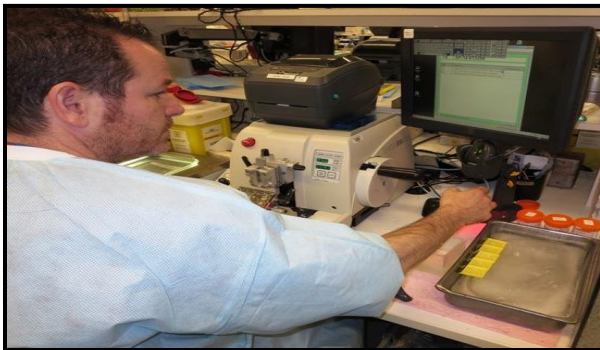
Subspecialization

The Division of Anatomical Pathology at the Ottawa Hospital is separated in the surgical pathology services and the forensic/autopsy services. Due to the uniqueness and licensing agreements, forensic pathology services are operated separately from the hospital pathology service. The anatomic surgical pathology service encompasses all surgical pathology subspecialties: Cytopathology, Neuropathology, Hospital autopsy and frozen section services. Within the surgical pathology service neuropathology is also separate, based on license requirements.

All other subspecialties are less strictly separated, and most pathologists in the remaining service cover 2 or 3 subspecialties. The subspecialties include:

- Neuropathology
- Cardiac Pathology
- Lung/Thoracic Pathology
- Breast pathology
- Cytopathology
- Gyne pathology
- GU pathology
- Ophthalmic Pathology
- GI pathology
- Liver pathology
- Dermatopathology
- Lymph node pathology
- Renal pathology
- Bone/ soft tissue/musculoskeletal pathology
- Ear, nose, throat and endocrine pathology
- Molecular Oncology Diagnostics

EORLA Division of Anatomical Pathology



Part of cutting process – Histology. Photo provided by Dr. Harman Sekhon



Part of embedding process – Histology. Photo provided by Dr. Harman Sekhon

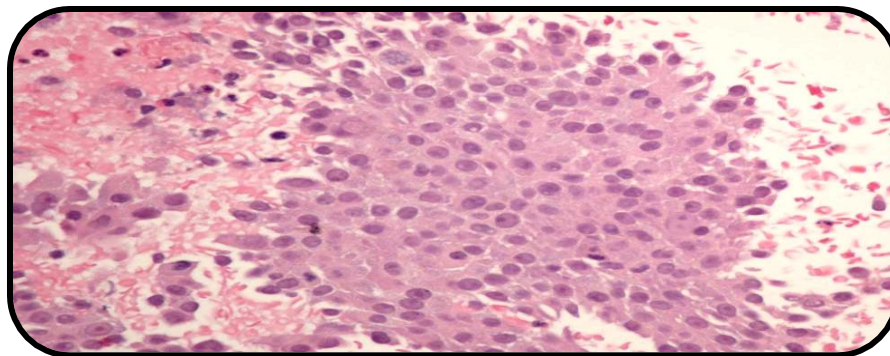


Image displays diagnosis of Primary Lung Adenocarcinoma. Image provided by Dr. Harman Sekhon.

Cancer Care Ontario Synoptic Reporting Indicators

EORLA AP Division rate of issuing synoptic reports was 95.2% (The Provincial Average was 92.8%) as of December 2014, and the report completeness rate was 96.4% (The Provincial Average was 91%).

Teaching at the University of Ottawa

Over 450 hours of undergraduate teaching plus additional hours of graduate and postgraduate teaching were provided by members of the Division in 2014.

Research Funding, Abstracts and Publications

Despite the very high clinical service loads, members of the Division presented 22 abstracts at National and International Conferences, published 41 peer-reviewed articles in journals. Collectively, the Division brought in **over 2 million dollars** in research funding as principal or co-investigators. Several were invited speakers at National and International Conferences, organised symposia and chaired scientific sessions.

Clinical Service

The Division of Anatomical Pathology, operating out of 5 sites, reported on over 94,000 surgical pathology cases, over 21,000 cytology specimens and performed over 380 hospital autopsies and almost 600 forensic autopsies (Table 1).

TABLE 1

Site	Surgical Cases reported	Cytology Cases Reported	Hospital Autopsies	Forensic Autopsies
Children's Hospital of Eastern Ontario	4,028	N/A	113	12
Cornwall Community Hospital	4,834	687	N/A	N/A
Hôpital Montfort	14,307	0	3	N/A
The Ottawa Hospital	51,945	17,011	164	579
Queensway Carleton Hospital	19,466	4,064	9	N/A
Total	94,580	21,762	289	591

Biochemistry



**Dr. Sherry Perkins, PhD
Regional Discipline Head –
Biochemistry**

Dr. Sherry L. Perkins is currently the Head of the Division of Biochemistry, Medical/Scientific Director for LIS and Pre & Post Analytical Processes and Medical/Scientific Co-Director for Point of Care Testing at the Ottawa Hospital. In January 2014 she was appointed Acting Head of Biochemistry at The Children's Hospital of Eastern Ontario.

She is an Associate Professor in the Departments of Pathology and Laboratory Medicine and Obstetrics and Gynecology at the University of Ottawa. She is a past president of the Ontario Society of Clinical Chemists and of the Canadian Society of Clinical Chemists. She has received numerous awards and recognition for her administrative leadership at the local, provincial and national level.

Dr. Perkins has witnessed firsthand the evolution of the Champlain LHIN region laboratory system. She served as the last Chairman of the Laboratory Coordination Program (LCP), a voluntary regional laboratory system which had served Eastern Ontario for over 30 years. In 1998, the responsibility for coordination of regional laboratory services was transitioned from the LCP to EORLA and Dr. Perkins was appointed the EORLA Project Director and subsequently chair of the East 1 Regional Coordinating Committee (2001- 2006). She is currently a member of the EORLA Board, EORLA Governance Committee and EORLA Medical Scientific Advisory Committee (EMSAC) and served for over 10 years as the Chair of the EORLA Biochemistry Discipline Specific Working Group.

In addition to her experience within the Academic Health Sciences Centers, Dr. Perkins has developed a balanced perspective and understanding of the rural and community environments through her roles as Laboratory Medical/Scientific Director and/or Biochemistry Consultant at various hospitals throughout the Champlain Local Health Integration Network. Dr. Perkins also has an active research program in partnership with clinical colleagues in the Department of Obstetrics and Gynecology exploring the relationship of biochemical markers to maternal and fetal outcomes.

What is Biochemistry?

Biochemistry

Biochemistry, or more specifically clinical biochemistry, is the analysis of biochemical compounds in body fluids, primarily blood, serum and urine.

Why is Biochemistry important?

Biochemical analysis of body fluids helps physicians diagnose, monitor and manage many different diseases. For example, a physician may request a plasma glucose test to diagnose or monitor diabetes. Cholesterol testing is commonly done to assess a patient's risk for developing heart disease. Serum enzymes may be measured to diagnose and monitor liver diseases such as hepatitis. Measurement of thyroid hormones is used in the diagnosis and management of thyroid disorders. Therapeutic drug monitoring involves the measurement of the concentration of specific drugs in patient plasma to ensure the patient is receiving optimal drug dosage in areas such as anti rejection treatment post organ transplant and antibiotic treatment for infections. Tumour markers such as PSA, CA-125 and CEA are measured to help monitor cancer patients response to treatment.



A blood gas analyzer. Photo provided by Dr. S. Perkins

Biochemistry is the largest of the Laboratory Medicine subspecialties in terms of menu and volume of tests performed accounting for over 50% of the total tests performed in the region. A vast array of STAT, routine, and highly specialized laboratory investigations are provided 24 hours a day, seven days a week. These include blood gases, electrolytes, enzymes, metabolites, lipids, cardiac markers, therapeutic drug monitoring, toxicology, hormones, tumour markers, immunology/autoimmune investigations, and markers of bone metabolism.

The Division of Biochemistry at the Ottawa Hospital serves as the biochemistry reference laboratory for EORLA and provides province-wide and nation-wide services to other health care facilities, hospitals and community laboratories.

In addition to providing clinical interpretation and day to day direction of the analytical activities of the laboratories, the Biochemists provide clinical direction for Point of Care Testing, Pre and Post Analytical processes (phlebotomy, specimen receiving, accessioning) and laboratory information system at The Ottawa Hospital and many of the other EORLA sites.

Over the last year, Biochemistry teams across the region have been focused on a number of major initiatives: implementation of new laboratory information systems (LIS) at several hospitals, configuration of LIS's to transmit results to the Ontario Laboratory Information System (OLIS) and successful completion of the Ontario Laboratory Accreditation Peer Assessment for all 16 EORLA member hospitals. These activities will continue through the next year along with reviews and re-engineering of specimen procurement and processing to leverage the enhanced functionality of the new LIS's to improve patient flow within the member hospitals.

Major advancements have been made in the development of an integrated Point of Care Testing (POCT) model at The Ottawa Hospital which has lead to the electronic transmission of most POCT results to the electronic health record thus providing care teams with full access to results. This POCT integration model will be rolled out to other sites over the next few years.

The Biochemists are continuing to take a leadership role in ensuring appropriate laboratory utilization. Working collaboratively with physicians and clinical programs and leveraging the LIS's and advanced informatics technologies the combined laboratory and clinical teams will focus on opportunities to improve laboratory utilization including setting testing algorithms and protocols to complement the Ministry of Health and Long Term Care's Quality Based Procedures.

Regional standardization of laboratory processes will continue as sites roll out a new patient correlation and cross over validation protocol for new reagent lots. Instrument specific pediatric reference intervals will be introduced at all sites under the direction of Drs. Natalie Lepage & Julie Shaw, EORLA's representatives on the Canadian CALIPER pediatric reference interval project. Analytical priorities will include (supervising Biochemist): completion of the implementation of new state of the art integrated autoimmune instrumentation (Dr. Ron Booth), replacement of High Performance Liquid Chromatography equipment and implementation of Mass Spectrometry analytical services at The Ottawa Hospital (Dr. Matthew Henderson) and regional standardization of autoverification (Dr. Christopher McCudden).

Academic activities within the Division of Biochemistry have increased significantly over the last couple of years and now include formal and informal elective rotations for non-laboratory residency programs including Rheumatology, adult and pediatric Endocrinology, Hematology, Internal Medicine and Critical Care Medicine. Under the leadership of Dr. Julie Shaw, the biochemistry component of medical laboratory technologist training program has been enhanced. Undergraduate medical student electives will be expanded over the next year.

The EORLA program has become a popular elective destination for clinical biochemistry fellows from the McMaster and University of Toronto programs who enjoy the opportunity to visit and experience the day to day operations and witness the roles and responsibilities of a high functioning team of Biochemists. Other teaching enhancements have included regular "lunch and learn" rounds for biochemistry staff. The Division continues to actively participate in the Canadian Society of Clinical Chemistry's biweekly "Education Roundtables" providing staff with access to high quality national and international speakers on a wide variety of contemporary topics.



Automation line and Biochemistry analyzers at The Ottawa Hospital. Photo provided by Dr. S. Perkins.

Hematopathology



**Dr. Antonio Giulivi
MD, FRCP(C)
Regional Discipline Head –
Hematopathology, Transfusion
Medicine and Tissue Typing**

Dr. Antonio Giulivi is the Regional Discipline Head for Hematopathology, Transfusion Medicine and Tissue Typing at EORLA. He is also Associate Professor, Department of Pathology and Laboratory Medicine, Faculty of Medicine and Division Head, The Ottawa Hospital, General Campus, Hematology and Transfusion Medicine. Dr. Giulivi is also the Director Hemopoietic Stem Cell and Therapeutic Apheresis Division at Canadian Blood Services.

A licensed medical doctor in Canada and Italy, Dr. Giulivi has an extensive wealth of knowledge in Haematological Pathology, Oncology and Transfusion Medicine. As part of EORLA, he brings expertise in the fields of Hematopathology, Stem Cell Collection and Processing and Transfusion Medicine Stem Cells as well as Infectious Diseases related to blood transfusions. He is actively engaged in research related to Cyro Preservation and Fibrin Glue.

Prior to joining EORLA, Dr. Giulivi served extensively for the Center for Infectious Disease Prevention and Control and the Canadian Red Cross. He has been the Director for the Department of Haematology at both The Ottawa Hospital and the Queensway Carleton Hospital.

What is hematopathology?

Hematopathology is focused on the study, investigation, diagnosis and therapeutic monitoring of disorders of blood, blood-forming elements, hemostasis and immune function in adults and children.

What does a Hematopathologist do?

Using components of immunology, biochemistry, molecular pathology, and genetics, hematopathologists to investigate and monitor clinical disorders. Their specialties are in the area of:

- blood elements
- blood forming organs
- hemostatic function
- transfusion therapy

Specialists in hematopathology have an important role to play in the development of standards and guidelines for optimal utilization of diagnostic laboratory investigations and blood or blood product transfusions.

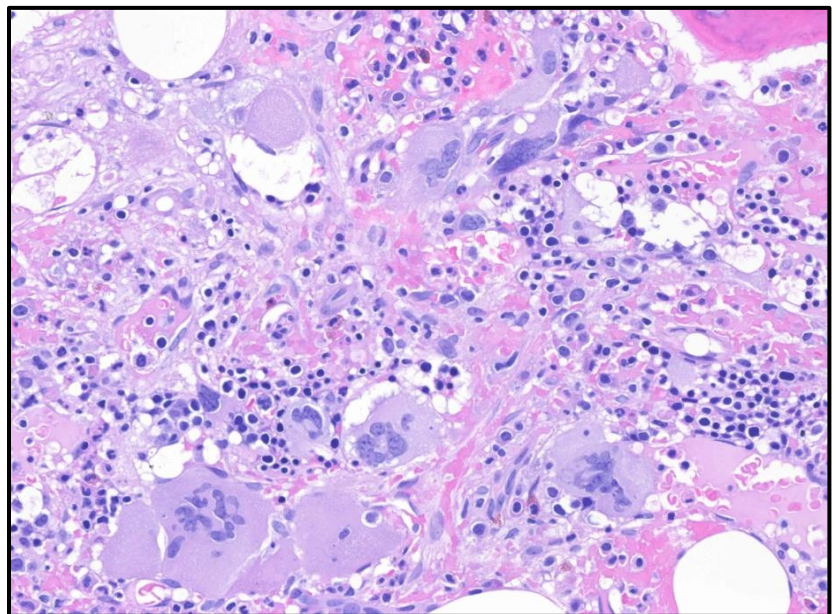
Hematopathology, Transfusion Medicine and Tissue Typing

The Division of Hematopathology and Transfusion Medicine is distinct within the Department of Pathology and Laboratory Medicine, in that it provides both diagnostic services as well as therapies in the form of blood and blood products for transfusion. Hence, the team's aims are always dual - to provide accurate and timely diagnoses in hematologic testing and to provide safe and adequate transfusion therapies. The Division of Hematopathology and Transfusion Medicine is made up of the following sections:

- Routine Hematology;
- Special Hematology;
- Flow Cytometry;
- DNA Lab;
- Tissue Typing; and
- Transfusion Medicine.

The Division also is responsible for two (2) recognized Canadian University Programs; Hematopathology Residency Training Program and Transfusion Medicine Residency Training Program.

The Division is composed of five (5) Medical personnel and one (1) Scientist. Each medical staff has their own expertise and their own mandate for the region. For example, Dr. Elianna Saidenberg is responsible for Transfusion Medicine, Dr. Luke Shier handles all Morphology issues, Dr. Ruth Padmore handles teaching for the region, Dr. Zhaodong (Mike) Xu handles Quality Assurance and QMP-LS, Dr. Jain Ping Li is responsible for Tissue Typing and DNA and Dr. Giulivi is the Head of the Division with expertise in the areas of Transfusion Medicine and Stem Cells.



This image shows abnormal megakaryocytes in the bone marrow biopsy of a myeloproliferative neoplasm. Photo provided by Dr. L. Shier

We are extremely proud of the diagnostic services we provide to the EORLA region. Each of our five Hematopathologists provides consultation services to a regional hospital's or hospitals' Hematology laboratories to help ensure quality reporting of routine Hematology testing such as complete blood counts and basic coagulation testing. This is done through regular visits to the labs and review of their internal quality control measures. Additionally, each Hematopathologist Consultant participates in the laboratories' external quality assessment programs such as QMPLS and CAP. Additionally, abnormal test results requiring Hematopathologist review such as abnormal blood films are reviewed at The Ottawa Hospital, General Campus each day. In this way, we ensure that serious morphologic diagnoses of blood problems are made quickly, to ensure patients receive appropriate therapy. All of our Hematopathologists also provide consultation services, interpreting bone marrow aspirates and biopsies performed in EORLA regional hospitals. This invaluable service enables expert diagnostic input on complex hematologic problems.

In addition to consultation to regional hospitals on routine hematologic testing, The Ottawa Hospital site of EORLA, also acts as a referral centre for multiple specialized hematology tests. Chief among these is flow immunophenotyping for hematologic malignancies. Samples of peripheral

blood, bone marrows and tissues, are received from throughout the region for analysis for presence of leukemias, lymphomas and other malignant hematologic conditions. Testing for benign blood disorders such as hemoglobinopathies and hemostatic disorders, are also performed at The Ottawa Hospital site.

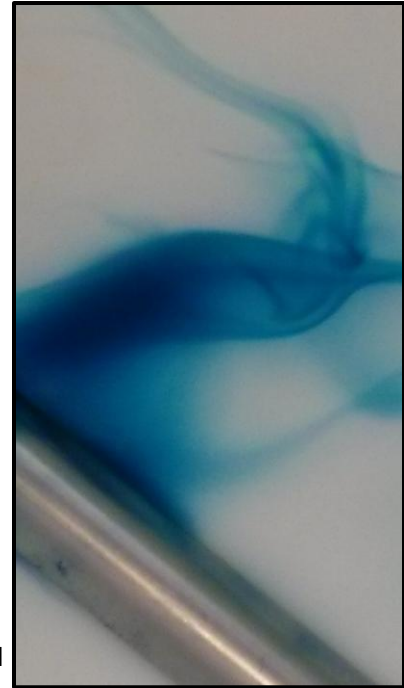


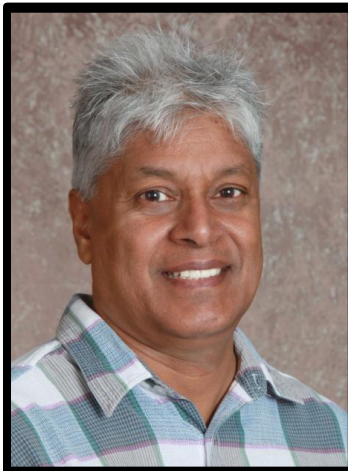
Photo: Kim Varas



Photo: Janice Benoit

For many years, the expertise of The Ottawa Hospital (TOH), Transfusion Medicine Laboratory technologists in resolving serologic issues in transfusion medicine has been recognized throughout the region. Complex cases of allo-antibody identification are routinely referred to the TOH laboratories for expert assistance. This is an important diagnostic service provided to EORLA regional hospitals that assists in preventing serious transfusion complications. Each Hematopathologist in our Division also consults with an EORLA hospital or hospitals, to provide support for transfusion procedures and processes, as well as quality assessment.

Microbiology



**Dr. Karam Ramotar,
PhD
Regional Discipline Head
- Microbiology**

Dr. Ramotar is the director of the EORLA Microbiology Reference laboratory located at the Ottawa Hospital, General campus and the regional microbiology discipline lead for EORLA. He is also the head of the Division of Microbiology at The Ottawa Hospital and he has an academic appointment as an Associate Professor in the Department of Pathology and Laboratory Medicine at the University of Ottawa

Dr. Ramotar has extensive expertise in molecular and clinical diagnostic microbiology both in terms of technical and operational knowledge. He developed and implemented the molecular microbiology testing service at the EORLA reference laboratory. As well, his expertise in clinical microbiology was instrumental in leading the implementation of diagnostic testing for TB and sexually transmitted infections through a Canadian funded public health Program in Guyana, South America.

Within EORLA, Dr. Ramotar is a member of a number of regional committees including its Quality committee. Nationally, Dr. Ramotar has been Chair of the Board of directors of the Canadian Society for International Health (CSIH), an NGO based in Ottawa. He has served as the president of the Canadian Association of Microbiology and Infectious Diseases (CACMID), and as a board member of the Association of Medical Microbiology and Infectious Diseases (AMMI-Canada). He has been an assessor for Ontario's Laboratory Quality Program (QMPLS-OLA) for 12 years and has assessed laboratories within Ontario and other Canadian provinces. He also served as a Corresponding editor for the International Journal of Infectious Diseases (IJID) from 2009-2013.

What is Microbiology?

Microbiology is the study of microorganisms – bacteria, fungi, viruses and parasites. Microbiology testing provides information on the presence of pathogens which cause disease and their antimicrobial susceptibility patterns. This information allows physicians to appropriately manage and treat infections in their patients.

Testing in the microbiology laboratory is performed by medical laboratory technologists under medical/clinical oversight of microbiologists. Microbiology testing is performed using a variety of methods such as microscopy, culture of the organisms, serology, and molecular testing among others.

What does EORLA's Microbiology program look like?

Currently within EORLA, microbiology testing is performed in laboratories located at the Ottawa Hospital, General campus (the EORLA microbiology reference laboratory), CHEO (includes bacteriology and virology), Queensway Carleton Hospital and the Montfort hospital. (The EORLA microbiology reference laboratory at the General performs testing in routine bacteriology, mycology, mycobacteriology and molecular microbiology. It provides routine testing services to a number of hospitals including The Ottawa Hospital and referral services to others such as CHEO.

The microbiologists from the EORLA reference laboratory, provides on-call and consultative services for all EORLA institutions. They are also involved in supporting infection control and antimicrobial stewardship activities in hospitals in Champlain LHIN. The microbiologists also direct investigative work which allows for the introduction of newer methods and technologies for testing within the laboratory

The EORLA reference laboratory also provides training to MLT students from St. Lawrence College and the University of Ontario Institute of technology. Microbiologists direct and support the medical Microbiology, Adult ID, and pediatric ID residency training programs of the University of Ottawa. Microbiologists also actively participate in university of Ottawa undergraduate and postgraduate teaching and in applied clinical Microbiology research through their affiliation with the Ottawa hospital Research Institute.

The bacteriology laboratory at CHEO provides testing for CHEO and focuses on pediatric bacteriology. The Virology laboratory located at CHEO provides regional virology testing. Laboratories at Queensway Carleton and Montfort hospitals provide routine microbiology testing services with QCH providing services to valley hospitals (Kemptville, Carleton Place, and Arnprior

The EORLA Microbiology reference laboratory is committed to establishing an environment that will provide better testing and reference service to the region, education and development of staff resources. The laboratory focuses on providing quality service and staying at the leading edge of technology in performance of diagnostic microbiology.

The EORLA Microbiology program is committed to:

- Providing cost-effective and quality microbiology services for the patients it serves.
- Ensuring that specimen processing and results that are reported to users are clinically relevant.
- Utilizing a quality management program to monitor the proper handling, processing, and reporting of patient results.
- Providing consultative services in Clinical Microbiology, Infectious Diseases, and Infection Control
- Providing excellence in teaching to a broad range of health care professionals and allied health care workers, including laboratory technologists and technicians, residents in Medical Microbiology, and fellows in Infectious Diseases.
- Supporting and engaging in relevant clinical research and methods development.
- Providing an environment that encourages continued personal growth, education and development.



