

## 2015 Research Award Recipients

### MANNING INNOVATION PRINCIPAL AWARD, ERNEST C. MANNING AWARDS FOUNDATION

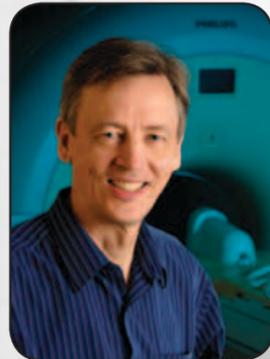
#### Dr. Paul Santerre's

research focuses on design and synthesis of novel degradable biologically active polymers for use in tissue engineering, drug delivery and implantable device fabrication. He received the Principal Award from the Ernest C. Manning Awards Foundation for his development of surface modifying macromolecules that effectively prevent blood clots when built into plastic medical tubing and other medical devices. The macromolecules, known by the trade name Endexo™, eliminate the need to coat plastic with anticoagulants after manufacturing and reduce clots by up to 87%.



**J. Paul Santerre, MScE, PhD, FBSE, FAIMBE, FAAAS, FCAHS**  
Professor, Faculty of Dentistry and Institute of Biomaterials and Biomedical Engineering

### RAYLEIGH AWARD, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS



#### Dr. Kullervo Hynnen

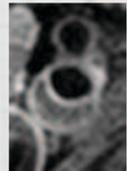
received the Rayleigh Award from the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society "for outstanding accomplishment in the development of image guided therapeutics, and in particular for pioneering the use of focused ultrasound as a means of noninvasively ablating brain tissue and reversibly opening the blood brain barrier."

**Kullervo Hynnen, PhD**  
Professor, Department of Medical Biophysics  
Senior Scientist, Sunnybrook Research Institute,  
Sunnybrook Health Sciences Centre

### ALEXANDER R. MARGULIS AWARD FOR SCIENTIFIC EXCELLENCE, RADIOLOGICAL SOCIETY OF NORTH AMERICA

The Alexander R. Margulis Award recognizes the best original scientific article published in *Radiology* during the award year.

Dr. Anna Zavodni demonstrated that arterial MRI predicts cardiovascular events in asymptomatic adults. By examining the neck vessels for wall thickness and plaque composition, her team improved the traditional risk model for identifying individuals at risk for heart disease and stroke.



Cross-section of common carotid artery showing wall thickening and presence of lipid-containing plaque



**Anna Zavodni, MD, MHSc, FRCPC**  
Assistant Professor, Department of Medical Imaging  
Affiliate Scientist, Sunnybrook Research Institute, and  
Clinician Investigator, Sunnybrook Health Sciences Centre

### MARY MATTHEWS PATHOLOGY / TRANSLATIONAL RESEARCH AWARD, INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER

#### Dr. Ming-Sound Tsao's

career contributions to the molecular understanding of lung cancer were recognized with the Mary Matthews Pathology Award, given for outstanding lifetime scientific achievement in translational and pathology research of thoracic cancers. Dr. Tsao's research aims to identify genes and proteins that may predict poor prognosis after lung cancer tumor resection, as well as biomarkers of cancer drug resistance. His research also explores the molecular basis of pancreatic cancer.



**Ming-Sound Tsao, MD, FRCPC**  
Professor, Department of Laboratory  
Medicine and Pathobiology  
Senior Scientist, Princess Margaret Cancer Centre, UHN

### LEADERS IN INNOVATION AWARD, SOCIETY OF INTERVENTIONAL RADIOLOGY FOUNDATION

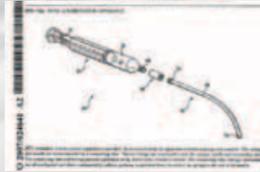


Photo: GJ Baylon

#### Dr. Kieran Murphy

received the Leaders in Innovation Award for his many innovative contributions to interventional neuroradiology. Dr. Murphy's research focuses on radiological approaches to complex spine, neurovascular and cerebral spinal fluid pathologies, including imaging techniques to guide surgical intervention. He has filed over 60 patents on medical devices and founded six medical device companies. He continues to encourage innovation as director of clinical research faculty for UHN's Techna Institute.

**Kieran Murphy, MB, BCh,  
BAO, FRCPC, FSIR**  
Professor, Department of Medical Imaging  
and Joint Department of Medical Imaging  
at UHN, Mount Sinai Hospital  
and Women's College Hospital



Globally issued non Luer lock cement low pressure delivery system, 7 patents issued of 8 filed globally

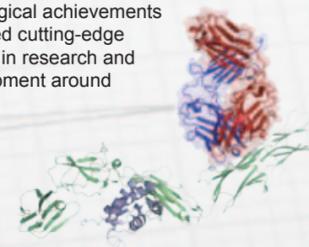
### CHRISTIAN B. ANFINSEN AWARD, PROTEIN SOCIETY



#### Dr. Sachdev Sidhu

was awarded the Christian B. Anfinsen Award in recognition of his achievements in protein engineering. Dr. Sidhu's work has significantly advanced phage display technology for the efficient production of antibodies; pioneered the use of synthetic human antibody libraries; and developed methods to engineer ubiquitin. His technological achievements have provided cutting-edge tools for use in research and drug development around the world.

