GETTYSBURG COLLEGE **X-SIG** SEMINAR SERIES

CROSS-DISCIPLINARY SCIENCE INSTITUTE

presents

Dr. Glenn Rall

Fox Chase Cancer Center

"Back Door Neurovirology: Nontraditional Mechanisms of Viral Spread in the Brain"

A central tenet of virology is that viruses must use cellular receptors to gain access to permissive cells. However, in the complex and multi-cellular central nervous system, in which cell-cell interactions are unlike other tissues of the body, this dogma may not be applicable. During most instances of acute viral encephalitis, neurons are typically the initial cell type that is infected. However, as replication and spread ensue, other cells can become viral targets, especially in chronic infections. Using a transgenic mouse model of measles virus neuronal infection, we defined a novel mode of viral spread between neurons and astrocytes that did not depend on expression of known viral receptors. Moreover, the unique way by which measles virus was shuttled from neurons to astrocytes may provide insights into the novel neuropathology observed in infected mice. The characterization of this novel mode of intercellular transport offers insights into the unique interaction of neurons and glia, and may reveal therapeutic targets to mitigate the life-threatening consequences of measles encephalitis.

TUESDAY, OCTOBER 26, 2021, 11:30 A.M.
BOWEN AUDITORIUM (MCCREARY RM 115)

Lunch will be provided after the talk.

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