Speaker: Brian Blagg, PhD  
Director, Warren Family Research Center Drug Discovery and Development  
Charles Huisking Professor, Chemistry and Biochemistry  
The University of Notre Dame

Presentation:  
10:50 – 11:20 AM

Q&A:  
11:20 – 11:25 AM

Title: “Chaperone modulators for the treatment of cancer or neurodegeneration”

Abstract: Molecular chaperones are responsible for the regulation of cellular proteostasis. In cancer cells, mutated and overexpressed proteins become dependent upon the protein folding machinery in order to maintain biologically active and oncogenic proteins. Thus, one can inhibit the chaperone network with small molecules, which result in promising anti-cancer activity by preventing the maturation of such proteins. In contrast, the accumulation of misfolded proteins results in numerous pathologies, including Alzheimer’s Disease, in which neurofibrillary tangles and Ab plaques accumulate. Consequently, small molecule stimulators of the protein folding machinery can lead to decreased levels of misfolded proteins. This lecture will focus on the development of small molecule modulators of the molecular chaperone, Hsp90, and their use as anti-cancer or neuroprotective agents.