



The Adolph C. and Mary Sprague
Miller Institute for Basic
Research in Science

JOINT MCB DEPT. - MILLER INSTITUTE LECTURE

*commemorating the 60th anniversary of the establishment of the
Adolph C. and Mary Sprague Miller Institute for Basic Research in Science*

SCOTT D. EMR

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Cornell University
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**"Sorting out membrane traffic with old friends:
Having the time of my life at "**

**WEDNESDAY, 18 NOVEMBER 2015
4:05 PM (SHARP)
Room 100 (Cox Auditorium), GPBB**

Host: Randy Schekman

ABSTRACT:

As a cell biologist and biochemist, Emr's research has focused on uncovering the molecular mechanisms responsible for the biogenesis of a specialized organelle, the lysosome, which functions in the degradation and recycling of cellular proteins, lipids, carbohydrates and nucleic acids. Emr's lab has used a single-cell yeast as a genetic model system to discover and isolate the complex machinery as well as a special class of signaling lipids, phosphoinositides, that sort and deliver proteins and enzymes to lysosomes. This sorting machinery directs the packaging of proteins into small membrane-enclosed carrier vesicles. One set of machines discovered in Emr's lab, the ESCRT complexes, sort and degrade cell surface receptors. ESCRTs comprise a highly conserved set of five protein complexes. Recent studies have identified the ESCRT-III complex as a vesicle budding machine. The ESCRTs also have been found to play an essential role in cytokinesis and the budding and release of the HIV virus from infected cells.

Post-seminar Reception in 1st-floor lobby of LKS

This seminar is also sponsored, in part, by the NIH.