

SOCIETY OF COSMETIC CHEMISTS

SCC

ANNUAL SCIENTIFIC SEMINAR REGISTRATION MATERIAL

June 5-6, 2008, Disney's Grand Floridian Resort & Spa
Annual Scientific Seminar program arranged by the Society's Committee on Scientific Affairs
Wil Hemker, Chair

REGISTRATION INFORMATION

FULL registration includes admission to the Technical Sessions, the Luncheons and Student Poster Exhibit on Thursday and Friday, and the Suppliers' Cocktail Reception on Thursday evening. **STUDENT** registration includes Technical Sessions only. NOT included in base registration are the Continuing Education courses on Wednesday, June 4th, COSA Mini Breakfasts and hotel accommodations. **A discount of \$50 off the seminar registration fee will be given if you register for the Full Seminar and a Continuing Education Course. Split registrations do not qualify for the discount.**

SPLIT registration allows one individual to attend sessions on Thursday and one individual to attend sessions on Friday. **SPLIT** registration includes access for only those events scheduled on the day on which each individual registrant is attending. **All split registrants must state the day on which each registrant will be attending.** Split registration will be accepted until May 23rd. There will be no split registration accepted at the door.

UNEMPLOYED members are invited to attend the technical sessions free of charge; please report to the SCC Registration Desk for your name badge.

ON SITE registration will be available, however, the registration fees will be much higher (\$750 for members and \$850 for non members). It is highly recommended that you pre-register to avoid waiting and to save money.

ALL Pre-registration Forms must be received at the National Office by Noon on Thursday, May 29th. Registrations received after this time will be treated as On Site and charged the higher fee. The National Office will ship all materials to Orlando on Friday, May 30th and the office will be closed from June 2nd through June 9th.

HOTEL reservations should be made by May 5, 2008 directly with the Grand Floridian reservations by calling 1-407-824-1383. Please remember to indicate that you are attending the SCC Annual Seminar. Reservations may also be made online by visiting the dedicated SCC/Disney website for the seminar at:

<http://www.mydisneymeetings.com/meetingsite/SOCC2008/index.cfm>.

NEITHER THE SOCIETY NOR GRAND FLORIDIAN ARE RESPONSIBLE FOR THE AVAILABILITY OF ROOMS FOR RESERVATIONS RECEIVED AFTER MAY 5th.

Room Rates are as follows:

Single/Double Occupancy: \$239

Additional persons (3 or more) in the room will be charged \$25 per person per night.

The **Supplier's Cocktail Reception** will be held on property outdoors (weather permitting) at the Grand Floridian, on Thursday evening, June 5th.

REGISTRANTS may pick up their registration material beginning Wednesday, June 4th at the SCC Registration Desk between 5:00 p.m. and 7:00 p.m. Those registered for Wednesday's Program may pick up their course registration material on Wednesday morning beginning at 8:00 a.m. outside the room scheduled for the session.

HOW TO REGISTER

COMPLETE the enclosed form and mail (with check made payable to the SCC or credit card payment information) to Society of Cosmetic Chemists, 120 Wall Street, Suite 2400, New York, NY 10005-4088. **Type or print your name and company as you wish it to appear on your badge.** Please make sure to include your telephone number and mailing address. **You must mail your check to the SCC office with a copy of the Registration Form so that proper credit can be issued.** **Faxed registrations are only acceptable with credit card payment information included (212-668-1504).** The Society cannot be held responsible for forms lost in the mail. Registrants may also register for the seminar online. For more information, please visit the SCC Website, www.sconline.org.

POLICIES

Pre-Printed badges will be made available only to those who register prior to May 30, 2008 (see note above). Registrants will be included on the Pre-Registration List of Attendees after receipt of payment. Requests for refunds in writing and no later than May 9th will be granted, less a \$150 administrative fee. Registration fees are transferable to another registrant but not refundable after May 9, 2008.

The Society of Cosmetic Chemists cannot be held responsible for forms lost in the mail. The Dress Code for the Seminar is Business Casual.

SECURITY

BADGES AND WRISTBANDS MUST BE WORN TO ALL TECHNICAL SESSIONS, LUNCHEONS, EXHIBITS AND SOCIAL EVENTS. IF THE PROPER SCC BADGE IS NOT DISPLAYED, YOU WILL BE ASKED TO EITHER LEAVE THE SEMINAR SITE OR REGISTER FOR THE SEMINAR.

THURSDAY'S PROGRAM, June 5, 2008

9:00 a.m. - 11:30 a.m.

NATURAL/ORGANIC COSMETIC PRODUCTS

Moderator – Timothy Kapsner, Aveda Corporation

Organic Cosmetic Standards: Fact or Fiction?

*Timothy Kapsner
Aveda Corporation*

This presentation will discuss the current status of organic certification standards in the U.S. and worldwide cosmetic industry. Companies such as Aveda are leading the way by using an increasing number of organic ingredients in their products, but the food industry organic standard does not translate well as a finished product standard for the cosmetic industry. As a result, false and misleading claims abound. European food certifiers, including Soil Association and Ecocert, have developed private cosmetic standards, and products certified to these standards are finding their way into the U.S. market as well. A new U.S. trade group, OASIS (Organic and Sustainable Industry Standards),

has created an organic cosmetic standard for the U.S. market. A comparison of the allowed chemistry shows that some of the existing standards may not be too far apart to hope for the possibility of harmonization. If and when an international harmonization takes place between Europe and the U.S., a single standard may emerge so consumers worldwide can expect organic cosmetic product claims to be made on a level playing field. While the organic food industry has not managed to create a single international standard, the cosmetic industry may be able to lead the way in this effort.

The New Paradigm in Sustainable Packaging for Cosmetics

*John A. Delfausse
Estee Lauder Companies*

In today's world, sustainability is the new buzz word. Sustainable packaging is not only the right thing to do for the communities we live in, but it is thought to be a critical element for the success of the corporation. The packaging industry is beginning to adopt the principles of Cradle to Cradle design to Zero Waste. These concepts are especially relevant to cosmetic packaging. Our goal must be to design the right package, and communicate to our

consumers the end of life opportunities for the package. Working with our suppliers, designers and communication teams, we have the ability to create WIN-WIN-WIN solutions that enable us to deliver quality, cost effective, and sustainable package designs to our customers.

Green Chemistry: The Natural Ally of the Cosmetic Industry

*Pierre Charlier de Chily
ALDIVIA SAS*

Today, cosmetic markets follow a strong tendency: long-term beauty is linked to well being, health and nature. Consumers wish to buy effective, healthy and natural products, which protect their skin as much as their environment. Green Chemistry is the indispensable ally of this evolution.

Its fundamental idea is to resolve at the source the problems of toxicity and pollution to avoid having to handle them downstream:

- by reducing effluents and energy consumption.
- by using and by producing non toxic, renewable and biodegradable substances.

