

THE FACULTY OF GRADUATE STUDIES PRESENTS

THREE MINUTE THESIS **FINALS**



APRIL 10, 2024, 7:00 - 9:00PM





EMCEE

COLLEEN BREADY

Weather Specialist

Colleen Bready [BA(Adv)/03] is the Weather Specialist and “Spotlight” entertainment segment host for CTV News at 5 and 6. Born and raised in Winnipeg, she holds a Bachelor of Arts (Advanced) degree with a major in Political Studies from the University of Manitoba. Colleen started her career in broadcast journalism at 680 CJOB in 2005 and has been with CTV Winnipeg since 2011. During her career she has covered a wide range of topics from politics, crime and courts to health and human interest stories for radio and television before becoming a weather anchor.

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 **\$2,000**

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

THIRD PLACE **\$500**

PEOPLE’S CHOICE AWARD **\$200**

2024 CHALLENGERS

HEAT 1

Stella Onwah, Kaden Baskerville, Raneeta Thingnam, Julie Donahue, Anam Ara, Megan Crooks, Saeid Maghsoudi, Samuel Lawal, Sara Crooks, Akshi Malik

HEAT 2

Breanne Semenko, Maria Baranowski, Dasinija Karikalan, Tamunoibi Ekine, Joanna Candas, Isanka Gimhani, Harshani Vidana Hewage, Foluke Oyekale, Surani Matharaarachchi, Jocelyn Zambrano Albarado, Dallas Murphy, Abhinav Tiwari, Shanelle Gingras, Jason Mergler

HEAT 3

Dimitar Tomovoski, Farzan Farnaghi, Naman Agarwal, Ruwani Wimalasekara, Kofi Oduro, Cole Treyturik, Maximillian Scott, Termeh Shakery, Luma Clarindo Lopes, Ishika Mittal, Nnedinso Aguwa, Dario Lorenzoni, Maheshi Jayasinghe, Neil Lorente Cobo

JUDGES

JENNIFER CHEN

MLA, Fort Richmond

GRANT PRAIRIE

Senior Director, Advanced Education and Training, Government of MB

DAVID BEAUDIN

Associate Minister of Education and Minister of Agriculture, MMF

National Government of the Red River Metis



FINALISTS



RANEETA THINGNAM
PHYSIOLOGY AND PATHOPHYSIOLOGY, M.SC.
Advisor: Lorrie Kirshenbaum

Innate cGAS-STING signaling in Doxorubicin cardiomyopathy

With a Bachelor of Science (Honours) from Panjab University, India, Raneeta explores the intricate relationship between cancer treatment and cardiac health. Dedicated to deciphering the mechanisms of Doxorubicin-induced cardiomyopathy, she strives to develop interventions for safer cancer therapy. Raneeta's passion for translational research propels her to bridge the gap between scientific knowledge and clinical application. Committed to unraveling the cardiotoxic effects of Doxorubicin, she aims to advance patient care and contribute to the field of cancer therapy through her dedication to epigenetics and quality research.



FARZAN FARNAGHI
INTERIOR DESIGN, M.I.D.
Advisor: Kurt Espersen-Peters

Hip hop interior design: Imagining interior environments rooted in hip hop

Inspired by a personal passion for Hip Hop culture, Farzan explores its potential to catalyze positive change in disenfranchised communities through interior design. Farzan completed his undergraduate degree, a Bachelor of Landscape Architecture from the University of Guelph. He now delves into the sociocultural influence of Hip Hop, seeking to empower and uplift youth and foster self-advancement. His goals are to inspire socially conscious designers while establishing an interdisciplinary design practice dedicated to addressing inner-city community challenges. Farzan recognizes the opportunity to understand how interior spaces rooted in Hip Hop culture can uplift and empower marginalized youth to promising futures.



JOCELYN ZAMBRANO ALVARDO
MICROBIOLOGY, M.SC.
Advisor: Dr. Miguel Uyaguari

Exploring other microbes as proxies of aquatic pollution

Utilizing advanced molecular tools, Jocelyn's research investigates microbes present in rural Manitoba's surface water to understand their potential as indicators of aquatic contamination. Motivated by the widespread impact of waterborne pathogens, particularly in rural and underprivileged regions, she previously earned a Doctor of Veterinary Medicine from Universidad Agraria del Ecuador. As the former Manitoba representative for the Canadian Water Network, Jocelyn's advocacy efforts extend to promoting water sanitation and developing rapid testing methods globally. Committed to the One Health approach, she seeks to establish new indicators of aquatic pollution for enhanced water surveillance and to protect public health in remote areas and developing countries.



ANAM ARA
BIOCHEMISTRY AND MEDICAL GENETICS, M.SC.
Advisor: Dr. Meaghan Jones

Is all smoke the same

Anam's research focuses on uncovering the epigenetic changes induced by prenatal cannabis smoke exposure, leading to childhood asthma. With cannabis's legality lacking safety regulations, Anam investigates its impact on lung health, an area often overlooked despite extensive research on its neurodevelopmental effects. Driven by a desire to understand cannabis smoke's effects on the lungs using mice model, Anam aims to have a meaningful impact in the field of epigenetics through rigorous scientific inquiry and a commitment to having a lasting impact on society.

FINALISTS



LUMA CLARINDO LOPES
CHEMISTRY, PH.D.

Advisor: Dr. Sabine Kuss

Electrochemical detection of antibiotic resistance

Luma's research focuses on developing electrochemical tools for detecting antibiotic resistance in various pathogens, driven by a passion for advanced techniques in studying live cells, particularly bacteria. With a Master's degree in Chemistry from the State University of Ponta Grossa, Brazil, she aims to complete her Ph.D. at UM, and pursue post-doctoral research and ultimately become a university professor, leading her bioelectrochemistry research group to combat antibiotic resistance. Her goal is to help drug development while nurturing the next generation of researchers.



