Canadian Medical Hall of Fame
Discovery Days in HEALTH SCIENCES

Temple de la renommée médicale canadienne
Journées Découvertes en SCIENCES DE LA SANTÉ

Local Event Champion
Champion local de l'événement
Kiwanis Ottawa

University of Ottawa (Anglophone event)
Wednesday, May 7th, 2025
WORKSHOP CATALOGUE

uOttawa
Faculté des sciences de la santé
Faculty of Health Sciences

CODE	TITRE	DESCRIPTION	AM	PM	PRÉSENTATEUR / PRÉSENTATRICE
H01	Research with Heart *This workshop includes a short 15min shuttle bus ride	Join us at the University of Ottawa Heart Institute if you are interested to see how research will help detect and treat patients with heart and blood vessel disease. In our laboratories you will see beating heart with and without heart disease, as well as beating human heart cells (generated from patient stem cells). Note this workshop is not for the faint of heart/ squeamish!	**0**	**10**	Dr. Wenbin Liang
H02	A Journey Through Heart Development *This workshop includes a short 15min shuttle bus ride	Explore the fascinating journey of how the heart forms and begins to beat during embryonic development. Join us at the University of Ottawa Heart institute for an interactive workshop, where you'll see real hearts and use advanced techniques for heart development research. With us, you'll explore the stages of heart growth using mouse embryos, starting from early development, when the heart's chambers first begin to form, all the way to a mature, fully developed heart. You'll also have the chance to see advanced imaging techniques in action, as we use fluorescent microscopy to reveal the heart's hidden electrical pathways. Through these exciting visuals, you'll see the pathway through which electricity moves through the heart to create each heartbeat!	**0**	**10**	Rimshah Abid
H03	The Role of Exercise: Why It Is Important in Cardiac Care *This workshop includes a short 15min shuttle bus ride	Did you know that exercise is one of the most important ways to help treat and manage heart disease? Visit the University of Ottawa Heart Institute to learn about the role of exercise and why it is so important in cardiac care. You will see a demonstration of top-of-the-line fitness testing for athletes and patients and have the opportunity to speak with experienced Registered Kinesiologists, Exercise Physiologists and Physiotherapists about different types of exercise and how we prescribe exercise to our patients.	**0**	**15**	Dr. Matheus Hausen
H04	The Heart of the Matter: Let's Talk about Women's Heart and Vascular Health *This workshop includes a short 15min shuttle bus ride	This workshop will spark conversation among the students about women's heart health. Our interactive session will: 1. Outline the rationale as to why women's heart and vascular health is important 2. Describe the anatomy of the heart, different heart ad vascular diseases, how women's hearts are different than men's, how women's symptoms of a heart attack can be different than men's and what they can do to help	**0**	**20**	Lisa Comber

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		3. Describe healthy behaviours to encourage the prevention and management o heart and vascular diseases 4. Identify resources to learn more and the steps for acting and advocating for women's heart and vascular health at your school and in your community			
L01	More Than Meets the Eyes: Robotic Devices for Describing Human Movement *This workshop includes a short 15min shuttle bus ride	This workshop will teach participants about our current understanding of human motor control focusing on how we interact with our world and the current technologies being used to describe this behaviour. This session will provide a brief background of how the brain can turn sensory input into action, the complexity of human action, and what current tools are being used to describe human movement. Participants will perform basic reaction time experiments using stopwatches to showcase the variability in subjective human assessments and then be introduced to robotic devices that can provide objective and accurate measures of human behaviour.	**10**	**10**	Dr. Kayne Park
L02	Exploring Exercise for People with Neurological Disorders *This workshop includes a short 15min shuttle bus ride	This workshop will focus on the role exercise for people living with neurological disorders with a specific focus on multiple sclerosis. Learn about multiple sclerosis and the benefits of exercise for this population. Hands-on activities will include motor, cognitive, and physiological testing sessions.	**12**	**12**	Dr. Lara Pilutti
L03	Understanding the brain in movement: Behavioural Neuroscience *This workshop includes a short 15min shuttle bus ride	Humans are remarkable movers. We can learn new movements (e.g., the intricate finger movements required to play the violin or the coordination of multiple body segments to propel our body over the bar in high jump). We can also adapt our movements to new situations that arise within the environment (e.g., changing our walking gait when a surface is icy or changing the location of where we kick a soccer ball depending on the location of the defensive players), or within ourselves due to age or disease. In this workshop we will explore the processes underlying motor skill acquisition and adaptation from a behavioural neuroscience perspective.	**14**	**0**	Dr. Erin Cressman
P01	Translational and Molecular Medicine (TMM) Labs: From Benchwork to the Clinics *This workshop includes a short 15min walk	Work through case studies and apply biological concepts to understand disease mechanisms and identify potential therapeutic avenues. Students will get a taste of what it is like to be a undergraduate TMM student in the Faculty of Medicine or work in a biomedical research setting.	**12**	**12**	
R01	Flow Cytometry	The uOttawa Flow Cytometry and Virometry Core Facility is a state-of-the-art facility offering high-speed cell sorting services, flow cytometry analysis, and training, teaching and support to the research community. We are also one of the few core facilities in Canada that specialize in nano-sized particles such as viruses and extracellular vesicles. Come see how flow cytometry and our state-of-the-art instruments are used to determine the properties of cells. Get ready for a demonstration of cell analysis using one of our cytometers!	**0**	**6**	Dr. Vera Tang

