

THE FACULTY OF GRADUATE STUDIES PRESENTS

THREE MINUTE THESIS FINAL



WATCH LIVE ONLINE – APRIL 21



EMCEE

RICHARD CLOUTIER

Radio host and senior reporter

Richard Cloutier [BA(Adv)/87] is co-host of the News on 680 CJOB and senior reporter for Global News. He studied political studies at the University of Manitoba and journalism at Carleton University. He has been with CJOB for nearly 29 years and has a passion for story-telling on all platforms, including radio, digital and television.

Three Minute Thesis (3MT®) is an international research communication competition for graduate students in a thesis-based program.

The University of Manitoba 3MT is part of an overall strategy to highlight our graduate students, promote UM research and connect with the community.



PRIZES

DR. ARCHIE McNICOL PRIZE FOR FIRST PLACE **\$2,500**

UM RETIREES ASSOCIATION PRIZE FOR SECOND PLACE **\$1,250**

THIRD PLACE **\$750**

PEOPLE'S CHOICE AWARD **UM BOOKSTORE GIFT CERTIFICATE**

2021 CHALLENGERS

HEAT 1

Curtis Cavers, James Tucker, Chris Voth, Chelsea Scheller, Aaron Kilmury, Danah Alhattab, Cameron Eekhoudt, Andria Langi, Sristi Mundhada, Elena Broeckelmann, Nikita Thomas

HEAT 2

Jamie Pfau, Nicole Robak, Mercedes Casar, Odile Huynh, Agoston Fischer, Ahmed Bediwy, Chris Manchur, Jarrad Perron, Veronica Coppolaro, Maiah Tratch, Sonu Varghese, John Jackson, Jhannelle Francis

HEAT 3

Yi Xie, Nolan De Leon, Kwene Appah, Semiyu Adegbite, Susane Trevisan, Danielle Cherpako, Sabrin Bashar, Amirbahador Mansoori, Vimala Bharathi S K, Nasiba Maruf Ahmed, Noushin Ahmadpour, Roshan Parvarchian, Manzuma Khanam, Zachary Moore

JUDGES

SHREERAJ PATEL

Chair, Winnipeg Chamber of Commerce

Raj Patel [BComm(Hons)/2002] has an extensive background and involvement in the financial industry both in commercial and corporate banking for the last 18 years. He joined RBC in 2014 and was appointed to the role of Vice-President, Commercial Financial Services in 2017. He is responsible for a diversified team that covers the industry sectors of: Real Estate Development/Private and Public REITS, Construction Services, Public Sector, Supply Chain and Transportation. For the past eight years, he has coached the JDC West Business Case Competition team at the Asper School of Business.

TRACEY MACONACHIE

Deputy Minister, Economic Development and Training

For over a decade, Tracey Maconachie [BSc/1988] served as the President of Bioscience Association Manitoba, a non-profit organization dedicated to growing Manitoba's health, agricultural and clean biotech industries. Prior to that she worked at an international pharmaceutical company where she created partnerships with government to improve patient care by increasing access to treatments. She has served on the Manitoba Liquor and Lotteries Corporation board and as chair of the Research Manitoba board, and also on committees for organizations as diverse as the Royal Winnipeg Ballet and St. Boniface Hospital.

DOUG COLLIER

Former SVP/Chief Commercial Officer and President International, La-Z-Boy

Doug Collier [BSc/1987] is an active early-stage investor in industries including food/beverage, consumer technology, enterprise software and others. He is also a board director for companies in the consumer products industry in North America and internationally. He serves on the board of advisors for Marxent, a quickly growing digital technology company, and also mentors and advises several other start-ups. Prior to his career as a board member and early-stage investor, he was an accomplished global executive, most recently with La-Z-Boy. He serves on the University of Manitoba's Alumni Council.

FINALISTS



CAMERON EEKHOUDT

PHYSIOLOGY AND PATHOPHYSIOLOGY (MASTER'S)

Advisor: Dr. Davinder Jassal

Can flaxseed protect the hearts of women with breast cancer?