Thanks to green chemistry developments, the use of raw materials stemming from the biomass in replacement of petrochemical products is henceforth possible in most of the conventional chemistry sectors and in the cosmetic industry. The advantages for our industry are numerous: economic, technical, ethical and marketing.

Organic and natural certified cosmetic standards include more and more references to green chemistry. Not only raw materials have to be natural or organic, but also processes have to respect the environment and produce safe ingredients. Green chemistry principles are an excellent means to optimize these processes.

SCIENTIFIC SESSION A (cont'd.)

“Green” Formulating Strategies

*Ulrich Issberner
Cognis Corporation*

The global trend for sustainable and green products has drastically changed the formulator's world in the Personal Care Industry like no other trend.

In the past, consumers were willing to compromise on product performance in exchange for products which were perceived as “green”. Today's consumer demands high performance for products with ingredients derived from renewable sources. In addition, other attributes are finding the consumer's attention, e.g. fair trade, local sourcing, biodegradability, energy-saving, etc.

Truly there has been a paradigm shift in the industry with no turning back. How do formulators meet these complicated demands from the customer while retaining high performance at reasonable costs?

Strategies which will be discussed include the sourcing of raw materials, and options for energy-reduced manufacturing – achieving a holistic approach to formulating green.

Organic, Natural and Other “Green” Labeling Regulations

*Farah K. Ahmed
Personal Care Products Council*

This presentation will provide a legal background and an overview of the regulations surrounding "organic", "natural" and environmentally-friendly claims for cosmetic products. As companies work towards creating new and innovative products to meet the growing "green" market, it is critical that they understand the complex legal and regulatory joint-jurisdictional landscape. Insights will be given into the underlying principals of law that govern USDA, FDA, FTC, and EPA regulations

applicable to claims such as "organic", "natural" and "recyclable" for cosmetic products. Additionally, this presentation will provide examples to help audience members understand how to navigate through compliance issues from a practical perspective. With a fundamental understanding of these regulations and the laws, companies can better maximize product development and avoid future compliance issues at the innovation stage.

SCIENTIFIC SESSION B (concurrent)

THURSDAY'S PROGRAM, June 5, 2008

1:30 p.m. - 4:00 p.m.

SKIN COLOR

Moderator – Jane Hollenberg, JCH Consulting

A New Skin Whitener (Sodium Palmitoylproline and Nymphaea Alba Flower Extract) Capable of Modulating Melanogenesis-Related Genes and to Prevent UV-Induced Pigmentation through its Soothing Properties

*Carla Perez, Sandy Dumont and Corinne Stoltz
SEPPIC*

An active molecular association, composed of a Sodium palmitoylproline with a nymphaea alba flower extract (SPPNF), is known to have soothing properties. The aim of the study was to determine whether such soothing properties could confer a melanogenesis-modulator activity to SPPNF. Indeed, a strong correlation can be observed between inflammation and pigmentation since i) post-inflammatory hyperpigmentation can be observed in many dermatological diseases and ii) the pro-inflammatory cytokines interleukin-1 α (IL-1 α) and endothelin-1 (ET-1), which are mainly produced by keratinocytes, are considered as protagonists of such disorders, being able to exert paracrine pro-melanogenic activities on melanocytes.

The production of intracellular and extracellular melanin and that of DOPAchrome (i.e. the tyrosinase activity product) were measured with colorimetric methods (absorbance at 450 nm) on the B16-F1 melanoma cell line and on pigmented reconstructed epidermis (PRE), which were SPPNF or non-SPPNF treated or by reference molecules and cultured either in steady state conditions or under an inflammation state (i.e. after chronically performed UV irradiations). Reference molecules included both lightening reference molecules, i.e. kojic acid and arbutin, and a pro-pigmenting molecule, i.e. α -MSH (melanocyte-stimulating hormone).

Productions of IL-1 α and ET-1 were measured by ELISA (enzyme-linked immunosorbent assay) on normal human keratinocyte cultures with SPPNF or non-SPPNF treated and with and without irradiation.

Molecular experiments were performed on normal human melanocytes on SPPNF or non-SPPNF treated, both by cDNA arrays and by quantitative-polymerase chain reaction (Q-PCR), to confirm some of the regulations observed.

A clinical trial was performed on 33 voluntary type III or IV phototype Asian women, who presented pigmented disorders on the face (average age: 43±2 years old; bi-quotidian topical application on the face over 84 days) and lightening efficacy was measured on normal and hyperpigmented skin with Chromameter® and Mexameter® measures as well as with a dermatologist scoring (statistical analyzes performed on the differences between D0 and D84).

In the B16-F1 melanocyte model, SPPNF tested at 0.001% induced a reduction of both extracellular melanin release and tyrosinase activity (respectively -57% and -54% vs. non treated cells), lightening reference molecules globally showing similar effects (respectively -13% and -15% for arbutin; 0% and -11% for kojic acid; both tested at 0.004%) while α -MSH tested at 50nM induced the opposite effect (+66% and +152%, respectively). In non-irradiated phototype VI PRE, the formulation containing 3% SPPNF induced a decrease of the melanin productions (-31% vs. placebo formulation) and a reduction of the Chromameter® parameters a* and b* (respectively -17% and -10%), while inducing an increase of the L* parameter (+5%); the formulation also induced such decreases for most of these parameters in irradiated phototype VI PRE.

At the molecular level, variations observed on cDNA arrays showed that SPPNF tested at 0.001% on normal human melanocytes induced a global depigmentation-associated effect, more particularly by decreasing expression of two genes mainly involved in the regulation of melanogenesis, i.e. tyrosinase and, MITF (microphthalmia-associated transcription factor), and by

increasing that of MIC1 (macrophage inhibitory cytokine 1), these regulations having been confirmed by Q-PCR (respectively -56%; -59% and +292% vs. non treated cells).

In keratinocytes, SPPNF tested at 0.00025% induced a significant reduction of ET-1 production (-53% vs. non treated cells) as well as a slight reduction of IL-1 α production (-54%) in non-irradiated cells and conferred a photoprotection to the irradiated cells (respectively 121%, p<0.05; and 20% vs. non treated cells).

Finally, SPPNF showed the following clinical efficacy (from the 56th day of treatment): i) on normal skin, an increase in ITA° (+1 A.U.) as well as a decrease in both b* (-0.33 A.U.) and the melanin index (-7) (respectively on 64%, 64% and 67% of volunteers), and ii) on hyperpigmented spots, an increase in ITA° (+3 A.U.) and L* (+0.8 A.U.) and a decrease in b* (-0.26 A.U.) (respectively on 88%, 82% and 58% of volunteers).

The lightening properties of SPPNF both *in vitro* and *in vivo* can be demonstrated. Such an efficacy seems to be correlated on the one hand to its ability to act directly on melanocytes and on the other hand to its soothing effects, which offers SPPNF a precious advantage in comparison to the other lighteners, most of which being irritants.

