

# BASIC & APPLIED DERMATOLOGY FORUM EVENT

November 12th, 2014

gene expression

## *The Evolution of Water-in-Oil Emulsion Technology*

*The first water-in-oil (W/O) emulsions have been attributed to a Roman Physician, Galen, in AD1500. Despite the limited shelf life of the early "Cold Cream" type formulations, their use persisted with formulations appearing in Pharmacopeias as early as 1618.*

*Towards the end of the 19th century, Borax was introduced into cold cream formulations to improve processing and to enhance emulsion stability.*

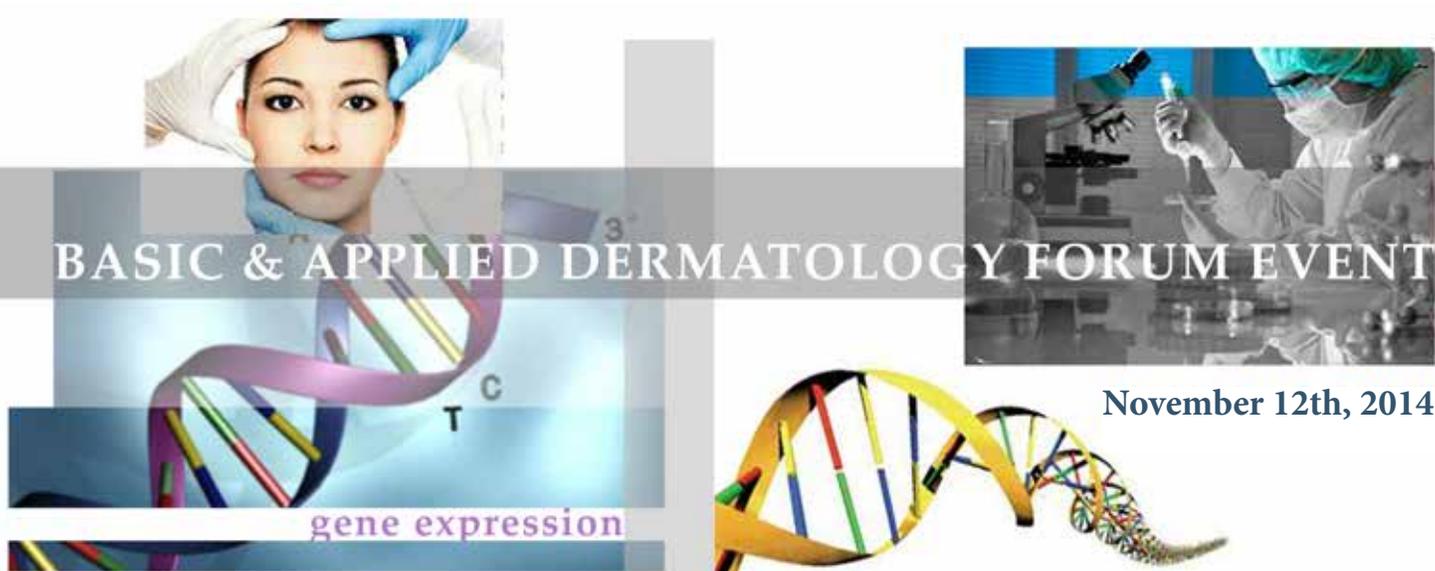
*Up until the mid-1970's, most cosmetic chemists hesitated to formulate W/O emulsions because of their greasy characteristics and the difficulty in formulating emulsions with adequate shelf life.*

*The goal of our presentation is to outline and demonstrate the advances in the formulation of W/O emulsion technology that have occurred over the past fifty years. These advances have made it possible to manufacture cosmetic and dermatologic products with significantly improved emulsion shelf life and enhanced application and sensory properties for a range of new topical applications.*

***The outline below shows the topics that we plan to cover:***

- I - Introduction**
- II - Classical Water-in-Oil Emulsion Technology**
- III - Tailored Emulsifiers for Water-in-Oil and Water-in- Silicone Emulsions**
- IV - Additives that can enhance the stability, cosmetic elegance and rheological Properties of W/O and W/S Emulsions**
- V - Prototype W/O and Emulsions**
- VI - High Internal Phase (HIPE) W/O Emulsions**
- VII - HIPE Virtual Patch Emulsions**
- VIII - Prototype HIPE Virtual Patch Formulations**

***Please join us for a talk, discussions and lunch (free of charge)  
Dr. Thau and Dr. Shah will be presenting between 1:00 PM - 2:00 PM***



## *The Evolution of Water-in-Oil Emulsion Technology*

*Paul Thau, B.S. (Pharmacy)*



Paul Thau was employed at Cosmair/L'Oreal USA for over 22 years, during which time he served as Assistant Vice-President of Cosmetic R&D and then as Senior Research Fellow. His cosmetic industry experience spans more than fifty years and includes R&D positions at Revlon, Bristol-Myers, CIBA Pharmaceutical, and Warner-Lambert.

He has served the Society of Cosmetic Chemists in many capacities including Chairman of the N.Y. Chapter during 1971 and President of National in 1988. Later he was a member of the IFSCC Presidium and Scientific Committee. Paul is a Fellow of the SCC, and is a holder of fifteen U. S. patents. He was presented with the Society of Cosmetic Chemists Maison de Navarre Award in 2005.

He currently has a cosmetic consulting company, PaCar Tech, which specializes in the areas of innovative product development, new cosmetic raw materials, technology transfer and technology acquisition.

*Kishore R. Shah, Ph.D.*



Dr. Shah has been the President of Polytherapeutics since its inception. He is also the inventor of the patented PharmaDur® drug delivery technology, which was developed at Polytherapeutics. He received his master's degree in polymer science from Lowell Technological Institute in Lowell, MA and doctoral degrees in organic chemistry from University of Maryland in College Park, MD. He has over 25 years of research experience in the medical device and pharmaceutical industry, including Bristol-Myers Squibb and Johnson & Johnson. His technical expertise includes development of polymeric biomaterials, their applications, and controlled drug delivery technologies. Dr. Shah is experienced in taking products from concept to commercialization. He is an author or coauthor of more than 45 patents and technical publications, several of which are in the field of transdermal drug delivery. Dr. Shah is currently a member of Technical Advisory Board of the TRANSDERMAL magazine.

**LOCATION:** Life Sciences Building Rutgers - The State University of New Jersey, 145 Bevier Road, Piscataway, New Jersey 08854, New Jersey Center for Biomaterials Suite - Conference Room 102

**TIME:** 12:30PM - 2:30PM

**HOST:** Basic and Applied Dermatology Forum

**For general or talk information contact:** Otto Mills, Ph.D., FCP- Adjunct Professor of Dermatology- Rutgers, RWJMS at [Otto@ohmills.com](mailto:Otto@ohmills.com)

**REGISTRATION IS FREE:**

Please contact Louli if you plan to attend: 732.445.0488 ext. 40001  
[kohnoffice@dls.rutgers.edu](mailto:kohnoffice@dls.rutgers.edu)

**SUPPORTED BY:**

Center for Dermal Research & Target Health, Inc.