Skin Barriers, Penetration and Compound Interaction

Day: Monday, May 21, 2012  Time: 10:00 a.m.–11:00 a.m. (ET)
Location: Your Computer  Offering # 1205-406  Priority Code: 520 (Available On-Demand starting 5/22/12)

WHO SHOULD ATTEND

This overview is intended for individuals who are interested in expanding their knowledge and understanding in recent findings about the skin as a barrier, possible ways of interaction between the skin and applied compounds and patterns and pathways for penetration into and through the skin. Attendees may hold a function in the following areas:

• Skin research and development
• Technical sales and marketing
• Formulation chemistry
• Estheticians and cosmetologists
• Toxicology and regulatory affairs

LEARNING OBJECTIVES

Upon completion of this webinar, you will be able to:

• identify the different possible pathways of penetration to the skin
• Outline the parameters that contribute to its barrier properties
• Specify potential approaches to resolve bioavailability limitations.

In addition, participants will study the different gradients in the skin that may contribute to penetration patterns, structure and function of the different openings in the skin, and models of related research.

COURSE DESCRIPTION

This FREE 60-minute online session is tailored for individuals who want to gain better understanding in the detailed structure of the skin and the correlation between structure and penetration. Participants will be introduced to the biochemistry of the upper layer of the skin, the stratum corneum, and the different theories about pathways of penetration through it. The session will provide tools for understanding the limitations in penetration and will suggest possible ways to overcome the skin barrier. It will discuss testing models as well as considerations to be taken such as skin age and condition.

Skin structure

• The stratum corneum
• The living epidermis
• The intercellular lipids
• The role of ceramides

Gradients in the skin and their possible role in partitioning

• The water gradient
• The role of pilosebaceous glands in skin penetration
• Sebum composition
• Sebum flow
• Pore size
• Models for pore penetration
• The polar/pore pathway

In vitro models for skin penetration

Chemical skin permeation enhancers

Summary and additional topics of interest

HOW TO REGISTER

To Register for this FREE Webinar go to www.cfpa.com. Enter Course Offering #1205-406 into Quick Jump. Use Priority Code: 520.

For Questions and Information call Customer Service at 732-613-4500 or Email: info@cfpa.com

System Requirements: PC-based attendees: Windows® 7, Vista, XP or 2003 Server/Macintosh®-based attendees: Mac OS® X 10.4.11 (Tiger®) or newer
Dr. Nava Dayan, Skin Care Research Expert

Dr. Nava Dayan earned her Ph.D. in Pharmaceutics from the Hebrew University in Jerusalem specializing in skin delivery. She is currently an Associate Adjunct Professor in the Ernest Mario School of Pharmacy at Rutgers University, and the Research and Development and Safety Assessment Director at Lipo Chemicals Inc. During her 24 years of experience she has specialized in a variety of areas related to skin treatment:

- The research and understanding of the interaction between topically applied compounds and the skin
- Findings in skin biochemistry and especially the upper layer of the skin- the stratum corneum
- Delivery of active compounds into and through the skin and the development of delivery systems to facilitate transport, improve bio-availability and reduce toxicity
- Design and development of topically applied formulations
- Design of clinical studies to substantiate market claims and to assure safety
- Academic teaching and lecturing
- Industrial experience in both development of active compounds, delivery systems and finished formulations
- Skin absorption studies in vivo and in vitro for safety/efficacy assessment
- In vitro methodologies for safety assessment of topically applied compounds

Dr. Dayan has received numerous awards of excellence for various papers she has authored. A technology developed by Dr. Dayan is the recipient of the Gold Award for Innovation at the 2011 In Cosmetics European Show. She is the author and co-author more than 150 publications including book chapters and was granted 8 patents. She is also the editor of the “Skin Aging Hand Book” published by Elsevier, “Innate Immunity of Skin and Oral Mucosa” Book co-edited with Prof. Philip Wertz, “Formulating Skin Care with Natural Products” Book co-edited with Dr. Lambros Kromidas; both published by Wiley and sons. Dr. Dayan is a member of the Dermatopharmaceutics Focus Group, and the Abstract Review Committee for the American Association of Pharmaceutical Scientists (AAPS). She is serves as the Educational Chair of the NYSCC Chapter and on the Scientific Advisory Board of Health Beauty America Expo and the Center for Dermal Research at the Center for Biomaterials. Dr. Dayan teaches at Rutgers University and is the Director of a variety of courses at the Center for Professional Advancement.

Who We Are

The Center for Professional Advancement (CfPA) is the largest accredited technical training organization in the world with a curriculum of approximately three hundred and fifty short courses in 18 industries including Pharmaceutical, Biotechnology, Medical Device, Chemical, Cosmetics, Food and more.

Since our founding in 1967, we have successfully trained nearly a half million people worldwide in topics ranging from basic and introductory concepts to new advances and cutting-edge technology, and current U.S. and European regulations. CfPA courses are offered in a variety of formats – Public offering, Client Site and Online – to fit you or your company’s training needs.

For more information visit our website at www.cfpa.com

Courses of Interest

- Adverse Effects on Skin—How to Formulate a Safer Topically Applied Product—An Online Course
  course ID# 2455
- Basics of Skin Allergy and Newest Testing Methods—An Online Course
  course ID# 2502
- Pathways to Skin Penetration
  course ID# 2149
- Safety Assessment of Cosmetic Ingredients and Formulations
  course ID# 2161
- Skin Aging and Inflammation
  course ID# 2444
- Skin Biochemistry Basics (First in a 3-Part Series) —An Online Course
  course ID# 2485
- Skin Product Development
  course ID# 1050