

A Celebration of Richardson Laboratory 1924-2024



Saturday, September 14th, 2024

**Queen's University, BioSciences Complex
Arch Street, Room 1102**

Richardson Laboratory

100 years ago, in 1924, Richardson Laboratory opened its doors and has been the home of the Department of Pathology ever since. Throughout our history we have worked closely with the Hospital and Queen's University Medical School to provide laboratory testing services while also giving current medical students and researchers a chance to get hands-on experience in a real lab setting.

In 1926 Dr. J.F Logan, supervisor of physiological chemistry, emphasized the interdependence of teaching, research and medical care – this influence was driven predominantly by rapid advances in laboratory testing. By 1927 it had grown to such an extent that Mrs. Alice Richardson, widow of Senator Harry W. Richardson, made an offer to pay the salary of a clinical pathologist for 5 years, a very generous donation that helped the program thrive.

In 1962 two floors were added to Richardson Laboratory significantly increasing the departmental research space and allowing for even more growth to occur, and 1986 saw the introduction of pathology courses into the undergraduate Life Sciences program. In 2003 the department changed its name to the “Department of Pathology and Molecular Medicine” to reflect its leadership role in understanding the basis of disease at a molecular level and applying this knowledge to disease diagnosis, clinical care, education, and research.

Today, we celebrate all the brilliant researchers that have worked in our labs, the fearless department heads who worked tirelessly to grow our department, the speakers who helped us learn, the faculty that have taught the students, and the staff that kept us going.

Thank you, we could not have done it without you.

Cover: Copy of an
The Richardson
Street.



original watercolor by Judith Gould, 2013.
Laboratory, Queen's University – entrance, Stuart



The Nathan Kaufman Lectureship



Nathan Kaufman was born in Lachine, Quebec and educated at McGill University graduating with a medical degree in 1941. He interned at the Royal Victoria Hospital and then served as a Medical Officer to a tank battalion in Western Europe and was honoured with a Member of the Order of the British Empire (MBE). After 18 months as a pathology resident at the Jewish General he moved with his wife Rita to the Cleveland Metropolitan General Hospital to complete his residency. He then joined the Faculty at Case Western and quickly began a successful and satisfying career in iron metabolism research, medical education and laboratory administration. In 1967 after 7 years as a Professor at Duke University, he was

persuasively recruited by Dean Harry Botterell to succeed Bob More as the Head of Pathology at Queen's.

His accomplishments were numerous. They included the development of the NCIC Cancer Research Unit, recruitment and nurturing of faculty, distinguished service to senior committees of the Hospital, University and the Medical Research Centre (MRC), and expansion of the department's scholarly productivity and residency program. During his 12 years at Queen's, Dr. Kaufman became internationally recognized for his distinguished leadership as Editor of *Laboratory Investigation*, President of the US-Canadian Academy of Pathology and the International Academy of Pathology. After Queen's, he moved to Augusta as the first full-time secretary/treasurer of the United States and Canadian Academy of Pathology (USCAP). He was recognized by the USCAP for his contributions, including the annual Nathan Kaufman Timely Topics Lecture.

Through this lectureship, the department honours Nathan Kaufman's extraordinary influence in shaping the scholarly life of our department and his contribution to our specialty internationally.

The Nathan Kaufman Lectureship – 2024 Recipient Dr. Alanna Church



Dr. Church received her bachelors, master's and medical degrees at Queen's University before completing her residency in anatomic pathology at the same institution. She then moved to Boston to complete her education in both molecular genetic pathology and pediatric pathology at Harvard Medical School. She is

currently a Molecular and Pediatric Pathologist at Boston Children's Hospital, where she is a founder and associate medical director of the Laboratory for Molecular Pediatric Pathology (LaMPP). She is an Assistant Professor of Pathology at Harvard Medical School, the Program Director for the Harvard Molecular Genetic Pathology Fellowship, and the incoming Chair of Clinical Practice for the Association for Molecular Pathology.