DALLAS MURPHY
PSYCHOLOGY, M.A.

Advisor: Dr. Corey Mackenzie

Decreasing internalized ageism: Development, feasibility and effectiveness of a process-based intervention

Dallas is dedicated to developing and testing a six-week intervention aimed at reducing internalized ageism and enhancing the health and well-being of older adults. Motivated to create more equitable mental health resources, he aims to address the disparity in mental healthcare for older adults, often exacerbated by ageism. With a Bachelor of Arts (Honours) in Psychology from UM, Dallas actively contributes to research at the Centre on Aging. Engaged in various leadership roles and volunteering activities, his future plans include a career in academia, establishing a research lab focused on developing mental health interventions for marginalized groups, and older adults, while becoming a registered clinical psychologist to provide direct clinical care. He is also deeply engaged in charity initiatives and holds numerous awards for his leadership and research excellence.



FOLUKE OYEKALE
HUMAN NUTRITIONAL SCIENCES, M.SC.

Advisor: Dr. Dylan Mackay

Investigating the post-prandial glycemic response to wild rice cakes using randomized controlled trials

Foluke, a nutrition researcher, investigates the impact of wild rice cakes on postprandial blood glucose concentration and satiety, driven by the personal loss of her grandmother to diabetes. Collaborating with specialists, she aims to debunk nutritional misinformation and translate complex research into actionable insights. With a bachelor's degree in human nutrition and dietetics from Bowen University, Nigeria, Foluke volunteers extensively, aiming to bridge the gap between research and personalized nutrition, by testing the effect of novel food, and their potential to provide function beyond basic nutrition. Through practical applications, she wants to empower communities to make informed dietary choices for better chronic disease management and prevention.



SARA CROOKS
BIOCHEMISTRY AND MEDICAL GENETICS, M.SC.

Advisor: Dr. Mark Nachtigal

L-Rham: A potential new treatment option for ovarian cancer patients

Propelled by her desire to help those experiencing cancer, Sara delves into understanding how a novel drug called L-Rham kills chemotherapy-resistant ovarian cancer. Graduating with a BSc in Biochemistry (Hons., Co-op) from the University of Manitoba in 2023, Sara's passion for cancer research intensified during a summer placement. Eager to pursue a Ph.D. in proteomics and bioinformatics following her master's degree, Sara envisions a career as an independent cancer researcher, dedicated to developing personalized treatment options for patients.

FINALISTS



SAMUEL LAWAL

MEDICAL MICROBIOLOGY AND INFECTIOUS DISEASES, M.SC.

Advisor: Dr Heather Armstrong

Identifying changes in microbial abundance and functions that mediate host inflammatory response to select dietary fibers in inflammatory bowel disease

Samuel's research is focused on identifying the link between fermentable dietary fibers, microbial fermentation processes, and how the gut microenvironment can mediate changes in microbe functions, in inflammatory bowel diseases (IBD). He is inspired by the profound impact these conditions have on individuals' lives. Samuel's goal is to contribute to the development of personalized gut microbiome as a biomarker in defining a healthy diet for IBD patients. With his bachelor's degree in pharmacy from Olabisi Onabanjo University, Nigeria, Samuel's long-term research interests involve understanding how microorganisms evade the immune system and the development of innovative therapeutics.



JOANNA CANDAS

HUMAN NUTRITIONAL SCIENCES, M.SC.

Advisor: Dr. Miyoung Suh

Using omega-3 and lutein-enriched eggs as a strategy for diabetic retinopathy

Joanna's clinical trial investigating the potential benefits of omega-3 and lutein-enriched eggs on eye health and metabolic parameters in individuals with type 2 diabetes is driven by her interest in functional foods' impact on disease prevention and management. With a BSc in Human Nutritional Sciences from the University of Manitoba in 2022, Joanna possesses extensive experience in nutrition research, particularly with diabetes and Indigenous communities. Active in advocacy for FHNS students and the 2SLGBTQ+ community, Joanna aims to continue her journey as a nutrition researcher, advocating for food accessibility and equity. Joanna won the 2024 MT180 competition at the University of Manitoba, showcasing her dedication to advancing scientific knowledge and community engagement.



COLE TREYTURIK

PHYSICS AND ASTRONOMY, PH.D.

Advisor: Dr. Samar Safi-Harb

Typing supernova remnants

Cole studies supernova remnants, aiming to enhance methods for their identification and linkage to their progenitors. With a keen interest in astronomy since childhood, he naturally gravitated towards a degree in astrophysics, graduating with a Bachelor of Science (Honours) in Physics and Astronomy from UM. High-energy astrophysics interests him due to its diverse array of intriguing celestial phenomena and the rapid advancements within the field. Dreaming of a career with major space agencies like NASA or ESA, Cole is also intrigued by opportunities to apply his expertise to novel challenges beyond academia.



RUWANI WIMALASEKARA

MICROBIOLOGY, PH.D.

Advisor: Dr. Ayush Kumar

Regulation of efflux pumps in *Acinetobacter baumannii*

Ruwani's research aims to understand the mechanisms of antibiotic resistance in bacteria, focusing on elucidating the regulatory genes of the AdeJK efflux pump in *Acinetobacter baumannii*. With antibiotic resistance presenting a formidable global threat, Ruwani's passion for microbiology propels her to explore this critical issue. Holding a Master of Philosophy degree in Biochemistry from the University of Kelaniya, Sri Lanka, Ruwani is committed to advancing understanding in this field to combat multidrug resistance and safeguard public health.



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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