

SOCIETY OF COSMETIC CHEMISTS**December 2, 2002**

The Exchange Center on Boston Harbor

" Instrumentation for the Cosmetic Chemist"

8:30 AM to 9:30 AM Registration and Socialization over coffee

9:30 AM Welcome : Chuck Frank, Chapter Chair, NE SCC
Moderator: Karl F.Popp, R. Ph.9:30 – 10:15 AM **Iqbal Sadiq**
S.K.I.N. Inc.**Advanced Skin Imaging Techniques**

10:15 –10:45 AM Coffee Break / Vendor Visits

11:00 – 11:45 AM **Lenore Coyle**
NOVA Technology Corporation, Portsmouth, NH**Evolution in Product Development and Assessment Techniques: in vitro to in vivo and sensory to instrumental**

11:45 AM 15 PM Lunch and Vendor Visits

1:15 PM – 2:00 PM **Jay M. Eastman, Ph. D.**
Chairman & CEO
Lucid, Inc.**Non-Invasive Confocal Reflectance Imaging of the Skin for Assessment of Cosmetic Products**2:00 PM - 2:45 PM **Jefferson J. Katims, MD**
Medical and Research Director
Neurotron, Inc.**Measuring Sensory Thresholds In Cosmetic and Pharmaceutical Development with the Neurometer® Current Perception Threshold (CPT) Test**

2:45 PM to 3:15 PM Coffee Break and Vendor Visits

3:15 PM to 4:00 PM **Neelam Muizzuddin, Ph. D.**
Director Clinical Research
Estee Lauder Companies, Melville, NY**Practical Applications of Instruments used by Cosmetic Scientists**

4:00:PM to 4:30 PM Ask the Panelists Q&A session

Speaker No. 1

Iqbal Sadig

S.K.I.N. Inc.
Conshohocken, PA

Abstract

Skin imaging, both in vivo and in vitro, is an important part of evaluating the effects of topical drugs and skin care products on human skin. Recent advances in technology have improved the imaging methodologies. We can now image the skin surface as well as deeper layers by a variety of instruments. We can also image various properties of skin e.g. blood flow and fluorescence. An overview of these technologies and some recent results will be presented. In a quest to study human skin in vivo at various depths, a number of techniques have been developed. Optical Coherence Tomography (OCT) device images the cross-section of skin to a depth of 0.7 mm with resolutions reaching 3 μ in lateral direction and 5 μ m in depth. A complimentary technique, confocal microscopy, samples horizontal sections at various depths of skin, with horizontal resolution of 1.3 μ m and vertical resolution of 5 μ m. Cross-sectional image of the whole thickness of skin is obtained by ultrasound device but with much lower resolution. High resolution digital photography and videomicroscopy reveals the basic surface structures e.g. fine lines, wrinkles, scales as well as sub-surface features e.g. erythema, pigmentary distribution and telangiectasia. Skin fluorescence is captured by using band pass filters. The blood flow imaging is based on the Doppler Effect on laser light produced by the moving erythrocytes in skin. The blood flow distribution is recorded as a two-dimensional picture in pseudo color. Irritant effects of topical products and erythema produced by various challenges to skin can be followed by this technique.

Biography:

After obtaining a research degree of M.Phil. from the University of Surrey (England) have been involved in biophysical measurement of human skin. Extensive research experience in photobiology and photo-dermatology e.g. use of ultraviolet light in the treatment of various dermatoses. Have done research and development in the field of optical techniques to study skin in health and disease. Helped develop diffuse reflectance spectrophotometers specially a synchronous drive spectrophotometer. Published and presented a number of papers on the use of bio-engineering techniques for studying the fundamental properties of skin as well as the on the effects of topical drugs and skin care products. Have developed new imaging techniques to study photodamage and elastosis. Was part of a group involved in initial work to assess the usefulness of optical coherence tomography in skin research. Have successfully utilized confocal microscopy in skin research.

Speaker No. 2

Lenore Coyle

Nova Technology Corp.
Portsmouth, NH

Title: Evolution in Product Development and Assessment Techniques: in vitro to in vivo and sensory to instrumental

Abstract:

The cosmetic chemist today must deal with multiple demands from different members of the R&D team when formulating a new product. In the past, the chemist would rely heavily on sensory self-

evaluation of the formula as well as in vitro methods of formula evaluation. In more recent years, many R&D capabilities have changed in order to help the chemist in evaluating the formula before it goes on for external testing or goes to market. This talk will discuss the form in which some of these changes have taken in the way of internal testing panels, instrumentation and product evaluation.