Dr. Church's clinical and research work focus on bringing molecular testing to the clinical care of children with cancer. Through institutional projects (the Profile study, GAIN consortium study) she has profiled thousands of children's tumors and has used these results to make real-time impacts on their diagnoses and treatments. She is involved in national initiatives to improve the quality and access to molecular testing for children with cancer, including the NCI-funded Count Me In Study (Dana Farber, Broad Institute), the National Comprehensive Cancer Network, National Institutes of Health, and the Children's Oncology Group. She was recently awarded the American Association for Cancer Research and St. Baldricks Foundation Award for Outstanding Achievement in Pediatric Cancer Research.

AGENDA

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- 11:30am Arrival to the **Atrium** – light snacks and refreshments provided
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- 11:55am Please find a seat in **Rm. 1102**
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- 12:00pm Welcome – Master of Ceremony Dr. David Lillicrap (Part I)
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- 12:05pm Dr. David Berman, Department Head
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- 12:10pm Dr. Nicholas Mosey, Chief of Staff and Special Advisor, Office of the Principal and Vice-Chancellor, Queen’s University
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- 12:15pm History of Richardson Laboratory – Dr. Paul Manley
(20 min. + 10 min. Q&A)
Richardson Laboratory: Refuge, Incubator, Home
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- 12:45pm Canada Excellence Research Chair - Dr. Paul Kubes
(25 min + 5 min Q&A)
Imaging Pathology in Real Time: Seeing is Believing
-
- 1:15pm Research in Richardson Laboratory – Dr. David Lillicrap
(10 min. + 5 min. Q&A)
Insights into Hemophilia Science: From Queen’s, Mice, and Dogs
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- 1:30pm Research in Richardson Laboratory – Dr. Jeannie Callum
(10 min. + 5 min. Q&A)
Hemostatic Resuscitation in Trauma and Cardiac Surgery
-
- 1:45pm Research in Richardson Laboratory – Dr. Michael Rauh
(10 min. + 5 min. Q&A)
Toward Cancer Surveillance and Prevention with Blood as the Exemplar
-
- 2:00pm Mix & Mingle in the **Atrium** – light snacks and refreshments
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AGENDA continued

2:35pm Please return to **Rm. 1102**

2:40pm Welcome Back – Master of Ceremony Dr. John Rossiter (Part II)

2:45pm **Nathan Kaufman Lecturer** - Dr. Alanna Church
(25 min. + 5 min. Q&A)
Molecular Profiling to Support the Care of Children with Cancer

3:15pm Research in Richardson Laboratory – Dr. Neil Renwick
(10 min. + 5 min. Q&A)
Novel microRNA markers for NEN Tissue and Liquid Diagnostics

3:30pm Research in Richardson Laboratory – Dr. Xiaolong Yang
(10 min. + 5 min. Q&A)
How Fireflies and Glowing Shrimps Illuminate the Fight Against Cancer and COVID-19

3:45pm Research in Richardson Laboratory – Dr. Lois Mulligan
(10 min. + 5 min. Q&A)
Exploiting Molecular Mechanisms to Target Familial Cancers

4:00pm Dr. Stephen Scott, Vice-Dean, Research, Queen's Health Sciences

4:05pm Closing remarks – Dr. David Berman, Department Head, Pathology & Molecular Medicine

4:10-4:45pm Mix & Mingle in the **Atrium**

Speakers



Dr. Paul Manley is a Professor Emeritus of the Department of Pathology and Molecular Medicine. Dr. Manley has held many distinguished administrative roles in our department over his 50 years of service including a 10-year tenure as Chief/Department Head. He is an expert in gastroenterology and liver pathology.



Dr. Paul Kubes' research program is at the forefront of real-time imaging of the immune system. As the CERC in Immunophysiology and Immunotherapy, he will provide leadership and build synergies amongst physiologists, cancer biologists, and immunologists, in order to adopt advanced technologies for understanding immune mechanisms of homeostasis and new disease treatments. By leveraging existing institutional strengths in immunology, cancer research, and precision medicine, this work will position Canada as a global hub for translational research on immune-based therapies.



