

# THE TENTH M. DARIA HAUST LECTURER

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## KATHLEEN BURNS, MD, PhD

Chair, Department of Pathology, Dana-Farber Cancer Institute. Professor of Pathology, Harvard Medical School



### *“Building and wrecking genomes”*

Tuesday, May 25, 2021  
4:00 pm  
Via Zoom

<https://zoom.us/j/97337882424?pwd=M3Y2UU01NytnMXNZbUZyTlZlanUvZz09>

Meeting ID: 973 3788 2424  
Passcode: 384748

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The Department of Pathology and Molecular Medicine and Queen’s University

Dr. Kathleen Burns, MD, PhD

Dr. Kathleen Burns is the Chair of the Department of Oncologic Pathology at the Dana-Farber Cancer Institute and a Professor of Pathology at Harvard Medical School.

She received her M.D. and Ph.D. degrees from Baylor College of Medicine and was recruited to Johns Hopkins University School of Medicine for clinical pathology (CP) residency and hematopathology fellowship. Thereafter, she joined the faculty at Johns Hopkins, progressed through their academic ranks to Professor, and served as the Pathology department's Deputy Director (Vice Chair) for Research and the institution's Physician Scientist Training Program (PSTP) Director until leaving for Dana-Farber in 2020.

The Burns laboratory is focused on studying mobile genetic elements in human disease. Her group was among the first to develop a targeted method for amplifying mobile DNA insertion sites in the human genome, and they study functional effects of inherited mobile element insertions using a combination of genetic approaches and molecular biology. The lab has also shown that the expression of long interspersed element-1 (LINE-1) open reading frame 1 protein is a hallmark of human cancers, and that somatically-acquired LINE-1 insertions characterize cancer genomes. Her group is currently studying consequences of this activity on cancer cell biology, and seeking avenues to translate our understanding of this basic biology to inform approaches to diagnose and treat cancers.

Dr. Burns has first or senior authored papers in highly cited peer-reviewed journals, including Science, Cell, Nature Medicine, Nature Structural and Molecular Biology, and Proceedings of the National Academy of Sciences. She has authored reviews for Nature Reviews Genetics and Nature Reviews Cancer, and organized several major scientific meetings in her field. Her group has been supported by the Burroughs Wellcome Fund and multiple R01 awards from the National Institutes of Health. She is the Scientific co-founder of Oncolinea Pharmaceuticals, Inc. a biotechnology startup company focused on discovering new therapies for LINE-1-expressing malignancies.

Dr. M. Daria Haust, OC, MD, FRCPC

M. Daria Haust, a native of Poland, graduated *summa cum laude* from the Medical School of Heidelberg (Germany) in 1951. Immigrating to Canada in 1952, she completed a rotating internship at the Kingston General Hospital (KGH) in 1953, and thereafter spent a year of atherosclerosis research with Dr. Robert More. In 1954, Dr. Haust enrolled in the General Pathology Residency and Graduate School programs at Queen's, obtaining in 1959 the specialty certification from the Royal College of Physicians and Surgeons of Canada (RCPSC) and an MSc degree from Queen's. In 1960, following an extended postdoctoral fellowship in paediatric pathology with Dr. Benjamin Landing at the Cincinnati Children's Hospital, Dr. Haust joined the Faculty of Medicine at Queen's as an Assistant Professor and as a paediatric pathologist at the KGH, embarking on a career in experimental atherosclerosis and paediatric pathology. Promoted to Associate Professor in early 1967, she subsequently moved to Western University (UWO), obtaining full Professorship in 1968. In 1972, Dr. Haust became a Fellow of the RCPSC. Currently, Dr. Haust maintains contacts with several academic/professional domains, e.g., as Professor Emeritus (UWO), Professor to Adjunct Academic Staff (Queen's), Honorary Member of Medical Staff (SickKids) and as the 2013-Awardee of the Emeritus Status (College of Physicians and Surgeons of Ontario).

Dr. Haust has had a distinguished career in basic research in several areas including atherosclerosis, the process of elastogenesis, and the pathogenesis of a number of genetic diseases. She is a highly regarded educator, respected for her teaching ability, and known for the devoted supervision of the programs of her graduate students. She received several Best Teacher Awards at Queen's and the UWO. Dr. Haust was a guest lecturer at universities and scientific gatherings around the globe. She has played important roles in the establishment and functional continuity of national and international scientific societies, either as President, Secretary-Treasurer or as a member of the Council, and has served on Editorial Boards of several scientific journals. Her scientific or academic contributions have been honoured by a multiplicity of distinctions (Canada Council Killam Prize in Medicine; Gold Medal Award from the International Atherosclerosis Society; Honorary membership of the Academy of Sciences of Heidelberg; the William Boyd Lectureship of the Canadian Association of Pathology; the Andreas Vesalius Medal by the University of Padua; Honorary Professorship of Medicine from the University of Chile, and others). Dr. Haust's biography as one of the Founders of Paediatric Pathology appeared in 2001, and a *Festschrift* in her honour, with contributions from ten international scientists, was published in 2002. In 2004, she received the Distinguished Pathologist Award from the US/Canadian Academy of Pathology; fellowships and awards named in her honour were established by the International Atherosclerosis Society, the Canadian Atherosclerosis Society, and at the UWO. She is the recipient of honorary degrees from three mediaeval universities (Jagiellonian University, Krakow; Charles University, Prague; Havana University, Havana). In 2007, Dr. Haust's extraordinary career culminated with her appointment as an Officer of the Order of Canada. In 2012, she received the Queen Elizabeth II Diamond Jubilee Medal from the Governor General of Canada.

Through this lectureship, Dr. Haust is honoured for her scholarly achievements, contributions to the profession, and her continuing passionate devotion to our Department and to Queen's University.

## Previous Haust Lecturers

2001 Kurt Benirschke, Emeritus Professor of Pathology and Reproductive Medicine, University Medical Center, San Diego, California

2003 Luc Oligny, Pediatric and Molecular Pathologist, Department of Pathology and Cellular Biology, Université de Montréal and Hôpital Sainte-Justine, Montréal, Québec

2005 Timothy Triche, Professor of Pathology and Pediatrics at the University of Southern California, and Head, Department of Pathology, Childrens Hospital Los Angeles, Los Angeles, California

2007 Peter Davies, Robinette Foundation Professor of Cardiovascular Medicine, is Professor of Pathology and Laboratory Medicine, Professor of Bioengineering, and Director of the Institute for Medicine and Engineering (IME) at the University of Pennsylvania

2010 Michael Gimbrone, Chairman, Department of Pathology, Brigham and Women's Hospital, Ramzi S. Cotran Professor of Pathology, Director, Center for Excellence in Vascular Biology (Brigham & Women's Hospital), Director, Vascular Research Division

2012 Michael Allard, Professor and Head, Department of Pathology and Laboratory Medicine, University of British Columbia

2014 Murray Huff, Professor, UWO and Director, Vascular Biology Research Group, Robarts Research Institute, London, ON

2016 Richard G. Hegele, MD, FRCPC, PhD, Vice Dean, Research and Innovation, Faculty of Medicine and Pathobiology, University of Toronto, Toronto, ON

2018 Philip Awadalla, PhD, Director of Computational Biology, Ontario Institute for Cancer Research; Professor, Dept. of Molecular Genetics, University of Toronto, Toronto, ON

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