Escherichia coli O157:H7 growing on a sorbitol MacConkey plate. Photo provided by Dr.K. Ramotar

Microbiology Accomplishments

During the 2013-2015 period, the Microbiology team has been working to streamline processes and to promote standardization within the region. A focus on efficient, high quality test results is enhancing the care patients receive throughout the region. Accomplishments include:

- Transfer of the microbiology services from Pembroke General Hospital to the EORLA Microbiology Reference Laboratory
- Implementation of Lean initiatives at the EORLA reference and QCH laboratories
- Implementation of Mass Spectrometry based identification of microorganisms at the Reference laboratory with limited referral bacterial identification service to the other three laboratories
- Implementation of newer molecular technologies for MRSA detection, bacterial identification (sequencing based identification of bacteria) and Influenza testing
- Continued standardization of testing and results reporting methods across the four laboratories
- Establishment of new quality indicators for regional microbiology
- Reviews of operational processes at all 4 laboratories
- Increased medical/scientific support for microbiology laboratories at QCH, Montfort and CHEO
- Increased support for antimicrobial stewardship programs within the region
- Launch of the microbiology transformation plan to unify all microbiology services under a single entity called the **EORLA Regional Microbiology Reference Laboratory**



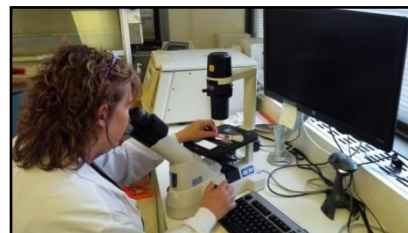
*Cross section of a pinworm showing eggs.
Photo provided by Dr. K. Ramotar*

Going forward, over the next year, much time and effort will be invested in the planning stages of microbiology service transformation and the eventual implementation. This is a critical project in context of overall EORLA strategic planning and it will require commitment and focus to achieve microbiology consolidation.

Virology

The EORLA Regional Virology Laboratory (RVL) is situated at the Children's Hospital of Eastern Ontario (CHEO) and provides diagnostic virology testing for all patients, in eastern Ontario.

EORLA RVL offers a comprehensive menu of viral testing, including: virus isolation, virus antigen detection, electron microscopy, serology, and molecular detection. EORLA RVL offers full service Monday-Friday and limited service on Sundays and holidays. During respiratory season, expanded service is provided on Sundays and evenings.



***EORLA Virology Laboratory –
Children's Hospital of Eastern
Ontario***

During respiratory season, specimens are tested for a number of pathogens including Influenza A and B, RSV, human metapneumovirus (hMPV) and parainfluenza viruses (hPIV). Testing for these pathogens is performed using a variety of methods consisting of EIA, direct fluorescent antibody detection of viral particles (DFA), cell culture and molecular (PCR) based testing. Testing is also available in selected cases on a STAT basis using the PCR method

Virus isolation

Conventional cell culture is used to recover common viruses from patient specimens. Cultures are set up and examined daily for 7 to 28 days, depending on specimen source and virus requested.

Antibody staining

Direct (DFA) and indirect antibody staining/microscopy are used to identify respiratory viruses in clinical specimens to confirm the identity of viruses isolated in cell culture, and also form the basis of certain serologic tests.

Electron microscopy

Electron microscopy (EM) allows the direct visualization of virus particles in patient specimens and of viruses isolated by cell culture. The principal use of EM is the identification of non-culturable or difficult to culture viruses (e.g. noroviruses, rotavirus, polyomaviruses, poxviruses).

Serology

Serologic diagnosis is based on the detection of an agent-specific immune response in the infected host. Serological testing is used to determine immune response and in certain instances can be useful to identify acute infection. Antibody detection method varies depending on the agent in question, and includes IFA, latex agglutination, and manual or automated ELISA assays.

Molecular detection

Tests based on the amplification of nucleic acid (PCR and its derivatives; real-time PCR) has become common in the clinical virology laboratory. Both DNA and RNA-containing agents can be detected using this technology. Molecular assays allow the qualitative detection of most agents, as well as the quantitative detection (i.e. viral load determination) of select agents.

EORLA Quality

The Eastern Ontario Regional Laboratory Association has been committed to quality since inception. In fact, it was a commitment to higher quality and standardization that formed the roots of the integrated medical laboratory model that EORLA is delivering.

Quality is one of the foundations on which EORLA was established and continues to be a pillar in all decision making and best practice implementations. Each staff member and medical and scientific professional are accountable for ensuring that their work leads to high quality and safe patient care.

The Laboratory Directors, Regional Operations Managers, Site Operations Managers work with staff and leadership to ensure that their laboratories are meeting or exceeding regional quality targets. They also work with EORLA leadership to ensure that quality is never compromised in the decision making process.

In its third year, EORLA has adopted quality indicators approved through the Regional Discipline Committees and the EMSAC Quality Sub-Committee. Thirty-four more relevant quality indicators now include not only the analytical but both pre and post analytical areas. New areas with primordial patient quality and safety impact (i.e. POCT and LIS) are now monitored as well as outpatient phlebotomy. With the review and implementation of these new quality indicators with targets set by the Regional Discipline Leads, the Hospital partners now have an improved monitoring of all aspects of laboratory quality. Each month these indicators are reviewed against their targets by the EORLA Integrated Quality Manager. Even the smallest gap results in the distribution of an Opportunity for Improvement (OFI) form to the Laboratory Director, Regional Operations Manager, Regional Discipline Manager and Site Manager for a full investigation and mitigation strategies. These indicators have been monitored for a one year (fiscal period) with the following results.

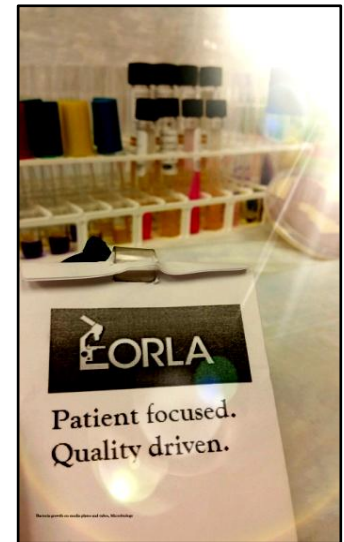
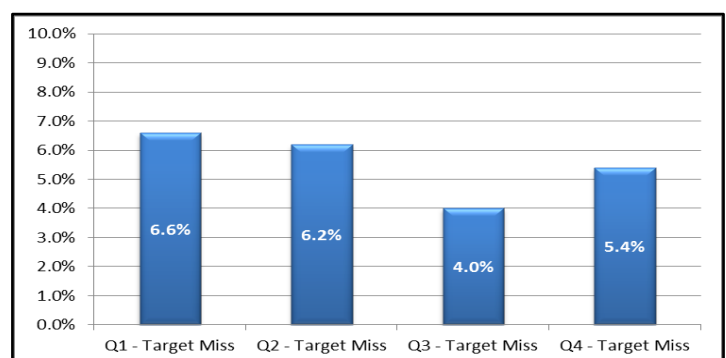
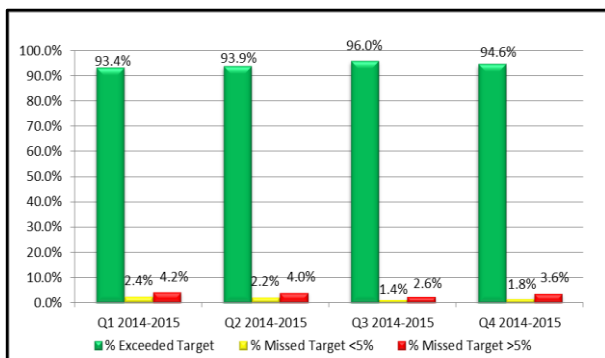


Photo: Amanda McIntosh

Service Level Delivery Attainment

2014-2015 Quality Indicators - 12-Month Performance Summary



Regularly, the results are presented to the Service Delivery Committee – a dedicated group of our Member Hospital partners who hold accountability for quality within their organization. Together they review the quality indicators and determine the most relevant areas in which EORLA needs to focus its efforts for improvements.

Likewise, EORLA has several other committees dedicated to the delivery of high quality patient care. The EMSAC Quality Sub-Committee and its two working groups (i.e. the Quality Working Group and the Standards2 Quality Committee) are focused entirely on quality at both the technical and medical/scientific levels. Regular meetings of the committees are held to review processes, to share best practices and to align all EORLA activities around quality.

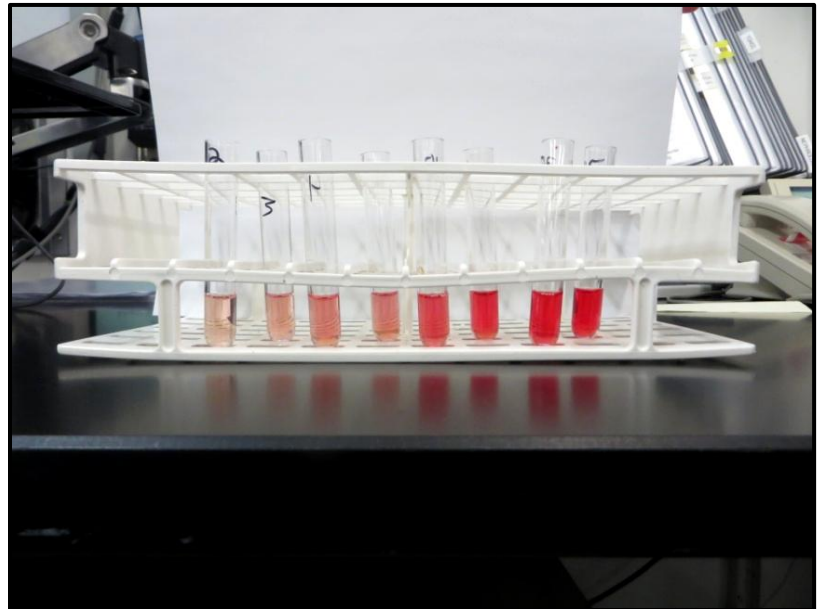


Photo: Alex Copeland

The EORLA Board Patient Safety and Quality Committee has the responsibility to advise on patient safety and quality issues to EORLA operations, review all accreditation assessments, review audits on critical events, review reports on continuous quality improvement initiatives, monitor quality metrics and approve quality improvement plans. During this past year, the definition of quality and quality policy have been created and approved for all EORLA sites. They have also begun the process for EORLA's first Quality Improvement Plan.

Because quality is so important to the work EORLA does, EORLA has completed many projects to assess and standardize processes to improve quality within all regions.

From April to October 2014, EORLA underwent 13 IQMH Accreditation peer assessments. All 13 sites received a full 4 year accreditation. Discussions are in progress to determine the possible scenarios of how accreditation peer assessments can be standardized.

As laboratory testing touches almost all patient interactions with hospitals, it is important for EORLA to be able to continually improve the services we offer our clients and patients.

Quality Improved through Communications

One of the best ways that EORLA has been able to facilitate and improve quality within laboratories is by sharing information. Regular team meetings that encompass leaders and managers from throughout the region are allowing for the sharing of information, challenges and solutions. By building on a shared expertise, EORLA has been able to implement best practices at sites from our smallest Members to our largest Member Hospitals.

A special edition of the EORLA Fall Newsletter has been issued “Quality Assurance Issue- a fresh look at quality and patient safety in EORLA”.



Photo: Lori Bates

In 2014/2015, improved communications due to the integrated laboratory medicine model has led to positive changes. Communication has been facilitated by the quality group for:

- Changes in testing and methodology between EORLA sites
- Quality indicator data to member hospitals and their boards

Education and Improved Quality

Education is recognized as an integral part of improving quality within the laboratories and facilities EORLA operates. Not only is EORLA working to ensure existing staff are well trained and knowledgeable about quality processes, but also that they are reaching out to our educational partners to ensure their curriculum and students are meeting the needs of a largely integrated medical laboratory. EORLA now receives students from Everest College, St Lawrence College, University of Ontario Institute of Technology, University students, residents, fellows in Pathology and Laboratory Medicine and other Departments, for training the next generation of leaders in the medical laboratory field. Standards for employment roles are being established and adhered to support the high quality delivery of patient care.

Our EORLA corporate quality leads are also sharing their expertise beyond the walls of our Member Hospitals. In 2014/2015 EORLA appointed a representative to the Algonquin College Digital Health Program Advisory Committee. The Graduate Certificate in Digital Health program has been evaluated, approved and will begin at Algonquin College in the new year. Discussions are now underway for the Bachelor's Degree in Digital Health. EORLA along with other parties have had preliminary talks with Algonquin College concerning the need to re-institute the Medical Laboratory Technology Program.

Information Services & Technology

Information Technology Overview

EORLA's Information Technology initiatives are fully aligned with the strategic plan and will focus on transforming and enabling the delivery of Laboratory services through:

- Automation
- Innovation and Benefits Realization
- Standardization, and;
- Connectivity

The primary stakeholders that will be impacted by our information technology initiatives are identified to be:

- Our Members
- Our Medical & Scientific Group, and;
- Laboratory Operations and Administration.

Given the Laboratory Information System (LIS) transition initiatives that occurred in 2013-2014, EORLA's Laboratory Staff utilize 12 different Laboratory Information Systems across our 16 member hospital sites and 18 Laboratories. This represents a net reduction of two LISs' involving Montfort Site and Glengarry Site transition from Technidata and PowerLab LISs' to Meditech.

Highlights and Accomplishments for 2014-2015

EORLA's Information Services & Technology program included the following highlights and major accomplishments for 2014/2015:

➤ **Implementation of Regional Anatomical Pathology Laboratory Information System (APLIS)**

Eorla has been actively working with several of its members to create an integrated AP management system for all of its regional members. In July of 2014, the Cornwall Hospital site successfully transitioned to the Regional APLIS. The transitions of Montfort Hospital and Queensway Carleton Hospitals are slated for Q1 of 2015/16.

Implementing this Regional APLIS is resulting in more benefits possible for patients across EORLA through the leveraging of a regionally integrated model of health care where new technologies and broader capabilities not available to any one hospital can now be leveraged for the benefit of all patients across EORLA. In these times of rising health care costs and restricted budgets, EORLA is innovating to drive excellence in patient-focussed lab services through a unified regional model that is unique to the province of Ontario.

➤ **Ontario Laboratory Information System (OLIS)**

EORLA successfully transitioned from the Discovery Phase to the Implementation Phase for this project, which is being delivered in collaboration with our member sites on a site by site basis. The following sites went live in 2014-2015:

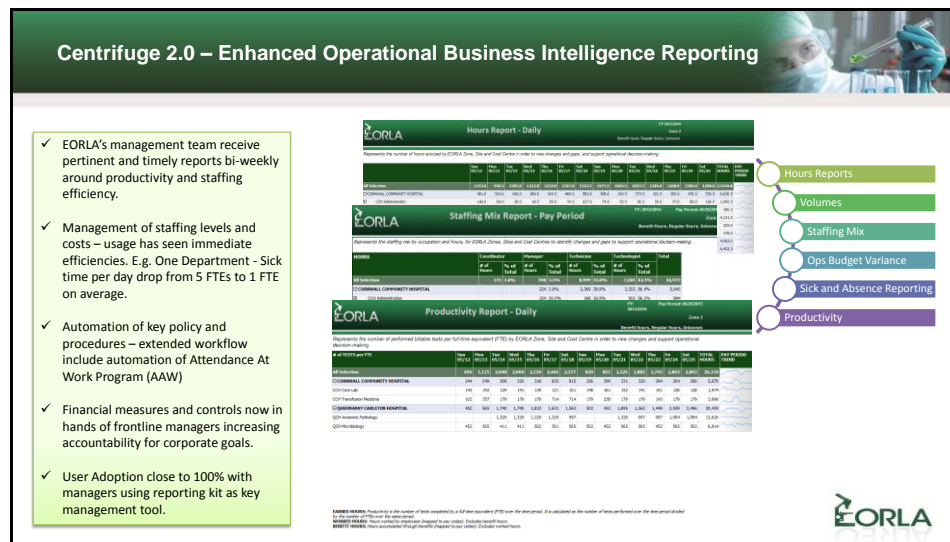
- Hawkesbury General Hospital
- Almonte General Hospital
- Deep River & District Hospital
- St. Francis Memorial Hospital
- Pembroke Regional Hospital
- Renfrew Victoria Hospital

➤ **Business Intelligence**

In September of 2014, Version 2 of the Data Warehouse known as Centrifuge was released. With this release, the following enhanced capability was delivered:

- Enhanced Operational and Business intelligence reporting by adding scheduling and payroll data feeds, which provides managers with visibility to hours, staff mix and productivity reporting by site, automated on a bi-weekly basis.
- Delivery of an Attendance at Work (AAW) Solution to provide enhanced reporting capability to managers in support of administering this benefit and its related costs.

Below is an example of the Enhanced Operational Business Intelligence Reporting which are automatically produced and distributed on bi-weekly basis to all EORLA managers:



- **Document Management System.** EORLA will be implementing a document management system in 2015-2016 that will enable centralization and management of all corporate documents, ranging from forms to policies & procedures to the Institute for Quality Management in Healthcare (IQMH) required documentation, along with workflow efficiencies.

- **Laboratory Middle Ware Projects.** EORLA will be completing the implementation of SysMx WAM and SirWeb middle ware projects which commenced in Q4 2014-2015.

- Middle Ware provide our Medical/Scientific and Operations team enhanced capabilities to manage complex high volume laboratory environments. BioChemistry completed the installation of Syngo, middle ware for the main Chemistry analyzers; Microbiology is in the process of completing the installation of SirWeb to support its core bacteriology testing and Hematopathology is completing the installation of Sysmex WAM to support its core hematology analysers. Together these systems will provide quality, specimen management and productivity improvements.

- **EORLA Cost Allocation Model (ECAMS).** EORLA completed the development of Cost Allocation Model that provides pricing and cost at a more detailed and granular level for the tests performed at our TOH Reference lab.
- **Website Redevelopment.** There are plans to transform EORLA.ca from an information only-brochure website, to an interactive enabled website supporting the following business functions:
 - **Internal Facing**
 - Support employee communications and access to services and documents.
 - Introduction of clinical user experience, involving Immuno-Histo-Chemistry Slide viewing capability.
 - Introduction and support of operational and clinical reporting capability.
 - **External Public Facing**
 - Enhancements to Information on services provided and ability to further interact with EORLA through enhanced user experience.
 - Create infrastructure for Business-to-Business (B2B) and Business-to-Consumer (B2C) capability.



Education

The Department of Pathology and Laboratory Medicine at the University of Ottawa is comprised of over 50 academic staff who are located within the Faculty of Medicine at the University of Ottawa's Roger Guindon Hall campus, the Ottawa Hospital (General, Civic and Riverside campuses), as well as the Children's Hospital of Eastern Ontario (CHEO). Many staff members at the University of Ottawa Heart Institute are also members of the Department and a number of researchers at Health Canada maintain adjunct status in the Department.

The Department contributes significantly to the new undergraduate curriculum in medical education both in lectures, laboratories, tutorials and electives. The Department administers five postgraduate residency training programs of the Royal College of Physicians and Surgeons of Canada in Anatomical and General Pathology, Hematological Pathology; Medical Biochemistry and Microbiology.

In 1994, a unique unit in forensic pathology was opened that in addition to performing medico-legal autopsies, brings together physicians, coroners, residents, police, law students and RCMP toxicologists in an educational environment. The Department hosts the national archives of the Canadian Reference Center for Cancer Pathology (CRCCP) one of the largest archives of tumour pathology in North America that holds tumour sections and information that date as far back as the end of the Second World War. In 1996 the Department opened a Tissue Plastination Facility (using silicon S-10 impregnation) which is now almost in full operation and prepares tissues and organs that are extensively used in medical teaching.

The Department also administers a collaborative graduate program in Pathology and Experimental Medicine. Many academic staff, by virtue of cross appointments to several Basic Science Departments, maintain membership in the School of Graduate Studies and Research. These department members supervise graduate students and postdoctoral fellows.

Education/Residency

Hematological Pathology Residency Training Program Report

The Hematological Pathology Residency Training Program is a four year program. There are currently four (4) residents in the program; one (1) in first year, two (2) in second year and one (1) in fourth year. Three residents/fellows are writing the Royal College exams this year, and commencing in January, weekly exam review sessions for the senior residents/fellow have been provided by the staff. The program has one (1) first year CaRMS match position and we are currently interviewing for potential resident candidates for next year. The residents actively participate in the On Call Schedule, always with staff back-up. With the supervision of the Staff Hematopathologists, the residents have good research productivity, with presentations at local, national and international meetings.

Transfusion Medicine Residency Training Program Report

The Transfusion Medicine Residency Training Program does not have any trainees enrolled for the 2013-2014 academic year. We are not presently accepting foreign applicants and have not received any applications from Canadian graduates.

Anatomical Pathology Residency Training Program Report

The University of Ottawa provides a 5-year comprehensive training in Anatomic Pathology (AP), leading to eligibility to write the Royal College specialty examinations and to practice as a competent pathologist. Following the PGY-1 year, which is designed to give broad-based clinical exposure, as well as 3 months in Lab Medicine, the residents start their 4 core years of AP training. Throughout the 5 years, there is a weekly academic day (whole day

Monday with lunch provided) dedicated to sessions that may include formal lectures, CanMEDS roles presentations, unknown slide rounds, gross rounds, autopsy rounds, cytology teaching, journal clubs and research: this is protected time for residents, i.e. no service duties. The department annually sponsors an active visiting professor program attracting world-class pathologists and scientists. Residents attend a number of conferences throughout the year and are encouraged to make presentations at national and international meetings. The curriculum encompassing 4 years of core AP training has dedicated research time, electives and in-depth exposure to subspecialties. The program is based on a 13-block lunar calendar, the majority of the rotations being 1-3 blocks (each block is 4 weeks) in duration. The evaluations and programs are structured to conform to the Royal College training specialty requirements including the CanMEDS 2005 objectives. The residents' progress is closely monitored during the various rotations with graded responsibilities and teaching sessions, and by a formal practice written & oral examination, once a year in addition to end of rotation practice texts. Residents are required to write the ASCP In-Service exam each year.



General Pathology Residency Training Program Report

This is a five year program comprising one year of internship (PGY1) followed by two years in Anatomic Pathology, six months each in Hematopathology, Medical Biochemistry, and Medical Microbiology and a six month elective. The program provides opportunities to achieve the educational requirements of the Royal College of Physicians and Surgeons of Canada, and to acquire the diagnostic and interpretive skills required for the practice of General Pathology. The resident will be exposed to the diversity of approach, equipment and expertise in the various laboratories and will actively participate in both the routine work and academic activities to develop (a) a thorough knowledge of the laboratory operations, including management, (b) diagnostic and interpretive skills, and (c) skills as a consultant and a participant in continuing education programs in the hospital setting.

Medical Microbiology Residency Training Program Report

Medical Microbiology PGY-1

This year consists of 16 weeks of Medicine/Medical Specialties, 4 weeks of Surgery, 4 weeks of Pediatrics, 4 weeks of Emergency Medicine, 4 weeks of Obstetrics & Gynecology, 4 weeks of Family Medicine, 4 weeks of Psychiatry, and 12 weeks of Microbiology.