Cameron is investigating whether flaxseed is as effective as a current treatment, perindopril, in preventing chemotherapy from damaging the heart in women with breast cancer. His personal goal is to further bridge the gap between research and bedside practice. He has received the Bank of Montreal - Institute of Cardiovascular Sciences Studentship and the Research Institute in Oncology and Hematology Summer Studentship for his promising research.



JHANNELLE FRANCIS

MICROBIOLOGY (MASTER'S)

Advisor: Dr. Miguel I Uyaguari-Diaz

The identification of human enteric viruses present in urban water bodies of Manitoba

Devastated by family members struggling with the financial burden of chemotherapy, Jhannelle took an interest in healthcare reform. She is passionate about translating therapeutic strategies into the clinic, pushing towards affordable and individualized medicine. She is studying viruses in Winnipeg rivers with a goal to improve water quality health and subsequently the health of local communities. She aspires to be a role model for women scientists.



KWENE APPAH

SOCIOLOGY AND CRIMINOLOGY (MASTER'S)

Advisor: Dr. Lori Wilkinson

Nationalism and integration policy: A comparative cross-national examination

Kwene's research analyzes nationalism and integration policies within and across three distinct countries, Canada, Hungary and Sweden. The research areas of migration and immigration are of great interest based on her personal experiences as an immigrant to Canada. Her desire to conduct research in these areas is rooted in the belief that improving newcomers lived experiences strengthens our societies. A policy analyst for the Government of Manitoba, Kwene contributes to the *Journal of Sociological Thought* as a peer reviewer and is an alumna of the Canada Service Corps youth organization ApathylsBoring.



NOLAN DE LEON

PHYSIOLOGY AND PATHOPHYSIOLOGY (MASTER'S)

Advisor: Dr. Richard Keijzer

Assessment of circular ribonucleic acid expression profiles in biofluids for the prognosis and diagnosis of congenital anomalies

As an aspiring physician, Nolan believes it's not only important to understand the clinician's perspective, but to also understand the underlying processes behind the health problems they treat. His current research is in understanding how circular RNA can predict congenital anomalies that may contribute to abnormal lung development. He wants to bring basic sciences and biomedical engineering together to improve treatment options. He is also a strength and conditioning coach as well as a mixed martial artist.



NOUSHIN AHMADPOUR

PHARMACY (MASTER'S)

Advisor: Dr. Jillian Stobart

Decoding the true language of the brain

Noushin has a bachelor's degree in cell biology from the University of Isfahan. Her research looks at how neurons, our brain's superstar cells, fail to perform their best if their faithful crew of star-shaped glial cells, called astrocytes, don't communicate with them properly. Beyond her academic research, she has been an instructor with the International English Language Testing System (IELTS) and has organized multiple bio-entrepreneurship events, including a workshop series that teaches biology students how to commercialize scientific research.



SRISTI MUNDHADA

BIOSYSTEMS ENGINEERING (MASTER'S)

Advisors: Drs. Jitendra Paliwal and Chyngyz Erkinbaev

Safe storage for flaxseed (*Linum usitatissimum*)

The development of safe storage guidelines for Canadian Prairie flaxseed is Sristi's focus. She hopes better post-harvest handling and storage will prevent food waste and help farmers mitigate the financial losses caused due to grain spoilage. Sristi has always had an interest in food technology, stemming from her first degree through Anna University in India. She says: "I want to hone my skills in both research and industrial sectors, and I wish to start my own business."

FINALISTS



VERONICA COPPOLARO

GEOGRAPHY (DOCTORAL)

Advisors: Drs. David Barber and Marianne Marcoux

Passive acoustic monitoring of marine mammals in the Canadian Arctic: Implications of a changing Arctic for their populations and habitat use

With a background in physics, Veronica became passionate about sea ice and polar research during a study exchange in Norway and was fascinated by how physics can be applied to real-world issues such as climate change. She has done several fieldwork placements, including in the Churchill River estuary, and uses her knowledge to analyze underwater sound recordings to study the potential negative impacts of noise in Arctic waters on marine mammals. Veronica looks forward to continuing her research at the postdoctoral level and would also enjoy teaching in the future.



