



RUTGERS' CENTER FOR DERMAL RESEARCH
(CDR) SEMINAR SERIES

Guest speaker: Dr. Amy Ethier, BASF

Rutgers, The State University of New Jersey
March 14, 2016

“Excipient Selection and the Effect on Performance and Physical Properties of Semi-Solids”

ABSTRACT:

One of the most established skin delivery systems, medicated semi-solids, continues to retain consumer attractiveness due to ease of application, absence of first pass metabolism, and localized drug delivery. Subtle differences in the physico-chemical framework associated with these systems may have a large effect on the performance and bioavailability of the drug agents. Specifically, these frameworks are composed of numerous possible microstructures including API polymorphs, surfactant phases, crystalline lipophiles, polymer networks and lipophile-surfactant gel or liquid crystalline phases. Thus, the selection of excipients in topical semi-solids will determine the structure of the microscopic phases during and after processing, and fundamentally alter the performance of the formulation; this is ultimately important for both formulators as well as the FDA. In this work, the complexity of PEG ointment formulations and o/w emulsions are investigated using various excipients. The influence of these ingredients on the physical properties of the formulations was observed by measuring viscosity and observing microstructure. Exemplary data will demonstrate how specific excipients were used to modify formulation performance, correct formulations that exhibited phase separation, and improve stability.

BIOGRAPHY:



Amy Ethier grew up in Connecticut and received a B.S. in Chemical Engineering from the University of Connecticut. Following graduation, she worked for Saint-Gobain as a research engineer in Northborough, Massachusetts developing coextruded polymeric films. She moved to Atlanta in 2009 to begin her Ph.D. in Chemical and Biomolecular Engineering at Georgia Tech. Her research was conducted in an interdisciplinary lab of chemical engineers and synthetic chemists with a focus on the design of smart solvents for sustainable processes. Amy joined the Professional Development Program with BASF in 2013, in which she held various roles in R&D and lean manufacturing. Following completion of the program, she joined the BASF Global Skin Delivery lab in Tarrytown, NY, supporting dermatological excipients.

Further Details & Registration Information [click here](#).

Our seminars are free and open to the public.
Stay informed on all of our educational events including our
seminar series on our website.