Medical Microbiology PGY- 2 to 4

Medical microbiology is a five year program with the first year structured for successful completion of MCCQE Part II. The second year is the first year of the core microbiology training, with rotations at all three laboratory sites. The third year includes 6 months of additional core microbiology training followed by 6 months of clinical training. This includes Infectious Diseases but may also include additional medical rotations of particular relevance to Microbiology. The clinical training will also include clinics in general Infectious Diseases, HIV, travel and tropical diseases, TB, Hepatitis, and STDs. The fourth year includes 6 months of core microbiology training and 6 months of clinical rotations. The core microbiology training will provide 48 weeks of bacteriology, 16 weeks of virology, 8 weeks of mycology, 8 weeks of mycobacteriology, 12 weeks of pediatric microbiology, 8 weeks of parasitology, and 4 weeks of infection control.

Medical Microbiology PGY-5

The final year of training is flexible and planned according to the needs and interests of the resident to provide further experience in microbiology and to provide the trainee with a greater level of responsibility. It may be consist of clinical, laboratory, or basic microbiology rotations. This may also consist of electives at other centres.

Medical Microbiology Research

The research interests of members of the Division of Microbiology and the Division of Infectious Diseases are diverse and include: molecular diagnostics, laboratory detection and molecular epidemiology of antimicrobial resistant bacteria, epidemiology of hospital-acquired infections, viral pathogenesis and vaccine development, hepatitis, basic and clinical aspects of HIV/AIDS, tropical diseases, etc. Residents are strongly encouraged to participate in research activities and to present and publish their results. Support is available for residents to attend meetings and present their research.

Pathology and Experimental Medicine (MNP) Collaborative Graduate Program

This is a collaborative program in Pathology and Experimental Medicine leading to an MSc or PhD degree in one of the primary programs (Biochemistry; Cellular and Molecular Medicine; Microbiology and Immunology or Neuroscience). The emphasis of this collaborative program is on the training of graduate students in the field of pathology and experimental medicine with the aim of providing them with the knowledge and skills to examine the basic mechanisms of disease pathology, and to develop new strategies for prevention and treatment.

Faculty members include basic and clinical scientists with interests in cancer, emerging pathogens, cardiovascular and neurodegenerative diseases.

Specialization Courses

CMM5001

The Pathological Basis of Disease (3 cr.)

An introductory course to general pathology for graduate students in the life sciences. This course teaches fundamental concepts of the basis of disease as viewed from a general pathology perspective. It provides 3-hour weekly lectures during the winter term dealing with manifestation of disease at the macroscopic and microscopic levels. Background lectures are given on the morphology of normal tissues and organs and in investigative approaches used. General Pathology of the following topics is discussed in the different lectures: 1. Hypertrophy, atrophy, hyperplasia, aplasia, metaplasia, dysplasia, neoplasia. 2. Storage diseases. 3. Extracellular space pathologies. 4. Cell injury, necrosis and apoptosis. 5. Inflammation and edema. 6. Repair. 7. Immunopathology. 8. Neoplasia. Benign, malignant. 9. Blood vessels. Hemostasis, thrombosis and embolism. Atherosclerosis and arteriosclerosis. Heart disease. Heart failure, pathological hypertrophy, ischemic heart disease, infarction, myocarditis, cardiomyopathies, valvular disease. 10. Neuropathology. 11. Hematopathology. 12. Toxins/environmental injury. 13. Genetic Diseases.



2015 Lecture Schedule

Lecture	Date	Room	Topic	Professor
1 st Lecture	January 14	RGN 3035	<u>Intro to General Path</u>	Dr. Rudolf W. Mueller
2 nd Lecture	January 21	RGN 3035	<u>Cell and Tissues</u>	Dr. Safaa El-Bialy
3 rd Lecture	January 28	RGN 3035	<u>Methods in Pathology</u>	Dr. Mercedes L. Kuroski/ Dr. Adolfo de Bold
4 th lecture	February 4	RGN 3035	<u>Organ Pathology</u>	Dr. Rudolf W. Mueller
5 th Lecture	February 11	RGN 3035	<u>Molecular Pathology</u>	Dr. Olga Jarinova
6 th Lecture	February 18	RGN 3035	<u>Cardiovascular</u>	Dr. John P. Veinot
7 th Lecture	February 25	RGN 3035	<u>Neoplasia</u>	Dr. Trevor A. Flood
8 th Lecture	March 4	RGN 3035	<u>Neuropathology A</u> <u>Neuropathology B</u>	Dr. Jean Michaud
9 th Lecture	March 11	RGN 3035	<u>Genetic diseases</u>	Dr. Joseph de Nanassy
10 th Lecture	March 18	RGN 3035	<u>Gastrointestinal</u>	Dr. Fawaz Halwany
11 th Lecture	March 25	RGN 3035	<u>Endocrine</u>	Dr. Qiao Li
12 th Lecture	April 1	RGN 3035	<u>Hematopathology</u>	Dr. Zhaodong (Mike) Xu
13 th Lecture	April 8	RGN 3035	<u>Issues in Toxicological Pathology</u>	Dr. Colin Rousseaux

CMM5315

Cellular and Molecular Basis of Cardiovascular Function/Dysfunction (3cr.)

Mechanism of failing heart and cardiovascular system, its associated functions and associated conditions. Therapies for restoring function. Topics include: regulation of heart development, cell signaling, cellular and molecular mechanisms of atherosclerosis and heart disease, hormonal regulation, hypertension, bioenergetics, cardiovascular genomics and genetics, cell therapy, and regenerative medicine.

CMM5105

Introduction to Cancer Biology (3cr.)

An introduction to the biology of cancer. Major topics in cancer biology include the following: tumor suppression/oncogenes; apoptosis in cancer; cell immortalization and senescence; genomic instability; multistep tumorigenesis/inflammation in cancer; biology of angiogenesis; rational therapies.

CMM8105

Advanced Topics in Cancer Biology (3cr.)

Advanced study of recent developments in the field of cancer biology with emphasis on cellular and molecular aspects. Specific topics to be covered include: angiogenesis, apoptosis, cancer genetics, cell signaling, genetic instability, oncogenes and tumour suppressors.

BCH8107

Advanced Topics in Structure and Function of Plasma Lipoproteins (3cr.)

Recent advances in our knowledge of the plasma lipoproteins with a special emphasis on their role in the etiology of atherosclerosis. The subject will be introduced by an overview of the general structural properties of lipoproteins which will be followed by detailed discussion of the structure, metabolism and genetics of the apolipoproteins, the proteins and enzymes that modify lipoproteins and cell surface lipoprotein receptors. Other topics will include cholesterol homeostasis, plasma cholesterol transport and disorders of lipoprotein metabolism.

Undergraduate Medical Education

The Department of Pathology and Laboratory Medicine played a significant role in the development of the New Medical Curriculum. The department is still heavily involved in the teaching of Stage I (first and second year) at all levels including PBL, formal lectures and laboratory demonstrations. The Department is also involved in Stage II (third and fourth year) but to a lesser extent.

With the inception of the Faculty of Medicine's new "Electronic Curriculum" and laptop program in 2001, the Department remains at the forefront of this endeavor. A number of web-based teaching modules are available that will enable students to review both lectures and laboratory sessions remotely.

EORLA Undergraduate Courses

Course Name	Instructor
Introduction to blood: (Week 4)	
Lecture: Disorders of growth	Dr. Trevor Flood
Lecture: Hematopoiesis II: Red Cells & Platelets	Dr. Ruth Padmore
UDA: Diagnostic Tools in Hematology	Dr. Zhaodong Xu
Lecture: Genetic alterations in Cancer Groups I to Q	Dr. Bruce Burns
Lecture: Genetic alterations in Cancer Groups R to Z	Dr. Bruce Burns
Red Blood Cells: (Week 5)	
UDA: Introduction to autopsy	Dr. Alfredo Walker
Microscopic Lab: Hematology Normal Blood and Marrow and Red Cell Disorders Groups: R-Z	Dr. Ruth Padmore
Microscopic Lab: Hematology Normal Blood and Marrow and Red Cell Disorders Groups: I-Q	Dr. Luke Shier
Coagulation and Transfusion: (Week 6)	
UDA: Introduction to inflammation	Dr. David Grynspan
Leukemia: (Week 7)	
Microscopic Lab-Hematology: White Cells Disorders Groups: R-Z	Dr. Ruth Padmore
Microscopic Lab-Hematology: White Cells Disorders Groups: I-Q	Dr. Luke Shier
Immunology: (Week 8)	
LAB: Acute inflammation Groups R-Z	Dr. Nicolas Roustan-Delatour
LAB: Acute inflammation Groups I-Q	Dr. Nicolas Roustan-Delatour
Monoarthritis and microbiology: (Week 10)	
Lecture: Pathology of Monoarthritis	Dr. Bibianna Purgina
UDA: Chronic inflammation Groups R-Z	Dr. Nicolas Roustan-Delatour
UDA: Chronic inflammation Groups I-Q	Dr. Nicolas Roustan-Delatour
Introduction au sang: (semaine 4)	
Cours: Troubles de la croissance	Dr. Marcio Gomes
Hématopoïèse 2: Globules rouges et plaquettes	Dr. John Leddy
Outils diagnostiques en hématologie	Dr. Melissa Toupin
Cours: Altérations génétiques du cancer	Dr. Marcio Gomes
Globules rouges: (semaine 5)	
Activité spécifique à l'unité: Introduction à l'autopsie	Dr. Éric Bélanger
Microscopie: Hematologie sang normal et maladies... moelle osseuse	Dr. David Allan
Coagulation et transfusion sanguine : (semaine 6)	
Activité spécifique à l'unité: Introduction à l'inflammation	Ayroud, Yasmine
Leucémie: (semaine 7)	
Microscopie: Hematologie Maladie des globules blancs	Dr. Pierre Villeneuve
Immunologie (semaine 8)	

Course Name	Instructor
LAB: Pathologie, Inflammation aiguë Groupes A-H	Dr. Nicolas Roustan Delatour
Monoarthrite et microbiologie: (semaine 9)	
Cours: Pathologie de la monoarthrite	Dr. Denis Gravel
Polyarthrite: (semaine 10)	
LAB: Pathologie, Inflammation chronique Groupes A-H	Dr. Nicolas Roustan Delatour
CAD- Cardio 3: (Week 3)	
Lecture: Pathology of Atherosclerosis	Dr. John Veinot
Valvular Heart Disease Cardio 4: (Week 4)	
LAB: Unit directed activity: Pathology of valvular disease Groups R-Z	Dr. John Veinot
LAB: Unit directed activity: Pathology of valvular disease Groups I-Q	Dr. John Veinot
Oncology: (Week 6)	
Lecture: Introduction to neoplasia	Dr. Shahidul Islam
LAB: Pathology Neoplasms Groups: I-Q	Dr. Marcio Gomes
LAB: Pathology Neoplasms Groups: R-Z	Dr. Marcio Gomes
Airway Disease (Resp/Ent 3): (Week 9)	
Microscopic Lab: Airflow Diseases of the Respiratory Tract Groups: R-Z	Dr. Chi Lai
Microscopic Lab: Airflow Diseases of the Respiratory Tract Groups: I-Q	Dr. Chi Lai
Pneumonitis (Resp/Ent 4): (Week 10)	
Pathology: Interstitial Lung Disease: Group I-Q	Dr. Chi Lai
Pathology: Interstitial Lung Disease: Group R-Z	Dr. Chi Lai
Microscopic Lab: Pathology Respiratory Infections Groups: R-Z	Dr. Harman Sekhon
Microscopic Lab: Pathology Respiratory Infections Groups: I-Q	Dr. Harman Sekhon
Lung Cancer Resp/Ent 5 : (Week 11)	
Microscopic Lab: Pathology cancer of the lung and airways Groups: R-Z	Dr. Harman Sekhon
Microscopic Lab: Pathology cancer of the lung and airways Groups: I-Q	Dr. Harman Sekhon
Lymphoma: (Week 12)	
Lecture: Lymphatic Function & Anatomy	Dr. Bruce Burns
Lecture: Malignant Lymphomas and Plasma Cell Myeloma	Dr. Bruce Burns
Microscopy: Myeloma and Lymphoma Groups R-Z	Drs. Ruth Padmore/Philip Berardi
Microscopy: Myeloma and Lymphoma Groups I-Q	Dr. Manisha Lamba
Chronic Renal Diseases (Renal 3): (Week 16)	
Unit directed activity: Interactive discussion: glomerular diseases; clinical and pathological perspectives	Dr. Paula Blanco
Microscopic LAB: Pathology renal disease Groups:R-Z	Dr. Don Wang
Microscopic LAB: Pathology renal disease Groups: I-Q	Dr. Don Wang
Coronaropathie (Cardio 3): (semaine 3)	
Cours: Pathologie athérosclérose	Dr. Joseph de Nanassy
Valvulopathie (Cardio 4): (semaine 4)	

Course Name	Instructor
Activité spécifique à l'unité: Pathologie de la valvulopathie Groupe: A-H	Dr. Joseph de Nanassy
Oncologie: (semaine 6)	
Cours: Introduction à la néoplasie	Dr. Marcio Gomes
Microscopie-Pathologie: Néoplasmes Groupes A-H	Dr. Nicolas Roustan-Delatour
Maladies des voies respiratoires (Resp/ORL 3) : (semaine 9)	
Microscopie-pathologie: Obstruction à la circulation de l'air dans les voies respiratoires Groupes: A-H	Dr. Marcio Gomes
Pneumonite (Resp/ORL 4): (semaine 10)	
Pathologie: Maladie pulmonaire interstitielle Groupes: A-H	Dr. Marcio Gomes
Microscopie-pathologie: Infections respiratoires Groupes: A-H	Dr. Marcio Gomes
Cancer du poumon (Resp/ORL 5) : (semaine 11)	
Microscopie-pathologie: Cancer du poumon et des voies aériennes Groupes: A-H	Dr. Marcio Gomes
Lymphome: (semaine 12)	
Cours: Anatomie et fonction des noeuds lymphatiques	Dr. Bruce Jamison
Cours: Lymphomes malins et myélomes plasmocytaires	Dr. Bruce Jamison
Microscopie: Hematologie Myélome et lymphome Groupes: A-H	Dr. Bruce Jamison
Maladies rénales chroniques (Rénal 3) : (semaine 16)	
Discussion interactive: maladies glomérulaires, aspects cliniques et pathologiques	Dr. Éric Bélanger
Microscopie-pathologie: Maladie rénale Groupes: A-H	Dr. Éric Bélanger
Week 2 (GI I):	
Unit-directed activity: Clinical pathological conference: Barrett's esophagus, carcinoma, eosinophilic esophagitis	Dr. Celia Marginean
Unit-directed activity: Clinical pathological conference: H. Pylori, peptic ulcer disease, gastric cancer	Dr. Terence Moyana
Week 3 (GI II):	
Unit-directed activity: Clinical pathological conference: IBD & Other Colitides	Dr. Celia Marginean
Unit-directed activity: Clinical pathological conference: Colorectal Cancer	Dr. Fawaz Halwani
Week 4 (GI III):	
Unit-directed activity: Clinical pathological conference: Pancreatic and biliary tumors	Dr. Marcio Gomes
Week 5 (GI IV):	
LAB: Pathology/Radiology Workshop PCR: Liver tumors Groups: I-Q	Dr. Nicolas Roustan-Delatour
LAB: Pathology/Radiology Workshop PCR: Liver tumors Groups: R-Z	Dr. Fawaz Halwani
Unit-directed activity: Clinical pathological conference: NASH, Alcohol and other hepatitides	Dr. Terence Moyana

Course Name	Instructor
Week 7 (Endo II):	
LAB: Pathology in diabetes Groups: I-Q	Dr. Paula Blanco
LAB: Pathology in diabetes: Groups R-Z	Dr. Paula Blanco
Week 8 (Endo III):	
LAB: Parathyroid/thyroid metabolic disease Groups: I-Q	Dr. Bibianna Purgina
LAB: Parathyroid/thyroid metabolic disease Groups: R-Z	Dr. Bibianna Purgina
Week 10 (Repro I):	
Unit-directed activity: Abnormal uterine bleeding	Dr. Shahidul Islam
Week 11 (Repro II):	
Lecture: Pathology of Pregnancy Groups: R-Z	Dr. Carlos Parra-Herran
Lecture: Pathology of Pregnancy Groups: I-Q	Dr. Nicolas Roustan-Delatour
Week 12 (Repro III):	
Unit-Directed activity: Benign breast disease	Dr. Susan Robertson
LAB: Pathology/Radiology Breast: Group I-Q	Dr. Susan Robertson
LAB: Pathology/Radiology Breast: Group R-Z	Dr. Susan Robertson
Semaine 2 (Digestif I):	
Activité spécifique à l'unité: Conférence anatomo-clinique: oesophage de Barrett, carcinome, oesophagite éosinophile	Dr. Marcio Gomes
Activité spécifique à l'unité: Conférence anatomo-clinique: H. pylori, ulcère gastro-duodénal, cancer gastrique	Dr. Nicolas Roustan-Delatour
Semaine 3 (Digestif II):	
Activité spécifique à l'unité: Conférence anatomo-clinique: MICI et autres colites	Dr. Nicolas Roustan-Delatour
Activité spécifique à l'unité: Conférence anatomo-clinique: cancer colorectal	Dr. Nicolas Roustan-Delatour
Semaine 4 (Digestif III):	
Activité spécifique à l'unité: Conférence anatomo-clinique: Tumeurs pancréatiques et biliaires	Dr. Nicolas Roustan-Delatour
Semaine 5 (Digestif IV):	
LAB: Atelier pathologie/radiologie: Conférence en radio-pathologie: Tumeurs du foie	Dr. Nicolas Roustan-Delatour
Activité spécifique à l'unité: conférence anatomo-clinique: stéatohépatite non alcoolique, hépatite alcoolique et autres	Dr. Bruce Jamison
Semaine 7 (Endo II):	
LAB: Pathologie du diabète	Dr. Bruce Jamison
Semaine 8 (Endo III):	
LAB: Pathologie: Maladies métaboliques des os liées à la parathyroïde et à la thyroïde	Dr. Denis Gravel
Semaine 10 (Repro I):	
Activité spécifique à l'unité: saignement utérin anormal	Dr. Nicolas Roustan-Delatour
Semaine 11 (Repro II):	
Cours: Pathologie de la grossesse	Dr. Nicolas Roustan-Delatour
Semaine 12 (Repro III):	
Activité spécifique à l'unité: Les maladies bénignes du	Dr. Denis Gravel

Course Name	Instructor
sein	
LAB: Pathologie: sein Groupes A-H	Dr. Denis Gravel
Week 1 (Mood Disorders):	
LAB: Dementia: Pathology & Pathophysiological concepts Groups I to Q	Dr. John Woulfe
LAB: Dementia: Pathology & Pathophysiological concepts Groups R to Z	Dr. John Woulfe
Week 5 (Neuro I):	
Lecture: Primary Tumors of CNS	Dr. John Woulfe
Week 6 Stroke and Trauma (Neuro II):	
LAB: Pathology Stroke Groupd R-Z	Dr. John Woulfe
LAB: Pathology Stroke Groupd I-Q	Dr. John Woulfe
Week 7 (Infectious,Inflammatory and Demyelinating disorders):	
LAB: Pathology: Infections and demyelinating disorders Group R-Z	Dr. Gerard Jansen
LAB: Pathology: Infections and demyelinating disorders Group I-Q	Dr. Gerard Jansen
Week 8 (Neuromuscular, Degenerative and Developmental Disorders):	
LAB: Pathology of movement disorders and muscle disorders Group R-Z	Dr. Gerard Jansen
LAB: Pathology of movement disorders and muscle disorders Group I-Q	Dr. Gerard Jansen
Week 9 (Neuro V):	
LAB: Pathology: Epilepsy Groups I-Q	Dr. Gerard Jansen
LAB: Pathology: Epilepsy Groups R-Z	Dr. Gerard Janssen
Semaine 1: Trouble de l'humeur:	
LAB: Pathologie: Démence, pathologie et concepts physiopathologiques	Dr. Jean Michaud
Semaine 5: Neuro I:	
Cours: Tumeurs primaires du SNC (pathologie)	Dr. Jean Michaud
Semaine 6: Neuro II:	
LAB: AVC	Dr. Jean Michaud
Semaine 7: Neuro III:	
LAB: Pathologie: Infections et maladies demyelinisantes	Dr. Jean Michaud
Semaine 8: Neuro IV:	
LAB: Pathologie: Troubles du mouvement	Dr. Jean Michaud
Semaine 8: Neuro V:	
LAB: Pathologie: Épilepsie	Dr. Jean Michaud

Annual Research Day

Each year, as part of the academic program supported by EORLA and the University of Ottawa, Residents are encouraged to participate in a learning day. During the day, they have the opportunity to share their work, to learn from peers and to recognize those who have excelled in their area.

List of Winners at the 2015 Department Of Pathology and Laboratory Medicine Annual Research Day

Nadia Mikhael Award for Best Paper presented by a Junior Resident: (Nina Chang)

ESTIMATING RECURRENCE IN LOBULAR BREAST CANCER USING MAGEE EQUATIONS

Nina Chang, Amelia Parrott, Angel Arnaout, Mark Clemons, Susan J Robertson

2nd Best paper by a Junior Resident: (Jordan Sim and Nina Chang)

PREDICTING THE HISTOLOGIC SUBTYPE OF LUNG ADENOCARCINOMAS USING CYTOLOGIC SPECIMENS

Jordan Sim, Nina Chang, Marcio Gomes, Chi Lai, Harman Sekhon

Virbala Acharya Award for Best Presentation by a Senior Resident or Fellow: Sarah Strickland

IMMUNOHISTOCHEMISTRY IN THE DIAGNOSIS OF MUCINOUS NEOPLASMS INVOLVING THE OVARY: THE ADDED VALUE OF SATB2 AND BIOMARKER DISCOVERY THROUGH PROTEIN EXPRESSION DATABASE MINING

Sarah Strickland, Jason K. Wasserman, Ana Giassi, Bojana Djordjevic, Carlos Parra-Herran



2nd Best paper by a Senior Resident or Fellow: Soufiane El Hallani

VALUE OF HISTOPATHOLOGY FOR PREDICTING THE POSTOPERATIVE COMPLICATIONS OF ILEO-ANAL ANASTOMOSIS (J-POUCH) PROCEDURE IN CHILDREN WITH REFRACTORY ULCERATIVE COLITIS

Soufiane El Hallani, Joseph de Nanassy, James Young Lee, Emily Chan, Juan Bass, David Mack, Ahmed Nasr, Dina El Demellawy

EVALUATION OF QUANTITATIVE TISSUE PATHOLOGY IN THE ASSESSMENT OF BARRETT'S ESOPHAGUS ASSOCIATED DYSPLASIA

Soufiane El Hallani, Martial Guillaud, Jakoda Korbelik, E. Celia Marginean

Best Poster Presentation by a Graduate Student: Katherine Dixon
MECHANISMS OF ENHANCER-MEDIATED GENE EXPRESSION DURING EARLY MYOGENIC DIFFERENTIATION

Katherine Dixon, Munerah Hamed, Hamood Al-Sudais, Qiao Li
Department of Pathology and Experimental Medicine, Department of Cellular and Molecular Medicine, University of Ottawa

2nd Best Poster Presentation by a Graduate Student: Zachary Lister
MACROPHAGE FUNCTION MEDIATED THROUGH A MIR-92A MECHANISM BY A COLLAGEN MATRIX

Zachary Lister, Helene Chiarella-Redfern, A. Chiu, Nick J. R. Blackburn, Marc Ruel, M. Brand, Katey J. Rayner, Erik J. Suuronen

Best Poster Presentation by a Resident: Aurelia Busca and Soufiane El Hallani
PERINEURAL INVASION (PNI) AS A RISK FACTOR FOR LOCAL RECURRENCE (LR) IN EARLY SQUAMOUS CELL CARCINOMA OF THE ORAL TONGUE

Aurelia Busca, Chi Lai, Susan J. Robertson, Simon Chiosea, Raja Seethala, Lester D. R. Thompson, Margaret S. Brandwein-Gensler, Jessica H. Maxwell, Umamaheswar Duvvuri, Seungwon Kim, Jonas T. Johnson, Robert L. Ferris, E. Celia Marginean, Bibianna Purgina

PREDICTORS OF TUMOR UPGRADING OR UPSTAGING AFTER RADICAL PROSTATECTOMY IN PATIENTS WITH GLEASON SCORE 3+4=7 PROSTATE CANCER (PCA) AT TRANSRECTAL ULTRASOUND (TRUS) GUIDED NEEDLE BIOPSY

Soufiane El Hallani, Trevor Flood, Kien T. Mai, Eric Belanger, Nicola Schieda

Dr. M. Orizaga Award for Best Teacher: Dr. Shahidul Islam





EORLA's residents are well on their way to becoming accomplished physicians. In addition to completing their regular studies, they are actively involved in research. The following is a list of presentations and publications by our residents in 2014/15.