Thus, even if further investigations would be necessary to identify all the biological links that are involved in the different properties of SPPNF, the following correlations are suggested: i) SPPNF ability to modulate keratinocytes IL-1 α and ET-1 productions is likely to be partially responsible for its lightening efficacy and ii) the decrease of MIC1 expression, which is known to belong to the BMP (bone morphogenetic protein) family, could regulate the expression of the main melanogenesis-related genes, particularly MITF.

Complex Effect Pigments: Innovation Solutions for Ethnic Color Cosmetics

Leila Song, Ph.D., James Carroll, Ph.D., Gabriel Uzunian and Betty Aucar
BASF Corporation

The ethnic population in the US is growing, but ethnic cosmetic needs have been historically neglected. Ethnic skin color affects the color expression. What are the appropriate color cosmetic products for ethnic skin types? What are the ideal shades for ethnic skin tones? The objective of this paper is to address these issues for ethnic color cosmetics and to develop desirable color cosmetic products using complex effect pigments for a variety of ethnic groups.

Color and appearance of ethnic group due to the interactions among ethnic color cosmetic formulations and ethnic skin tones are measured. An instrumental goniospectrophotometric method is employed to measure the reflected light for color and gloss. An UV/Vis spectrophotometric method is also used to measure the transmitted light for translucency and clarity of the formulations.

Depending on the background of the ethnic skin tone, different color cosmetic product designs are illustrated using a variety of effect pigments and colorants for desirable functions and effects.

The color generated by an effect pigment is highly dependent on the viewing angle and the skin tone on which it is applied. Cosmetics formulated with effect pigments can be designed to have impact on skin. Color cosmetics design using effect pigments can create a desirable appearance for a variety of ethnic groups.

Drawing the Line on Wrinkles by Supporting the Dermal-Epidermal Junction (DEJ)

Diane Bilodeau, Ph.D.
Atrium Innovations

The dermal-epidermal junction (DEJ) is a dynamic structure that maintains skin cohesion and supports skin metabolic needs. With aging, structural protein expression is reduced at the DEJ which weakens and flattens, resulting in a slowing of cellular turnover and regeneration that culminates in wrinkle formation. Our objective was to develop a cosmetic active that would work at the DEJ to help reduce wrinkle formation

Based on the known sequence of a growth factor involved in wound healing, a bank of peptides was created by solid phase organic synthesis. To optimize skin penetration, peptides were coupled to various lipids. Peptide conjugates were then screened for their ability to stimulate the production of structural proteins by fibroblasts at the DEJ, using ELISA *in vitro* and immunohistochemical techniques *ex vivo*. The selected peptide (caprooyl tetrapeptide-3) was clinically tested in a cream formulation for fine lines and wrinkle reduction; the study was a split face placebo-controlled clinical trial involving 27 women volunteers aged 40-65. The cream was applied on the Crow's Feet area and silicone replicas were taken at day 28 and day 56. An ultrasonographic study was also performed on volunteers to document the effects of caprooyl tetrapeptide-3 cream on skin structures.

In vitro, caprooyl tetrapeptide-3 stimulates the production of laminin and fibronectin by fibroblasts, at a similar or greater level than TGF- β used as a positive control. *Ex Vivo* treatment of skin explants with caprooyl tetrapeptide-3, in a model of corticoid-induced skin aging, resulted in the protection of laminin-5 and collagen VII expression at the DEJ, while expression of these proteins was seriously impaired with corticoid treatment alone; DEJ flattening by corticoid treatment was also prevented in the presence of caprooyl tetrapeptide-3. In clinical trial, caprooyl tetrapeptide-3 cream significantly reduced the appearance of fine lines and wrinkles by 16% (average) over placebo after 28 days. Interestingly, for older women aged 50-65, average reduction continued to significantly progress over 2 month reaching 27%. The ultrasonographic study revealed that use of caprooyl tetrapeptide-3, but not placebo cream, over 6 months reduced the appearance of a low echogenic band that develops in the upper dermis with elastin and collagen degradation, as we age.

Supporting the production of structural proteins involved in skin cohesion at the DEJ is an effective strategy to reduce the appearance of fine lines and wrinkles.

Ceramidase Control: A Novel Approach to Improving Skin Health

David W. Koenig, Ph.D. and Ben Minerath
Kimberly-Clark Corporation

Enhancing skin barrier function is desirable for skin care products. Ceramides are essential for barrier function as depletion of stratum corneum (SC) ceramides eventuates in loss of skin barrier and skin disease. Accordingly, proper control of SC ceramide levels is vital. Compositions that modulate SC lipid processing enzymes represent a cost effective means to produce ceramides in-situ.

Ceramidase and sphingomyelinase activity was determined by incubation of enzymes with fluorogenic lipid substrates alone and with compositions of interest. Forty three compositions were evaluated for their ability to decrease or increase the activity of

ceramidase and sphingomyelinase, respectively. (Methods are *in vitro* utilizing a fluorogenic substrate and a modified TLC method.)

Six compositions reduced ceramidase activity at least 90% and seventeen more than doubled sphingomyelinase activity. One composition, Devil's Claw, shared both attributes. (The compositions evaluated are botanical extracts from various vendors. All analyzed with the same conditions allowing for ranking of each with regard to its effectiveness.)

Coordinated control of ceramidase and sphingomyelinase is achieved with botanical compositions. Thus, choiceful inclusion of these botanicals into products present a cost effective means to deliver skin benefits.

Image Analysis to Quantify the Efficacy of Active Ingredients for Skin

Roger McMullen¹, Ph.D., Gilles Oberto², Eric Bauza² and Nooha Domloge²
¹International Specialty Products
²ISP/Vincience

Numerous *in vitro*, *ex vivo* and *in vivo* tests exist for the determination of active ingredient efficacy as related to skin immunological status, pigmentary changes, and skin aging. Many of these procedures result in microscopic or photographic images, allowing for qualitative visual comparison between active ingredient-treated sample and placebo. Using image analysis techniques, we demonstrate how features of interests in the image may be qualified using various algorithms and image analysis software (Adobe Photoshop CS3 and Image Pro 6.2). Some specific tests that will be discussed include:

1. **Hematoxylin and eosin (H&E) staining** is a common technique used in histological analysis to examine the biological state of the tissue. Image analysis was employed to separate the contribution of each stain, monitor stain intensity, measure the 2D area occupied by each stain, and count cell nuclei.

2. One method for analyzing skin whitening and tanning is the **Fontana-Masson staining** technique in which transverse sections of skin biopsies are examined for melanin expression. Using image analysis, melanin content is quantified by measuring the total image area corresponding to melanin expression per length of skin as well as the density of the stain.

3. The **Oil Red staining** experiment is often used to measure the amount of lipid matter in cell cultures. An application of this technique is to monitor the level of stored fat in adipocytes when treated with an active ingredient. Several image filters in conjunction with threshold techniques and image segmentation were utilized to quantify the amount of lipid present in the microscopic image.

SCIENTIFIC SESSION B (cont'd.)

