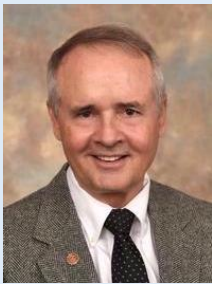


RESEARCH SEMINAR SERIES REMOTE

The Center for Dermal Research Welcomes
Professor Gerald Kasting, University of Cincinnati

*“Mechanisms of anionic surfactant penetration into human skin:
Investigating monomer, micelle, and submicellar aggregate penetration theories”*

Monday, March 27th, 2023, at 5:30pm EST (REMOTE)



In his faculty role at the University of Cincinnati's James L. Winkle College of Pharmacy, Dr. Kasting teaches in the College's graduate and professional programs, with the bulk of this effort focused on their growing Cosmetic Science Distance Learning program. He also conducts laboratory research in the area of percutaneous absorption and the computational modeling thereof. He and his trainees have published extensively in this area, often in collaboration with engineering and mathematics faculty from other institutions and with FDA and industry scientists. He serves on the editorial board of the Journal of Pharmaceutical Scientists and as referee for several other major pharmaceutical journals. Prior to beginning an academic career, Dr. Kasting was a senior scientist with the Procter & Gamble Company, working on the development of improved skin care products. He received his B.A. in Chemistry from Vanderbilt University and his Ph.D. in Physical Chemistry from MIT.

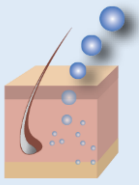
Abstract: Once penetrated into the stratum corneum, anionic surfactants bind to and denature stratum corneum proteins as well as intercalate into and extract intercellular lipids. With repeated exposures, this leads to skin dryness and irritation, compromising barrier function and skin health. The mechanisms of anionic surfactant penetration into the skin, however, are still widely debated. This talk will focus on the findings of an industry-sponsored study to investigate several current theories of surfactant penetration into human skin, conducted in part in our laboratories. A variety of experimental techniques including tensiometry, dynamic light scattering, zeta potential, filtration methods and penetration of radiolabeled sodium dodecyl sulfate (¹⁴C-SDS) into human skin in vitro were employed. The results supported a composite mechanism in which short-term penetration is based on monomer concentration and longer-term penetration is based on surfactant-induced damage to the skin barrier.

Continued on page 2



RUTGERS

Center for Dermal Research, 145 Bevier Road, Piscataway, NJ 08854
Tel: 848.445.3589 Fax: 732.445.5006 For more information: cdr_frontdesk@dls.rutgers.edu



RESEARCH SEMINAR SERIES REMOTE

CONFERENCE LINK:

Meeting link: <https://rutgers.webex.com/rutgers/j.php?MTID=mc7ae9d7b2b72b72bde2c54a99ff69bb8>

Link is also available on our website: <https://sites.rutgers.edu/centerfordermalresearch/>

under the Events menu.



RUTGERS

*Center for Dermal Research, 145 Bevier Road, Piscataway, NJ 08854
Tel: 848.445.3589 Fax: 732.445.5006 For more information: cdr_frontdesk@dls.rutgers.edu*