

PUBLIC LECTURE

BRAIN AWARENESS WEEK

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Structural Neurobiology
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DATE
Monday, March 14th, 2016
6:30 p.m.

LOCATION
Robert B. Schultz Lecture Theatre
St. John's College, Fort Garry Campus, University of Manitoba

TITLE

Molecular Architecture of Life

What is the basis of life? Science still lacks an answer to how life began from non-living molecules. Until now we have mainly been able to understand the processes of life as static structures of life's building blocks. Yet life is dynamic, and processes are in constant states of change across varying scales of size and time. New imaging methods that can record molecules in motion make it possible to examine molecular processes at a level of detail that will lead to a coherent picture of how molecular assembly can give rise to living systems. Understanding levels of biological function from the movement of a single atom within a molecule in a quadrillionth of a second to the much slower processes of cell growth and regulation will allow researchers to manipulate them and lead to new strategies to fight disease. The rod cell of the retina has a unique function in vision and is a good example to illustrate these processes.