**Sachdev Sidhu, PhD**  
Professor, Donnelly Centre  
for Cellular and Biomolecular Research  
Senior Investigator, Ontario Institute  
for Cancer Research



Therapeutic inhibition of KIT receptor activation with a synthetic antibody. Dr. Sidhu in collaboration with Dr. J. Schlessinger and Koltan Pharmaceuticals

### KHURSHED JEEJEEBHOY AWARD FOR BEST APPLICATION OF CLINICAL NUTRITION FINDINGS TO CLINICAL PRACTICE, CANADIAN NUTRITION SOCIETY

#### Dr. Deborah O'Connor's

translational research program in maternal and infant nutrition has impacted the health of families around the world. Based on her research investigating the role of folate in prevention of birth defects, folate is now added to the food supply globally. Dr. O'Connor co-invented a widely used milk fortifier that allows very low birthweight infants to consume their own mother's milk and she has contributed to improvements to preterm infant formulas. She continues to assess nutritional solutions for low birth weight infants, including the use of donor human milk, as well as examining the impact of maternal diet and metabolism on breast milk composition and infant health.



**Deborah O'Connor, PhD, RD**  
Professor, Department of Nutritional Sciences  
Senior Associate Scientist, SickKids Research  
Institute, The Hospital for Sick Children

### AWARD FOR INNOVATION IN LABORATORY MEDICINE, CANADIAN SOCIETY FOR CLINICAL CHEMISTS



#### Dr. Khosrow Adeli

leads the Canadian Laboratory Initiative on Pediatric Reference Intervals (CALIPER), which was recognized by the Canadian Society of Clinical Chemists for its innovative approach to improving the accuracy of pediatric laboratory test results. The national multi-centre initiative has developed a comprehensive database of gender- and age-specific reference intervals for over 100 laboratory biomarkers of pediatric disease, which have been adopted by hospitals in Canada, the USA, and around the world.



**Khosrow Adeli, PhD, FCACB, DABCC, FACB**  
Professor, Department of Laboratory Medicine and Pathobiology  
Senior Scientist, SickKids Research Institute, and Division Head of  
Clinical Biochemistry, The Hospital for Sick Children

### MERCK IRVING S. SIGAL MEMORIAL AWARD, AMERICAN SOCIETY FOR MICROBIOLOGY

The Merck Irving S. Sigal Memorial Award recognizes excellence in basic research in medical microbiology and infectious diseases.

Dr. Jeffrey Lee received the award for his work on the molecular mechanisms underlying the relationship between retroviruses and host immune responses. Dr. Lee uses cutting-edge X-ray technologies to examine viral surface glycoproteins, which mediate viral entry into cells, and the mechanisms by which the human immune system recognizes and restricts the impact of viruses.



Photo: GJ Baylon

**Jeffrey Lee, PhD**  
Associate Professor,  
Department of Laboratory  
Medicine and Pathobiology

# BOUNDLESS INNOVATION

### YOUNG INVESTIGATOR AWARD FOR BASIC SCIENCE, AMERICAN GASTROENTEROLOGICAL ASSOCIATION



Photo: GJ Baylon

#### Dr. Aleixo Muise

was awarded the AGA Young Investigator Award for Basic Science, which recognizes originality and innovative insight into a major scientific problem in gastroenterology. Dr. Muise's research focuses on the role of genetics in the pathogenesis of Very Early Onset Inflammatory Bowel Disease. It has led to groundbreaking insights into mutations that contribute to the disease and to novel curative treatments.

**Aleixo Muise, MD, PhD, FRCPC**  
Associate Professor, Department of Paediatrics  
Scientist, SickKids Research Institute, and  
Co-Director, Inflammatory Bowel Disease Centre,  
The Hospital for Sick Children

### IN MEMORIAM

### 2014 MARGARET HAY EDWARDS ACHIEVEMENT MEDAL, AMERICAN ASSOCIATION FOR CANCER EDUCATION 20 FACES OF CHANGE, THE CHANGE FOUNDATION



#### Dr. Pamela Catton,

a visionary leader of cancer education research and practice, was recognized this year for establishing ELLICSR, an innovative research centre at Princess Margaret Cancer Centre focused on optimizing health and wellness for people with cancer and their families. The centre offers resources to cancer survivors and aims to make new contributions to survivorship research and care delivery through collaboration between survivors, researchers, clinicians and community organizers. Dr. Catton is remembered as a dedicated clinician and passionate innovator in medical education.

**Pamela Catton, MD, MPHE, FRCPC (1953 - 2014)**  
Professor, Department of Radiation Oncology  
Medical Director, Breast Cancer Survivorship Program,  
Princess Margaret Cancer Centre, UHN