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Forum Cosmeticum 2010

Cosmetics: quo vadis?

The 24th Forum Cosmeticum 2010*, which from May 5th to 7th attracted about 250 delegates to Interlaken, was organised by the Swiss SCC and featured the topic "Cosmetics: quo vadis?" Trends and visions, new findings in skin and hair care, innovations in the area of raw materials and actives, ecology, economy and sustainability, as well as interdisciplinary developments, measurements and tests were also featured.

Sabine Menzel from **Henkel** presented a talk on market research for cosmetic products. She explained why the cosmetics market is still, and will continue to be, a growing market. With well-informed customers judging products in a more rational way than ever, and at the same time being emotional with respect to their expectations about cosmetic products, performance is the dominant asset accompanied by globalisation, ecology and technology.

According to Karin Hess from the **ZHAW/Mibelle** anti-ageing claims are of above average interest amongst 50+ consumers. While young skin can maintain a balance with in-built defence mechanisms, more mature skin is confronted with problems such as the ageing of the mitochondria, shortening of telomers, hormonal changes and glycation. Anti-ageing concepts are often based on anti-oxidants, peptides and



Some 250 visitors were presented with a wealth and rich variety of technical information

other active ingredients such as vitamins, polyphenols and signal peptides.

Dr. Bernard Gabard of **Iderma** explained that the Vernix caseosa of newly born babies supplies their skin with moisture until their stratum corneum is built up, within about 2 weeks. However, when trying to copy this natural system for adult human skin, scientists found out that once the connection with the Vernix caseosa is destroyed, this original functionality cannot be reactivated so easily.

Prof. Dr. Sven Gohla from the **La Prairie Group** explained the relevance of stem cells for cosmetics. He said that only adult stem cells are used for cosmetics and these types of stem cell can only form the specific tissue of their origin such as, for example, dermal, follicular or epidermal cells. While the use of human stem cells is forbidden, protecting stem cells can be supported. This is one way to slow down ageing processes and thus preserve natural regulatory processes.

Sun care products: a formulation challenge

According to Dr. Christiane Hanay of **Weleda**, developing sun care products today is a real challenge due to increasing consumer expectations and increased regulatory demands, and entails a lengthy and costly development

process. Before formulating, a competition analysis, a suitable filter platform, a patent search and ingredients search for a specific product brief have to be performed. Development limitations such as water resistance or a spray format can only be overcome with the help of a fine-tuning process once all ingredient and patent limitations have been clarified.

Dr. Franz Enzmann from **MSE Pharmazeutika** talked about Ubiquinone Q10, a key ingredient for the mitochondrial function and well known in cosmetic products. According to Dr. Enzmann, mitochondria are not only power stations of the cells, but also "conductors" of many different cell activities. Chronic oxidative and nitrosative stress are the main enemies of mitochondria and the main cause of chronic inflammation diseases and dysregulation. Ubiquinone Q10 is a strong antioxidant and directs ion-channels, gap-junctions, aquaporins and vitamin C pumps as well as regulating receptor ups and downs.

Dr. Torsten Clarius from **Laboratoires Sérobiologiques** said that the cosmetics market for sensitive skin is growing, even though there is no clear definition of "sensitive skin". One classification model defines three skin types: Type I with decreased barrier function, Type II with inflammatory changes but an intact



The DGK committee (from left to right): Dr. Karlheinz Hill (Cognis), Dr. Bernd Herzog (BASF), Prof. Dr. Ulrike Heinrich (Derma Tronnier) and Dr. Hartmut Schmidt-Lewerkühne (Beiersdorf)

barrier and neurosensitive, Type III, with an intact barrier and normal inflammation state, however, with excessive nerve irritation. The perception of an irritation stimulus is taken by so-called nociceptors. They function as thermoreceptors and perceive chemical irritants. An activation of nerve ends leads to the release of neuropeptides that start a cascade which is recognised by the body as burning, itching or pain. The inhibition of these neuropeptides may reduce excessive nerve irritation. Two examples, one synthetic and one plant derived inhibitor, were presented and showed a reduction of nerve irritations.

