

# in-cosmetics® formulation summit

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London • 25-26 October 2017

## PROGRAMME 2017

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## DAY 1 – BIOTRANSFORMING BEAUTY

Time	Session information
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09:00 – 09:15 **Opening remarks – Microbes producers & agents in beauty? ‘Scratching the surface’**

With all this talk about the Microbiome, what does your facial microbiome look like? The opening remarks of this year’s in-cosmetics Formulation Summit, – is a brief introduction to the role of microbes in beauty.

- Discovering your personal microbiome
- Preserving products while protecting the microbiome
- Using next generation sequencing technologies to profile microbial communities

Chair: Dr. Barbara Brockway, Director, Personal Care, **Applied DNA Sciences**

## SESSION 1 – MICROBES FERMENTING BEAUTY

09:15 – 10:00 **Bio based cosmetics – Science creating value to sustainable ingredients**

The summit explores the legacy of one iconic brand focussing in on its history and the brand’s ethos that converts users into devotees.

- What being sustainable means to Natura and the challenges behind
- Value to natural ingredients applying technologies like genomics, proteomics and metabolomics (some results)
- Comparison between natural ingredients and specific microorganisms either in end points related to skin aging and skin protection
- Challenges for the future in our industry

Speaker: Alessandro Mendes, Innovation Director, **Natura**

10:00 – 10:30 **Fermenting consumer interest in the microbiome**

Prebiotics, probiotics, postbiotics... they’re all familiar terms in the food & drink market but less well known in beauty and personal care. Nonetheless, the growing popularity of fermented skincare products is helping to establish in consumers’ minds the benefits of nurturing "good bacteria" in the microbiome. Mintel’s director of innovation and insight, Vivienne Rudd, shares the latest research into consumer interest in fermented beauty products and shows how recent product launches are feeding this interest with new ingredients, claims and formats.

Speaker: Vivienne Rudd, Director of Innovation & Insight, Beauty & Personal Care, **Mintel**

10:30 – 11:00 **Coffee & networking break**

11:00 – 11:30 **Korean fermented products energise the market**

The beauty world looks to Korea for inspiration and Koreans have highlighted traditional fermented materials in many innovative approaches. An array of products from masks to creams and makeup to deliver fermented actives to energise, detox, purify, regenerate... Discover & experience during this presentation:

- How are these traditional materials being used in Asia?
- How Asian beauty products deliver innovation secured in the past?
- What are the new ingredients and benefits highlighted nowadays related to pollution, environmental aggression and aging?
- How inspiring are fermented ingredients for the rest of the world?

Speaker: Florence Bernardin, Founder & CEO, **Information et Inspiration**

## SESSION 2 – MICROMANAGING HEALTHY SKIN & HAIR

### 11:30 – 12:00 **Revealing the skin microbiota**

Seeing is believing. For far too long the microbiome world we carry around with us has been the 'elephant in the room'. Text book diagrams rarely show the presence of microbial communities on the skin, yet all of us know that they play an important role in the skin's well-being. To help clear up confusion and inspire 'intelligent' new product development, this session will give delegates:

- An overview of the skin microbiota
- A knowledge of skin ecology, which is essential for understanding the formation, composition and control of the skin microbiota
- An appreciation of the composition of the skin microbiota at different body sites

Speaker: Prof. Michael Wilson, Professor of Microbiology, *University College London*

### 12:00 – 12:20 **Biofilms and their importance in skin ecology**

Every time you clean your teeth you remove a complex community of microbes held in position with biofilm. The extracellular polysaccharides making up biofilms are already used in cosmetics to provide protection and moisturisation. In this session, we will examine:

- The role of biofilms in skin's complex ecology
- Extracellular polysaccharides as actives
- A look in to the future in formulating with the microbiome

Speaker: Dr. Lawrence Davies, Senior Microbiologist, *Perfectus Biomed*

### 12:20 – 12:40 **Keeping scalp microbiota in check**

People suffering from dandruff scalp's microbiota have lower levels of Propionibacterium acnes and significantly higher levels of Staphylococcus epidermidis and Malassezia restricta. Developing products to rebalance the scalp microbiota could be the route to clearer scalp and the end to bad hair days? In this session, we learn more about:

