Chemical & Biomolecular Seminar Series

Elizabeth Topp

B.Ch.E., University of Delaware, 1979

Dane O. Kildsig Chair and Department Head

Industrial & Physical Pharmacy

Purdue University

Friday, March 3, 2017

10:00—11:00 a.m.

102 Colburn Lab

Elizabeth M. Topp is Dane O. Kildsig Chair and Head of the Department of Industrial and Physical Pharmacy at Purdue University in West Lafayette, Indiana. She received a bachelor's degree in chemical engineering from the University of Delaware in 1979 (B.Ch.E.), a master's in chemical and biochemical engineering from the University of Pennsylvania in1984 (M.E.) and a Ph.D. in pharmaceutics from the University of Michigan in 1986. Dr. Topp's research addresses the chemical and physical stability of protein drugs, with particular emphasis on the solid state. She is a Fellow of the American Association of Pharmaceutical Scientists and recently completed a term as a Committee on Institutional Cooperation Academic Leadership Fellow.

High Resolution Characterization of Proteins in Amorphous Solids

Over the last decade, our group has developed solid-state hydrogen deuterium exchange (ssHDX-MS) and photolytic labeling (ssPL-MS) with mass spectrometric analysis to probe protein conformation and matrix interactions in lyophilized solids with peptide-level resolution. This talk will describe the methods and present some recent results. The methods show promise for screening lyophilized formulations to maintain conformation and minimize aggregation, and provide insights into the properties of amorphous solids.