



Research Day

March 4, 2025 | 1:00 pm – 5:00 pm
Apotex Building – Bannatyne Campus

Recognizing accomplishments in research and innovation
in the College of Pharmacy, University of Manitoba.

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University
of Manitoba

Rady Faculty of
Health Sciences

PROGRAM

- 1:00 pm** Welcome Address by the Acting Dean and Co-chairs
Dr. Lavern Vercaigne
Dr. Kaarina Kowalec
Dr. Anna Chudyk
050 Apotex Centre
- 1:15 pm** Dr. Argel Aguilar-Valles, Carleton University
“Rewiring the Mind with Ketamine and Psychedelics for Lasting Antidepressant Effects”
Invited speaker (45 min present + 15 min Q&A)
050 Apotex Centre
- 2:15 pm** Dr. Samantha Pauls, University of Manitoba
“Immune cells gone rogue: understanding and targeting immune dysfunction in obesity and metabolic disease”
Faculty speaker (45 min present + 15 min Q&A)
050 Apotex Centre
- 3:15 pm** Poster Session
3rd floor atrium—Apotex Centre
- 4:45 pm** BREAK
Judges select poster winner
- 5:00 pm** Poster Award, Closing remarks
Dr. Kaarina Kowalec
3rd floor atrium—Apotex Centre

KEYNOTE SPEAKER

Rewiring the Mind with Ketamine and Psychedelics for Lasting Antidepressant Effects

Tuesday, March 4, 2025 | 1:15 pm – 2:15 pm

050 Apotex Building | Bannatyne Campus | University of Manitoba



Speaker: Argel Aguilar Valles, MSc, PhD
Associate Professor, Carleton University
Department of Neuroscience

Dr. Argel Aguilar-Valles received his Ph.D. in Neuroscience from McGill University in 2011. He completed two postdoctoral fellowships at the Scripps Research Institute (Florida Campus) in 2012 and at McGill University in 2018. He joined Carleton University in 2019 as a faculty member. The Aguilar-Valles Lab is interested in the molecular mechanisms that underlie psychiatric and neurodevelopmental disorders. They use a combination of biochemistry, molecular biology, neuronal culture, and animal models to understand how genetic risk factors contribute to mental illness.

Learning Objectives:

- Gain insights into how ketamine and psychedelics promote neural plasticity and why this is crucial in alleviating symptoms of depression
- Learn about the molecular pathways through which these compounds exert their antidepressant effects, including their impact on synapse formation and brain connectivity
- Discuss the therapeutic potential psychedelics beyond psychiatric of ketamine and illness

FACULTY PROGRAM

Immune cells gone rogue: understanding and targeting immune dysfunction in obesity and metabolic disease

Tuesday, March 4, 2025 | 2:15 pm – 3:15 pm

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Speaker: Samantha Pauls, PhD
Assistant Professor, University of Manitoba
College of Pharmacy

Dr. Samantha Pauls is an Assistant Professor at the College of Pharmacy, Rady Faculty of Health Sciences, University of Manitoba. She completed a PhD in Biochemistry and Medical Genetics at the University of Manitoba in 2016 followed by a postdoctoral fellowship at the Canadian Centre for Agri-Food Research in Health and Medicine (CCARM) from 2016-2020. Her current research seeks to understand and target defects in immune cell metabolism and function that may contribute to the development or progression of obesity-associated metabolic diseases. She also serves as the programming lead for graduate and postdoctoral professional development at the Rady Faculty of Health Sciences and as chair of the Manitoba Student Research Forum.