

# New active molecule discovered

A new bioactive molecule from the *Centella asiatica* plant has been discovered by researchers at Sederma's Istituto di Ricerche Biotechnologiche (IRB). The molecule, 4-malonil-3,5-dicaffeoylquinic acid (known as irbic acid), has always existed in *Centella* but at levels so low that its presence was indiscernible among many other low level compounds existing in the plant.

Through their proprietary



biotech method which stimulates plant cells to produce high levels of phytoactives (up to 1,000 times greater than traditional means), IRB has uncovered irbic acid, a plant compound with very high collagen-protective activity and greater antioxidant and anti-inflammatory benefits over other well-known plant molecules. IRB worked in conjunction with the University of Bologna in Italy who defined

irbic acid's chemical structure. IRB now holds a patent for this technology and Sederma has ongoing studies further elucidating additional activities and cosmetic benefits. This discovery illuminates just one of the many benefits that strategic use of plant cell culture allows an industry seeking more advanced solutions from nature.

With this new technology, that offers the highest known concentration of irbic acid ever expressed from this herb, new levels of anti-ageing efficacy never seen before in standard extracts of *Centella* are possible.

## Record trade of certificates

GreenPalm has reported a record trade of palm kernel oil (PKO) certificates during the month of October 2013. November saw a further record broken by the sustainable palm oil certificate-trading programme, with unprecedented figures for the number of palm oil certificates sold.

GreenPalm allows manufacturers to off-set their palm oil, PKO and palm kernel expeller (PKE) use by buying GreenPalm certificates representing an equivalent volume that has been produced in line with Roundtable on Sustainable Palm Oil (RSPO) principles and criteria.

During October 416,852 certificates worth \$4.4 million were sold on GreenPalm's trading system, of which a record 125,781 were PKO certificates. In November 717,431

certificates worth \$3.2 million were traded, of which a record 667,982 were for palm oil.

The growth in the volume of PKO certificate sales, along with a significant increase in the premium buyers are paying for each PKO certificate, is also largely responsible for the GreenPalm's significant improvement in premiums paid to RSPO-certified growers.

With a month still to go before the end of the year, GreenPalm has traded palm oil, PKO and PKE certificates worth \$15.3 million – a rise of 25.4% on 2012 figures.

Bob Norman of GreenPalm said: "This month has seen unprecedented levels of trading, particularly in PKO certificates. Our figures to date illustrate the fact that manufacturers and retailers are taking palm sustainability seriously and are keen to support growers directly."

## Regional sales appointment

Innospec in the US has recently hired John Bozza as south east regional sales manager for their Performance Chemicals division.

In this role, Bozza will be responsible for continual development of the Innospec complete range of personal care products including Iselux sulfate free surfactants, Finnsolv esters and Chemsil Silicones through direct activity with personal care companies in the region.

Bozza is widely known and valued in the personal care industry for his knowledge garnered over the past 28 years of technical formulation and sales experience with raw material suppliers as well as with industry leading consumer product manufacturers.

## New subsidiary

As part of its ongoing strategy of international expansion, Cornelius Group plc has announced the opening of Cornelius France S.A.S. Managing director (International Operations), David Brown said: "Opening our new office in Beziers, France follows on from the opening of Cornelius Polska Sp z o.o., and Cornelius Rus LLC. and gives Cornelius access to one of the largest markets in Europe."

## Dr Jack Guth

Dr Jack Guth passed away on Thursday 28 November, after a short battle with a rare bone marrow disorder. Dr Guth was Botaneco's vice president of R&D for the past 7 years, and developed the oleosome technology in the personal care industry.

Dr Guth had a deep knowledge of chemistry and formulations, having begun his career with Johnson and Johnson before switching to the supplier side with Lonza, Inolex and Botaneco. He was widely admired in the industry and his passing will be keenly felt by many people who worked with him over the years.

