5th Anniversary
CENTER FOR
DERMAL RESEARCH

RUTGERS' CENTER FOR DERMAL RESEARCH
(CDR) SEMINAR SERIES

Guest speaker: **Serom Lee,** BME-Rutgers University

Rutgers, The State University of New Jersey
September 12, 2016 at 5:30pm

"An In Vitro Approach to Identify Skin Sensitizers"

ABSTRACT:

Allergic contact dermatitis (ACD) is an inflammatory skin disease that is a significant occupational health hazard and rising public health concern due to its growing prevalence. It is estimated that 15 – 20% of the general population is sensitive to at least one chemical in their environment. A variety of sensitizing chemicals can cause ACD including industrial (e.g. hair dyes or fragrances), pharmaceutical, and metallic compounds (e.g. nickel). Animal testing has been used historically as a gold standard to screen for potential skin sensitizers. However, there is a global initiative to reduce the use of animals for testing cosmetic ingredients due to ethical concerns that lead to effective bans in the European Union and India with several other leading nations following suit. Several alternatives to animal testing have been developed to meet the new regulatory requirements for assessing safety. This talk will review validated alternative assays, current challenges still facing the field, and potential strategies to address these issues using co-culture approaches combined with machine learning analytics.

BIOGRAPHY:

Serom Lee received her B.S. and Ph.D. in Biomedical Engineering at Rutgers University, where she developed tools to screen skin sensitizers using co-culture approaches combined with machine learning analytics. She was awarded a post-doctoral fellowship to further develop and validate her in vitro alternative to animal testing. During her academic career, she has also gained industry experience and perspectives through internships at Chanel Inc. and Merck & Co. She is currently applying her assay development experiences to establish in vitro tools for evaluating novel wound healing therapeutics under the guidance of Dr. Francois Berthiaume. She is also working with the Rutgers Office of Research Commercialization, where she supports Life Science technology transfer efforts.

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