4. **Immunofluorescent staining** techniques are commonly employed to monitor expression of certain cellular proteins. A green fluorescent dye, such as FITC or Alexa Fluor 488, is typically used to image the expression of Cytochrome C in fibroblasts. Using image algorithms, we demonstrate how the green fluorescence seen in the image can be quantified in terms of

area per number of cells and fluorescence intensity.

Using image analysis techniques, we demonstrate how various image features usually observed qualitatively, can be appropriately quantified. This was accomplished using standard methods of image analysis and applying them to images obtained from histological and cell culture analysis.

SCIENTIFIC SESSION C (concurrent)

THURSDAY'S PROGRAM, June 5, 2008

1:30 p.m. - 4:00 p.m.

HAIR - AGING & GRAYING

Moderator – Colleen Rocafort, Ciba Specialty Chemicals Corporation

Fluorescence and Yellowness in Gray Hair

Products designed to address the cosmetic concerns of the aging population will likely be in increasing demand in the coming years. Only a small amount of information has been published on the physico-chemical properties of gray hair and hair yellowing.

In this study, gray hair samples were collected from 12 individuals and separated into un-pigmented and pigmented fibers. Fluorescence and colorimetric measurements were obtained and used to relate the hair yellowness to the chemical transitions in the hair.

Susan Daly¹, Robert Bianchini¹, Thomas Polefka¹, L. Jumbelic¹
and Janus Jachowicz², Ph.D.

¹Johnson & Johnson

²Better Cosmetics, LLC

The fluorescence spectra of un-pigmented hair produced a multi-peak emission profile representing tryptophan (356 nm), and several products of oxidative or metabolic conversion of tryptophan including N-formylkynurenine (420 nm), kynurenine (460 nm), 3-hydroxykynurenine (495 nm). Quantitative measurements of coloration to determine the Yellowness Index (YI) showed a linear correlation between YI and the ratio of fluorescence intensities I₄₄₀/I₃₅₆.

This data indicates that the decomposition of tryptophan and production of its degradation products is directly related to yellowing of the hair.

What Color is Colored Hair?

Not only are the optics of color formation from uniformly dyed and naturally colored (by discrete melanosomes) different, but also the optical effects of damage on these hairs are different. To explore these differences, we study natural and dyed hair (both originally pigmented and originally de-pigmented) and subject them to a variety of sources of damage. The primary measure is the angular dependence of the color of hair tresses wrapped

around a cylinder under directional illumination. Mechanical damage has a distinct signature related to the accumulation of rough chipped cuticle edges. Color fading, from shampoo with or without UV produces different color shifts. The details of these changes are critical to the perception of the depth and vibrancy of color. The differences in optical signatures between originally pigmented and de-pigmented hair are relevant to consumers who use dye to cover their gray hairs.

Peter Kaplan, Kongsheng Yang, K. McAllister
and K. Ram Ramaprasad
TRI/Princeton

Hair Aging and Graying

Aging Hair

Just like with our skin, our hair changes over time. These biological effects of aging will begin to show in the way our hair looks and feels. This presentation will show how the structure of the hair changes from childhood through the senior years. These changes correlate directly to attributes like dull, lifeless, and dry hair feel that people notice as they grow older. Fundamental understanding of how hair ages allows you to develop products that make hair look healthier.

Graying Hair

Beyond the structure and obvious thinning of aging hair, people are concerned about the color of their hair as they age; namely, going gray. Since gray hair can make one look older than how they feel, many people color their hair to feel younger. This presentation will go through what makes hair gray and how the lack of melanin makes it even harder to dye than pigmented hair. Beyond just coloring challenges, the surface properties of chemically treated hair negatively affect the look and feel of the hair. This modified substrate needs to be taken into consideration when formulating effective hair care treatments.

Teca Gillespie
Procter & Gamble Beauty

SCIENTIFIC SESSION C (cont'd.)

Treatments for Graying Hair: What Works and What Doesn't

*Perry Romanowski
Alberto Culver, Inc.*

Problems Related to Gray Hair

While most hair care problems are suffered by small sub-segments of the human population, the problem of gray and graying hair is nearly universal. It is one of the most recognizable, early indicators of the aging process and one that directly conflicts with the desire to look young.

Review of Gray Hair Treatments

Currently, consumers are inundated with a wide range of products that promise to solve their gray hair problems. There are supplements containing vitamins, minerals, proteins, and other organic substances that promise to reverse gray hair.

There are natural ingredient-based remedies for staining hair. And there are cosmetic dyes that can hide the gray hairs. Additionally, raw material suppliers constantly provide data about new raw materials that can stimulate melanocyte production of melanin.

This presentation will review past, current, and future treatments of graying hair. It will examine the science, or lack thereof, and discuss how well the various approaches work to camouflage gray or otherwise improve the appearance and condition of aging hair. It will also review some of the latest findings and the possible treatments that could lead to permanent cures in the future.

Rapid Screening Protocol to Preventing Aging from UV Damage to Colored Hair

*Eric Abrutyn
Kao Brands Company*

Consumers are unsatisfied with the loss of color shortly after they have colored their hair. They are looking for a more consistent hair color over a 4-8 week period. One of the potential causes of color loss is exposure to sunlight. Sunlight (mostly the UVa and UVb exposure) has been identified as a cause for degradation of the cuticle and cortex that allows for more rapid leaching of artificial and natural color. This aging process needs to be controlled better so the cuticle and cortex are more intact and the color has a better chance to last longer.

Most hair care treatment products utilize UVb sunscreen protection. Hair damage is caused by not only UVb but also UVa exposure. So the right selection of UVa and UVb protection will not only control the sun expose aging of hair, but will protect the color of UV degradation.

There are a large number of UV absorbers available to the formulating chemist. Which one to choose and how do you screen their potential to prevent damage and color loss? This paper will focus on the development of a rapid screening protocol and test results of over 50 UV absorbers to control this damage and loss in color.

KEY BULLET POINTS:

- Longer lasting color from Sunlight exposed hair
- Quick screening UV protection protocol
- Understanding the role of UVa and UVb exposure to hair

SCIENTIFIC SESSION D

FRIDAY'S PROGRAM, June 6, 2008

9:00 a.m. - 11:30 a.m.

DELIVERY SYSTEMS

Moderator – Mindy Goldstein, Ph.D., Estee Lauder Companies

Straightforward Approach for Screening Silicone Gels of Varying Functionality for Use in Cosmetic Ingredient Delivery

*Jeffrey Caruso, Joan Meyer, Robert Umland and
Summer Sivas, Ph.D.
NuSil Technology, LLC,*

Biocompatibility of silicone gels has made them an excellent candidate for use as an encapsulant or matrix for actives delivery. Due to the myriad of silicone functionalities and even greater variety of cosmetic ingredients, a means to assess and screen for desired characteristics is required. The goal of this study is to compare hydrophilicity/hydrophobicity via contact angle measurements and percent swell of silicone gels of varying functionality providing a straightforward screening method for the selection of suitable delivery matrices. Balancing formulation stability with acceptable delivery rate requires tailoring the matrix to the desired deliverables.