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R02	Unlocking Epigenetics: Understanding Stress' Impact on Our Health	Explore the fascinating world of epigenetics in our workshop that will delve into how our environment can influence gene expression, impacting our health and well-being. Through interactive discussions and engaging activities, students will discover how stress affects our bodies at a molecular level and the potential long-term consequences. They will learn about the role of epigenetics in regulating gene activity, providing insights into how we can mitigate stress-related health issues. Join us for an enlightening journey into the world of epigenetics and its implications for our overall health.	**0**	**14**	Dr. Lei Cao
R03	From Code to Cure: How AI is Transforming Biomedical Research	Artificial Intelligence (AI) is rapidly reshaping biomedical research. This workshop offers a lay introduction into the basics of AI including the wide-range of AI applications in biomedical research, from AI-driven diagnostics to machine learning models accelerating drug discovery. Together we will use an open-source large language model (LLaMA) to tackle a domain-specific problem of summarizing biomedical research papers with the aim of reducing the level of the model's hallucinations.	**0**	**15**	Dr. Arvind Mer & Aws Almir Ahmad
R04	Seeing biomolecules through the atomic lens.	In this workshop, we will explore how to look at biological molecules (such as proteins or DNA) at the perspective of a super-microscopic scale (a.k.a. ATOMIC)!!	**10**	**0**	Dr. Jyh-Yeuan (Eric) Lee
R05	Computer Science Revolutionizing Medicine	Computer science plays an increasingly important role in medicine and biomedical research. Computer programs help us better understand the functions of molecules in cells and their roles in disease processes. During this workshop, students will use video games to understand how computer algorithms provide insights into cells and human biology, ultimately transforming modern medicine.	**10**	**0**	Dr. Mathieu Lavallée-Adam
R06	Discovery of new molecules to eliminate cancer	Dr. Benoit's laboratory is working to identify chemical compounds capable of eliminating a type of cancer cell that is particularly resistant to standard treatment and responsible for the progression of the disease. You will receive explanations on the new methods put forward to better target these highly aggressive cells and you will be able to visualize certain experimental components of these inside the laboratory.	**12**	**0**	Dr. Yannick Benoit
R07	Bacteriophages: Viruses that kill bacteria and a potential solution to antibiotic resistance	Come discover the surprising world of bacteriophages, which are viruses that infect bacteria. Interactive activities will allow students to learn more about bacteriophages and the role they play in our daily lives and health research.	**12**	**0**	Dr. Adam Rudner
R08	Journey to the Heart of the Circulatory System: Understanding the Structure of the Heart and Its Essential Role	Join us for an interactive workshop exploring the fundamentals of the circulatory system. As “doctors”, you'll have the opportunity to test your own heart and understand how it works. We'll look at the structure of the heart, its essential role in pumping blood and maintaining blood pressure. By creating a heart model, either on your own or in a group, you'll discover how blood continues to circulate throughout the body, thanks to the efficiency of this vital pump.	**12**	**25**	Brianna Sanko

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R09	Animal Models of Human Diseases	What can a mouse tell us about a human? A lot! Come see how scientists use behaviour testing in mice to learn more about human diseases and to develop new treatments.	**14**	**0**	Dr. Kerstin Ure
R10	Pathways to a Career in Child and Youth Mental Health	This workshop will explore the different health disciplines that work in Child and Youth Mental health, and what their work involves. Participants will also get a chance to learn some skills involved in this work and try them out with each other during the workshop.	**16**	**0**	Dr. Olivia MacLeod & Dr. Michel Poirier
R11	Real and Artificial Intelligence: Physics and Computer Science in Neuroscience	We will present research directions and career paths available to students interested in applying the tools of physics and computer science to the study of neural systems. Students will complete hands on programming tasks to simulate the biophysics of a neuron and gain insight into how larger networks of neurons can process information. No previous programming experience is expected but a students should create a Google account to use Google Colab beforehand.	**16**	**16**	Zachary Friedenberger
R12	Introduction of Medical Laboratory Technology	In this workshop, students will explore the world of Medical Laboratory Technology, a vital profession in the healthcare field. Participants will learn about the essential roles and responsibilities of a Medical Laboratory Technologist, including performing diagnostic tests and working closely with doctors to help treat patients. Through interactive discussions and real-life examples, students will gain insight into how this profession contributes to healthcare and patient well-being. This workshop is designed to inspire young minds interested in science and healthcare careers.	**20**	**0**	Stanley Ngenzi
R13	Amazing Race: Personal Genomics	Get an overview of genetics and how genetic screening is done to identify risk of disease. Discussions will cover some of the ethical issues associated with genetics-based decision-making and the concept of genetic mutations in cancers and how that helps to tailor personalized cancer treatment. Most of the learning elements are embedded within an Amazing Race-style competition	**25**	**25**	
R14	Tumour Games	Cancer is the uncontrolled growth of abnormal cells that develop when the body's normal control mechanisms stop working. A tumor is a complex tissue, usually as complex as an organ having multiple cell types that each play a role in collectively promoting the hallmarks of cancer. When trying to treat a tumor, every treatment will have a "good" effect on some cell types but might have a "bad" effect on other cell types. During this game board activity students will make choices on treatment options and rolls of the dice will determine treatment efficacy	**25**	**25**	