2014/15 Academic Presentations by EORLA Residents

1. **DIFFERENTIATED SQUAMOUS INTRAEPITHELIAL NEOPLASIA ASSOCIATED WITH SQUAMOUS CELL CARCINOMA OF THE ANAL CANAL**
Jason K. Wasserman, Christopher G. Ball, Justin Bateman, Fawaz Halwani, E. Celia Marginean, Kien T. Mai
2. **PREDICTING THE HISTOLOGIC SUBTYPE OF LUNG ADENOCARCINOMAS USING CYTOLOGIC SPECIMENS**
Jordan Sim, Nina Chang, Marcio Gomes, Chi Lai, Harman Sekhon
3. **FLAT UROTHELIAL NEOPLASIA EXHIBITING DIFFUSE IMMUNOREACTIVITY FOR CD44 AND CYTOKERATIN 5 (UROTHELIAL STEM CELL/BASAL CELL MARKERS): A VARIANT OF INTRA-UROTHELIAL NEOPLASIA COMMONLY ASSOCIATED WITH MUSCLE-INVASIVE UROTHELIAL CARCINOMA**
Aurelia Busca, Trevor Flood, Eric C. Belanger, Kien T. Mai
4. **ESTIMATING RECURRENCE IN LOBULAR BREAST CANCER USING MAGEE EQUATIONS**
Nina Chang, Amelia Parrott, Angel Arnaout, Mark Clemons, Susan J Robertson
5. **CLEAR CELL UROTHELIAL CELL CARCINOMA: A STUDY OF EIGHT CASES**
Christopher G. Ball, Justin Bateman, Trevor A. Flood, Eric C. Belanger, Kien T. Mai
Department of Anatomical Pathology,
The Ottawa Hospital and Ottawa University, Ottawa, Ontario, Canada
6. **DEVELOPMENT OF A COMPREHENSIVE REGISTRY OF GASTROINTESTINAL STROMAL TUMOUR (GIST) PATIENTS AT A SINGLE CANADIAN INSTITUTION**
Jason K. Wasserman & E. Celia Marginean

7. **VALUE OF HISTOPATHOLOGY FOR PREDICTING THE POSTOPERATIVE COMPLICATIONS OF ILEO-ANAL ANASTOMOSIS (J-POUCH) PROCEDURE IN CHILDREN WITH REFRACTORY ULCERATIVE COLITIS**
Soufiane El Hallani, Joseph de Nanassy, James Young Lee, Emily Chan, Juan Bass, David Mack, Ahmed Nasr, Dina El Demellawy

8. **IMMUNOHISTOCHEMISTRY IN THE DIAGNOSIS OF MUCINOUS NEOPLASMS INVOLVING THE OVARY: THE ADDED VALUE OF SATB2 AND BIOMARKER DISCOVERY THROUGH PROTEIN EXPRESSION DATABASE MINING**
Sarah Strickland, Jason K. Wasserman, Ana Giassi, Bojana Djordjevic, Carlos Parra-Herran

9. **EVALUATION OF QUANTITATIVE TISSUE PATHOLOGY IN THE ASSESSMENT OF BARRETT'S ESOPHAGUS ASSOCIATED DYSPLASIA**
Soufiane El Hallani, Martial Guillaud, Jakoda Korbelik, E. Celia Marginean

10. **ENDOTHELIAL CELL REACTION IN VASCULAR INVASION IN WELL DIFFERENTIATED THYROID CARCINOMA IS MORE COMMONLY ASSOCIATED WITH LOCO-REGIONAL RECURRENCE THAN DISTANT METASTASIS**
Christopher G. Ball, Bernhard Olberg, Chi K. Lai, Bibiana Purgina, Kien T. Mai

11. **PERINEURAL INVASION (PNI) AS A RISK FACTOR FOR LOCAL RECURRENCE (LR) IN EARLY SQUAMOUS CELL CARCINOMA OF THE ORAL TONGUE**
Aurelia Busca, Chi Lai, Susan J. Robertson, Simion Chiosea, Raja Seethala, Lester D. R. Thompson, Margaret S. Brandwein-Gensler, Jessica H. Maxwell, Umamaheswar Duvvuri, Seungwon Kim, Jonas T. Johnson, Robert L. Ferris, E. Celia Marginean, Bibianna Purgina

12. **CANMEDS SPECIFIC COMPETENCY MILESTONES IMPLEMENTED IN SURGICAL PATHOLOGY TRAINING IN ANATOMICAL PATHOLOGY RESIDENCY TRAINING AT THE UNIVERSITY OF OTTAWA**
Aurelia Busca, Sarah Strickland, Shahidul Islam

13. **THE ACCELERATED CLINICAL COURSE OF PANCREATIC NEUROENDOCRINE TUMORS: AN ANALYSIS OF CLINICAL, IMAGING AND PATHOLOGIC PROGNOSTIC FACTORS**
Nina Chang, Wayne S. Kendal, Wael Shabana, Alfredo Walker, Fady K Balaa, Christine Nyiraneza, Yvonne Dawkins, Avijit Chatterjee, Rachel Goodwin, Timothy Asmis, Terence N. Moyana

14. **DIRECT AUTOFLUORESCENCE VISUALIZATION TO GUIDE KIDNEY SPECIMEN GROSSING: A PROOF-OF-CONCEPT**
Soufiane El Hallani, Trevor Flood, Previn Gulavita, Eric Belanger

15. **PREDICTORS OF TUMOR UPGRADING OR UPSTAGING AFTER RADICAL PROSTATECTOMY IN PATIENTS WITH GLEASON SCORE 3+4=7 PROSTATE CANCER (PCA) AT TRANSRECTAL ULTRASOUND (TRUS) GUIDED NEEDLE BIOPSY**
Soufiane El Hallani, Trevor Flood, Kien T. Mai, Eric Belanger, Nicola Schieda

16. **GATA-3 EXPRESSION IS NOT ASSOCIATED WITH COMPLETE PATHOLOGICAL RESPONSE IN TRIPLE NEGATIVE BREAST PATIENTS TREATED WITH NEOADJUVANT CHEMOTHERAPY**
Jason K. Wasserman, Phillip A. Williams, Shahidul Islam, Susan J. Robertson

17. **LABORATORY REQUISITION FORMS OFTEN LACK CRITICAL INFORMATION: A QUALITY IMPROVEMENT INITIATIVE TO ENHANCE COMMUNICATION AND PATIENT SAFETY AT THE OTTAWA HOSPITAL**
Jason K. Wasserman, Iris Teo, Darren Tse, John P. Veinot, Bibianna Purgina

EORLA Academic Staff

EORLA's partnership with the University of Ottawa has been well-established and most of the Medical and Scientific Staff that support EORLA hold appointments with the University of Ottawa. EORLA's Academic Staff, by site:

Children's Hospital of Eastern Ontario

Melanie	Beaulieu-Bergeron	Assistant Professor
Pranesh	Chakraborty	Assistant Professor
Francis	Chan	Assistant Professor
Joseph	de Nanassy	Associate Professor
Dina	El Demellawy	Associate Professor
Michael	Geraghty	Full Professor
Yanping	Gong	Assistant Professor
David	Grynspan	Assistant Professor
Tim	Karnauchow	Assistant Professor
Ashok	Kumar	Full Professor
Nathalie	Lepage	Associate Professor
Elaine	Leung	Assistant Professor
Brian	Luke	Adjunct Professor
Jean	McGowan-Jordan	Assistant Professor
Jean	Michaud	Full Professor
Elizabeth	Nizalik	Assistant Professor
Robert	Slinger	Assistant Professor
Baldwin	Toye	Assistant Professor

Health Canada

Syed	Aziz	Adjunct Professor
Harpal	Buttar	Adjunct Professor
Susie	Elsaadany	Adjunct Professor
Santokh	Gill	Adjunct Professor
Olga	Pulido	Adjunct Professor
Collin	Rousseaux	Adjunct Professor

The Montfort Hospital

Maggy	Kyrollos	Assistant Professor
Nicolas	Roustan-Delattour	Assistant Professor

National Research Council

Wandong	Zhang	Adjunct Professor
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Ottawa Regional Cancer Centre

Manijeh	Daneshmand	Assistant Professor
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Queensway Carleton Hospital

Vivien	Frenkel	Assistant Professor
Garth	Perkins	Assistant Professor

The Ottawa Hospital

Anna	Adamiak	Assistant Professor
Yasmine	Ayroud	Assistant Professor
Diponkar	Banerjee	Full Professor
Paul	Beaulé	Full Professor
Eric	Bélanger	Assistant Professor
Paula	Blanco	Assistant Professor
Ronald	Booth	Assistant Professor
Janis	Bormanis	Full Professor
Seymour	Brownstein	Full Professor
Bruce	Burns	Full Professor
Marc	Desjardins	Assistant Professor
Bojana	Djordjevic	Assistant Professor
James	Farmer	Assistant Professor
Trevor	Flood	Assistant Professor
Antonio	Giulivi	Associate Professor
Marcio	Gomes	Assistant Professor
Denis	Gravel	Assistant Professor
Donald	Greenway	Assistant Professor
Fawaz	Halwani	Assistant Professor
Matthew	Henderson	Assistant Professor
Shahidul	Islam	Associate Professor
Jamison	Bruce	Assistant Professor
Gerard	Jansen	Associate Professor
Peter	Jessamine	Assistant Professor
Charis	Kepron	Assistant Professor
Zuzana	Kos	Assistant Professor
Thomas	Lagacé	Assistant Professor
Chi	Lai	Assistant Professor
Manisha	Lamba	Assistant Professor
Jianping	Li	Assistant Professor
Kien	Mai	Full Professor
Esmeralda Celia	Marginean	Associate Professor
Christopher	McCudden	Assistant Professor
Christopher	Milroy	Full Professor
Terence	Moyana	Full Professor
Bernhard	Olberg	Assistant Professor
Ruth Frances	Padmore	Associate Professor
Carlos	Parra-Herran	Assistant Professor
Jacqueline	Parai	Assistant Professor
Sherry	Perkins	Associate Professor
Robert	Prokopetz	Assistant Professor
Bibianna	Purgina	Assistant Professor
Karamchand	Ramotar	Associate Professor

The Ottawa Hospital,
cont'd

Susan	Robertson	Assistant Professor
Elianna	Saidenberg	Assistant Professor
Harman	Sekhon	Assistant Professor
Julie	Shaw	Assistant Professor
Luke	Shier	Associate Professor
Iris	Teo	Assistant Professor
Alan	Tinmouth	Assistant Professor
John	Veinot	Full Professor
Alfredo	Walker	Assistant Professor
Don	Wang	Assistant Professor
John	Woulfe	Associate Professor

University of Ottawa

Marilyn Ann	Keaney	Associate Professor
Marc-André	Langlois	Assistant Professor
Qiao	Li	Assistant Professor

University of Ottawa Heart Institute

Adolfo	De Bold	Emeritus Professor
Mercedes	De Bold	Assistant Professor
Yves	Marcel	Adjunct Professor
Ross	Milne	Full Professor

Pathology and Laboratory Medicine Clinical Research Committee



The Pathology and Laboratory Medicine (PALM) Research Committee, a joint TOH CHEO committee, was established several years ago to administer the academic funds the Department of Pathology and Laboratory medicine receives and to ensure that those resources are available to all Medical/Scientific staff.

Specifically the purpose of the Committee is to support academic and departmental activities including clinical research, to share information about our activities and what resources are available elsewhere, to improve departmental academic resources and capabilities and to build bridges and links within our department and outside of it.

The committee membership includes a chair, representatives from each division and CHEO, the Chief Medical and Scientific Officer of EORLA and the Departmental Coordinator of Research Operations. At least once per year, the committee sends out a call for research proposals to Medical/Scientific staff members.

Academic activities which are funded through the PALM funds include clinical research, academic research or educational enhancements including equipment, research infrastructure needs, epidemiology-statistical support and laboratory tests or procedure access and supplies. The committee reviews each proposal on the basis of its scientific merit, feasibility, and ensures that the objectives of the proposal conform to the terms of reference. Since 2010, the PALM Academic research committee has funded 45 projects and disbursed more than \$337,027.12.

In the past, a number of approved projects have been published or presented at national and international conferences. The increased interest in soliciting for funding through PALM is encouraging and we hope to be in a position to continue supporting the academic activities of our members.

Pathology and Laboratory Medicine (PALM) Grand Rounds 2014/15

Awards for PALM Grand Rounds were introduced for the 2013/14 academic year in various categories and the winners were announced and presented with their awards in the final session of that schedule which was held on June 16, 2014. The awardees in the various categories were as follows:

Best Presentation: Dr. Baldwin Toye (Microbiology)

Best Attended Presentation: Mr. Craig Ivany (EORLA Management)

Best Individual Attendance: Dr. John Veinot (Anatomical Pathology) and Dr. Harman Sekhon (Anatomical Pathology)

Best Attendance (Division): Anatomical Pathology (accepted by Dr. Diponkar Banerjee)

The 2014/15 edition of the PALM Grand Rounds (PGR) continued to build on the continuing success of the preceding years in terms of variety and quality of speakers and audience attendance.

PGR at the TOH General Campus site found a new base in the more spacious OHRI Room on the 5th Floor of the Critical Care Wing (CCW 5225). The present lecture schedule is attached. The lone external speaker in this academic year was Professor Andrew Nicholson, Lung Pathologist of the Royal Brompton Hospital, London, United Kingdom who delivered an astounding talk on “The New WHO Classification of Lung Tumours” on March 18, 2015. The Department of Anatomical Pathology at the University of the West Indies, Mona campus, Jamaica had tuned in to this lecture by OTN videoconferencing which was the first time that there has been participation in PGR by an international audience.

The PGR Committee was afflicted by the departures of Drs Tim Karnauchow, Elaine Leung and Ruth Padmore who all stepped down for personal reasons. We thank them for their contributions and look forward to them rejoining the committee in the near future. The Committee was able to recruit Dr Dina el Demellawy (Pediatric Pathology), Dr Karam Ramotar (Microbiology) and Agnes Cadieux (Microbiology) to restore its numbers and they have added value to its functions. At present, the 2014/15 PGR Committee is comprised of the following individuals by divisional/sub-divisional representation:

- Dr. Alfredo E Walker (Forensic Pathology) – Chairperson
- Dr. Julie Shaw (Biochemistry) – Committee Secretary
- Dr. Bojana Djordjevic (Anatomical Pathology) – Attendance/CME Recording Secretary
- Ms. Lorraine Hart (Laboratory Technology)
- Dr. Charis Kepron (Forensic Pathology)
- Dr. Harman Sekhon (Anatomical Pathology)
- Dr Dina el Demellawy (Pediatric Pathology)
- Dr Karam Ramotar (Microbiology).
- Agnes Cadieux (Microbiology)

The 2015/16 instalment of PALM Grand Rounds is shaping up to be yet another bumper year of talks. EORLA and the University of Ottawa have teamed up to put on a one day conference on Forensic and Pediatric pathology (<http://www.med.uottawa.ca/Pathology/eng/conference-forensic-pediatric-pathology.html>) which is planned for September 25, 2015. The conference has been planned around the visit of Professor Roger Byard, Forensic Pathologist and George Richard Marks Chair of Pathology, University of Adelaide, Australia who will be the featured external speaker for PGR on September 29, 2015. It is hoped that this conference will transform into an annual event.



Pathology and Laboratory Medicine (P.A.L.M.) Grand Rounds Monthly Schedule 2014/15



Venues: **TOH General Campus PALM Rooms A/B** and videoconferencing rooms at Civic and Riverside Campuses as available (*see below*).

Video conferencing access from External Sites available on the Ontario Telemedicine Network (OTN) by dialling the stated OTN numbers

Date	Speaker	Title	Discipline	General	Civic	Riverside	OTN	Chair
Apr 8, 2014	Laurel Crisbie-Michaud Laura Shaw	Virology – International QA and Testing	Virology (Technology)		Kaminski	Amphitheatre	26785360	C Kepron
Apr 22, 2014	Julie Shaw	Creatinine Standardization for eGFR Reporting in Guyana	Biochemistry		Kaminski	Amphitheatre	26786058	J Shaw
May 6, 2014	Marissa Freedman	Coagulation Case Studies	Hematology			Amphitheatre	26786743	H Sekhon
May 20, 2014	Charis Kepron	Drugs and Genes: New Applications of Molecular Genetics to Forensic Pathology	Forensic Pathology		Kaminski	Amphitheatre	26786834	B Djordjevic
June 3, 2014	Greg Doiron	Potential Yellow Belt LEAN Training	EORLA Management		N/A	Amphitheatre	26786976	C Kepron
June 17, 2014	Stephen Morley	Diabetes Mellitus and Insulin Measurement: Dogs, dog's dinners and new tricks	Biochemistry/Chemical Pathology	PALM	Kaminski	Amphitheatre	2687462	A Walker
Sep 9, 2014	Nancy Carson, Hussein Daoud, Olga Jarinova	Integration of the Next Generation Sequencing in Molecular Genetics Diagnostics	Molecular Genetics	OHRI	Kaminski	Auditorium	36945627	D Demellawy
Sep 23, 2014	Agnes Cadiuex	HIV Cured!Or Not?	Virology	PALM	Kaminski	Auditorium	36945995	K Ramotar
Oct 7, 2014	Liz Glover	The EORLA People Strategy	EORLA HR	OHRI		Auditorium	36954191	J Shaw
Oct 21, 2014	Ruth Padmore	Critical results in the Hematology Laboratory	Heme Path	OHRI		Auditorium	36958227	C Kepron
Nov 4, 2014	Doug Gray	The Contribution of UCHL1 to Neuronal and Non-neuronal Pathology	OHRI Research	OHRI	Tulip Cafe	Auditorium	36958330	Dr. Karam
Nov 18, 2014	Marc Desjardins	Laboratory Automation in Microbiology: Not just a Pipe Dream!	Microbiology	PALM	Tulip Cafe	Auditorium	36958446	C Kepron
Dec 2, 2014	Ronald Booth	Transformation of the Autoimmunity Laboratory: Bringing EORLA into the 21st Century	Biochemistry	OHRI	Kaminski	Auditorium	36958559	D Demellawy
Dec 16, 2014	Chris Milroy	Forensic Pathology and International Law	Forensic Pathology	OHRI		Auditorium	36958689	C Kepron
Jan 13, 2015	Amanda Clark	EBOLA: Addressing Biosafety and Biosecurity Concerns	Microbiology	OHRI	Kaminski	Auditorium	36958911	Lorraine Hart
Jan 27, 2015	Carlos Parra-Herran	Intraoperative Consultation in Gynecologic Pathology-Practical Approach	Anatomical Pathology	OHRI	Kaminski	Auditorium	36959044	Lorraine Hart
Feb 10, 2015	Sarah Schock David Grynspan	Intestinal dysmotility in Rett Syndrome	Ped Path	OHRI		Auditorium	36959122	B Djordjevic
Feb 24, 2015	Melanie Tokessy*	The Use of CMV-safe versus CMV-negative Blood Products for Hematopoietic Stem Cell Transplant Recipients	Transfusion Medicine	OHRI		Auditorium	36959203	R Padmore
Mar 10, 2015	John Woulfe	Advances in Parkinson's Disease: Not your Grandpa's PD	Neuropathology	OHRI		Auditorium	36959588	C Kepron *
Mar 18, 2015	Prof A Nicholson	The New WHO Classification of Lung Tumours		OHRI	Bickell Room	Auditorium	36945400	H Sekhon

Clinical Research Support

The Clinical Research Support is an integral part of EORLA's corporate operations and its mandate is delivering world class patient-focused integrated laboratory services.

The Clinical Research Program was established to improve the laboratory's ability to facilitate and support research conducted by clinical researchers. EORLA provides researchers with dedicated laboratory services in Biochemistry, Hematopathology, Microbiology, Surgical and Anatomical Pathology. The Clinical Research Program office provides assistance with study methodology consultation, project planning, financial analysis, reporting of research client activity, and support for study coordination ranging from ethics applications to study management. Clinical Research support is provided for both internal and external clients. Internal clients include the three campuses of The Ottawa Hospital (TOH), Ottawa Hospital Research Institute (OHRI), and the University of Ottawa Heart Institute (UOHI). External clients include the University of Ottawa, Ontario Tumour Bank (OTB), Princess Margaret Hospital (PMH), Mount Sinai Hospital, Sunnybrook Hospital, Ontario Familial Colorectal Cancer Registry, and the Juravinski Cancer Center.

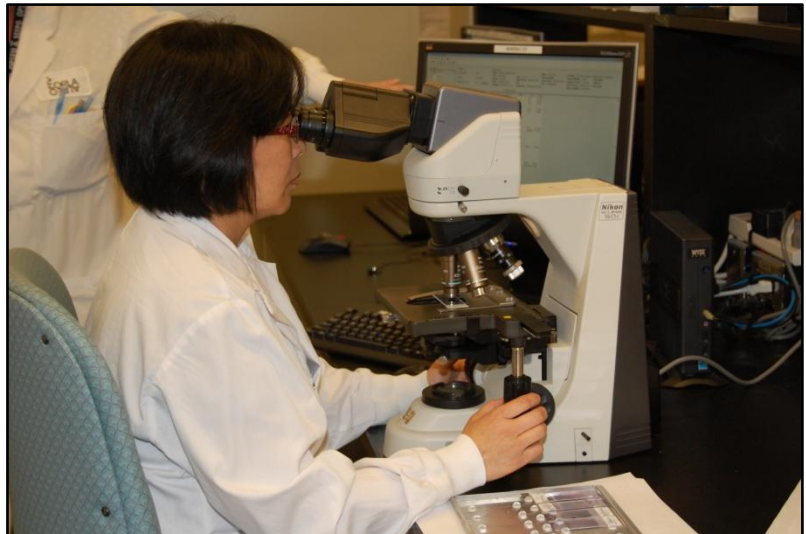
For 2014-2015:

The EORLA-TOH site provided ongoing support to 490 active clinical research clients:

- TOH-General Campus: 126
- TOH-Civic Campus: 35
- TOH-Riverside Campus: 32
- The Ottawa Hospital Cancer Centre (TOHCC): 245
- The University of Ottawa Heart Institute: 52 (mostly at the TOH-Civic Campus)

EORLA Laboratory staff processed a total of 25,000 laboratory service requests from internal and external clinical research clients.