METHODOLOGY

- I) Silicone materials considered include standard dimethicone; 100mol% trifluoropropyl-methylsiloxane and 20mol% PEG-7 substituted dimethicone gels. Crosslink density of each gel was measured via durometer, 000 type, and was 50+ / ~5 for all gels considered.
- II) Fluids considered include water, phosphate buffer, mineral oil, and cyclopentasiloxane.

- III) Contact angle measurements, initial and time dependent, were conducted using Ramé-Hart Model 200 Digital Contact Angle Goniometer with DROPimage software. Contact angle measurements were collected once per second for 150 seconds.
- IV) Swell measurements were performed on all three gels from using I fluids from II. Gel sample sizes were 0.5 g and allowed to swell at ambient for 48 hours. Fluid was decanted and samples pat dry prior to initial measurement. Samples were dried in an air-circulating oven to obtain the extracted sample mass for adjustment of final data.

For all samples tested initial contact angles for water were the highest, 127°, 130° and 115°, for dimethyl, PEG-substitued and fluoro gels respectively. The greatest time dependent change was for PEG-substitued which declined to 51°. The lowest initial contact angles were obtained using cyclopentasiloxane, 35°, 11° and 14°, for dimethyl, PEG-substitued and fluoro gels respectively. The rate of angle change for cyclopentasiloxane for all sample types was very rapid and reached $6 \pm 2^\circ$ well before the testing time had elapsed.

Swell testing showed highest values for all samples with cyclopentasiloxane, as high as 580% for the dimethyl gel. The lowest values occur with phosphate buffer ranging from 0-7%.

Contact angle and swell measurements are useful tools in initial screening of appropriate delivery matrices for cosmetic ingredients. The goal of the matrix delivered cosmeceutical device is shelf stability and an effective dosage delivery. Achieving these goals requires an understanding of the hydrophobic/hydrophilic nature of the therapeutic compounds and silicones. Effective stability and delivery depends on the solubility and diffusivity of the compound in and through the silicone. While not addressing these factors directly, the measurements performed can provide an understanding of compound / silicone interactions. Based on these straightforward measurements one hopes to aid the formulator in selecting an appropriate starting point for their delivery matrix development needs.

Extended Release of Poorly Water Soluble Active Ingredients Using Linker-Based Lecithin Microemulsions

*Jessica Yuan, Alice Yip, Chong Liang,
and Edgar Acosta
University of Toronto*

Alcohol-free lecithin microemulsions formulated with food-grade linkers have been recently proved to produce a significant increase in the topical absorption of actives ingredients while minimizing the cytotoxic side effects. In this work, these linker formulations were evaluated for extended release of oil-soluble actives into the skin.

Lidocaine-laden linker microemulsions were applied on pieces of cultured human skin and the skin were used to conduct *in vitro* permeation studies.

Linker microemulsions produced a prolonged release up to 48 hours, rivaling the performance of other extended release methods such as polymers or patches.

The microemulsions can be used as sustained release formulations and can act as *in-situ* delivery patches. Potential advantages of this application are low cost, customizable dose, use on uneven and exposed parts, and flexibility to formulate for a wide range of actives, including vitamins, antioxidants, and perfumes.

Vesicular Delivery Systems: From Phospholipids to Silicones for Targeted Skin Sites

*Shaow B. Lin, Ph.D., Joanna Newton, Stephanie Postiaux,
James F. Thopson and Emilie Courbon
Dow Corning Corporation*

Vesicles are technically complex nano delivery systems that possess a structure like “hollow particles” with water at the exterior and the interior of the “particles”, with a bilayer forming the vesicular particles. Because of this unique structure, vesicles are of particular interest as carrier systems for their ability to encapsulate both lipophilic actives and hydrophilic actives. In this study, the characteristics of phospholipid vesicles and silicone vesicles for delivery of actives to targeted skin sites are compared.

“Assembly-required” silicone vesicles are prepared from selected PEG-12 Dimethicone polymers via a proprietary process. Lipophilic actives such as vitamins, sunscreens, silicone fluid emollients, and hydrophilic actives such as vitamin C and natural extracts have been successfully encapsulated and formulated into model skin care products. Two new ranges of phospholipid-based vesicles are made from high purity, unsaturated flexible phospholipids. Both are again able to encapsulate various types of actives, lipophilic and hydrophilic.

The study of stability and skin penetration of actives delivered from liposomes is carried out using ESR (electron spin resonance). The penetrating liposomes are capable of penetrating into the upper layers of the epidermis, delivering a variety of

cosmetic actives into the skin. The non-penetrating liposomes deposit the actives onto the surface of the skin or hair and show no penetration into the skin, due sterically hindered vesicular structure.

The polymeric PEG-12 Dimethicone derived silicone vesicles show excellent bilayer flexibility, good active payload and good structural stability. Lipophilic actives such as vitamins, sunscreens, silicone fluid emollients, and hydrophilic actives such as vitamin C and natural extracts have been successfully encapsulated and formulated into model skin care products. The polymeric nature of the silicone vesicles makes it ideal for non-penetrating topical delivery applications.

Two fundamentally different vesicular technologies are compared for their fit for active delivery to skin applications. The skin penetration or non-penetration characteristic is controlled at the molecule level, while both are capable of encapsulating and retaining lipophilic and hydrophilic actives. The skin penetrating liposomes deliver actives into the upper layers of the epidermis. The PEG-12 Dimethicone derived silicone vesicles deposit actives onto the skin surface.

Microemulsions as Sprayable Delivery Systems for Specialty Ingredients

Terri Germain¹, Jonette Evans-Payne¹, Gina Cosby¹,
Natalie Fasouliotou¹, and Monna Manning²,
¹McIntyre Group, Ltd.
²Abitec Corp.

Many desired cosmetic ingredients are not water soluble, e.g. organic sunscreens, tocopheryl acetate, essential oils and ester emollients to name a few. Products that incorporate these ingredients are typically opaque emulsions. Recently, clear sprayable products have been introduced, e.g. clear, sprayable sunscreens. However, these products contain a significant amount of short chain alcohols which can be drying to the skin. Our objective was to use microemulsion technology to create a clear to translucent water-based delivery system without ethanol or IPA that could deliver some of the above ingredients.

