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The Charles Institute Seminar Series

Wednesday, June 18th, 2025 @ 12 noon

In Person & Online Via Zoom

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Mechanisms of Brain Aging & Healthspan Determination

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BIO: I completed my undergraduate degree in Genetics at Queen's University Belfast. I then went on to complete both Master's and Ph.D. degrees at the University of Manchester. I carried out postdoctoral work at the California Institute of Technology (Caltech), where I received training in Drosophila genetics in the laboratory of Seymour Benzer and training in mitochondrial biology in the laboratory of Giuseppe Attardi. I established my independent research group at University of California at Los Angeles (UCLA) in 2007.

ABSTRACT:

The effects of aging on the brain are widespread and can have dramatic implications on the overall health of an organism. Chronic sterile inflammation is an important hallmark of brain aging that is intimately linked with senescence and frailty. However, fundamental questions remain regarding the molecular, cellular and inter-organ signaling mechanisms that drive neuroinflammation and brain aging. Indeed, little is known regarding the causal relationships between pro-inflammatory signaling from distal organ systems, the cellular hallmarks of brain aging and healthspan.

In this seminar, I will discuss the interplay between actin dynamics, brain aging and healthspan. In addition, I will discuss recent work examining the role of intestinal barrier dysfunction as a driver of brain aging phenotypes.