Our robust and active clinical research program continues to be refined to ensure that EORLA provides world-class clinical research services and support.





EORLA's medical and scientific staff are very accomplished in their research and publications, along with their excellence in presenting. Following is a list of their publications and presentations in 2014/15.

2014/15 Academic Presentations by EORLA Medical and Scientific Staff

2014

1. **Syed Aziz**, Clarine Chan, Ivan Curan, Virginia Liston, Don Caldwell, Kamla Kapal, Rekha Mehta. Histochemical and immunohistochemical analysis of metabolic enzymes and co-factors in calf muscle of rats exposed to brominated flame retardant (BFR) Hexabromocyclododecane (HBCD). Annual Research Day, 2014, University of Ottawa, Canada.
2. **Syed Aziz**, Sana Aman, Meghan Kavanagh, Michael Barker, Kamla Kapal, Wendy Cherry, Rekha Mehta and Santokh Gill. The Effects of 3-Methylfuran on the Calf Muscle of Fischer 344 Rats. Annual Research Day, 2014, University of Ottawa, Canada.
3. J. Raju, J. Roberts, **S.A. Aziz**, D. Caldwell, and R. Mehta. Effect of dietary exposure of acrylamide on experimental colon carcinogenesis. CMP research open house Health Canada, Ottawa, Canada 2014.
4. **Syed A Aziz**, Sana Aman, Meghan Kavanagh, Michael Barker, Kamla Kapal, Wendy Cherry, Rekha Mehta, Santokh Gill. The effect of 3-Methylfuran on the Calf Muscle of Fisher 344 Rats. Annual Research Day, 2014, University of Ottawa, Canada.
5. **Syed A Aziz**, Clarine Chan, Ivan Curan, Virginia Liston, Don Caldwell, Kamla Kapal, Rekha Mehta. Histochemical and immunohistochemical analysis of metabolic enzymes and co-factor in calf muscle of rats exposed to brominated flame retardant (BFR) Hexabromocyclododecane (HBCD). Annual Research Day, 2014, University of Ottawa, Canada.

6. J. Raju, J. Roberts, **S.A. Aziz**, D. Caldwell, and R. Mehta. Effect of dietary exposure of acrylamide on experimental colon carcinogenesis. CMP research open house Health Canada, Ottawa, Canada in 2014.
7. **Beaulieu Bergeron M**, Yoshimoto M, Clifford B, Sinclair-Bourque E, Padmore R, McGowan-Jordan J, Tay, J. Implementation of a multiple myeloma high risk mini-FISH panel: Implications for treatment management for patient in Eastern Ontario. Department of Pathology and Laboratory Medicine Annual Research Day, University of Ottawa, May 8th, 2014.
8. **Beaulieu Bergeron M**,
Genomic disorders: When the genome architecture is to blame. Weekly Academic Half Days in Genetics, Children's Hospital of Eastern Ontario (CHEO), Ottawa, January 10th, 2014.
9. **Beaulieu Bergeron M**,
Are all D13S319 probes equal for detection of interstitial deletion 13q in CLL? Great Lakes Chromosome Conference. University of Toronto, Toronto, May 15-16, 2014.
10. **Beaulieu Bergeron M**, Yoshimoto M, Clifford B, Sinclair-Bourque E, Padmore R, McGowan-Jordan J, Tay, J. When you get more than you bargained for: FISHing multiple myeloma samples using a mini panel for high-risk cytogenetic anomalies. Great Lakes Chromosome Conference. University of Toronto, Toronto, May 15-16, 2014.
11. **Beaulieu Bergeron M**,
Highlights of the American Cytogenetics and Great Lakes Chromosome Conferences. Weekly Education Rounds in Genetics, Children's Hospital of Eastern Ontario (CHEO), Ottawa, June 3rd, 2014
12. Gunita Mitera, **D. Banerjee**, Laurette Geldenhuys, Rosemary Henderson, Fergall Magee, Meg McLachlin, Tarek Rahmeh, Esther Ravinsky, Bernard Têtu, Martin Trotter, Robert Wolber, Natasha Camuso, John Srigley. Quality Assurance Programs for External and Interpretive Pathology in Canada – Is there Room for Improvement? 65th Annual Meeting of the CAP-ACP July 12-15, 2014, Toronto, ON.
13. Histopathological grading of rectum prior to ileoanal anastomosis (J-pouch) in children with refractory ulcerative colitis. **EI Demellawy D**, de Nanassy J, Chan E, Lee, JYJ, Bass J, Mack D, Nasr Published in Journal of Pediatric and Developmental Pathology, 2014. Presented in joined PPS and SPP fall meeting 2014
14. Does MAP2 play a role in predicting the development of anti-NMDAR encephalitis associated with Benign Ovarian Teratoma. Cundiff C, Elawabdeh N, Naguib MM, Jactel S, **EI-Demellawy D**, Abramowsky CR, Durham MM, Youssef L, Wittkamp ML, Shehata B. Presented in joined PPS and SPP fall meeting 2014
15. Congenital mesoblastic nephroma: A study of 19 cases using immunohistochemistry. **Dina EI-Demellawy**, Ahmed Nasr, Nancy Elawabdeh, Caitlin Cundiff, Shelley Caltharp, Bahig Shehata Journal of Pediatric and Developmental Pathology, 2014. Presented in SPP spring meeting 2014
16. Diagnostic Value Of Caldesmon, Cyclin D1 and Beta Catenin In Pediatric Fibroblastic/Myofibroblastic Tumors. M Hassan, J de Nanassy, A Nasr, **D EI-Demellawy**. Canadian Journal of Pathology, 2014
17. Neurogenic Ovarian Cyst – A Rare Monodermal Teratoma. K Williams, J Michaud, **D EI-Demellawy**. Canadian Journal of Pathology, 2014
18. Petkiewicz S, Sekhon H, Lai C, Wheatley-Price P, **Gomes M**. Morphology Outperforms Immunohistochemistry on Subtyping of NSCLC in Biopsies. United States and Canadian Academy of Pathology 101st Annual Meeting, San Diego, CA, USA, March 01-07, 2014.

19. Paliga A, Strickland S and **Gomes M**. Improving the Autopsy Service through a Pathology Resident-Led Educational Initiative for Clinical Residents. United States and Canadian Academy of Pathology 101st Annual Meeting, San Diego, CA, USA, March 01-07, 2014.
20. Sudden Dyspnea & Autoimmune Polyarthritis, Cardiovascular Pathology Specialty Conference, United States and Canadian Academy of Pathology, San Diego, CA, USA, March 2014. **Lai, C**
21. What is the Best Sampling Approach In Different Situations of Pleural Thickening? The Ottawa Hospital Interprofessional Retreat on Thoracic Cancer, Ottawa, ON, Canada, November 2014. **Lai, C**
22. Griffith CC, Thompson LDR, Assaad A, Purgina BM, **Lai C**, Bauman JE, Weinreb I, Seethala RR, Chiosea SI. Salivary duct carcinoma: prevalence of actionable genetic alterations and re-assessment of conventional clinicopathological prognosticators. Mod Pathol 2014 Feb; 27 (Supplement 2): 319A.
23. Petkiewicz, Sekhon H, **Lai C**, Wheatley-Price P, Gomes M. Morphology outperforms immunohistochemistry on subtyping of NSCLC in Biopsies. Mod Pathol 2014 Feb; 27 (Supplement 2): 491A.
24. Brooks Z, Gerz R, **Nathalie Lepage**, Plaut D. Evaluation of quality OptimiZer software to simplify application of EP23-A, minimize patient risk and reduce clinical cost. Annual meeting of the American Association of Clinical Chemistry, Chicago, USA, July 27-31, 2014.
25. Plaut DS, **Nathalie Lepage**, Taylor R, McLellan W. Recommendations for new QC rules based on precision from 2012 data. Annual meeting of the American Association of Clinical Chemistry, Chicago, USA, July 27-31, 2014.
26. Plaut D, Davis D, Dumontelle J, Johnsen L, **Nathalie Lepage**. Descriptive statistics. Advance for Medical Laboratory Professionals. Webinar June 12, 2014.
27. Chiu T, Richer J, **Nathalie Lepage**. Outcomes of Pregnancies Screened Positive for Both Down Syndrome and Trisomy 18 Using Integrated Prenatal Screening (IPS). Annual meeting of the American College of Medical Genetics Annual Clinical Genetics, Nashville, USA, March 25-29, 2014.
28. MRI characterization of brain tumors in children younger than two years old: correlation with pathology results (Poster EP-210)
Caro, P., Davila, J., **Michaud, J.**, Miller, E.
American Society of Neuroradiology (ASNR), Montréal, May 17-22, 2014
Fatal Entrapment of the Basilar Artery in a Longitudinal Fracture of the Clivus due to Head Injury: A Case Report and Review of the Literature (Platform 10.2)
Walker, A. E., dos Santos, M. P., Glikstein, R., Michaud, J.
National Association of Medical Examiners 2014 Annual Meeting, Portland, OR, August 23, 2014
29. Neurochemical changes in a mouse model of Rett Syndrome (Poster)
Cudd, S., Schock, S., Grynspan, D., **Michaud, J.**, Staines, W.
7th Annual CHEO Research Day, Ottawa, October 22, 2014
30. Neurogenic Ovarian Cyst: A Rare Monodermal Teratoma
Williams, K., Williams, P. **Michaud, J.**, El Demellawy, D.
Canadian Association of Pathologists Annual Meeting, Toronto, July 12-16, 2014 (Poster session)

31. Sudden death following mono-intoxication with 3,4-methylenedioxypyrovalerone. (MDPV). American Academy of Forensic Sciences, Seattle, 2014. **Milroy, C**
32. Lethal rupture of a traumatic aneurysm of the posterior inferior cerebellar artery. International Academy of Forensic Sciences, Seoul, South Korea, 2014 **Milroy, C**
33. Buyukdere H, **Padmore R**, Mandel K, Jones G, Atkins H. Successful use of infliximab to treat acute Epstein Barr-induced hemophagocytic lymphohistiocytosis: A case report. The Histiocyte Society Annual Meeting, Toronto October 28 – 30, 2014.
34. Robillard J, Pena E, Dennie C, **Veinot JP**. Case presentation- cardiac lymphangioma. SCMR annual meeting. New Orleans, LA, USA, Jan 2014.
35. Van Oosten EM, Boag A, Cunningham K, **Veinot JP**, Hamilton A, Petsikas D, Payne D, Redfearn DP, Zhang S, Baranchuk A. Histological changes in human right atrial tissue caused by obstructive sleep apnea: a pilot study. Canadian Cardiovascular Congress. Vancouver, BC.2014. Can J Cardiology. Abstract # 195. 2014; 30: S152-3.
36. Stoyanov N, Birnie DH, Beanlands RS, **Veinot JP**, Redpath CJ, Nair GM, Lemery R, Ohira H, Leung E, Dekemp R, Nery PB. Using 3D electroanatomical mapping to guide endomyocardial biopsy for cardiac sarcoidosis. Canadian Cardiovascular Congress. Vancouver, BC. 2014. Can J Cardiology. Abstract # 463 2013; 30: S294.
37. USCAP Short course faculty – Heart and lung transplant pathology. D Miller, **JP Veinot**, HD Tazelaar, G. Berry.. San Diego, CA, USA, 2014.
38. Cardiovascular Anatomy and Pathology. University of Ottawa Heart Institute, Nursing conference. **Veinot JP**, 2014.
39. Wasserman JK, Jansen G, Yaworski R, **Woulfe J**. IDH1 mutation is associated with decreased proliferative activity in newly diagnosed anaplastic gliomas. United States and Canadian Association of Pathologists, San Diego, CA, 2014.
40. Warman Chardon J, Smith A, **Woulfe J**, Pena E, Rakhra K, Beaulieu C, Schwartzentruber J, Hawkins C, Harms MB, Zheng M, and FORGE Canada, Majewski , Bulman D, Boycott KM, Dymment DA. Exome sequencing identifies PINCH2 mutations in early onset autosomal recessive LGMD with severe cardiomyopathy and triangular tongues. American Academy of Neurology, Philadelphia, PA, 2014.
41. Gont A, Hanson JEL, Lavictoire SJ, Nicholas G, **Woulfe J**, Kassam A, Da Silva VF, Lorimer IAJ. PTEN represses glioblastoma tumor initiating cell differentiation via the polarity proteins aPKC and Lgl. Cold Spring Harbour PTEN Pathways & Targets Meeting, New York, 2014.
42. Wasserman J, Ottawa, Chakraborty S, Nicholas G, **Woulfe J**, Jansen G, Nguyen T. Radiological and pathological features associated with early disease progression and death in newly diagnosed anaplastic astrocytic tumours. RSNA, 2014.
43. Kumar R, Gont A, Hanson JEL, Cheung AYL, Nicholas G, **Woulfe J**, Da Silva VF, Lorimer IAJ, Kassam A. Isolating glioblastoma tumor initiating progenitor cells from the subventricular zone using a novel minimally invasive approach. Society for Neurooncology, Miami, Fla, USA, 2014.
44. Sai Y, **Zhang W**, Li Q. Characterization of A β -mediated insulin resistance in APP-expressing neuroblastoma cells. Canadian Alzheimer's Disease Basic Research Symposium. Oct. 2014, Laval, Quebec.

45. Dorey E, **Zhang W**, Bamji-Mirza M, Liu H, Najem D. Apolipoprotein E isoforms differentially regulate Alzheimer's neuroinflammation. *Alzheimer's & Dementia* 10 (4 suppl): P254-P255, 2014.
46. Beta-amyloid metabolism, Neuroinflammation and Alzheimer's disease. Tongji Medical College, Huazhong University of Science & Technology. March 4, 2014. **Zhang W**
47. Apolipoprotein E isoforms differentially regulate Alzheimer's neuroinflammation. Invited oral presentation at the 2014 Alzheimer's Association International Conference (Copenhagen, July 16, 2014). **Zhang, W**

2015

1. **S.A. Aziz**, R. Mueller, E. Lok ' K. Kapal, M. Taylor' P. Bellon-Gagnon, R. Mehta. Analysis of p30 Deleted in Breast Cancer (DBC) gene as a potential biomarker in rat mammary gland tumours. Health Canada Science forum Feb. 23-24, 2015.
2. **S.A. Aziz**, R. Mueller, E. Lok ' K. Kapal, M. Taylor' P. Bellon-Gagnon, R. Mehta. Analysis of p30 Deleted in Breast Cancer (DBC) gene as a potential biomarker in rat mammary gland tumours. Health Canada Science forum Feb. 2015
3. **Beaulieu Bergeron M.**
Products of conception and pregnancy losses gone array: The new gold standard? Weekly Education Rounds in Genetics, Children's Hospital of Eastern Ontario (CHEO), Ottawa, March 24th, 2015.
4. **Beaulieu Bergeron M.**
Illustrative cytogenetic prenatal cases. Weekly Academic Half Days in Genetics, Children's Hospital of Eastern Ontario (CHEO), Ottawa, February 20th, 2015.
5. **Beaulieu Bergeron M.**
Introduction to standard chromosome analysis in hematological disorders. Weekly Academic Half Days in Hematological Pathology, The Ottawa Hospital (TOH), Ottawa, February 9th, 2015.
6. **Beaulieu Bergeron M.**
Why we do what we do: The "how" and "why" of the new CHEO cytogenetics prenatal testing algorithm. Weekly Academic Half Days in Maternal Fetal Medicine, The Ottawa Hospital (TOH), Ottawa, February 2nd, 2015.
7. **Beaulieu Bergeron M.**, Cloutier M, Nikkel S, McGowan-Jordan J. Adapting clinical testing algorithms in the context of an ever-changing landscape: The new CHEO cytogenetic prenatal diagnosis algorithm. CHEO Genetics Clinical Innovation Day. Children's Hospital of Eastern Ontario (CHEO), April 17th, 2015.
8. Al Mugbel M, **Nathalie Lepage**, Fung Kee Fung K. First trimester nuchal translucency in twin pregnancy as a predictor of birth weight discordance. Annual meeting of the International Society of Ultrasound in Obstetrics and Gynecology, Montreal, Canada, October 11-14, 2015.
9. Johnston A, McFarlane A, Bourner G, Martin T, Aslan B, **Padmore R**. Setting appropriate precision limits in routine hematology. XXVIIIth International Symposium on Technological Innovations in Laboratory Hematology/ISLH, Chicago, May 2015.

10. Murzin D, Milman N, Belanger E, Veinot J. A retrospective cohort of aortitis cases in a Canadian centre over 10 years. Canadian Rheumatology Association Annual scientific meeting. Quebec City, Quebec, Canada, Feb 2015.
11. Inacio JR, Pena E, Veinot J, Shafeequr RS, Dennie C. A rare cardiomyopathy presenting with predominant right ventricle involvement. Society for Cardiovascular Magnetic resonance, Nice, France. Feb 2015.
12. Inacio Joao, Pena Fernandez Elena, Veinot JP, Dennie C. Giant cell myocarditis: a rare cause of myocarditis presenting with predominant right ventricular involvement on cardiac magnetic resonance imaging and pathology. SCMR/EuroCMR joint scientific session 2015, Nice, France.
13. USCAP Short course faculty – Heart and lung transplant pathology. D Miller, JP Veinot, HD Tazelaar, G. Berry. Boston, MA, USA, 2015
14. Schlossmacher M, Pelletier L, Dong L, Meng F, Fitzpatrick M, Harmsen I, Grigor E, Roberson E, Bennett S, Nussbaum R, Woulfe J, Brown E, Lagace D, Tomlinson J. Holocrano microscopy technique visualizes alpha-synuclein and tau expression in the olfactory epithelium: Implications for testing the Braak hypothesis. AD/PD Conference. Nice, France, 2015.
15. Zakhari N, Nguyen T, Boivin A, Jansen G, Woulfe J, Cron G, Thornhill R. Usefulness of Dynamic Contrast Enhanced (DCE), Dynamic Susceptibility Contrast (DSC) and Diffusion Weighted (DW) MRI in Differentiating Tumor Progression from Treatment Related Changes in High Grade Gliomas. ASNR, 2015.
16. Gray MT, Woulfe J, Munoz DG. Vessel-associated neurites contain phosphorylated alpha-synuclein in young and old appendices. American Association of Neuropathologists, 2015.
17. Genetic Polymorphisms and functional consequences in Alzheimer's disease. Beijing Hospital/Ministry Health-Institute of Geriatrics. March 30, 2015. Zhang, W

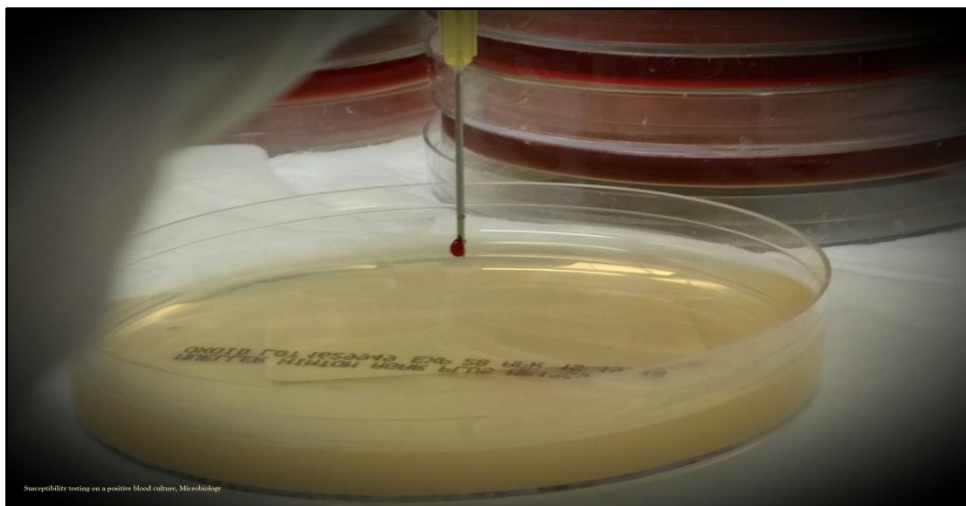


Photo: Amanda McIntosh

2014/15 Academic Publications by EORLA Medical and Scientific Staff

2014

1. Chao Wu Xiao , Carla M, Wood ,Dorcas Weber ,**Syed A. Aziz** , Rekha Mehta , Philip Griffin , Kevin A. Cockell. Dietary supplementation with soy isoflavones or replacement with soy proteins prevents hepatic lipid droplet accumulation and alters expression of genes involved in lipid metabolism in rats. *Genes Nutr* 2014 Jan;9(1):373.
2. **Aziz SA**. Prognostic and Predictive Factors in Breast Cancer Patients: a Need for Developing the Consensus. *Austin J Pathol Lab Med*. 2014;1(2): 2.
3. Cheung CC, **Banerjee D**, Barnes PJ, Berendt RC, Butany J, Canil S, Clarke BA, El-Zimaity H, Garratt J, Geldenhuys L, Gilks CB, Manning L, Mengel M, Perez-Ordóñez B, Pilavdzic D, Riddell R, Swanson PE, Torlakovic EE. Canadian Association of Pathologists–Association canadienne des pathologistes National Standards Committee for High Complexity Testing/Immunohistochemistry. Guidelines for the Preparation, Release, and Storage of Unstained Archived Diagnostic Tissue Sections for Immunohistochemistry. *Am J Clin Pathol*. 2014 Nov;142(5):629-33
4. Xu Z, Van Der Jagt R, Faught C and Beaulieu **Bergeron M**. A rare IgM multiple myeloma with aberrant PAX5 expression mimicking lymphoplasmacytic lymphoma. *Annals of Hematology* 93:1251-1252, 2014.
5. Choi J, Bouron Dal Soglio D, Fortier A, Fetni R, Mathonnet G, Cournoyer S, Lallier M, Isler M, Beaulieu **Bergeron M** and Patey N. Diagnostic utility of molecular and cytogenetic analysis in lipoblastoma: A study of two cases and review of the literature. *Histopathology* 64:731-740, 2014.
6. Chow A., **Blanco P.L.**, Raghuveer A., Pearcey J., Husain S., Hidalgo L., Halloran P., Zhu L., Sis B. Alloantibody induced C4d deposition, without activation of distal complement effector C5a, is not associated kidney allograft injury or accommodation in mice (submitted)
7. Lim LA., Miyamoto C. **Blanco P.L.**, Bakalian S., Burnier Jr. M.N. An atypical peripapillary uveal melanoma. (accepted for publication)
8. Oremus M., McKelvie R., Don-Wauchope A., Santaguida PL., Ali U., Balion C., Hill S., **Booth R.A.**, Brown JA., Bustamam A., Sohel N., Raina P. A Systematic Review of BNP and NT-proBNP in the Management of Heart Failure: Overview and Methods. Submitted to *Heart Failure Reviews*, 2014 19(4): 413-419.
9. Oremus M., Don-Wauchope A., McKelvie R., Santaguida PL., Hill S., Balion C., **Booth R.A.**, Brown JA., Ali U., Bustamam A., Sohel N., Raina P. BNP and NT-proBNP as Prognostic Markers in Persons with Chronic Stable Heart Failure. Submitted to *Heart Failure Reviews*, 2014 19(4): 471-505.