Combine emollients with mid-range HLB emulsifiers to create an emulsifying concentrate via experimental design and evaluate its emulsifying potential. Emulsifiable ingredients tested include but are not limited to (with varying use levels depending on combination and design):

- Water insoluble vitamins
 - Vitamin E Acetate
 - Vitamin A Palmitate
 - Fragrance components
 - Vanillin
 - Linalool
 - Eugenol
 - Geranyl Acetate
 - Benzyl Acetate
 - Beta-Ionone
 - Silicones
 - Cyclomethicone
- Ester emollients
 - Propylene Glycol Caprylate
 - Butyloctyle Palmitate
 - Propylene Glycol Dicaprylate/Dicaprate
 - Essentials oils
 - Tea tree oil
 - Organic sunscreens
 - Octisalate
 - Octinoxate
 - Oxybenzone

An emulsifying concentrate based on the low skin irritation ingredients PEG-6 Caprylic/Capric Glycerides, Polyglycerol-6 Dioleate and Caprylic/Capric Glycerides was developed. Using 5-15% of the concentrate, we were able to create microemulsions of 1-3% of the tested ingredients. In addition, higher levels of sunfilters (20-28%) were incorporated by using higher levels of microemulsion concentrate (30-42%) creating an alcohol-free translucent sunscreen spray. Samples were evaluated by their ability to withstand there Freeze/Thaw cycles. Additional temperature stabilities were also completed for one month (i.e. 25°C, 4°C, and 43°C). The concentrate not only serves as an emulsifying base but also has emolliency properties of its own.

It is possible to deliver water insoluble cosmetic ingredients in a water-based, clear to slightly translucent, low viscosity form without the use of short chained alcohols. Microemulsions are thermodynamically stable and can be prepared at room temperature with gentle mixing thus allowing for ease of manufacture and protection of heat sensitive components.

Removal of Microbial Pathogens from Skin Using Magnets

Michael Daley, Ph.D. and David W. Koenig, Ph.D.
Kimberly-Clark Corporation

The presence of microbial species adapted to the skin constitutes one of the many defenses animals have against pathogenic bacteria and fungi. Non-discriminate dislodging of microbes by surface active agents or annihilation using antimicrobials can destroy this beneficial ecology. It is therefore advantageous to use a gentle nontoxic approach for removal of pathogens from the skin.

Candida albicans and *Escherichia coli* were removed from skin using superparamagnetic monodispersed microspheres (SMM) as well as magnetic cellulose particles. The amount of microbes removed was enumerated and compared to non-magnetically treated samples.

The use of magnetic materials increased the removal of yeast from skin by >60%. A 30% improvement of removal of bacteria was observed.

We have shown it is possible to remove microbes from skin using magnetic technology. Microbe-specific SMMs can be incorporated into wipes and sprays and when used in conjunction with magnets impregnated in cleaning and absorbent materials enhance the cleaning of the skin.

FRIDAY'S PROGRAM, June 6, 2008

1:30 p.m. - 4:00 p.m.

FORMULATION AND TEST METHODS

*Moderator – Martha Tate, Ph.D., Kimberly-Clark Corporation***Utilizing Rheological Parameters to Predict Consumer-Perceived Sensory Attributes of Cosmetic Creams***Penny Anderson, Deb O'Toole, Julie Harrison and
Angie Hendrickson
Access Business Group*

The primary objective of this effort was to determine if rheological parameters could be practically leveraged to quantitatively describe consumer-perceived attributes of cosmetic creams and lotions.

Rheological measurements were employed to:

1. Characterize and differentiate between formulation prototypes
2. Stimulate the sensory perception experienced by consumers upon dispensing a lotion from a bottle into the hands.
3. Mimic deformations imparted during rub-out of creams onto the skin.

Significant correlations were established between rheometer-generated properties and consumer-perceived attributes collected from trained, dermatosensory panelists. Subjective descriptions of cream attributes such as “firmness, thickness, peaking and stickiness” were related to quantitative rheological measurements of elastic and viscous modulus, yield stress, and negative normal force (upon extension) respectively.

These recently developed methods/correlations provide the potential to aid product developers in prediction of targeted consumer sensory attributes, thereby reducing the necessity to conduct elaborate, expensive panel testing (for selected properties) while simultaneously accelerating the product development cycle.

Cationic Sunscreens: Combining Versatility and Efficacy with Excellent Cost Performance*Anna Howe and Klaus Jenni, Ph.D.
Degussa Goldschmidt Personal Care*

The unique properties of cationic emulsifiers enable the formulator to utilize large loadings of lipophilic ingredients while maintaining a light, smooth and powdery skin feel that non-ionic and anionic emulsions do not. Sunscreens, in particular, benefit from this technology because it allows one to develop non-oily formulations in spite of high loading with lipophilic UV filters. In addition, cationic sunscreens provide enhanced sand repellency, long-lasting skin moisturization, and the highest water resistance properties with no need for film forming polymers. This presentation will review cationic emulsifier based sunscreen formulations, introduce 2 new test methods to measure water resistance and sand repellency and illustrate the exceptional performance of these cationic based systems.

For Water Resistance, we compared cationic emulsifier (Distearyldimonium Chloride) based lotions with nonionic (Cetareth-25) and polymeric organic emulsifier (Polyglyceryl-3 Methylglucose Distearate) based lotions and used a novel test method which incorporated PMMA Helioplates as substrates, a stirring method in a water filled beaker, and in-vitro testing by the Diffey Optometrics or the Kockott Sunscreen Tester.

For the Sand Repellency tests, we compared 2 cationic emulsifier (Distearyldimonium Chloride and Distearoylethyl Dimonium Chloride; Cetearyl Alcohol) based lotions with non-ionic (Cetyl-PEG/PPG-10/1 Dimethicone), polymeric organic (Methyl Glucose Sesquisteate) and anionic (Carbomer) based lotions and used another novel test developed in house where 30g of sand is applied to skin, a force is then applied and the

residual amount of sand measured. Although simple, this method has been shown to differentiate between ionic classes in reference to sand repellency.

For the moisturization tests, we compared cationic emulsifier (Distearyldimonium Chloride) based lotions with non-ionic emulsifier (Glyceryl Stearate SE) based lotions using the standard cornometer method, extended to an 18 hrs measuring time period after application.

RESULTS

- Water Resistance – In-vitro water resistance was 100% for cationic vs 90% for polymer emulsifier and 70% for non-ionic emulsifier based lotions.
- Sand Repellency – Cationic based systems exhibited much higher sand repellency (0.5g residual sand) vs anionic (1.5g residual sand) and non-ionic (1.25g residual sand) emulsifier based systems.
- Moisturization – The rate of moisture loss is 2.6 times less with the cationic vs the nonionic emulsifier based systems.

Cationic emulsifiers show excellent emulsification properties, have an excellent cost / performance profile, and can be combined with co-emulsifiers to influence product properties such as aesthetics, skin feel and absorption behavior.

Friction of Human Skin and Interfacial Surfaces: The Flying String Method

Harry R. Elden, Ph.D.

OBJECTIVE: (1) Describe Flying String (FS) method to measure Frictional Drag (FD); set-up, physics and mathematics for damped oscillation. (2) Measure FD of human skin (fingers); compare with Surface Materials (SM) as substitute Skin Equivalents (SE). (3) Evaluate SE materials (Teflon, paper, Cecum tissue and Parchment) exposed to String Filaments (SF); viz., cotton, wool and nylon. (4) Study dehydration (alcohols) and hydration influences on FD. (5) Show that FS can be used to measure FD of human skin in situ any place on the human body. Calibrate with Reference Surfaces (RS); Aluminum tape and PVC pipe curved surfaces.

