

DEPARTMENT OF CHEMICAL & ENVIRONMENTAL ENGINEERING  
COLLEGE OF ENGINEERING AND APPLIED SCIENCES

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE WOMEN

APPLICATION DEADLINE: 03/01/2020

PROJECT TITLE: Kinetics of Detergent on Skin

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**Project Description**

Stratum corneum (SC), a sophisticated outermost skin layer, consists of lipid bilayers and keratin-filled corneocytes or dead cells in a "brick and mortar" structure configuration. The lipid bilayer and keratin-filled corneocytes act as a skin barrier and control hydration and different mechanical properties including lubrication and friction of the skin. It is reported that different bodywash products which contain surfactant can alter the skin properties during and after wash.

The goals of WISE are

- (1) to measure deposition kinetics of the surfactant on ex vivo skin
- (2) to determine major factors on the kinetics

The advisor will provide basic principles in soft materials and various analytical technique.

The candidate is required to have solid background in chemistry and biology.