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10. Santaguida PL., Don-Wauchope A., Oremus M., McKelvie R., Ali U., Hill S., Balion C., **Booth R.A.**, Brown JA., Bustamam A., Sohel N., Raina P. BNP and NT-proBNP as Prognostic Markers in Persons with Acute Decompensated Heart Failure. Submitted to Heart Failure Reviews, 2014 19(4): 453-470.
11. Don-Wauchope A., Santaguida PL., Oremus M., McKelvie R., Ali U., Brown JA., Bustamam A., Sohel N., Hill S., **Booth R.A.**, Balion C., Raina P. Incremental Predictive Value Of Natriuretic Peptides for Prognosis In The Chronic Stable Heart Failure Population: A Systematic Review. Submitted to Heart Failure Reviews, 2014 19(4): 521-540.
12. Santaguida PL., Don-Wauchope A., Ali U., Oremus M., Brown JA., Bustamam A., Hill S., **Booth R.A.**, Sohel N., McKelvie R., Balion C., Raina P. Incremental Value of Natriuretic Peptide Measurement in Acute Decompensated Heart Failure (ADHF): A Systematic Review. Submitted to Heart Failure Reviews, 2014 19(4): 507-519.
13. Don-Wauchope AC., Santaguida PL., McKelvie R., Brown JA., Oremus M., Ali U., Bustamam A., Sohel N., Hill S., **Booth R.A.**, Balion C., Raina P. Prediction of clinical outcomes using B-type Natriuretic Peptides in the general population. A systematic review. Submitted to Heart Failure Reviews, 2014 19(4): 541-551.
14. **Booth R.A.**, Stephen Hill, Andrew Don-Wauchope, P. Lina Santaguida, Mark Oremus, Robert McKelvie, Cynthia Balion, Judy A. Brown, Usman Ali, Amy Bustamam, Nazmul Sohel, Parminder Raina. Performance of BNP and NT-proBNP for Diagnosis of Heart Failure in Primary Care Patients: A Systematic Review. Submitted to: Heart Failure Reviews, 2014 19(4): 439-451.
15. Stephen A. Hill, **Booth R.A.**, P. Lina Santaguida, Andrew Don-Wauchope, Judy A. Brown, Mark Oremus, Usman Ali, Amy Bustamam, Nazmul Sohel, Robert McKelvie, Cynthia Balion, Parminder Raina. Use Of Bnp And Nt-Probnp For The Diagnosis Of Heart Failure In The Emergency Department: A Systematic Review Of The Evidence. Submitted to: Heart Failure Reviews, 2014 19(4): 421-438.
16. Jiang K, **Brownstein S**, Lam K, Chow D, Jackson WB. Posterior Amorphous Amyloid Degeneration. JAMA Ophthalmol. In press.
17. Jiang K, **Brownstein S**, Toye B, Ali-Ridha A, Mintsoulis G. Mycobacterium chelonae keratitis in a 3-decade old corneal graft. JAMA Ophthalmol. In press.
18. Erica Sequerira, Ginpreet Kaur, **Harpal S. Buttar**
Celiac disease: role of genetics and immunity and update on novel strategies for treatment
Bulgarian Society for Cell Biology, Biomedical Reviews, 2014; 25:45-58
19. Erica Sequerira, Ginpreet Kaur, Meena Chintamaneni, **Harpal S. Buttar**
Lactose intolerance: genetics of lactase polymorphisms, diagnosis and novel therapy
Bulgarian Society for Cell Biology, Biomedical Reviews, 2014; 25:35-44
20. Alexander Gont, Jennifer Hanson, Sylvie Lavictoire, **Daneshmand. M**, Garth Nicolas, John Woulfe, Amin Kassam, Vasco DaSilva, Ian Lorimer (2014)
Inhibition of glioblastoma malignancy by Lgl1, Oncotarget. 2014 Nov 30;5(22):11541-5
21. Zeh H, Downs-Canner S, McCart J, Rao U, Ramalingam L, Thorn S, Jones H, Kalinski P, Wieckowski E, O'Malley M, **Daneshmand M**, Hu K, Bell J, Hwang T, Moon A, Breitbach C, Kirn D, Bartlett D (2014)
First-in-man Study of Western Reserve Strain Oncolytic Vaccinia Virus: Safety Spread and Anti-tumor Activity, Molecular Therapy, 10. 138/mt.2014.194

22. Shawn Christopher Malone, Anoop Haridass, Balasz Nyiri, Jennifer Croke, Colin Malone;Rodney H. Breau, Christopher Morash, Leonard Avruch, **Daneshmand. M.**, Kyle Malone;Nicolas Roustan Delatour, Ileyaz Ahmed, Eric Belanger, (2014)
Creation of 3-Dimensional Prostate Cancer Maps, Arch Path LabMed, 138: 803-808
23. Curtis McCloskey, Reuben Goldberg, Lauren Carter, **Daneshmand M.**, Lisa F. Gamwel, Olga Collins, Elizabeth Macdonald, Euridice Carmona, and Barbara C. Vanderhyden, (2014), Characterization of a stem cell-like population in a spontaneously transformed syngenetic model of high-grade serous ovarian cancer. Frontier in Oncology, 18;4:53
24. Baldwin RM, Haghandish N, **Daneshmand M.**, Amin S, Paris G, Falls TJ, Bell JC, Islam S, Cote J (2014) Protein Arginine Methyltransferase 7 Promotes Breast Cancer Cell Invasion Through the Induction of MMP9 Expression, Oncotarget. 2014 Dec 26
25. Cooke G. M., M. Taylor, C. Bourque, I. Curran, S. Gurofsky and **Gill S.** Effects of Furan on Male Rat Reproduction Parameters in a 90 day Gavage Study. Reproductive Toxicology 46:85–90, 2014.
26. **Gill, S.**, M. Kavanagh, W. Cherry, M. Barker, M. Weld and G.M. Cooke. A A 28-Day Gavage Toxicity Study in Fischer 344 rats with 3-methylfuran. Toxicol Pathol, in print. 2014.
27. L. Graf, K.A. Moffat, S.A. Carlino, A.K.C. Chan, A. Iorio, **Giulivi A.**, C.P.M. Hayward; Evaluation of an Automated Method for Measuring von Willebrand Factor Activity in Clinical Samples without Ristocetin; International Journal of Laboratory Hematology 2014, 36, 341-351 online
28. Gaikwad A, Souza C, **Gomes M.**, Sekhon H, Seely J, Dennie C, Inacio J. Aerogenous Metastases: An Under Recognized Game-Changer in Diagnosis and Management of Primary Lung Adenocarcinoma. Am J Roentgenol (submitted for publication).
29. Wheatley-Price P, Jonker H, Jonker D, Shamji F, **Gomes MM.** Thymic epithelial neoplasms: a 12-year canadian regional cancer program experience. Clin Lung Cancer. 2014 May;15(3):231-6.
30. Pena E, Souza CA, Escuissato DL, **Gomes MM.**, Allan D, Tay J, Dennie CJ. Spectrum of Non-infectious Pulmonary Complications after Hematopoietic Stem Cell Transplantation: A Practical Approach to Imaging Diagnosis. RadioGraphics 2014 May-Jun;34(3):663-83.
31. Zuzana Kos, Bruce F. Burns, **Gomes M.**, and Harman S. Sekhon. A Rare Case of Anaplastic Variant of Diffuse Large B-Cell Lymphoma Presenting as a Lung Primary. Int J Surg Pathol. 2013 Jun 17. 2014 Apr;22(2):167-71
32. Teaching the Can MEDS Roles to Laboratory Medicine Residents: Residents as Teachers and Development of ePortfolios. S. Strickland and **Islam S** Can J Pathol (accepted for publication) 2014
33. Coulthart MB, **Jansen GH.** Cashman NR: Interpretation of CSF protein tests in the diagnosis of sporadic Creutzfeldt-Jakob disease: an evidence-based approach. CMAJ 2014 online: January 20, 2014, doi: 10.1503/cmaj.130720
34. Savard M, Laforce R, Guillemette E, Goselin-Lefebvre S, Geschwind M, Irani SR, **Jansen GH.** Gould PV: Creutzfeldt-Jakob disease-like periodic EEG discharges in voltage-gated potassium channel complex antibody encephalitis: A case report. Neuroimmunology 2014.

35. Nguyen TB, Cron GO, Mercier JF, Footitt C, Torres CH, Chakraborty S, Woulfe J, **Jansen GH**, Caudrelier JM, Sinclair J, Hogan MJ, Thornhill R, Cameron I: Preoperative Prognostic Value of DCE-MRI-derived Ktrans and Vp in Patients with Cerebral Gliomas. *Am J Neuroradiology* 2014
36. **Kos Z**, Broaddus RR, Djordjevic B. Fallopian tube high-grade serous carcinoma with intramucosal spread and presenting as a malignancy on pap smear. *Int J Gyne Pathol.* 2014; 33:443-8.
37. **Kos Z**, Williams PA, Belanger EC, Mai KT. Fluorescence in situ hybridization (FISH) as an adjunct tool in the diagnosis of primary and metastatic renal cell carcinoma in fine needle aspiration specimens. *Diagn Cytopathol.* 2014 Apr 1 [Epub ahead of print]
38. Mai KT, Flood TA, Ball CG, **Kos Z**, Belanger EC, Islam S, Sekhon H. Three- dimensional cell groups with disordered nuclei and cellular discohesion (3DDD) are associated with high sensitivity and specificity for cystoscopic urine cytopathological diagnosis of low-grade urothelial neoplasia. *Diagn Cytopathol.* 2014; 42:555-63.
39. **Kos Z**, Bums BF, Gomes MM, Sekhon HS. A Rare Case of Anaplastic Variant of Diffuse Large B-Cell Lymphoma Presenting as a Lung Primary. *Int J Surg Pathol.* 2014; 22:167-71.
40. Tajudeen BA, Fuller J, **Lai C**, Grogan T, Elashoff D, Abemayor E, St. John MA. Head and neck sarcomas: the UCLA experience. *Am J Otolaryngol* 2014 Jul-Aug; 35(4): 476-81. Epub 2014 Feb 15.
41. Peng KA, Chu AC, **Lai C**, Grogan T, Elashoff D, Abemayor E, St. John MA. Is there a role for neck dissection in T1 oral tongue squamous cell carcinoma? The UCLA experience. *Am J Otolaryngol* 2014 Nov-Dec; 35(6): 741-6. Epub 2014 Jul 10.
42. Griffith CC, Thompson LD, Assaad A, Purgina BM, **Lai C**, Bauman JE, Weinreb I, Seethala RR, Chiosea SI. Salivary duct carcinoma and the concept of “early carcinoma ex pleomorphic adenoma”. *Histopathology* 2014 Dec; 65(6): 854-60. Epub 2014 Oct 30.
43. Yilbas A, Hamilton A, Wang Y, Mach H, Lacroix N, Davis, DR, Chen J, **Li Q**. Activation of GATA4 gene expression at the early stage of cardiac specification. *Front. Chem.* 2014, 2:12
44. Tam RK, Wong H, Plint A, **Lepage N**, Filler G. Comparison of Clinical and Biochemical Markers of Dehydration in Children: A Prospective Double-cohort Trial. *BMC Pediatrics* 2014 in press.
45. Plaut D, **Lepage N**. The laboratory and risk reduction, part 6: It is important that new lots of reagents and calibrators be tested before being put online. *Advance for Medical Laboratory Professionals*, On-line publication November 24, 2014.
46. Plaut D, **Lepage N**. Quality control rejuvenated: a review of past and proposed rules. *Advance for Medical Laboratory Professionals*, 23(10): 26-30, 2014.
47. Plaut D, **Lepage N**. Cardiac markers: current status and the clinical laboratory. *Advance for Medical Laboratory Professionals*, 23(10): 18-21, 2014.
48. **Lepage N**, Hart L. A fresh look at Quality and Patient safety in the Eastern Ontario Regional Laboratory Association. *EORLA lab links*, October : 1-6, 2014.

49. Plaut D, **Lepage N.** The laboratory and risk reduction, part 4: examining the analytical phase of handling patient samples through acquiring results. Advance for Medical Laboratory Professionals, On-line publication August 29, 2014.
50. Plaut D, **Lepage N.** The laboratory and risk reduction, part 3: data indicate that 55-70% of the errors in the laboratory stem from the pre-analytical phase. Advance for Medical Laboratory Professionals, On-line publication August 26, 2014.
51. Plaut D, **Lepage N.** The laboratory and risk reduction, part 2: less likely but possible. Advance for Medical Laboratory Professionals, On-line publication August 5, 2014.
52. Plaut D, **Lepage N.** The laboratory and risk reduction, part 1: defining risk and risk management. Advance for Medical Laboratory Professionals, On-line publication July 22, 2014.
53. Plaut D, **Lepage N.** Davis D. Let's ROC, part 6: other related statistics. Advance for Medical Laboratory Professionals, On-line publication April 21, 2014.
54. Plaut D, **Lepage N.** Davis D. Let's ROC, part 5: other related statistics. Advance for Medical Laboratory Professionals, On-line publication April 7, 2014.
55. Plaut D, Davis D, **Lepage N.** Let's ROC, part 4: other related statistics. Advance for Medical Laboratory Professionals, On-line publication March 31, 2014.
56. Plaut D, Davis, D, **Lepage N.** Let's ROC, part 2. Statistics for study outcomes. Advance for Medical Laboratory Professionals, On-line publication March 10, 2014.
57. Plaut D, **Lepage N.** Davis D. ROC curves part 1. Statistics for study outcomes. Advance for Medical Laboratory Professionals, On-line publication March 4, 2014.
58. GulGulavita P, **Mai KT.** Urothelial bladder carcinoma metastasising to the scrotum mimicking primary extra-mammary Paget's disease. Pathology. 2014 Mar 9. [Epub ahead of print] PubMed PMID: 24614713.
59. Kotha VK, Khandelwal A, Saboo SS, Shanbhogue AK, Virmani V, **Marginean EC,** Menias CO. Radiologist's perspective for the Meckel's diverticulum and its complications. Br J Radiol. 2014 Feb 17;20130743.
60. Karapetis CS, Jonker D, Daneshmand M, Hanson JE, O'Callaghan CJ, **Marginean C,** Zalcborg JR, Simes J, Moore MJ, Tebbutt NC, Price TJ, Shapiro JD, Pavlakakis N, Gibbs P, Van Hazel GA, Lee U, Haq R, Virk S, Tu D, Lorimer IA. PIK3CA, BRAF, and PTEN Status and Benefit from Cetuximab in the Treatment of Advanced Colorectal Cancer--Results from NCIC CTG/AGITG CO.17.; NCIC Clinical Trials Group and the Australasian Gastro-Intestinal Trials Group. Clin Cancer Res. 2014 Feb 1;20(3):744-53.
61. Shukla T, Jin J, **Marginean EC,** Saloojee N. Anaplastic large cell lymphoma of the colon in a patient with colonic Crohn disease treated with infliximab and methotrexate. Can J Gastroenterol. 2014 Jan;28(1):11-2.
62. IgG-4 related disease presenting as dural thickening—a rare cause of myelopathy
Zwicker, J., **Michaud, J.,** Torres, C.
Can. J. Neurol. Sc. 41 : 392-396, 2014
63. IGF2BP1 controls cell death and drug resistance in rhabdomyosarcomas by regulating translation of cIAP1
Faye, M.D., Beug, S., Graber, T. E., Earl, N., Xiang, X., Wild, B., Langlois, S., **Michaud, J.,** Cowan, K. N., Korneluk, R. G., Holcik, M.
Oncogene Apr 7, doi.1038/onc.2014.90.

64. Genomic analysis of diffuse intrinsic pontine gliomas identifies three molecular subgroups and recurrent activating ACVR1 mutations
Buczkowicz, P., Hoeman, C., Rakopoulos, P., Pajovic, S., Letourneau, L., Dzamba, M., Morrison, A., Lewis, P., Bouffet, E., Bartels, U., Zuccaro, J., Agnihotri, S., Ryall, S., Barszczyk, M., Chornenkyy, Y., Bourgey, M., Bourque, G., Montpetit, A., Cordero, F., Castelo-Branco, P., Mangerel, J., Tabori, U., Ho, K. C., Huang, A., Taylor, K. R., Mackay, A., Bendel, A. E., Nazarian, J., Fangusaro, J. R., Karajannis, M. A., Zagzag, D., Foreman, N. K., Donson, A., Hegert, J. V., Smith, A., Chan, J., Lafay-Cousin, L., Dunn, S., Hukin, J., Dunham, C., Scheinemann, K., **Michaud, J.**, Zelcer, S., Ramsay, D., Cain, J., Brennan, C., Souweidane, M. M., Jones, C., Allis, C. D., Brudno, M., Becher, O. and Hawkins, C.
Nature Genetics 46: 451-456, 2014. doi:10.1038/ng.2936
65. CNS-PNETs with C19MC amplification and/or LIN28 expression comprise a distinct histogenetic diagnostic and therapeutic entity
Spence, T., Sin-Chan, P., Picard, D., Barszczyk, M., Hoss, K., Lu, M., Kim, S.-K., Ra, Y.-S., Nakamura, H., Fangusaro, J., Hwang, E., Kiehna, E., Toledano, H., Wang, Y., Shi, Q., Johnston, D., **Michaud, J.**, La Spina, M., Buccoliero, A. M., Adamek, D., Camelo-Piragu, S., Collins, V. P., Jones, C., Kabbara, N., Jurdi, N., Varlet, P., Perry, A., Scharnhorst, D., Fan, X., Muraszko, K. M., Eberhart, C., Ng, H-K., Gururangan, S., van Meter, T., Remke, M., Lafay-Cousin, L., Chan, J., Sirachainan, N., Pomeroy, S., Clifford, S. C., Gajjar, A., Shago, M., Halliday, W., Taylor, M., Grundy, R., Lau, C. C., Phillips, J., Bouffet, E., Dirks, P., Hawkins, C., Huang, A.
Acta Neuropathol. 128 : 291-303, 2014.
66. Primitive Neuroectodermal Tumor Presenting with Diffuse Leptomeningeal Involvement in a 55-year-old Woman: A Case Report and Brief Summary of Current Diagnostic Tests and Treatment Kalidindi, N., Torres, C.H., **Michaud, J.**, Zwicker, J.C.
Case Rep Oncol 7:471-477, 2014 (DOI: 10.1159/000365414)
67. Neuropathological Features of Pontocerebellar Hypoplasia Type 6
Joseph, J.T., Innes, A.M., Smith, A.C., Vanstone, M.R., Schwartzentruber, J.A., FORGE Canada Consortium, Bulman, D.E., Majewski, J., Daza, R. A., Hevner, R.F., **Michaud, J.**, Boycott, K.M.
J. Neuropathol. Exp. Neurol. 73 : 1009-1025, 2014.
68. Homozygous nonsense mutation in SYNJ1 associated with intractable epilepsy and tau pathology.
Dyment, D. A., Smith, A. C., Humphreys, P., Schwartzentruber, J., Beaulieu, C., FORGE Canada Consortium, Bulman, D. E., Majewski, J., Woulfe, J., **Michaud, J.**, Boycott, K. M.
Neurobiol Aging 2015 Feb;36(2):1222.e1-5. doi: 10.1016/j.neurobiolaging.2014.09.005. Epub 2014 Sept 6.
69. Giacco, F., Du, X., D'Agati, V.D., **Milne, R.**, Brownlee, M. (2014) Knockdown of Glo1 causes diabetic nephropathy in non-diabetic mice. Diabetes 63, 291-299.
70. Vulesevic, B. McNeill, B., Geoffrion, M. Kuraitis, D., McBane, J.E., Lochhead, M., Vanderhyden, B.C., Korbitt, G.S., **Milne, R.W.**, Suuronen, E.J. (2014) Over-expression of glyoxalase 1 in the bone marrow reverses defective neovascularization in streptozotocin-induced diabetic mice. Cardiovasc. Res. 101, 306-316
71. Molgat, A.S.D., Tilokee, E.L., Rafatian, G., Vulesevic, B., Ruel, M., **Milne, R.**, Suuronen, E.J., Davis, D.R., (2014) Hyperglycemia inhibits cardiac stem cell-mediated cardiac repair and angiogenic capacity. Circulation Cardiovascular Surgery Supplement (In press).
72. Vulesevic, B., **Milne, R.W.** Suuronen, E.J. (2014) Reducing methylglyoxal as a therapeutic target for diabetic heart disease. Biochem. Soc. Transactions. (In press).