METHODOLOGY: FS was mounted beneath a pendulous platform to present oscillating horizontal skin friction across Surface Materials (SM) Teflon, paper, Cecum tissue and Parchment. Set Normal Force (NF) of string filament (SF) on surfaces by adjusting vertical placement (H) of SM with FS. Control Normal Force and Angular Displacement (D). Dry SM with alcohols; hydrate with water. Treat SM/SF Interface Responses to cosmetic chemical agents; measure continuously to provide Kinetics of Interactions.

RESULTS: TD varied systematically with D, H; increased with D due to greater potential energy imparted to swing; decreased with H due to increased Normal Force (Frictional Drag). Human Finger Skin of Fingers 1-4 imparted comparable influence on TD; Thumb had lower TD, larger Caliper Diameter than FNGS. Nylon/Skin had higher TD; Cotton/Wool lower TD. Wool/Cotton/Nylon String Filaments were compared with Test Surfaces Al Foil/Parchment/Teflon Film/Cecum Tissue in serial repeated tests. TD was low For Al and Cecum tissue, high for Parchment and Teflon

CONCLUSIONS: Prehensile ability would be impossible without friction; one could not grasp, hold, manipulate and evaluate surfaces. Yet, excess is disdained. Diagnostic/therapeutic physiological activities depend on friction of human skin. The Flying String Method permits access to friction any place on the human body. The search for skin equivalent materials satisfies interests of skin biophysics and cosmetic skin product developers. It is to be noted, however, that dermabrasion therapy now uses Emery Cloth to smooth the surface. Search for skin-equivalents suggests that Cecum tissue and Parchment may be useful in cosmetic R&D laboratories.

A Study of the Effects of Hydrophobic Substitution on the Rheologies of Polyelectrolyte Thickeners

*Paul Mallo, Olivier Braun and Alicia Roso
SEPPIC*

Acryloyl Dimethyl Taurate/Dimethyl propenamide/Alkoxyated alkyl methacrylate Copolymer can thicken and stabilize emulsions under acid pH conditions and they also can show associative thickening properties giving to the formulators a solution to play with high amount of salt. Associative thickening in aqueous solutions results from the formation of molecular networks in which the water-soluble chains remain in solution and the hydrophobes attached to the chain phase-segregate into nanoscale or microscale aggregates. Hydrophobically-modified hydrophilic polymers form physical networks in aqueous solution.

Lochhead et. al. recently reported a method that used viscosity measurements to gain insight into the structure and properties of Carbomer-type thickeners. We have adopted this approach to study the extent of swelling and interaction between the molecules of hydrophobically-modified water-soluble copolymers and copolymers based on Acryloyl dimethyltaurate copolymers. We have studied the intrinsic viscosities, $[\eta]$, that is a

measure of the hydrodynamic volume of unit mass of the polymer in solution. For hydrophobically-modified copolymers, we found that the critical overlap concentration was significantly lower than the theoretical value of $1/[\eta]$. This critical concentration increased at low surfactant concentration but decreased again at higher concentrations. We interpret this behavior to mean that the hydrophobic cross-links of the original polymer network were disrupted by the surfactant adsorption, but re-established by polymer micelle interaction at the onset of surfactant micelle formation. In addition, the thickening properties which are correlated to the intrinsic viscosities are lightly affected by the presence of salts. This is due to the fact that the structure of the polymer backbone was optimized accordingly.

Effectively, this provides guidance to formulators who wish to avoid drastic changes in viscosities in adding salts and also to those who wish to employ high amount of surfactants and/or actives to their formulations.

Thursday, June 5th - 7:30 a.m. - 8:50 a.m.

A. New Proposed Sunscreen Regulations

Farah K. Ahmed, Personal Care Products Council

Farah K. Ahmed, lead on the Personal Care Products Council’s Sunscreen Task Force will provide an overview of FDA’s proposed amendments to the sunscreen monograph (Proposed Rule) and its impact on the sunscreen industry. This discussion will include information on the industry’s reaction to the Agency’s position on SPF and UVA testing and labeling, anti-aging claims, and other labeling issues; as well as what we may expect to see in the Final sunscreen monograph (when published). Also, learn how the dermatological community, consumer groups, and foreign regulators and standard setting bodies have responded to the Proposed Rule and how the rulemaking impacts the global sunscreen market.

Thursday, June 5th - 7:30 a.m. - 8:50 a.m.

B. Rules of Engagement - What is Obvious

Louis C. Paul, Esq., Louis C. Paul & Associates

Patents are of critical importance to launching and protecting products. They are awarded for novel and non obvious inventions. However, what is obvious is not so obvious. Last year, the US Supreme Court issued an important decision relating to the legal standard for obviousness. The US Patent and Trademark Office followed by issuing guidance to Patent Examiners. This mini-break fast will explore the implications of the new and/or old obviousness standard both with respect to patentability and freedom to operate. It is offered for educational purposes only, and is not intended to provide legal advice or create an attorney-client relationship

Friday, June 6th - 7:30 a.m. - 8:50 a.m.

C. Preservative Optimization and Risk Factor Analysis

Steven F. Schnittger, Estee Lauder Companies

There is a fine line between formula preservation and safety testing. When product reactions occur, either fragrance items or preservatives system are the major focus of attention. Because of the safety factor and the changes in global regulation there has been a significant reduction in globally acceptable preservatives.

This presentation will deal with ways to maximize the activity of your preservative system, mistakes often made when formulating with preservatives, and an overview of some of the new preservatives that are now available to the cosmetic formulator. There will also be a discussion on potential risk factors attributed to the different product types and the testing required.

Friday, June 6th - 7:30 a.m. - 8:50 a.m.

D. REACH and Innovation:

Do We Understand the Challenge Ahead for the Cosmetic and Fragrance Industry

Laurie Hughes, Croda, Inc.

REACH represents a major change in how our chemicals are regulated and constitutes a significant transformation to how chemical supply chains will function.

The working implications of REACH are unpredictable but the risks include whether the cosmetic industry can still benefit from having a broad and accessible source of ingredient and fragrance chemistry to sustain the industry going forward.

This session will look at how REACH will influence risk management in the cosmetic and fragrance industry and explore questions on the future direction of innovation and product development.

Note: You must register for the seminar in order to register to attend a COSA Mini Breakfast.

PATENTS - A PRACTICAL INTRODUCTION

Instructed by Tony O'Lenick (Siltech LLC)
and Louis Paul, Esq. (Louis C. Paul & Associates, PLLC)

Wednesday, June 4, 2008 * 9:00 a.m. - 5:00 p.m

COURSE OUTLINE

Objective:

More so than ever, patents play an essential role in commercializing new products. This course is designed to provide product development professionals - from individual inventors and marketers to chemists and other members of R&D teams - with an understanding of key patent concepts, with a goal of helping them help themselves and their companies to achieve Patent Peace of Mind®.