### COMMENT

## Innovation pitch reveals trends

Innovation is at the very heart of the personal care industry, and new ingredients are the lifeblood of personal care innovation. In such a crowded and aggressive marketplace achieving a perceivable difference or superiority over your competitors can be extremely difficult. Clearly, the marketing department can have a huge influence in this, but increasingly, the product itself is expected to back up the claims unambiguously and in shorter periods.

The Beiersdorf Innovation Pitch concept at the Hamburg in-cosmetics is an interesting idea and it would be fascinating to read all the submissions, which could

be just as revealing as the eventual winner's pitch. And will that winning idea be a concept, or a formulation and will it be in face care, sun care, men's grooming etc? It will certainly be difficult not to read into Beiersdorf's decision as a potential bellwether for the industry as a whole.

As ever, *Personal Care* aims to present you with the latest ingredient technology and industry news, to help create the next range of innovative personal care products. We will be in Hamburg to discover the winner of the Innovation Pitch, and we hope to see you there too.

**Richard Scott**  
Editor

# Hair loss prevention active

The appearance of the hair is one of the first impressions of a person. With ageing and under other circumstances (e.g. androgenic alopecia), hair loss occurs.

To prevent hair loss, healthy hair embedded in a healthy scalp is essential. Evonik launches Sphingony which will be presented at in-cosmetics 2014 in Hamburg. This latest hair and scalp care active ingredient is a naturally occurring, skin-identical sphingolipid which prevents hair loss by addressing scalp health and rebalancing the life cycle of the hair.

Various *in vitro* studies have shown that Sphingony balances the hair cycle by inhibition

of 5- $\alpha$ -reductase, improving the scalp renewal capacity, stimulating formation of essential building blocks like proteins and ceramides and by improving scalp health by equalising the microflora.

Extended *in vivo* studies have confirmed that Sphingony significantly prevents hair loss by prolonging the anagen growth phase of hair and effectively improves hair quality and scalp health.

Overall, Sphingony is a skin-identical molecule with highly scientific claim substantiation, which targets hair loss by balancing the hair cycle, strengthening the hair follicle and improving scalp health.



## New technical sales manager welcomed

Rashid Umar Jan, PhD has joined Sabinsa Europe GmbH as technical sales manager, Europe. Dr Jan will handle the technical aspects of Sabinsa's sales, visiting customers and exhibitions to describe Sabinsa's robust portfolio of proprietary, science-backed ingredients.

Dr Jan received a Doctorate in Biochemistry from Goethe University, Frankfurt am Main, Germany and a Master of Biochemistry from the University of Kashmir, Srinagar, India. He has acquired work experience from distinguished research institutes at an international level (IISC Bangalore and EMBL-Heidelberg). As a post-doctorate fellow at EMBL, he was selected for the prestigious CO-FUND Marie Curie and EMBO-long term fellowship. Dr Jan has published a number of papers in high impact peer-reviewed journals such as Nature, EMBO and JBC. Furthermore, Dr Jan has a good understanding of product marketing, business economics and

project management issues, and has passed certificate course examinations from the Frankfurt Chamber of Commerce and Industries (IHK). Before joining Sabinsa he worked as a senior scientist at Goethe University's Institute of Biochemistry and was responsible for training and supervising PhD students.

"Dr Jan's experience with research and sophisticated testing methods make him an excellent fit for the Sabinsa team," said Sabinsa Founder Dr Muhammed Majeed. "We find that having someone with a science background describes our proprietary and innovative products in a sales context beneficial, and therefore Dr Jan is an excellent addition to our European team."

"I'm quite pleased to be joining Sabinsa," said Dr Jan. "You don't often find this level of commitment to science and research with supplement ingredient companies, so I am eager to describe the benefits to our customers."

## Range expanded

A new range of essential oils from around the world is now available from Omega Ingredients. The new products can be used by manufacturers in a variety of food, beverage, fragrance and cosmetics applications and they complement the company's blossoming product range that has already seen specialist citrus and mint essential oils introduced in 2013.