Dr. David Lillicrap is a Professor in the Department of Pathology and Molecular Medicine. He is a prior recipient of a Senior Canada Research Chair in Molecular Hemostasis. Dr. Lillicrap's research program focuses on the molecular science of the two common inherited bleeding disorders, hemophilia A and von Willebrand disease.



Dr. Jeannie Callum is a Hematologist and a Professor in the Department of Pathology and Molecular Medicine. Dr. Callum's current research interests are in the hemostatic management of major hemorrhage and analysis of the utilization of blood through big data.



Dr. Michael Rauh is a Hematopathologist and Associate Professor in the Department of Pathology and Molecular Medicine. Dr. Rauh's clinical research focus is translating next-generation sequencing tests for earlier and more precise detection of myeloid cancers to improve management for patients and

clinicians. By also focusing on the origins of myeloid cancers, a common age-associated condition called clonal hematopoiesis, Dr. Rauh and his group are striving to shift the pathology paradigm beyond hospital walls, to myeloid cancer surveillance, disease prevention and health optimization in the community.



Dr. Neil Renwick is an Associate Professor in the Department of Pathology and Molecular Medicine, Clinician Scientist, and Head of the Laboratory of Translational RNA Biology. Dr. Renwick and his team work on microRNA-mediated gene regulation in neuroendocrine neoplasms. The ultimate goal of their research

is to improve clinical outcomes for these rare tumors and cancers through better diagnostics and therapeutics.



Dr. Xiaolong Yang is a Professor in the Department of Pathology and Molecular Medicine. Dr. Yang explores the role of oncogenes and tumor suppressor genes in breast cancer development, metastasis, drug resistance, and therapy using cancer cell lines, mouse models, and clinical cancer patient samples.



Dr. Lois Mulligan is a Professor in the Department of Pathology and Molecular Medicine, and a member of the Division of Cancer Biology and Genetics, at Sinclair Cancer Research Institute at Queen's University. Dr. Mulligan's primary research interests are in understanding the molecular, cellular and clinical roles of the RET receptor tyrosine kinase in normal and cancer cells.



Dr. John Rossiter is a Neuropathologist and a Professor in the Department of Pathology and Molecular Medicine. His research interests are in translational aspects of brain tumours.



Dr. David Berman is the Head of the Department of Pathology and Molecular Medicine. Dr. Berman is also a Principal Investigator, and Professor of Pathology, Oncology and Biomedical & Molecular Sciences. He directs a research laboratory focused on high impact cancer tests

for patients with prostate and bladder cancer. Laboratory members discover and develop novel image-based & molecular biomarkers and therapeutic targets that can rapidly improve patient care.

Our final words...

THANK YOU for celebrating with us today and for supporting the important work we do. As we celebrate the past 100 years, we also look ahead to the next 100 years; we are excited for the new brilliant minds that will join our ranks and for the possibilities in medical advances that will be discovered via research.

You can be part of this future with a one-time donation or a pledge for long-term support to either the Queen's Pathology Fund – which supports initiatives such as start-up funding for new researchers to the department, professional development support for faculty, staff and residents, collaborative projects, and purchase of new equipment OR the **Nathan Kaufman Lectureship & Visiting Speaker Fund** – an opportunity to honour Dr. Nathan Kaufman's extraordinary influence in shaping the scholarly life of our department and his contribution to our specialty internationally over the 12 years he served as Department Head.

Contact Us

Should you have any questions about how we manage our Pathology Trusts and Endowments, please do not hesitate to reach out to Josephina.

As our Finance Lead, she handles the tracking and reporting of our accounts and works directly with the Department Head to ensure the funds entrusted to us by our generous donors are used as intended.



Josephina Smyth, Lead Finance and Research Administrative Coordinator

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PATHOLOGY AND
MOLECULAR MEDICINE