- The composition of the scalp microbiota
- How an imbalance results in 'bad scalp and hair days'
- And how to manage scalp microecology

Speaker: Dr. Cécile Clavaud, Research Engineer, Open Research, *L'OREAL Research & Innovation*

### 12:40 – 14:00 **Networking lunch**

## SESSION 3 – SHOWCASE

### 14:00 – 14:20 **Tuning water-in-Silicone Systems to maximize the release rate and skin penetration of actives**

Although the diffusion of a molecule through the stratum corneum (SC) depends on its concentration, physicochemical properties, degree of solubility, interaction with skin components, potential metabolic and photochemical transformation within the skin, the composition of the topical formulation influences greatly both the bioavailability and release rate of the active from the formulation.

Dow demonstrated that a formulation can be tuned around different classes of silicone-based excipients to maximize the release rate and skin penetration profiles of anti-ageing actives formulated into water-in-silicone systems.

Speaker: Marc Eeman, Skin Care Application Designer, *DOW*

14:20 – 14:45 **Intracellular 'housekeeping' – Autophagy the new approach to antiaging**

Autophagy is a cellular mechanism for survival and waste management system when cells are in high stress, out of nutrients, or through ageing. Autophagy has been observed in all kinds of human cells including skin cells. Many have reported that lack of autophagic process in various human cells can lead to metabolic diseases such as type 2 diabetes, Alzheimer's disease, and certain types of cancer, and that inducing autophagy could become a new solution for the treatment of the above symptoms.

Speaker: Keedon Park, CEO, **Incospharm Corporation**

**Autophagy in practice**

As companies look to this emerging mechanism for keeping skin healthy, we hear how one brand has proved efficacy in its popular Korean skin care.

Speaker: Sekyoo Jeong Ph.D., Research Director – **NeoPharm Co., Ltd.** Assistant Professor, Department of Bio-Cosmetic Science, **Seowon University**

14:45 – 15:00 **The Microbiome demonstration experiment sponsored by Solabia**

Speakers:

Dr Barbara Brockway, Director Personal Care, **Applied DNA Sciences**  
Stephen R. Schwartz, President & CEO, **IRSI**

**SESSION 4 - CONTRADICTIONS: PRESERVE PRODUCT AND MAINTAIN MICROBIOME**

15:00 – 15:25 **A close look at preservatives, prebiotics and probiotics for a healthy microbiome**

- Is the delicate balance of the microbiome inevitably upset by the product's preservatives?
  - How can formulators walk the tight rope between preserving products and encouraging the microbiome?
  - Just because a material is a prebiotic or probiotic for the gut does that make it useful in topical products?
- We take a fresh look at preservatives and offer answers to these fundamental questions.

Speakers:

Kit Wallen-Russell, Director, **Pavane Research Centre**  
Nick Wallen, Co-Creator, **JooMo**

15:25 – 15:45 **Can we use live yoghurt? Important regulations & constraints on Biotransforming Beauty**

Regulations are strict about cosmetics being safe and living up to their claims. In this session, we face the issues of:

- The enigma of Probiotics (with live microbes) passing the challenge test
- Living up to the claim
- Probiotics & the skin health

Speaker: Rajat Narang, Head of the Global Regulatory Affairs & Technical Team, **Richards & Appleby Limited**

15:45 – 16:15 **Coffee & networking break**

**SESSION 5 – ADOPTING AND ADAPTING BIOTRANSFORMATIONS****16:15 – 16:45 Probiotic skincare technology – Not fake science**

How BeBe & Bella with their background in pharmaceuticals, with an emphasis in nutritional supplements and probiotics, have been leading the way, biotransforming beauty since 2013 with their probiotic-based skin care.