Stocked by Omega Ingredients and distributed by them throughout the UK and Europe with full market support from the Australian suppliers, the essential oils include, Buddha Wood Oil, Kunzea Oil, Australian Blue Cypress Oil and the new Sandalwood Nut Oil from Wisper Forestry Services, the Australian producer.

Sandalwood Nut Oil is of particular interest for cosmetics manufacturers because of its proven beneficial properties – it is being used in anti ageing and skin care products as it can help preserve the texture and integrity of skin by stimulating blood cells below the skin's surface, and patented applications also exist in formulations to improve hair vitality.

## Anti-wrinkle efficacy study for peptide

A new clinical study has been conducted by Lipotec to assess the anti-wrinkle efficacy of Argireline peptide at a concentration of 2%. The new test shows remarkable improvement of skin appearance after just one week of treatment. The test was performed on a panel of 24 female volunteers aged 35 to 45 years old, who applied a cream containing the peptide on half of the face, especially on the crow's feet area, and a placebo cream on the other half, twice daily.

Skin topography was quantitatively evaluated after measurements by FOITS (Fast Optical In vivo Topometry of human Skin) technique at the beginning and at the end of the treatment. At the end of the seven days of treatment, values showed a statistically significant decrease in the

average volume and length of the wrinkles by 20.6% and 15.9% respectively, with a cream containing 2% Argireline peptide solution C. The launch of Argireline peptide by Lipotec opened the door to a new generation of anti-ageing active ingredients. Its mechanism of action was a technological innovation: the modulation of muscle contraction to attenuate and reduce wrinkles induced by over-stimulation of facial muscles, through topical formulations, thus offering a topical alternative to more invasive existing methods.

The new *in vivo* test with Argireline peptide offers new cosmetic strategies that enable claims based on faster benefits for end-users, showing visible skin rejuvenation in just one week.



## Potent anti-ageing ingredient

The DSM Personal Care Business Unit has announced the launch of Retinol GS 50, one of the most potent actives in the industry.

Retinol has long been known and appreciated as one of the most effective skin care actives around. Discovered more than 80 years ago, it has proved a trusty ally in the fight against the visible signs of ageing.

Skin ageing, especially photoageing, expresses itself in multiple ways, including fine lines and wrinkles, loss of elasticity and smoothness, and uneven skin tone or mottled pigmentation. In today's world of perfection, a radiant, healthy appearance with skin that is even, firm and wrinkle-free is considered a prerequisite for success and a brighter future. Retinol helps people everywhere, regardless of their age, gender or ethnicity, look more beautiful for longer and that is why it has been named the gold standard in skin ageing.

Retinol's uniqueness lies in its targeted mechanism of action. Proven in a number of scientific studies to work on several relevant genes in the skin, it delivers multiple skin benefits as early as four weeks after commencing use. Retinol is active in the dermis and epidermis, boosting collagen production in the skin, stimulating keratinocyte proliferation and thickening the epidermis, and inhibiting tyrosinase activity. The effects of retinol on skin appearance are impressive. It visibly improves the appearance of fine lines and wrinkles; increases skin firmness, tonicity and smoothness; and evens out dark spots and age spots.

## Distributor acquired

Aceto Corporation, a US global leader in the marketing, sale and distribution of products for human health, pharmaceutical ingredients and performance chemicals, has announced that it acquired Inter'actifs, a French distributor of ingredients to the cosmetics and personal care industries.

Cécile Nayl, President of Inter'actifs, will be joining Aceto as director, Cosmetics and Personal Care Products - Europe.

Inter'actifs will be Aceto's face to the cosmetics and personal care industries throughout Europe and carries on with the

distribution of its main suppliers: Barnet (US), Jeen International (US), Aromtech (FI), Technoble (JP), Kemin (US), Doosan (KR), Citroleo (BR) and Polygal AG (CH). The offer is expanded and focuses on high-value specialties.