Biography:

Lenore has had several years experience in different areas of Clinical Research. She began her work in the bioinstrumentation lab at Clinical Research Laboratories. She has worked for Unilever in the clinical group on such projects as Anti-aging and Sunscreens. She has also worked as Claims Coordinator at Coty Cosmetics and championed their Internal Testing Panel. She currently works for Nova Technology Corporation, makers of skin hydration instrumentation in Portsmouth, NH

Lenore Coyle
Nova Technology Corp.
Pease International Tradeport
7 Pinecrest Terrace
Portsmouth, NH 03801-2880
(603) 422-6439
NJ Number (973) 663-5083
lcoyle@novatechcorp.com

Speaker No. 3

Jay M. Eastman, Ph.D.
Chairman & CEO

Lucid, Inc.
Rochester, New York 14623

Title: Non-Invasive Confocal Reflectance Imaging of the Skin for Assessment of Cosmetic Products

Abstract:

Confocal reflectance microscopy is being developed as a non-invasive means of characterizing skin and other human tissues. Confocal microscopy is capable of imaging throughout the epidermis, papillary dermis and superficial reticular dermis with cellular resolution. Lucid, Inc., a medical technology company headquartered in Rochester, New York has actively been developing and marketing this technology since 1997. This presentation will highlight confocal reflectance microscopy applications of interest to the cosmetics industry.

The ability to image the entirety of the skin with cellular resolution brings unprecedented capability for research and product development in the cosmetics and personal care products industries. Confocal microscopy, invented by Minsky in 1955, was not recognized for use as a clinical imaging modality until the early 90s. At that time Lucid began the development of confocal microscopy as a non-invasive imaging modality for dermatology applications and brought non-invasive imaging devices for skin imaging to the market in 1997. Since then the technology has been adopted by many of the major players in the cosmetics and personal care products industries.

This presentation will highlight use of the technology in the cosmetic and personal care products industries illustrated with practical examples of current concern. Applications such as: 1) in-vivo detection and monitoring of incipient cellulite; 2) determination of the location and size of antiperspirant plugs; 3) determination of the internal structure of hair; 4) facial pore size measurement; 5) deposition of ZPT on the scalp and in hair follicles by shampoo and 6) the effect of various cosmetic bases on comedogenicity, among other applications. Numerous images of these confocal imaging applications will be presented to illustrate the versatility of the technique.

Biography:

Jay M. Eastman received his B.S. (1970) and Ph.D. (1974) from The Institute of Optics, University of Rochester. He has held engineering and management positions at Spectra Physics, the Laboratory for Laser Energetics, and PSC, Inc. He is the founder of Optel Systems, Inc and Lucid, Inc., of which he is currently its Chairman and CEO.

Speaker No. 4

Jefferson J. Katims, M.D.

Medical and Research Director
Neurotron, Inc.
Baltimore, MD

Title of Presentation:

Measuring Sensory Thresholds In Cosmetic and Pharmaceutical Development with the Neurometer® Current Perception Threshold (CPT) Test

Abstract:

An overview of the neurophysiological basis of skin, tooth and mucosal sensation and an objective methodology for quantifying those sensations will be presented. The painless, neuroselective double-blinded Neurometer® Current Perception Threshold (CPT) test is currently being used in a wide range of cosmetic and pharmaceutical studies for the quantification of sensation and the measurement of factors such as aging, disease and disruptions of the stratum corneum. A review of the latest research findings in these fields including the electrical evaluation of the itch threshold will conclude the presentation with opportunities for further questions.

Biography:

Jefferson Katims attended McGill University as an undergraduate and then went to the Johns Hopkins University where he was a research associate in the Department of Neuroscience. While he was at Johns Hopkins he developed the Neurometer electrodiagnostic technology and founded Neurotron, Inc. of Baltimore in 1981. He also served as a Guest Researcher at the National Institutes of Health prior to attending medical school at the NY Medical College. He attended a residency training program at the Rusk Institute of Rehabilitation Medicine of the NY University School of Medicine where he continues to hold an academic affiliation. Dr. Katims has several patents and scientific publications. He presently serves as the Medical and Research Director of Neurotron, Inc. and provides consultation to various industries.

Speaker No., 5

Neelam Muizzudin, Ph.D.