- Inspired by nutritional supplementations
- Patented microorganisms
- Supporting the claim that probiotics can improve skin health and beauty

Speaker: Allison Krebs-Bensch, CEO & Co-founder, **BeBe & Bella**

**SESSION 6 – MICROBIOME SEQUENCING TECHNOLOGIES & CONSTRAINTS****16:45 – 17:15 Validating microbiome claims – Including the latest DNA techniques**

Understanding the microbiome interaction and impact on the human body has become of more interest in recent years. This is true for the personal care industry but interest on the microbiome has also attracted other industries such as processed food, agriculture, pharmaceuticals or even space travel. Eagle Genomics will expose how advanced DNA sequencing analysis techniques are helping in the understanding the microbiome ecosystem and produce scientific claims that in some cases could benefit product marketing and promotion.

Speaker: Abel Ureta-Vidal, Chief Executive Officer, **Eagle Genomics**

**17:15 – 17:45 The Experts Panel - How can we put into practice the new-found knowledge without breaking rules?**

Moderator: Marie Alice Dibon, Founder, **Alice Communications Inc.**

Panellists:

Veronika Oudova, Co-Founder, **S-Biomedic**

Marc Eeman, Skin Care Application Designer, **DOW**

Prof. Michael Wilson, Professor of Microbiology, **University College London**

Kit Wallen-Russell, Director, **Pavane Research Centre**

Rajat Narang, Head of the Global Regulatory Affairs & Technical Team, **Richards & Appleby Limited**

Allison Krebs-Bensch, CEO & Co-founder, **BeBe & Bella**

**17:45 – 18:00 Closing remarks and gold sponsor's address**

Chair: Summary and results of the running experiment: *How did your skin microbiome look?*

**18:00 – 20:00 Drinks reception**

## DAY 2 - FORMULATING WITH NATURE

Time	Session information
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08:50 – 09:00 **Opening remarks**

Chair: Dr. Barbara Brockway, Director, Personal Care, *Applied DNA Sciences*

### SESSION 1 – NATURE IDENTICAL: REPLACING PETROCHEMICALS WITH BIOTECHNOLOGY PRODUCTS

09:00 – 09:45 **Green replacements for materials derived from petrochemicals**

The fastest way to making products greener is to replace materials derived from petrochemicals with chemically identical materials made through biotransformations such as through fermentation. Solvents, Surfactants and now fragrance notes are being produced on a commercial scale by fermentation. In this session, we celebrate the successes that are making the biggest impact on greening our industry.

Speaker: Eric Althoff, Co-Founder, *Arzeda*

09:30 – 09:50 **Patents - an excellent way of finding out about 'new natural' materials from biotechnology**

There are an increasing number of 'new natural' materials designed as replacements for familiar functional cosmetic materials. In this session, we see how patents provide a way of exploring these new natural materials and also provide guidance on how to:

- Read, understand and make use of patents
- Stay ahead of the competition – patents as information and protection
- Avoid legal problems – preventing infringement of others' rights

Speaker: Julie Barrett-Major, Consulting Attorney, *A.A. Thornton & Co.*

09:50 – 10:10 **Using key biotransformed cosmetic ingredients**

How they are being used. Brand story ... Experts help formulators make more of the new, biotransformed materials?

- How should we be using the most popular biotransformed ingredients.
- Multifunctional or just a one for one replacement?
- Looking for synergies

Speaker: Margo Marrone, Co-Founder, *The Organic Pharmacy*

10:10 – 10:40 **Coffee & networking break**

### SESSION 2 – FORMULATING STRATEGIES

10:40 – 11:00 **Synthetic biology**

Synthetic biology is a term now being used in personal care. It is an emerging field that applies engineering principles to the fundamental components of biology and is the thinking behind the processes leading to many of the 'new naturals' discussed in the previous session.

Speaker: Dr Stephen Chambers, *Imperial College London*

11:00 – 11:20 **Peptides/Enzymes to the rescue**  
Peptides turned out to be far more than a trend. Along with enzymes they are amongst the most powerful tools for Biotransforming beauty. In this session, we hear how they are being used in personal care to produce the most efficacious beauty products.