Inter'actifs will operate as a separate brand within Aceto's Performance Chemicals business unit. Thanks to the group, Inter'actifs strengthens its regulatory and quality assurance services and gains sourcing capabilities.

Inter'actifs keeps its own image. The current technical and sales team remains dedicated to the follow-up of development projects.

## Anti-ageing for hair

The hair, as well as the skin, are victims of ageing and one of the major causes is oxidative stress. This phenomenon alters the fundamental composition of the skin, scalp and hair leading to changes in texture and pigmentation, dryness and premature ageing.

Phytessence French Oak from Crodarom as a concentrate of antioxidant molecules, neutralises free radicals and reduces the harmful effects of oxidative stress involved in skin and hair follicles ageing.

The place where hair grows, follicles, are the target of radical peroxide attacks which cause bleaching and loss of vitality of the hair and the slowdown of its growth.

The protective capacity of Phytessence French Oak is highlighted in the human hair follicle cells submitted to oxidative stress induced by a lipid peroxide, the linolein hydroperoxide (LOOH),  $p < 0.01$ .

Essential constituents of cellular



membranes, lipids are very sensitive to oxidative stress induced notably by ultraviolet A rays, the role of which has long been underestimated in dermal ageing and is today recognised as vital.

The protective capacity of Phytessence French Oak is determined by measurement of oxidative stress induced after skin exposure to the UVAs,  $p < 0.01$ . Compared to the placebo cream, skin application of Phytessence French Oak at 3% reduces the production of free radical by 34%.

## Additions for thickening and stabilising

Jeen International Corporation has announced the introduction of the Jeethix product line of thickeners.

The Jeethix line is a unique range of products positioned to provide both thickening and stabilisation benefits in a wide range of formulations. With technologies widely applicable worldwide, the versatile Jeethix products further demonstrate the continuing Jeen International commitment to provide a complete functional ingredients portfolio. Composed of four initial products, the Jeethix series includes acrylamide, acrylate and taurate copolymer technologies. The flagship product, Jeethix 305, is a polyacrylamidebased liquid designed for aqueous formulations.

Pseudoplastic and non-thixotropic, use of Jeethix 305 results in reduced formulation viscosity with shear stress and instantly returns to initial viscosity upon standing.

Jeethix 305 can be used at a wide pH range of 2-11 and exhibits excellent high temperature stability. Jeethix T is a unique sodium acrylate/sodium acryloyldimethyl taurate copolymer which requires no neutralisation and swells quickly in water to provide outstanding thickening across a wide pH range. Jeethix 980, a carbomer, along with Jeethix SP round out the initially launched products. Both are based on acrylate technology and provide excellent thickening and stabilisation attributes in a wide range of formulations.

## Italian partnership announced

TRI-K Industries has announced its partnership with Omnicem as its exclusive distributor in the Italian market. Omnicem will distribute TRI-K's line of cosmetic proteins, natural actives, biotechnology products and other specialty ingredients for the cosmetic & personal care market.

Omnicem, located in central Italy, is focused on the personal care market and has many years of experience in the promotion of proteins and other specialties. With a laboratory, sampling facility and a warehouse near Genoa, Omnicem is the most recent addition to the TRI-K network of partners throughout Europe.



## Natural tanner unveiled

Symrise has launched a natural tanner SymBronze1659. The new, natural ingredient is derived from a sustainable and renewable source: the marine water microalgae *Isochrysis galbana* var T.ISO. It reliably enhances the pigmentation of the skin. The proven efficacy includes sunless self-tanning and an accelerated tan during UV exposure. SymBronze 1659 can be used in many cosmetic applications like sunless self-tanning creams as well as products to prepare the skin for the bikini season.

SymBronze 1659 significantly decreases the tanning time. Without exposure to UV rays, SymBronze 1659 provides a most natural looking tan. The effect actually lasts longer and looks much more natural than that of traditional self-tanners on the market. In after

sun products it prolongs the tan. In combination with sun filters, its safe base-tan helps minimising the risks associated with long-term sunbathing.

