

---

## COLLOQUIUM

---

- **SPEAKER**

Prof. Casey H. Londergan (Associate Professor of Chemistry, Haverford College)

- **TITLE**

Applications of the SCN vibrational probe group to binding processes of disordered and dynamic proteins

- **ABSTRACT**

The covalently bound SCN group has a unique vibrational frequency and can be introduced into proteins of arbitrary size and complexity (with some limitations on cysteine and thiol content of the protein of interest). My group is currently using this probe group to explore protein–protein binding between structured and unstructured partners and I will present data from multiple sites in two different protein–partner protein systems. We are also using the SCN group to examine the membrane binding of alpha–synuclein, which is an intrinsically disordered protein implicated in Parkinson's disease and known to bind dynamically to membranes. Experimental strategies for verifying whether the artificial vibrational probe group perturbs the protein's functional interactions will be presented in each case, and a preliminary interpretation of the data at both local and global scales will be offered.

- **DATE AND VENUE**

July 14, 2016 (Thursday, 1:00–2:00 p.m.)  
Seminar room 116, R&D Center