Director Clinical Research,
Estee Lauder Companies
Melville, NY

Title: Practical Applications of Instruments used by Cosmetic Scientists

Non invasive technology has made great advances in the study of skin during the last decade or so. This was paralleled by a greater knowledge of many aspects of skin biology. The result is now

evident as we assist in development and refinement of meaningful approaches used in cosmetology.

Today there is a myriade of non invasive Instruments clamoring for the attention of the Cosmetic Scientist. This talk will discuss practical applications in the cosmetic industry of some commonly used instruments like the Evaporimeter, Ultrasound, Laser Doppler Capillary Perfusion Monitor, Ballistometer, GBE etc.

Biography:

Neelam Muizzuddin received her Masters degree in Microbiology from Agriculture University, Faisalabad, Pakistan and her PhD in biology from the University of the Punjab, Lahore, Pakistan. During her eighteen years at Estee Lauder as a clinical research scientist she has worked on skin sensitivity, percutaneous absorption, in-vitro toxicology, sunscreen and color technology, skin whitening. She has extensive experience in skin bioengineering has several publications and patents in these topics. At present she is Director of Clinical Research.

She is a Member of: American Contact Dermatitis Society, Society of Bioengineering and Skin, Society of Investigative Dermatology, Society of Cosmetic Chemists and Dermal Clinical Evaluation Society. For Long Island Chapter of Society of Cosmetic Chemists she served as secretary in 1997, Chair of Educational Seminar committee 1998 & 1999, Chair of Program committee 1999. She is also a pilot and an artist.

Directions to The Exchange Conference Center **(617-790-1900)**

From the North: Heading Southbound on Interstate 93, take Exit 23, High Street. At the bottom of the ramp, proceed straight onto Purchase Street. Turn left at the first intersection onto Congress Street. Turn left at the next intersection onto Atlantic Avenue. Turn right at the next intersection onto Seaport Boulevard (Seaport Boulevard turns into Northern Avenue.) Follow Seaport Boulevard for approximately 1 mile. At the first intersection after The World Trade Center turn left onto the Boston Fish Pier. See “Parking” - Last paragraph

From the South: Heading Northbound on Interstate 93 towards Boston, take Exit 20, which will be immediately after Exit 18. Follow the signs to “I-90 East.” Take the first exit to “South Boston”, following the signs for Seaport Boulevard. At the second traffic light turn right onto Seaport Boulevard. (Seaport Boulevard turns into Northern Avenue.) At the third traffic light turn left onto the Boston Fish Pier. See “Parking” - Last paragraph

From Storrow Drive: Take Storrow Drive East to Leverett Circle, follow the signs for Interstate 93 South. Head Southbound on Interstate 93 and take Exit 23, High Street. At the bottom of the ramp, proceed straight onto Purchase Street. Turn left at the first intersection onto Congress Street. Turn left at the next intersection onto Atlantic Avenue. Turn right at the next intersection onto Seaport Boulevard. (Seaport Boulevard turns into Northern Avenue.) Follow Seaport Boulevard for approximately 1 mile. At the first intersection after The World Trade Center turn left onto the Boston Fish Pier. See “Parking” - Last paragraph

From Logan Airport: Take the Ted Williams Tunnel/Interstate 90 West to Exit 25, South Boston. Follow the sign to Seaport Boulevard. Turn right at the second intersection onto Seaport Boulevard. (Seaport Boulevard turns into Northern Avenue.) Turn left at the second intersection onto The Boston Fish Pier. See “Parking” – Last paragraph.

Public Transportation: From South Station take MBTA Bus #7, #3, or #9 (Seaport District) to the World Trade Center. On Northern Avenue walk East (with the World Trade Center on your left and the Seaport Hotel on your right) to the first set of traffic lights. The Boston Fish Pier will be on your left. We are located at the end of the pier directly on the water.

Parking: When you enter the Fish Pier, please see the Massport Police Officer in the booth for parking directions and a parking permit. Parking areas are located on either sides of the building and in the “No Name” parking lot, located on your right at the entrance to the Boston Fish Pier. The Exchange Conference Center is located at the end of the pier directly on the water.

Hotels:

The Seaport Hotel (closest /walking distance)

1 Seaport Lane
Boston, MA 02116
(617) 385-4000
www.seaporthotel.com

The Boston Harbor Hotel

70 Rowes Wharf
Boston, MA 02110
(800) 752-7077
www.bhh.com

Boston Marriott Long Wharf

296 State Street, Boston, MA 02109
(617) 227-0800
www.marriott.com