Speaker: Prof. Ian W. Hamley, Diamond Professor of Physical Chemistry, *University of Reading*

11:20 – 11:50 **Biomimetic strategies leading to greater innovation**  
Biomimetic strategies leading to greater innovation: The living natural world's elegant and sophisticated chemistries are a rich source of innovative new cosmetics formulations that could, and have, improved performance while also making cosmetics more sustainable. Mark Dorfman will show how biomimicry systematically taps into nature's strategies to uncover and apply Life's design principles and deep patterns to the development of effective biomimetic solutions.

Speaker: Mark Dorfman, Biomimicry Chemist, *Biomimicry 3.8*

### SESSION 3 – LEARNING FROM CELL BIOLOGY & PHARMA

11:50 – 12:20 **Bioavailability & optimum delivery - Learning from Pharma**  
This presentation will discuss the necessity to understand the fate of the formulation components as well as the active once applied onto skin. Examples will be provided where the optimal vehicle for skin delivery is selected for the active based on matching polarity/solubility. Finally, the emerging importance of techniques that probe how the vehicle distributes in and on skin is highlighted.

Speaker: Majella Lane, Director, Skin Research Group, *UCL School of Pharmacy*

12:20 – 13:30 **Networking lunch**

13:30 – 13:50 **Marine inspiration – algae and UV protection**  
Fast growing algae protect themselves from UV damage with mycosporine-like amino acids (MAAs). It has been proposed that these natural sunscreens could 'biotransform' SPF products. As we move closer to their commercialisation, the Summit asks the academics to tell them more about these and the other algae derived materials, which are already here or are likely to be coming to the beauty industry soon.

Speaker: Bethan Kultschan, PHD Student, *Swansea University*

13:50 – 14:10 **Bio-protection from polluting nanoparticles**  
Since last year's summit the market for pollution protecting products has mushroomed. The fine nanoparticles have been shown to cause some of the worst damage. In this session, we look at natural approaches to protection and removal on polluting nanoparticles.

Speaker: David Delpont, Global Head of Education, *REN Clean Skincare*

14:00 – 14:30 **Epigenetics and cell regulation explained and tamed**  
Understanding the mechanistic underpinnings of epigenetics is essential for extending its application to complex systems such as those relevant to the cosmetics industry. In this session, delegates will be given a clear explanation of epigenetic mechanisms. They will hear how these dynamic mechanisms interpret the genome and regulate the function of genes in different tissue types. The relevance of the epigenome in environment: genome interactions will be considered in the context of cosmetic products.

Speaker: Rebecca Oakey, Professor of Epigenetics, *King's College London*

14:30 – 14:50 **Combining Artificial Intelligence and DNA analysis to accelerate the discovery of new actives from nature**

Technology advances are disrupting industry after industry and no technology threatens to be more disruptive than Artificial Intelligence; from driver-less vehicles and replacing the family doctor to the more extreme visions of self-aware robots intent of destroying the human race. Nuritas focus is on human health and using the combination of artificial intelligence and genomics to unlock natural Bioactive peptides with extraordinary health benefits.

Speaker: Neil Foster, Head of Strategic Partnerships, **Nuritas**

14:50 – 15:20 **Coffee & networking break**

15:20 – 15:40 **Circular economy applied to natural & organic cosmetics enables a holistic approach to ageing**

The use of sustainable resources is a pressing issues in all industrial fields and even more so in the cosmetic industry. The use of waste materials, either of botanical origin or from the food industry, is opening new possibilities in the development of raw materials and finished goods that are not only efficacious, but also more sustainable, renewable and green. On the other side, there is a strong movement towards products that favour a better & more gracious ageing with a strong focus on the emotional aspects of life, cosmetic products included.

The Author will present a case study showing how the use of a sustainable ingredients derived from botanical waste enabled a more holistic approach to skin ageing.

Speaker: Dr. Andrea Mitarotonda, CSO, **Neal's Yard Remedies**

15:40 – 16:10 **Closing remarks & group discussion**

Experts exchange views and share their experience

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