73. Cadet JL, Bisagno V **Milroy CM**. Neuropathology of substance use disorders. *Acta Neuropathologica* 2014; 127: 91-107.
74. **Milroy C**. Sudden death and chronic alcoholism. *Academic Forensic Pathology* 2014, 4: 168-171.
75. Purgina B, **Milroy CM**. Fatal traumatic aneurysm of the posterior inferior cerebellar artery with delayed rupture. *Forensic Science International* 2014 doi:10.1016/j.forsciint.2014.11.03
76. **Padmore R**, Berardi P, Erickson K, Desjardins D, Giulivi A, Tokessy M, Neurath N, Saidenberg E. Acute extravascular hemolytic transfusion reaction due to Anti-Kpa antibody missed by electronic crossmatch. *Transfusion and Apheresis Science* 2014 October;51:168-171.
77. Sun X , Lemyre B, Nan Xi, Harrold J, **Perkins SL**, Lawrence SE, Barrowman N. Free thyroxine and thyroid-stimulating hormone reference intervals in very low birth weight infants at 3-6weeks of life with the Beckman Coulter Unicel Dxl 800. *Clin Biochem* 47 (1-2): 16-18 (2014).
78. Fell DB, Sprague AE, Grimshaw JM, Yasseen III AS, Coye D, Dunn SI, **Perkins SL**, Peterson WE, Johnson M, Bunting PS, Walker MC. Evaluation of the Impact of Fetal Fibronectin Test Implementation on Hospital Admissions for Preterm Labour in Ontario: a Multiple Baseline Time-series Design. *British Journal of Obstetrics & Gynecology* 121 (4): 438-446 (2014).
79. Bastaki, J **Purgina, BM**, Dacic, S., Seethala, RR. Secretory myoepithelial carcinoma: a histologic and molecular survey and a proposed nomenclature for mucin producing signet ring tumors. *Head Neck Pathol.* 2014 Jan
80. Chin M, De Zoysa M, **Slinger R**, Gaudet E, Vandemheen KL, Chan F, Hyde L, Mah TF, Ferris W, Mallick R, Aaron SD. Acute effects of viral respiratory tract infections on sputum bacterial density during CF pulmonary exacerbations. *J Cyst Fibros.* 2014 Dec 17. pii: S1569-1993(14)00270-7.
81. Pernica JM, Moldovan I, Chan F, **Slinger R**. Real-time polymerase chain reaction for microbiological diagnosis of parapneumonic effusions in Canadian children. *Can J Infect Dis Med Microbiol.* 2014 May;25(3):151-4.
82. **Slinger R**, Hyde L, Moldovan I, Chan F, Pernica JM. Direct Streptococcus pneumoniae real-time PCR serotyping from pediatric parapneumonic effusions. *BMC Pediatr.* 2014 Jul 24;14:189. doi: 10.1186/1471-2431-14-189.
83. Altman E, Harrison BA, Chandan V, **Slinger R**. Lipopolysaccharide glycotyping of clarithromycin-resistant and clarithromycin-susceptible Canadian isolates of *Helicobacter pylori*. *Can J Microbiol.* 2014 Jan;60(1):35-9. PMID:24392924
84. Wong, H., Watt, C., Elsayed, S., John, M., Johnson, G., Katz, K., Krafden, S., Lee, C., Mazzulli, T., Ostrowska, K., Richardson, D., **Toye, B.**, Vermeiren, C., Yamamura, D., Simor., A.E. Characterization of Methicillin-Resistant *Staphylococcus aureus* Isolates from Patients with Persistent or Recurrent bacteremia. *Can J Infect Dis Med Microbiol* 2014; 25:83-86
85. Poutanen SM, Rennie, R., Roscoe, D., **Toye, B.**, Lee, C., Loo, V. et al. Increase in prevalence of extended-spectrum beta-lactamase in *Escherichia coli* isolated from Canadian patients with intra-abdominal infections. (Submitted)

86. Brownstein, S., Jiang, K., Ali-Ridha, A., **Toye, B.**, Minsioulis, G. Mycobacterium chelonae keratitis in a 3-decade-old graft. 77th Annual Meeting Canadian Ophthalmological Society. Halifax, NS June 4-7, 2014.
87. Kong, L.Y., Dendukuri, N., Schiller, I., Bourgault, A.M., Brassard, P., Poirier, L., Lamothe, F., Beliveau, C., Michaud, S., Turgeon, N., **Toye, B.**, Frost, E., Gilca, R., Dascal, A., Loo, V.G. Predictors of Asymptomatic Clostridium difficile Colonization on Hospital Admission. AMMI Canada – CACMID 2014 Annual Conference, Victoria, B.C. April 4- 6, 2014
88. Doonan RJ, Hafiane A, Lai C, **Veinot JP**, Genest J, Daskalppoulou SS. Cholesterol efflux capacity, carotid atherosclerosis and cerebrovascular symptomatology. ATVB. 2014; 34:921-926.
89. Dos Santos MP, Martin J, **Woulfe J**, Lim SP, Chakraborty S. Autopsy-proven Acute Hemorrhagic Leukoencephalitis in an Elderly Patient Can J Neurol Sci. 2014;41:99-102.
90. Giles KM, Rao RV, Ascah KJ, **Veinot JP**, Lam BK, Froeschl M. An unusual case of cardiogenic shock: common cause from uncommon etiology. Can J Cardiol 2014; 30:679-682.
91. Robillard J, Pena E, **Veinot JP**, Fulop J, Dennie C. Pericardial lymphangiohemangioma: multimodality imaging features and pathological correlation. Circulation 2014 129:e657-e659.
92. Gray M, Munoz DG, Schlossmacher M, Gray DA, **Woulfe J**. α -synuclein in the appendiceal mucosal plexus and macrophages of neurologically healthy subjects: implications for Parkinson's disease initiation. Movement Disorders 2013.Epub ahead of print.
93. Suh J-Y, **Woulfe J**, Corsten MJ, Carrau RL, Prevedello DM, Kassam AB. Diagnostic imaging dilemma of a clival lesion and its clinical management implications. J Neurol Surg. In Press.
94. **Woulfe, J**, Gray M, Munoz DG, Gray DA, Middeldorp JM. Hypothesis: A Role for EBV-induced Molecular Mimicry in Parkinson's Disease. Parkinsonism Relat Disord. In Press.
95. Nguyen T, Thornhill R, Cron G, Cameron I, Footit C, Caudrelier J-M, Jansen GJ, **Woulfe J**, Sinclair J, Chakraborty S, Hogan M. Preoperative Prognostic Value of DCE-MR derived Ktrans and Vp in Patients with Cerebral Gliomas. Submitted.
96. WarmWarman Chardon J, Smith A, **Woulfe J**, Pena E, Rakhra K, Dennie C, Beaulieu C, Schwartzentruber J, Hawkins C, MD, PhD, Harms MB, Zhang M, FORGE Canada Consortium, Majewski J, Bulman DE, Boycott KM, Dymont DA. Autosomal Recessive Mutations in LIMS2 are Associated with Early-Onset LGMD with Severe Cardiomyopathy and Triangular Tongues. Ann Neurol. Submitted.
97. Gray M, Gray DA, **Woulfe J**. Reply to: "Alimentary, My Dear Watson? The Challenges of Enteric α -synuclein as a Parkinson's disease biomarker". Mvt Disord. Submitted
98. Bamji-Mirza M, Callaghan D, Najem D, Shen S, Hasim MS, Yang Z, **Zhang W**. 2014. Stimulation of insulin signaling and inhibition of JNK-AP1 activation protect cells from $A\beta$ -induced signaling dysregulation and inflammatory response. J. Alzheimer's Disease 40:105-122. PMID: 24346217
99. Najem D, Bamji-Mirza M, Chang N, QY Liu, **Zhang W**. 2014. Insulin resistance, neuroinflammation, and Alzheimer's disease. Rev. Neurosci. 25(4): 509-525. PMID: 24622783

100. Dorey E, Chang N, QY Liu, Yang Z, **Zhang W**. 2014. Apolipoprotein E, amyloid-beta, and neuroinflammation in Alzheimer's disease. *Neuroscience Bulletin* 30: 317-330. PMID: 24652457
101. **Zhang W**, Bamji-Mirza M, Chang N., Haqqani A, Stanimirovic DB. 2015. Expression and Function of ABC Transporters at the Blood-Brain Barrier. In: *The Blood-Brain Barrier in Health and Disease*. Ed. K. Dorovini-Zis, pp. 172-214, Science Publisher/Taylor & Francis Group, New York.
102. Jin Z, Pu L, Sun L, Chen W, Nan N, Li H, Zhu H, Yang X, Wang N, Hui J, Zhang Y, Zhou Q, Zhao F, Yang F, Shi X, Zhu X, Yang Y, **Zhang W**, Zheng C, Li X, Yang D, Jia R, Meng S, Yang Z. 2014. Identification of susceptibility variants in ADIPOR1 gene associated with type 2 diabetes, coronary artery disease and the comorbidity of type 2 diabetes and coronary artery disease. *PLoS One*. 9(6): e100339. PMID: 24967709
103. Zhou Q, Zhao F, Lv ZP, Zheng CG, Zheng WD, Sun L, Wang NN, Pang SH, de Andrade FM, Fu M, He XH, Hui J, Jiang WY, Yang CY, Shi XH, Zhu XQ, Pang GF, Yang YG, Xie HX, **Zhang W**, Hu CY, Yang Z. 2014. Association between APOC1 Polymorphism and Alzheimer's disease: A Case-Control Study and Meta-Analysis. *PLOS ONE* 9(1): e87017. PMID: 25206869
104. Zhou Q, Peng DT, Yuan XR, Lv ZP, Pang SH, Jiang WY, Yang CY, Shi XH, Pang GF, Yang YG, Xie HQ, **Zhang W**, Hu CY, Yang Z. 2014. APOE and APOC1 gene polymorphisms are associated with cognitive impairment progression in Chinese patients with late-onset Alzheimer's disease. *Neural Regeneration Research* 9: 653-660.
105. Bamji-Mirza M, **Zhang W**, Yao Z. 2014. Expression of human hepatic lipase negatively impacts apolipoprotein A-I production in primary hepatocytes from Lipc-null mice. *J. Biochemical Research*. 28: 1-12. PMID: 25013403

2015

1. Genevieve Bondy , Donald Caldwell, **Syed Aziz** , Laurie Coady, Cheryl Aramstrong , Ivan. Curran, Robyn Koffman , Kamla Kapal , Lefebvre DE, and Rekha Metha. Effects of Chronic Ochratoxin A Exposure on p53 Heterozygous and p53 Homozygous Mice. *Toxicologic Pathology*, XX: 1-15, 2015.
2. Bichitra N. Nayak., **Harpal S. B**
Herbal therapy for men with erectile dysfunction. *Curr Res Cardiol* 2015; 2 (1): 30-34.
3. Siddhi Bagwe, Leo J.P. Tharappel, Ginpreet Kaur and **Buttar S. B**
Bovine colostrum: an emerging nutraceutical
J. Complement Integre Med. 2015
4. Siram R, Lo V, Pryce B, Antonova L, Mears AJ, **Daneshmand M**, McKay B, Conways SJ, Muller WJ, Sabourin LA (2015) Loss of Protein/OSF-2 in ErbB2/Neu-driven tumors results in androgen receptor-positive molecular apocrine-like tumors with reduced Notch1 activity
Breast Cancer Res. 2015 Jan 16;17(1):7
5. Can Quantitative CT Texture Analysis be Used to Differentiate Fat-poor Renal Angiomyolipoma from Renal Cell Carcinoma on Unenhanced CT Images? Hodgdon T, McInnes MD, Schieda N, **Flood TA**, Lamb L, Thornhill RE. *Radiology*. 2015 Apr 23;142215. [Epub ahead of print]

6. Diagnosis of Sarcomatoid Renal Cell Carcinoma With CT: Evaluation by Qualitative Imaging Features and Texture Analysis. Schieda N, Thornhill RE, Al-Subhi M, McInnes MD, Shabana WM, van der Pol CB, **Flood TA**. AJR Am J Roentgenol. 2015 May;204(5):1013-23. doi: 10.2214/AJR.14.13279.
7. Quantitative pharmacokinetic analysis of prostate cancer DCE-MRI at 3T: Comparison of two arterial input functions on cancer detection with digitized whole mount histopathological validation. Fennessy FM, Fedorov A, Penzkofer T, Kim KW, Hirsch MS, Vangel MG, Masry P, **Flood TA**, Chang MC, Tempany CM, Mulkern RV, Gupta SN. Magn Reson Imaging. 2015 Feb 12. pii: S0730-725X(15)00047-8. doi: 10.1016/j.mri.2015.02.008. [Epub ahead of print]
8. The role of pathology correlation approach in prostate cancer index lesion detection and quantitative analysis with multiparametric MRI. Fedorov A, Penzkofer T, Hirsch MS, **Flood TA**, Vangel MG, Masry P, Tempany CM, Mulkern RV, Fennessy FM. Acad Radiol. 2015 May;22(5):548-55. doi: 10.1016/j.acra.2014.12.022. Epub 2015 Feb 13.
9. Is primary tumor detectable in prostatic carcinoma at routine contrast-enhanced CT? Schieda N, Al-Dandan O, Shabana W, **Flood TA**, Malone SC. Clin Imaging. 2015 Jan 16. pii: S0899-7071(15)00010-8. doi: 10.1016/j.clinimag.2015.01.008. [Epub ahead of print]
10. Intracellular lipid in clear cell renal cell carcinoma tumor thrombus and metastases detected by chemical shift (in and opposed phase) MRI: radiologic-pathologic correlation. Moosavi B, Shabana WM, El-Khodary M, van der Pol CB, **Flood TA**, McInnes MD, Schieda N. Acta Radiol. 2015 Feb 13. pii: 0284185115572207. [Epub ahead of print]
11. Intracellular lipid in papillary renal cell carcinoma (pRCC): T2 weighted (T2W) MRI and pathologic correlation. Schieda N, van der Pol CB, Moosavi B, McInnes MD, Mai KT, **Flood TA**. Eur Radiol. 2015 Feb 14. [Epub ahead of print]
12. **Kos Z**, Nielsen TO. Developing a new generation of breast cancer clinical gene expression tests. Breast Cancer Res. (in press).
13. Liu S, Foulkes WD, Leung S, Gao D, Lau S, **Kos Z**, Nielsen TO. Prognostic significance of FOXP3+ lymphocyte infiltration depends on ER and HER2 expression, and cytotoxic T-cell infiltration status in breast cancer. Breast Cancer Res. (in press).
14. Case 216 Diagnosis Please Part1 & 2: Hypertrophic Spinal Pachymeningitis van der Pol, C. B., Chakraborty, S., Côté, I., Humphrey-Murto, S., **Michaud, J.** Radiology 273 : 937-939, 2014 (Part 1); 275: 303-307, 2015 (Part 2).
15. Rajput A, Bence-Bruckler I, Huebsch L, Jessamine P, Teye B, **Padmore R**. Disseminated Histoplasmosis associated with acquired hemophagocytic lymphohistiocytosis. Clinical Case Reports 2015 Mar;3(3):195-6.
16. McFarlane A, Aslan B, Raby A, Bournier G, **Padmore R**. Critical Values in Hematology. International Journal of Laboratory Hematology 2015 Feb;37(1):36-43.

17. Ramirez-Arcos, S., Kou, Y., Perkins, H., Halpenny, M., Elmoazzen, H., and **Toye, B.** Validation of Microbial Testing in Hematopoietic Progenitor Cell – Apheresis Product at Canadian Blood Services. 2015 Annual Meeting, Canadian Society of Transfusion Medicine. Winnipeg, MB. May 21-24, 2015.
18. Van Oosten EM, Boag AH, Cunningham K, **Veinot J.** Hamilton A, Petsikas D, Payne D, Hopman WM, Redfearn DP, Song WJ, Lamothe S, Zhang S, Baranchuk. The Histology of Human Right Atrial Tissue in Patients with High-Risk Obstructive Sleep Apnea and Underlying Cardiovascular Disease: A Pilot Study. IJC Heart & Vasculature. 2015; 6:71-75.
19. **Veinot JP.** Pathology and Genetics. Tumours of the Lung, Pleura, Thymus and Heart. Fourth edition World Health Organization Classification of Tumours. International Agency for Research on Cancer. IARC Press. Lyon France. 2015
 - a. cardiac lipoma pp 322
 - b. cystic tumour of the atrioventricular node pp 323-324.
20. Beauchesne LM, **Veinot JP.** Patent foramen ovale. Chapter 39. Pp 695-703. Colour Atlas of Cardiovascular Disease. GL Levine Editor. Jaypee Press. 2015.
21. Strickland S., Pena E., **Walker AE.** (2015). Fatal foreign body granulomatous pulmonary embolization due to microcrystalline cellulose in a patient receiving total parenteral nutrition: all crystals are not what they seem. Forensic Sci Med Pathol. Epub ahead of publication.

2014/15 Audited Financial Statements

To the Members of the Eastern Ontario Regional Laboratory Association Inc.

We have audited the accompanying financial statements of the Eastern Ontario Regional Laboratory Association Inc., which comprise the statement of financial position as at March 31, 2015, and the statements of operations, changes in net assets and cash flow for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards for government not-for-profit-organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Eastern Ontario Regional Laboratory Association Inc. as at March 31, 2015, and the results of its operations and its cash flow for the year then ended in accordance with Canadian public sector accounting standards for government not-for-profit-organizations.



Chartered Professional Accountants, Chartered Accounts
Licensed Public Accountants

June 19 2015

**Eastern Ontario Regional
Laboratory Association Inc.**
Statement of financial position
as at March 31, 2015

**Association des laboratoires
régionaux de l'Est de
l'Ontario Inc.**
État de la situation financière
au 31 mars 2015

	2015	2014	
	\$	\$	
Assets			Actif
Current assets			Actif à court terme
Cash	6,839,958	10,709,289	Encaisse
Receivable from MOHLTC	13,340	-	Sommes à recevoir du MSSLD
Due from member hospitals	3,607,720	2,739,777	Sommes à recevoir des hôpitaux membres
Taxes recoverable	4,354,235	2,430,823	Taxes à recouvrer
Other receivables	90,856	82,587	Autres débiteurs
Prepaid expenses	297,204	295,234	Charges payées d'avance
	15,203,313	16,257,710	
Due from member hospitals	2,412,461	2,412,461	Sommes à recevoir des hôpitaux membres
Prepaid occupancy costs (note 3)	6,267,620	6,463,520	Frais d'occupation payés d'avance (note 3)
Capital assets (note 4)	13,554,948	10,856,402	Immobilisations corporelles (note 4)
Funds held in trust (note 5)	307,264	278,866	Fonds détenus en fiducie (note 5)
	37,745,606	36,268,959	
Liabilities			Passif
Current liabilities			Passif à court terme
Accounts payable and accrued liabilities	6,794,434	6,594,944	Créditeurs et charges à payer
Deferred revenue (note 6)	88,013	88,013	Revenus reportés (note 6)
Due to The Ottawa Hospital			Sommes à payer à L'Hôpital d'Ottawa -
- operations	4,102,470	7,749,649	- exploitation
- capital (note 3)	7,833,777	7,833,777	- capital (note 3)
	18,818,694	22,266,383	
Employee future benefits (note 7)	3,495,300	3,205,300	Avantages sociaux futurs (note 7)
Deferred capital			Apports reportés afférents aux immobilisations
contributions (note 8)	10,053,837	7,514,433	corporelles (note 8)
Funds held in trust (note 5)	307,264	278,866	Fonds détenus en fiducie (note 5)
	13,856,401	10,998,599	
Net assets			Actif net
Unrestricted (deficiency)	1,569,400	(337,992)	Non affecté (insuffisance)
Invested in capital assets	3,501,111	3,341,969	Investi en immobilisations corporelles
	5,070,511	3,003,977	
	37,745,606	36,268,959	

On behalf of the Board

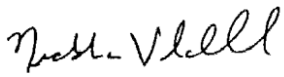
Chairman



Au nom du Conseil

Président

Director



Directeur

Eastern Ontario Regional Laboratory Association Inc.

Statement of operations
year ended March 31, 2015

Association des laboratoires régionaux de l'Est de l'Ontario Inc.

État des résultats
de l'exercice clos le 31 mars 2015

	2015	2014	
	\$	\$	
Revenue			Revenus
Medical laboratory services	107,362,938	105,795,866	Services de laboratoire médical
Government of Ontario contributions	4,541,624	300,000	Subventions du gouvernement de l'Ontario
Other income	2,519,552	2,720,923	Autres revenus
Amortization of deferred capital contributions (note 8)	1,560,861	585,968	Amortissement des apports reportés afférents aux immobilisations corporelles (note 8)
	115,984,975	109,402,757	
Expenses			Dépenses
Salary and wages	63,174,306	64,027,250	Salaires et traitements
Medical and scientific remuneration	20,402,504	14,911,132	Rémunération médicale et scientifique
Supplies	23,580,649	25,460,549	Fournitures
Consulting and purchased services	2,489,433	1,849,296	Consultation et services acquis
Amortization of capital assets	2,257,172	1,073,668	Amortissement des immobilisations corporelles
Courier and delivery	906,116	869,976	Courier et livraison
Professional services	838,379	825,999	Services professionnels
Legal fees	73,982	17,840	Frais légaux
Amortization of prepaid occupancy costs	195,900	195,900	Amortissement des frais d'occupation payés d'avance
	113,918,441	109,231,610	
Excess of revenue over expenses	2,066,534	171,147	Excédent des revenus sur les dépenses

Eastern Ontario Regional Laboratory Association Inc.

Statement of changes in net assets
year ended March 31, 2015

Association des laboratoires régionaux de l'Est de l'Ontario Inc.

État de l'évolution de l'actif net
de l'exercice clos le 31 mars 2015

	Invested in capital assets	Unrestricted (deficiency)			
	Investi en immobilisations corporelles	Non affecté (insuffisance)	2015	2014	
	\$	\$	\$	\$	
Balance, beginning of year	3,341,969	(337,992)	3,003,977	2,832,830	Solde au début
Excess of revenue over expenses	-	2,066,534	2,066,534	171,147	Excédent des revenus sur les dépenses
Purchase of capital assets	4,955,718	(4,955,718)	-	-	Acquisition d'immobilisations corporelles
Amortization of capital assets	(2,257,172)	2,257,172	-	-	Amortissement d'immobilisations corporelles
Amortization of deferred capital contributions (note 8)	1,560,861	(1,560,861)	-	-	Amortissement des apports reportés afférents aux immobilisations corporelles (note 8)
Deferred capital contributions received (note 8)	(4,100,265)	4,100,265	-	-	Apports reportés afférents aux immobilisations corporelles reçues (note 8)
Balance, end of year	3,501,111	1,569,400	5,070,511	3,003,977	Solde à la fin

Eastern Ontario Regional Laboratory Association Inc.

Statement of cash flow
year ended March 31, 2015

Association des laboratoires régionaux de l'Est de l'Ontario Inc.

État des flux de trésorerie
de l'exercice clos le 31 mars 2015

	2015	2014	
	\$	\$	
Operating activities			Activités d'exploitation
Excess of revenue over expenses	2,066,534	171,147	Excédent des revenus sur les dépenses
Items not affecting cash			Éléments sans incidence sur l'encaisse
Amortization of capital assets	2,257,172	1,073,668	Amortissement des immobilisations corporelles
Amortization of deferred capital contributions (note 8)	(1,560,861)	(585,968)	Amortissement des apports reportés afférents aux immobilisations corporelles (note 8)
Amortization of prepaid occupancy costs	195,900	195,900	Amortissement des frais d'occupation payés d'avance
Increase in employee future benefits liability	290,000	510,400	Augmentation des avantages sociaux futurs
	3,248,745	1,365,147	
Changes in non-cash operating working capital items:			Variation des éléments hors caisse du fonds de roulement d'exploitation :
Increase in MOHLTC receivable	(13,340)	-	Augmentation de la somme à recevoir du MSSLD
Decrease (increase) in due from member hospitals	(867,943)	3,442,155	Diminution (augmentation) des sommes à recevoir des hôpitaux membres
Increase in taxes recoverable	(1,923,412)	(1,056,533)	Augmentation des taxes à recouvrer
Increase in other receivables	(8,269)	(7,502)	Augmentation des autres débiteurs
			Diminution (augmentation) des charges à payer d'avance
Decrease (increase) in prepaid expenses	(1,970)	142,844	Augmentation (diminution) des créditeurs et charges à payer
Increase (decrease) in accounts payable and accrued liabilities	199,490	(2,445,786)	Augmentation (diminution) de la somme à payer à L'Hôpital d'Ottawa - exploitation
Increase (decrease) in due to The Ottawa Hospital - operations	(3,647,179)	2,951,646	Diminution des revenus reportés
Decrease in deferred revenue	-	(134,972)	
	(3,013,878)	4,256,999	
Capital activities			Activités en immobilisations
Purchase of capital assets	(4,955,718)	(3,285,862)	Acquisition d'immobilisations corporelles
Financing activities			Activités de financement
Deferred capital contributions received (note 8)	4,100,265	1,980,718	Apports reportés afférents aux immobilisations corporelles reçues (note 8)
Net cash inflow (outflow)	(3,869,331)	2,951,855	Augmentation (diminution) nette de l'encaisse
Cash, beginning of year	10,709,289	7,757,434	Encaisse au début
Cash, end of year	6,839,958	10,709,289	Encaisse à la fin

Eastern Ontario Regional Laboratory Association Inc.

Notes to the financial statements

March 31, 2015

Association des laboratoires régionaux de l'Est de l'Ontario Inc.