Topics to be covered include:

- * **Claims**
- * **Patentability**
- * **Inventorship**
- * **Patent Applications**
- * **Patent Disputes**
- * **Freedom to Operate**
- * **International Patent Protection**

These patent fundamentals will be reinforced through a series of industry case studies. This course is offered for educational purposes only and is not intended to provide legal advice nor does the course fee create an attorney client relationship.

SPECIAL DISCOUNT – Individuals that register for a Continuing Education Course at the Grand Floridian as well as register for the Annual Scientific Seminar (Full Registrations Only) may deduct \$50 off the meeting registration fee.

* The registration fee includes Continental Breakfast and lunch on the day of the course.

BASIC SUNSCREEN TECHNOLOGY AND FORMULATIONS

Instructed by John Carson. (Carson Product Developments)

Wednesday, June 4, 2008 * 9:00 a.m. - 5:00 p.m

COURSE OUTLINE

This course is intended primarily to acquaint the beginning formulator with sunscreen ingredients and how they are used. The more advanced formulator will benefit from a review of ingredients, techniques and regulations.

- | | |
|--|--|
| <p>A. The Sun</p> <ul style="list-style-type: none"> a. The solar spectrum b. Why we need protection c. SPF d. SPF and UVA testing techniques | <p>C. Regulatory Affairs</p> <ul style="list-style-type: none"> a. Sunscreen Monographs b. SPF and UVB and UVA c. International Regulations and REACH |
| <p>B. Sunscreen Ingredients</p> <ul style="list-style-type: none"> a. UV Filters <ul style="list-style-type: none"> i. How they work ii. Stability b. Physical Sunscreens <ul style="list-style-type: none"> i. How they work ii. Stability c. Vehicle effects | <p>D. Formulation Strategies</p> <ul style="list-style-type: none"> a. Formula Properties and vehicle effects upon performance b. Ingredients c. Stability d. Achieving high SPF's and water resistance |

SPECIAL DISCOUNT – Individuals that register for a Continuing Education Course at the Grand Floridian as well as register for the Annual Scientific Seminar (Full Registrations Only) may deduct \$50 off the meeting registration fee.

* The registration fee includes Continental Breakfast and lunch on the day of the course.

STUDENT POSTERS

During the Annual Scientific Seminar, a Student Poster Session will be held from 9 a.m. - 4 p.m. on Thursday and 9 a.m. – Noon on Friday. Students from across the Nation will present their exhibits relating to the cosmetic industry. The posters are judged and awards are given to First, Second, Third and Fourth Place. The awards are sponsored by DD-Chemco and are presented to the winners at the Friday Luncheon. This is a great opportunity for students to present their ideas and findings. Be sure to check out their posters and give them your support.

2008 ANNUAL SCIENTIFIC SEMINAR

REGISTRATION FORM JUNE 5-6* GRAND FLORIDIAN RESORT & SPA

Type or print your name and company as you wish it to appear on your badge, complete and mail with check or credit card information to:
SCC, 120 Wall Street, Suite 2400, New York, NY 10005-4088, (212) 668-1500, Fax: (212) 668-1504
 Participants may register for the Seminar online. For more information, please visit the SCC Website, www.sconline.com

NAME (Full Registration only) _____
(First name) (Last name)

Phone () _____ Fax () _____

NAMES (Split Registration only):

Thursday Participant _____ Phone () _____ Fax () _____

Friday Participant _____ Phone () _____ Fax () _____

Company _____ Email _____

Address _____

	REGISTRATION FEE On/Before May 9	REGISTRATION FEE After May 9*	
Member	\$600.00	\$650.00	\$ _____
Non-Member	\$720.00	\$770.00	\$ _____
Split Registration-MEMBER	\$700.00	\$750.00	\$ _____
Split Registration-NON-MEMBER	\$800.00	\$850.00	\$ _____
Full Time Student	\$200.00	\$200.00	\$ _____

*Onsite Registration Fee will be \$750 for Members and \$850 for Non Members. Split registrations will not be accepted after May 23rd.

CONTINUING EDUCATION PROGRAM Wednesday, June 4, 2008 * 9:00 a.m. - 5:00 p.m.* Courses are Limited

Patents:	Member - \$300.00**	\$ _____
	Non-Member - \$400.00**	\$ _____
Sunscreens:	Member - \$300.00**	\$ _____
	Non-Member - \$400.00**	\$ _____

** If you register for the Full Seminar and a Continuing Education Course, you may deduct \$50 from the Seminar Registration Fee above. *This discount does not apply to split registrations.*

COSA MINI-BREAKFAST SEMINARS

THURSDAY		
A. Sunscreen Regulations	\$45.00	\$ _____
B. Rules of Engagement	\$45.00	\$ _____
FRIDAY		
C. Preservative Optimization	\$45.00	\$ _____
D. REACH and Innovation	\$45.00	\$ _____

You must register for the seminar in order to register for a mini breakfast.

Payment Information

TOTAL ENCLOSED: \$ _____

Circle Choice: Check (made payable to SCC) Visa MasterCard American Express

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Signature _____

REGISTRATION FEE IS TRANSFERABLE TO ANOTHER REGISTRANT BUT NOT REFUNDABLE AFTER May 9, 2008

SCC USE: Received _____ Amount _____ Check # _____ Charge date _____

PLANNING YOUR TRIP

The Grand Floridian Resort & Spa is located in the heart of the Walt Disney World® Resort near the Magic Kingdom. The hotel offers a variety of amenities. There are four main restaurants onsite including Citricos, offering a Mediterranean cuisine, Narcossee's, a seafood restaurant, Grand Floridian Café, offering a casual dining experience and 1900 Park Fare, offering Disney Character dining. There are two pools, a white sand beach, spa and health club, tennis courts, as well as many unique adventures for kids.

To assist you with planning your trip, a special website has been created for the Society of Cosmetic Chemists by Disney Meetings. Here you will learn more about the resort as well as find information regarding tickets for the parks and Disney's Magical Express which provides free transportation from the airport if staying at the Grand Floridian. You may also make your hotel reservation online.

Please visit: <http://www.mydisneymeetings.com/meetingsite/SOCC2008/index.cfm>

SUPPLIERS' COCKTAIL PARTY

The Suppliers' Cocktail Party, which enables both sides of the supplier/buyer partnership to interact, has become a social highlight of the Annual Scientific Seminar, and we would like to continue that tradition in Florida. This year the Society will host this private reception outdoors (weather permitting) at the Summerhouse Patio and Sand Beach on Thursday evening, June 5th from 6:00 to 8:00 p.m. The Summerhouse Patio offers spectacular views of Seven Seas Lagoon and should be a wonderful venue for this special event. If your company would be interested in becoming a sponsor of this event, please contact the National Office.

SAVE THE DATE

2008 SCC Annual Scientific Meeting & Technology Showcase
December 11-12, 2008
New York Hilton

2009 SCC Annual Scientific Seminar
June 4-5, 2009
Chicago Hilton

2009 SCC Annual Scientific Meeting & Technology Showcase
December 10-11, 2009
New York Hilton