"Symrise has built a strong expertise in natural and safe skin toning over the past years", says Dr Marielle Le Maire, global product director Cosmetic Ingredients at Symrise. "SymBronze 1659 is the result of long-term research collaboration with our partner Cotech Srl. With this product, we are also extending our range of naturals and sustainably sourced ingredients. Thus, we are addressing several consumer concerns simultaneously. We see plenty of potential in this versatile approach and will come up with more inspiring ideas in the future."



## New three-headed TEWL instrument

The Tewameter, manufactured by Courage+Khazaka, is not only the most widely acknowledged instrument for the measurement of the TEWL and the barrier function of the skin, but is furthermore used for measurements on the International Space Station ISS. Moreover, the Tewameter Triple TM 330T is now available comprising three measuring heads and offering a multitude of advantages.

With one probe measurements on three neighbouring skin areas can be done simultaneously under the same surrounding conditions.

The probe with three heads is especially suitable for applications where large areas are measured (e.g. perspiration studies).

Increased accuracy of measurement is due to averaging of the three values of the independent measuring heads.

The instrument offers easy handling with the possibility of flexible adjustment of the single probe heads as well as the integration of the probe into the Multiprobe Adapter System.

## New intense deep black

Iron oxides are widely used in decorative cosmetics. Dark or bluish black mascara, grey eyeliner, red rouge or red lipsticks – all of these products can contain iron oxide pigments for coloration. The German specialty chemicals company Lanxess offers for such cosmetic applications a new black pigment within their high purity Z-Grade pigment range.

In all products for decorative cosmetics compatibility with the skin is of utmost importance. Bayferrox Z grades are specially developed for such applications, where coloured products are in direct contact with human skin. All Lanxess inorganic pigments are non-hazardous, safe, colour-stable and non-allergenic. In chemical terms, they are comparable with their natural counterparts. However with regard to their colour, they are superior to naturals because of



their higher purity and their particle morphology. The new product Bayferrox 360 Z QE 88 is a synthetic high-purity black iron oxide manufactured from selected raw materials with an extra purification step in the production process. The product complies with the requirements of FDA 21 CFR 73.2250 standards and regulation (EC) No 1223/2009 on cosmetic products, section E172 for iron oxides.

## New line of sensory-driven emollients

Croda Inc is broadening the ability of personal care formulators to engineer product aesthetics with the launch of the first in a line of sensory-driven emollients, Sensemol LST. This new, multifunctional, ether-based emollient offers an exceptionally light feel and high degree of skin spreading, making it ideal for a multitude of formats from colour cosmetics to antiperspirants. With the addition of this differentiated emollient and its unique sensorial benefits, Croda explained that they are giving their customers the ability to further customise the aesthetics of their formulations.

Croda asserts that a consumer may initially purchase a product because of functional label claims, but the aesthetics of the formula and

the experience of using it will ultimately determine the decision whether to purchase again. Because the after-feel of a skin cream leaves a lasting impression, the choice of emollients is an important factor for consideration. The ability of Sensemol LST to reduce tack and leave a light, dry feel on skin makes it the perfect option for any number of skin care applications including liquid foundations. In addition, this product is an excellent pigment-wetting agent, demonstrates a high degree of pH tolerance and can reduce the whitening effect of antiperspirant salts.

In the process of engineering emulsion aesthetics, the emollient is the finishing step that affects the final feel of the formula on the

surface of the skin. The other important factor in this process is the emulsifier, which affects the initial feel of the formula, including the pick-up and physical application of the product to the skin. Croda's emollient offerings are a fitting complement to their broad range of unique emulsifiers. In 2012, the company launched Sensification – the science behind sensory innovation, an easy-to-use system that allows formulators and marketers to navigate the complex landscape of sensory descriptors in a clear and defined way. Croda claims that through the selection of the desired emulsifier and emollient attributes, a formulator can align the product positioning with the consumer's sensory experience.