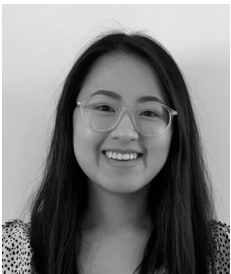
DANAH ALHATTAB

PHYSIOLOGY AND PATHOPHYSIOLOGY (DOCTORAL)

Advisor: Dr. Michael Czubryt

Role of scleraxis in perivascular fibrosis

Danah is using a mouse model of high blood pressure to identify the role of the protein scleraxis in hardening blood vessels, and to investigate how deleting scleraxis would enable vessels to become healthier. With a goal of being on faculty so she can teach and run her own lab, Danah studies heart and vascular diseases so that someday she can help develop better therapeutic approaches for patients. With a bachelor's degree in dentistry, she has volunteered by supervising students in the UM pediatric dental clinic and participated in Youth Biolab "Meet a Scientist" program, talking about science with high school students.



ODILE HUYNH

PHARMACOLOGY AND THERAPEUTICS (MASTER'S)

Advisor: Dr. Sachin Katyal

Cannabis: A potential therapy for breast cancer

With a UM bachelor's degree in biology, Odile hopes to have a career in healthcare. Her research goal is to determine the anti-cancer components of cannabis against highly aggressive breast cancers. Through her work, she says she has gained a greater appreciation and understanding of medical research. Aside from her academic interests, Odile is a youth leader in the Vietnamese Eucharistic Youth Movement and the main pianist for her church.



VIMALA BHARATHI S K

BIOSYSTEMS ENGINEERING (DOCTORAL)

Advisor: Dr. Digvir S. Jayas

Understanding the insect movement pattern inside a grain bin

As a child in India, Vimala watched her grandparents toil in the fields and knew that returns were often too low. She decided to build her career on research and development to reduce the losses in food grains, realizing that the levels of food losses that occur post-harvest are a threat to food security and sustainability. Vimala received a bachelor's and a master's degree in food process engineering and is proud to do her doctoral research at the Grain Storage Research Centre at UM.



CHRIS VOTH

KINESIOLOGY AND RECREATION MANAGEMENT (MASTER'S)

Advisor: Dr. Kyoung June Yi

Shining a light on the unseen athletes

Chris is exploring the experiences of gay team sport professional athletes around the world. When Chris came out as Canada's first active openly gay national team athlete, he wanted to set an example that it was possible to play a sport professionally and be out. He says: "There are a lot of other athletes out there who have stories but can't share them because they don't want to jeopardize their own careers." A highly accomplished UM student athlete, Chris ran and funded the non-profit Out There Winnipeg organization for 5 years, providing sport and recreation for the 2SLGBTQ+ community.



SONU VARGHESE

PHYSIOLOGY AND PATHOPHYSIOLOGY (MASTER'S)

Advisor: Dr. Davinder Jassal

EXercise to prevent AnthraCycline-based Cardio-Toxicity (EXACT 2.0) in women with breast cancer

With a career goal to work as a clinician scientist, Sonu has always been passionate about how lifestyle interventions can improve health outcomes. His previous research was investigating how running can improve the lungs of elderly patients and has expanded to look at whether physical activity can protect the hearts of women with breast cancer who are receiving chemotherapy treatment. Sonu was awarded Research Manitoba-CancerCare Manitoba Foundation Master's Studentship and has also previously served as the president of the Sick Kids Foundation chapter at Western University.



DR. ARCHIE McNICOL PRIZE

Dr. Archibald (Archie) McNicol, Associate Dean in the faculty of Graduate Studies, passed away suddenly in December 2016. Dr. McNicol earned a BSc (Hons) and a PhD in pharmacology from the University of Glasgow and had been with the University of Manitoba since 1993 when he joined the department of oral biology in what was then the Faculty of Dentistry. He taught in the College of Dentistry, the School of Dental Hygiene and the College of Rehabilitation Sciences within the Rady Faculty of Health Sciences.

His globally-recognized research focused on blood-clotting mechanisms and the function and dysfunction of human platelets.

Dr. McNicol was a gifted teacher and researcher who was an enthusiastic supporter of graduate students and of the Three Minute Thesis competition. To honour his legacy, the Dr. Archie McNicol Prize is awarded annually to the first place winner of the University of Manitoba's Three Minute Thesis Competition.



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umanitoba.ca/3mt