Dr. Marc Heidl from **DSM Nutritional Products** presented a new cosmetic peptide to synthesise hyaluronic acid (HA) in the skin. HA binds approximately 1.0000 times its own weight of water. HA moisturises very well on the surface, however, it does not penetrate into the skin. Having identified one tripeptide that also stimulates important proteoglycans, DSM demonstrated skin tightening and remodelling effects in in vitro and in vivo tests.

Dr. med. Urs Schwarz from the **University Hospital of Zurich**, explained the anatomy and the construction of the human eye and the phenomenon of optical illusions.

Dr. Ingo Büren from the **International Packaging Institute** presented mod-



For her doctorate "Research into the galenic stability and bio-availability of amino acids and peptides for cosmetics applications" Dr. Natalie Sors was presented with the DGK prize for young cosmetics scientists by Dr. Hartmut Schmidt-Lewerkühne

ern packaging technologies for cosmetics. He claimed that cosmetic packaging is an eye-catcher and a communication tool as well as a design item. In the 1990's the seven principles of Universal Design were born: equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, size and space for approach and use. The perception of the consumer influences the design of packaging. Materials, colours and tactile effect change with time and technologies. The three pillars that determine the sustainability of packaging are environment, economy and society.

Prof. Dr. Ralph Trüeb from the **The Dermatological Doctor's Office and Hair Center** presented trends in hair and skin cosmetics. Hair is the mirror of the soul. The condition of the hair plays an important role in our level of self-confidence and our perception by others. Women prefer hair which feels good while men want to look neat. As men mainly use shampoo for their hair this is a very important product category for them. Combing, gloss, repair and anti-static effects are the most important parameters. Actives for the scalp, such as anti-dandruff actives or actives against hair-loss, are popular. The awareness of skin ageing has reached the hair care sector. Hair ageing nowadays is becoming a focus. Tissue engineering to build new hair follicles is developing strongly.

Whether nanotechnology (i.e. dealing with particles smaller than 100 nm) might be the future key for more performance and function was the topic of Dr. Joachim Storsberg from the **Fraunhofer Institute** of Potsdam. Nanotech-

nology mainly deals with polymeric colloids, self-organising systems and tailor-made polymer properties. There are stable and labile systems such as gold, silver and silicates versus nanoparticles and liposomes.

Daniel Herbert from **Jovis** enterprises presented intelligent tools for an innovative development environment and the strengthening of interdisciplinary teamwork. In the past 35 years more and more regulations and restrictions for the development of cosmetics have appeared. A tailor-made piece of software, developed to manage information and the necessary documentation, was tested in different departments of companies. It demonstrates the effectiveness in a comparison with and without the software. A great deal of time and money could be saved in the R&D departments and time to market could be considerably reduced.

Dr. Peter Schoch from **United Technologies** talked about a new biological skin renewal factor – Dermatopoinetin. The active ingredient is a protein consisting of 159 amino acids which is equal to human Interleukin-1 alpha (IL-1a). The cytokine is an immune regulator, responsible for inflammation and fever. Surprisingly, it is a less well-known fact that IL-1a it is also the most important biological regulator for the renewal of skin. Inside the body it is only built in keratinocytes and reaches its highest concentration in the stratum corneum. Although the active does not penetrate into the dermis it initiates a signal cascade for skin renewal that is transported down to the dermis. For cosmetic applications it is often combined with Hexadeltine to create a synergistic effect. It is said to increase skin elasticity and to reduce cellulitis. According to the first study results it reduces hair loss after only a few days.

* The joint conference of the three German-speaking associations for Cosmetic Chemists – DGK, GÖCH and Swiss SCC

The full conference report, further information and photos can be found on the Internet (see Internet button)



Dr. Marion Fröschle of Givaudan (left), and Catherine Schneider of Rausch (right), were presented with the Kurt Pfeiffer prize by Dr. Philippe Auderset of Rausch (centre) in recognition of their tireless commitment on the board of the SWISS SCC. For a decade they did exceptional work for the association, e.g. organising the winter seminar in Champfêr. Both worked very closely together to develop this casual meeting of cosmetic chemists into a scientific seminar with a strong social character to underpin the importance of networking with industry peers



Maria Lüder
Managing Director, Genax and PR
Swiss SCC