Notes complémentaires

31 mars 2015

1. Nature of activities

The Eastern Ontario Regional Laboratory Association Inc. ("EORLA") was incorporated on April 15, 2003, as a shared services corporation without share capital. The member hospitals voluntarily joined EORLA to foster continued and increased cooperation between members and to support the integration of laboratory service in the region. EORLA is an integrated hospital laboratory network with sixteen acute care hospital facilities having on-site laboratories configured to meet program needs while referring specialized services to regional laboratory sites. EORLA began active operations as of April 1, 2012 and was previously considered a development stage enterprise.

These financial statements reflect the assets and liabilities and results of operations of EORLA. It does not include the assets, liabilities or operations of its member hospitals, which, although associated, are separately managed, and report to separate Boards of Directors. Note 9 provides details on related party transactions.

2. Significant accounting policies

The financial statements have been prepared in accordance with the Canadian public sector accounting standards for government not-for-profit organizations (PSAS) and include the following significant accounting policies:

Revenue recognition

EORLA follows the deferral method of accounting for contributions.

Operating grants are recorded as revenue in the period to which they relate. Where a portion of a grant relates to a future period, it is deferred and recognized in that subsequent period.

1. Description des opérations

L'Association des laboratoires régionaux de l'Est de l'Ontario Inc. (« ALREO ») a été incorporée sans capital-actions le 15 avril 2003 à titre d'organisme de services communs. Les hôpitaux membres se sont joints volontairement à l'ALREO pour encourager la coopération continue et accrue entre les membres et soutenir l'intégration des services de laboratoire dans la région. L'ALREO est un réseau de laboratoires intégré avec seize établissements hospitaliers de soins aigus ayant des laboratoires sur les lieux configurés afin de répondre aux besoins de programme tout en référant les services spécialisés aux laboratoires régionaux. L'ALREO a débuté le 1^{er} avril 2012 ses opérations actives et fut considérée auparavant à titre d'entreprise en phase de démarrage.

Ces états financiers reflètent les actifs et les passifs et les résultats d'exploitation de l'ALREO. Il ne comprend pas les actifs, passifs ou des opérations de ses hôpitaux membres qui, bien qu'associés, sont gérés séparément, et font rapport aux Conseils d'administration distincts. Les opérations entre apparentés sont divulguées à la note 9.

2. Principales méthodes comptables

Les états financiers ont été dressés selon les Normes comptables canadiennes pour les organismes sans but lucratif du secteur public, et tiennent compte des principales méthodes comptables suivantes :

Constatation des revenus

L'ALREO applique la méthode du report pour comptabiliser les contributions.

Les subventions d'exploitation sont comptabilisées à titre de revenus dans la période à laquelle elles se rapportent. Lorsqu'une partie de la subvention correspond à une période future, elle est reportée et comptabilisée dans cette période ultérieure.

Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Externally restricted contributions are recognized as revenue in the year in which the related expenses are incurred. Contributions restricted for the purchase of capital assets are deferred and amortized into revenue on a straight-line basis, at rates corresponding with the amortization rates for the related capital assets.

Revenue derived from laboratory services are recognized when services are rendered.

Financial instruments

EORLA initially measures its financial assets and liabilities at fair value and subsequently measures them at amortized cost except for cash which is measured at fair value.

Prepaid occupancy costs

Prepaid occupancy costs are amortized on a straight-line basis over 40 years.

Capital assets

Purchased capital assets, other than minor equipment, are recorded at cost. Minor equipment replacements are expensed in the year of replacement. Equipment is amortized on a straight-line basis over its expected useful life at rates varying from 10% to 20% per annum.

Computer hardware and software under development and construction in progress are capitalized until placed in service, at which point they will be amortized.

Les apports non affectés sont constatés à titre de produits lorsqu'ils sont reçus ou à recevoir si le montant à recevoir peut être raisonnablement estimé et le recouvrement est raisonnablement assuré.

Les contributions externes affectées sont constatées à titre de produits dans l'exercice au cours duquel les charges connexes sont engagées. Les apports affectés à l'achat d'immobilisations corporelles sont reportés et amortis par imputation aux résultats selon la méthode linéaire, à des taux correspondant aux taux d'amortissement des immobilisations connexes.

Les produits tirés des services de laboratoire sont constatés lorsque les services sont rendus

Instruments financiers

ALREO évalue initialement ses actifs financiers et ses passifs financiers à la juste valeur et évalue ultérieurement tous ses actifs et passifs financiers au coût après amortissement à l'exception de son encaisse qui est évalué à la juste valeur.

Frais d'occupation payés d'avance

Les frais d'occupation payés d'avance sont amortis selon la méthode linéaire sur 40 ans.

Immobilisations corporelles

Les immobilisations corporelles sont comptabilisées au coût. Les petits équipements remplacés sont passés à la dépense au cours de l'exercice du remplacement. L'amortissement des équipements est calculé selon la méthode linéaire sur la durée de vie utile au taux annuel qui varie entre 10 % et 20 % par année.

Le matériel informatique et logiciels en cours de développement sont capitalisés jusqu'à la mise en services, après quoi ils seront amortis.

2. Significant accounting policies (continued)

Employee future benefits

EORLA accrues its obligations for employee benefit plans. The cost of non-pension post-retirement and post-employment benefits earned by employees is actuarially determined using the projected benefit method pro-rated on service and management's best estimate of retirement ages of employees and expected health care costs.

Adjustments arising from plan amendments, including past service costs, are recognized in the year that the plan amendments occur. Actuarial gains or losses are amortized over the average remaining service period of active employees.

EORLA is an employer member of the Healthcare of Ontario Pension Plan, which is a multi-employer, defined benefit pension plan. EORLA has adopted defined contribution plan accounting principles for this Plan because insufficient information is available to apply defined benefit plan accounting principles.

Funds held in trust

EORLA holds resources and makes disbursements on behalf of certain third party groups. EORLA has no discretion over such transactions; hence, resources received are reported as liabilities, not revenue, and subsequent distributions are reported as decreases to the liability, not expenses.

2. Principales méthodes comptables (suite)

Régimes d'avantages sociaux

L'ALREO constate ses obligations au titre des régimes d'avantages sociaux. Le coût des avantages complémentaires de retraite et des avantages postérieurs à l'emploi gagnés par les employés est établi par calculs actuariels à l'aide de la méthode de répartition des prestations au prorata des années de service et de l'hypothèse la plus probable, selon la direction, quant à l'âge de retraite des employés et aux coûts prévus des services de santé.

Les ajustements découlant des modifications apportées aux régimes, y compris les coûts des prestations au titre des services passés, sont comptabilisés dans l'exercice au cours duquel les modifications de régime ont lieu. Les gains et pertes actuariels sont amortis sur la durée moyenne résiduelle d'activité des employés actifs.

L'ALREO est membre du Régime de retraite des hôpitaux de l'Ontario, régime interentreprises à prestations déterminées. Pour ce régime, l'ALREO a adopté des principes comptables propres à un régime à cotisations déterminées parce qu'il n'y a pas suffisamment d'information pour l'application des principes comptables relatifs à un régime à prestations déterminées.

Fonds détenus en fiducie

L'ALREO détient des ressources et fait des décaissements au nom de tierces parties. L'ALREO n'a pas de pouvoirs discrétionnaires sur ces transactions et par conséquent, les ressources reçues sont comptabilisées comme passif et non comme revenus, et les distributions qui s'ensuivent sont comptabilisées comme diminution du passif et non comme des dépenses.

2. Significant accounting policies (continued)*Use of estimates*

The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. Actual results could differ from these estimates. These estimates are reviewed annually and, as adjustments become necessary, they are reported in the periods in which they become known. The most significant estimates used in preparing these financial statements include the estimated useful lives of capital assets, the amount of accrued liabilities and the assumptions underlying the employee future benefit liability calculation.

3. Prepaid occupancy costs

The Ottawa Hospital entered into an agreement with the Ministry of Health and Long-Term Care of Ontario to construct a regional laboratory, including investment in capital equipment. The Ottawa Hospital completed the project in September 2006 at a total cost of \$25,375,812. EORLA's share of the project's total cost was \$7,833,777 and is accounted for as prepaid occupancy costs. In return for this capital investment, EORLA is permitted to occupy the premises at The Ottawa Hospital, General Campus, under the provisions set out in the related agreements. The accumulated amortization as at March 31, 2015 is \$1,566,157 (2014 - \$1,370,257).

The amount due to The Ottawa Hospital - capital, bears interest at prime and is payable on demand.

2. Principales méthodes comptables (suite)*Utilisation d'estimations*

Dans le cadre de la préparation de ces états financiers, la direction doit établir des estimations et des hypothèses qui ont une incidence sur les montants des actifs et des passifs présentés et sur la présentation des actifs et des passifs éventuels à la date des états financiers, ainsi que sur les montants des produits d'exploitation et des charges constatés au cours de la période visée par les états financiers. Les résultats réels pourraient varier par rapport à ces estimations. Ces estimations sont revues périodiquement et, si des ajustements deviennent nécessaires, ils sont présentés dans la période au cours de laquelle ils sont connus. Les principales estimations requises comprennent l'estimation de la durée de vie utile des immobilisations corporelles, le montant des charges à payer et les hypothèses qui sous-tendent le calcul des avantages sociaux futurs.

3. Frais d'occupation payés d'avance

L'Hôpital d'Ottawa a conclu une entente avec le Ministère de la Santé et des Soins de longue durée de l'Ontario pour la construction d'un laboratoire régional, y compris les investissements dans les biens d'équipements. L'Hôpital d'Ottawa a terminé le projet en septembre 2006 à un coût total de 25 375 812 \$. La quote-part de l'ALREO du coût total était 7 833 777 \$ et est présenté comme frais d'occupation payés d'avance. En contrepartie de cet investissement, l'ALREO est autorisé à occuper les lieux de L'Hôpital d'Ottawa, campus Général, conformément aux dispositions énoncés dans les accords connexes. L'amortissement cumulé au 31 mars 2015 est de 1 566 157 \$ (1 370 257 \$ en 2014).

Le montant à payer à L'Hôpital d'Ottawa - capital porte intérêt et est remboursable sur demande.

4. Capital assets**4. Immobilisations corporelles**

			2015	2014	
	Cost	Accumulated amortization	Net book value	Net book value	
	Coût	Amortissement cumulé	Valeur nette	Valeur nette	
	\$	\$	\$	\$	
Computer hardware and software	11,444,921	1,580,755	9,864,166	8,151,323	Matériel informatique et logiciels
Equipment	8,424,853	5,317,992	3,106,861	2,232,367	Équipement
Construction in progress	583,921	-	583,921	472,712	Travaux en cours
	20,453,695	6,898,747	13,554,948	10,856,402	

Cost and accumulated amortization at March 31, 2014 were \$15,497,978 and \$4,641,576, respectively.

Le coût et l'amortissement cumulé au 31 mars 2014 s'élevaient à 15 497 978 \$ et 4 641 576 \$ respectivement.

5. Funds held in trust

Funds held in trust are held in EORLA's bank account and represent education funds held in trust for third parties (employees).

5. Fonds détenus en fiducie

Les fonds détenus en fiducie sont détenus au sein du compte bancaire de l'ALREO et représentent des fonds d'éducation détenus en fiducie pour des tierces parties (employés).

6. Deferred revenue

	2014			2015	
	Balance beginning of year	Funds/ Interest received	Funds used	Balance end of year	
	Solde au début	Fonds/ intérêts reçus	Fonds utilisés	Solde à la fin	
	\$	\$	\$	\$	
Ontario Buys project					Programmes Achats Ontario
Continued administrative support	9,937	-	-	9,937	Support administratif continu
Regional integration initiative	32,657	-	-	32,657	Initiative d'intégration régionale
Members payroll advance	45,419	-	-	45,419	Avances liées au salaire des employés
	88,013	-	-	88,013	

7. Employee future benefits*Non-pension benefits*

EORLA offers a defined benefit plan which provides extended health care and dental insurance benefits to certain of its employees and extends this coverage to the post-retirement period. The most recent actuarial valuation of employee future benefits was completed as at March 31, 2013 and was extrapolated to March 31, 2015. The next actuarial valuation is expected to take place as at March 31, 2016.

As at March 31, EORLA's liability associated with the benefit plan is as follows:

7. Avantages sociaux futurs*Avantages autres que les régimes de retraite*

L'ALREO offre un régime à prestations déterminées qui met à la disposition de certains de ses employés une assurance-maladie complémentaire et une assurance contre les frais dentaires et continue de leur offrir ces prestations après leur départ à la retraite. La dernière évaluation actuarielle des avantages sociaux futurs a été effectuée au 31 mars 2013 et extrapolée au 31 mars 2015. La prochaine évaluation actuarielle devrait avoir lieu au 31 mars 2016.

Au 31 mars, le passif associé au régime d'avantages sociaux de l'ALREO s'établit ainsi :

	2015	2014	
	\$	\$	
Accrued benefit obligation	3,670,200	3,048,700	Obligation au titre des prestations constituées
Unamortized experience losses (gains)	(174,900)	156,600	Pertes (gains) liés à l'expérience non amortis
Employee future benefit liability	3,495,300	3,205,300	Passif lié aux avantages sociaux futurs

7. Employee future benefits (continued)*Non-pension benefits (continued)*

EORLA's defined benefit plan is not funded, resulting in a plan deficit equal to the accrued benefit obligation. The significant actuarial assumptions adopted in estimating EORLA's accrued benefit obligation are as follows:

	2015	2014	
Discount rate to determine accrued benefit obligation	3.31%	4.36%	Taux d'actualisation de l'obligation au titre des prestations constituées
Dental cost increases	3.50%	3.50%	Augmentation du coût des soins dentaires
Extended healthcare cost escalations, decreasing by 1.5% per annum to an ultimate rate of 4.5% thereafter	7.50%	7.50%	Hausse du coût des soins prolongés, diminuant de 1,5 % par an pour atteindre ultimement un taux de 4,5 % par la suite
Expected average remaining service life of employees	15 years/ans	15 years/ans	Durée moyenne estimative des années de service restantes des employés actifs

The employee future benefit liability change for the year ended March 31, 2015 is \$290,000 (2014 - \$510,400). This amount is comprised of:

Les changements dans le passif au titre des avantages sociaux des employés pour l'exercice clos le 31 mars 2015 sont d'un montant de 290 000 \$ (510 400 \$ en 2014). Ce montant comprend les éléments suivants :

	2015	2014	
	\$	\$	
Transfer of liability from member hospitals	-	201,200	Transfer de passif des hôpitaux membres
Current service cost	205,000	203,000	Coût des services rendus au cours de l'exercice
Amortization experience (gains) losses	(10,400)	9,500	Charges d'amortissement liées à l'expérience (gains) pertes
Benefit payments	(41,100)	(26,500)	Versements de prestations
Interest on accrued benefit obligation	136,500	123,200	Intérêts sur l'obligation au titre des prestations constituées
	290,000	510,400	

7. Employee future benefits (continued)

Pension

Substantially all of the employees of EORLA are members of the Healthcare of Ontario Pension Plan (the "Plan"), which is a multi-employer defined benefit pension plan available to all eligible employees of the participating members of the Ontario Hospital Association. Contributions to the Plan made during the year by EORLA on behalf of its employees amounted to \$5,331,662 (2014 - \$4,979,844) and are included in the statement of operations.

In consultation with its actuaries, pension expense is based on Plan management's best estimates, of the amount required to provide a high level of assurance that benefits will be fully represented by fund assets at retirement, as provided by the Plan. The funding objective is for employer contributions to the Plan to remain a constant percentage of employees' contributions.

Variances between actuarial funding estimates and actual experience may be material and any differences are generally to be funded by the participating members. The most recent triennial actuarial valuation of the Plan as at December 31, 2012 indicates the plan is fully funded.

7. Avantages sociaux futurs (suite)

Régime de retraite

Presque tous les employés de l'ALREO participent au Régime de retraite des hôpitaux de l'Ontario (le « régime »). Il s'agit d'un régime de retraite interentreprises à prestations déterminées auquel peuvent participer tous les employés admissibles des employeurs membres de l'Association des hôpitaux de l'Ontario. Les cotisations versées au régime au cours de l'exercice, par l'ALREO au nom de ses employés, s'élevaient à 5 331 662 \$ (4 979 844 \$ en 2014) et figurent à l'état des résultats.

La charge de retraite représente le montant qui, selon les meilleures estimations de l'administrateur du régime et de ses actuaires, sera suffisant pour fournir un niveau de certitude élevé que les prestations seront entièrement financées par l'actif de la caisse de retraite au moment de la retraite, comme le prévoit le régime. L'objectif de capitalisation consiste à faire en sorte que le pourcentage des cotisations que l'employeur verse au régime demeure constant par rapport aux cotisations versées par les employés.

Les écarts entre les estimations de la capitalisation actuarielle et les résultats réels peuvent être importants et toute différence doit généralement être financée par les employeurs membres. L'évaluation actuarielle triennale la plus récente du régime date du 31 décembre 2012 et indique que le régime est entièrement capitalisé.

8. Deferred capital contributions**8. Apports reportés afférents aux immobilisations corporelles**

	2014			2015	
	Balance beginning of year	Contributions received	Amortization	Balance end of year	
	Solde au début	Apports reçus	Amortissement	Solde à la fin	
	\$	\$	\$	\$	
Ontario Buys projects					Programmes Achats Ontario
LIS integration and connectivity	2,821,417	1,100,000	1,120,234	2,801,183	LIS intégration et connectivité
Front end automation	1,557,500	-	247,500	1,310,000	Automatisation de début de processus
Enabling equipment	90,754	-	61,188	29,566	Équipement facilitateur
Telepathology	859,073	-	124,001	735,072	Télépathologie
Ministry of Health and Long-Term Care of Ontario					Ministère de la Santé et des Soins de longue durée de l'Ontario
Start-up funding	39,690	-	7,938	31,752	Fonds de démarrage
Contingency fund Foundation	33,136	-	-	33,136	Fonds de la Fondation de prévoyance -
Auto-immune analyzer	87,115	-	-	87,115	Analyseur auto- immune
eHealth - OLIS funding	2,022,329	3,000,154	-	5,022,483	eHealth - financement OLIS
Diamond diagnostics	3,419	111	-	3,530	Diamond diagnostics
	7,514,433	4,100,265	1,560,861	10,053,837	

9. Related entities

EORLA is related to all member hospitals due to the composition of its Board of Directors. Unless otherwise stated, transactions occur in the normal course of operations and are recorded at fair value.

Medical laboratory services are invoiced to member hospitals at pre-established rates agreed upon with each individual member hospital.

The long-term receivable from members is non-interest bearing with no fixed terms of repayment. The balance due to The Ottawa Hospital - Operating bears interest at a rate of 3.1% (2014 – 3.1%) with no fixed term of repayment.

10. Financial instruments

Establishing fair value

The carrying values of the receivable from MOTLTC, due from member hospitals, taxes recoverable, other receivables, accounts payable and accrued liabilities and due to The Ottawa Hospital approximate their fair values due to the relatively short term to maturity of these financial instruments.

Unless otherwise noted, it is management's opinion that EORLA is not exposed to significant interest, currency or credit risk arising from these financial instruments.

9. Organismes apparentés

L'ALREO est apparentée à tous les hôpitaux membres compte tenu de la composition de son Conseil d'administration. Sauf indication contraire, les transactions sont conclues dans le cours normal des affaires et sont comptabilisées à la juste valeur.

Les services de laboratoire médical sont facturés aux hôpitaux membres aux taux préétablis individuellement avec chaque hôpital membre.

La somme à recevoir à long terme des hôpitaux membres ne porte pas intérêt et est sans mode prévu de remboursement. La somme à payer à l'Hôpital d'Ottawa - exploitation porte intérêts au taux de 3,1% (3,1 % en 2014) et est sans mode prévu de remboursement.

10. Instruments financiers

Juste valeur

La juste valeur des sommes à recevoir du MSSLD, sommes à recevoir des hôpitaux membres, des taxes recouvrable, des autres débiteurs, des créditeurs et charges à payer et de la somme à payer à L'Hôpital d'Ottawa se rapproche approximativement de la valeur comptable en raison de la nature à court terme de ces instruments financiers.

Sauf indication contraire, la direction est d'avis que l'ALREO n'est pas exposée au risque d'intérêt, de change ou de crédit provenant des instruments financiers.

10. Financial instruments (continued)*Fair value hierarchy*

The following table provides an analysis of financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and,
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The fair value hierarchy requires the use of observable market inputs whenever such inputs exist. A financial instrument is classified to the lowest level of the hierarchy for which a significant input has been considered in measuring fair value.

Cash is a Level 1 hierarchy. There have been no movements between levels during the year.

Credit risk

Credit risk relates to the potential that one party to a financial instrument will fail to discharge an obligation and incurs a financial loss. EORLA is exposed to credit risk on its accounts receivable. Management does not believe it is exposed to any significant credit risk due to the nature of the counterparties of its receivables.

Due from member hospitals are receivable within 30 days. Management has recorded its best estimate of taxes recoverable as EORLA is awaiting a ruling on its tax status by the Canada Revenue Agency for reimbursement of taxes recoverable.

10. Instruments financiers (suite)*Hiérarchie des justes valeurs*

Les actifs détenus sous forme de placements et les passifs relatifs aux placements sont classés et présentés dans l'une des catégories suivantes reflétant l'importance des données utilisées pour réaliser l'évaluation de la juste valeur :

- Niveau 1 - prix cotés (non ajustés) sur des marchés actifs pour des actifs ou des passifs identiques;
- Niveau 2 - données autres que les prix cotés visés au niveau 1, qui sont observables pour les actifs ou les passifs, directement (à savoir des prix) ou indirectement (à savoir des dérivés de prix);
- Niveau 3 - données relatives aux actifs ou aux passifs qui ne sont pas fondées sur des données de marché observables (données non observables).

Si des données de niveaux différents sont utilisées pour évaluer la juste valeur d'un placement, le classement dans la hiérarchie est déterminé en fonction de la donnée du niveau le plus bas qui a une importance par rapport à l'évaluation de la juste valeur.

L'encaisse est une hiérarchie de niveau 1. Il n'y a eu aucun mouvement entre les niveaux au cours de l'exercice.

Risque de crédit

Le risque de crédit concerne le risque qu'une partie à un instrument financier manque à ses obligations et subit une perte financière. L'ALREO est exposé au risque de crédit sur ses comptes débiteurs. La direction ne croit pas qu'elle est exposée à un risque de crédit significatif compte tenu de la nature des contreparties de ses débiteurs.

Les sommes à recevoir des hôpitaux membres sont encaissables dans les 30 prochains jours. La direction a comptabilisé sa meilleure estimation des taxes à recouvrer, compte tenu que l'ALREO attend un jugement de la part de l'Agence du revenu du Canada sur son statut fiscal relatif aux taxes à recouvrer.

10. Financial instruments (continued)

Liquidity risk

Accounts payable and accrued liabilities and due to The Ottawa Hospital - operations are payable in the next fiscal year. Terms of repayment of the Due to The Ottawa Hospital - capital is disclosed in note 3.

11. Comparative information

Certain comparative figures have been reclassified to conform to the current year's presentation.

10. Instruments financiers (suite)

Risque de liquidité

Les créiteurs et les charges à payer et les sommes à payer à l'Hôpital d'Ottawa - exploitation sont payables au cours du prochain exercice fiscal. Les modalités de remboursement des sommes à payer à L'Hôpital d'Ottawa - capital sont divulguées à la note 3.

11. Chiffres comparatifs

Certains chiffres de l'exercice précédent ont été reclassés afin de se conformer à la présentation adoptée pour l'exercice courant.

