

A mitoPodCast Interview with Dr. Yan Burelle

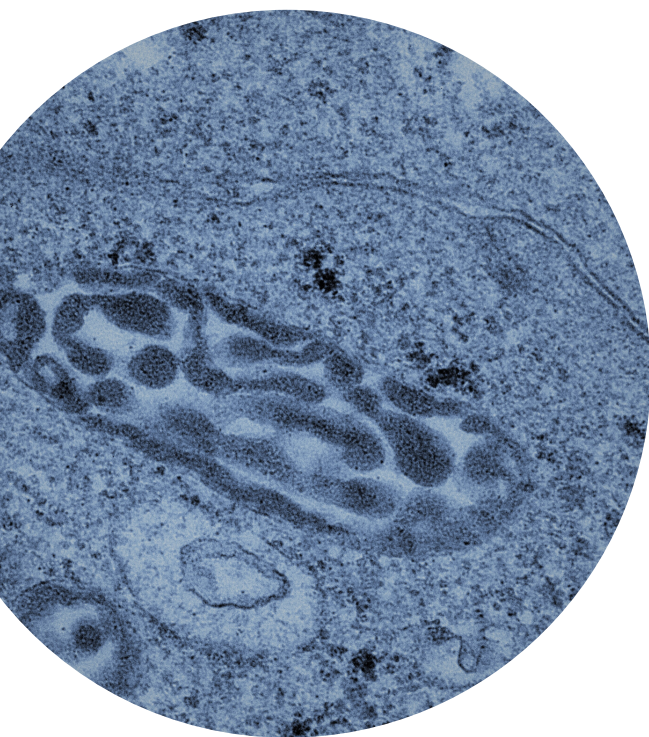


MEET DR. BURELLE

Dr. Burelle is a Professor in the Department of Cellular and Molecular Medicine at the University of Ottawa. There, he is also the University Research Chair in Integrative Medical Biology. Dr. Burelle is also a committee member of MITO2i, or the Mitochondrial Innovation Initiative.

BACKGROUND OF RESEARCH

Dr. Burelle uses his training in physiology to integrate multiple functional readouts to capture the complexity and diversity of mitochondrial function and to use these readouts to learn how mitochondrial dysfunction might contribute to mitochondrial diseases such as French Canadian Leigh Syndrome.



HIS CURRENT FINDINGS

Dr. Burelle's research program generated the first mouse models of French Canadian Leigh Syndrome to better understand the way mitochondria work in this disease. His work uncovered much more than changes in ATP energy production that were originally thought to be at the root of this disease.

NEXT STEPS

He wishes to further improve the mouse models he uses to study French Canadian Leigh Syndrome. With what is known as a "knock-in" model that features the main mutation, this will allow for testing of conditions that trigger the lactic acidosis and stroke-like episodes of the disease. It should also make it easier to identify therapeutic strategies.



A mitoPodCast Interview with Dr. Yan Burelle



ACCELERATING THERAPEUTIC DEVELOPMENT?

We need to leverage our clinical and basic research networks to federate a broad variety of patient samples and experimental models of mitochondrial dysfunction. Then perform deep mitochondrial phenotyping to get mitochondrial profiles of various diseases. After, analyze these to see where therapeutics can be developed.

WHY IS COLLABORATION IMPORTANT?

Collaboration allows researchers to gain new perspectives. Working with patients reminds researchers of the reason for their work: to improve patients' quality of life. For patients, collaboration with researchers allows for greater understanding of the scientific process.



ANY QUESTIONS?

If you have questions regarding his research, please contact Dr. Burelle at yburell2@uottawa.ca.



MITO2i

**MITOCHONDRIAL
INNOVATION INITIATIVE**