

In-Depth View of recent Advances in "Scientific-Biological-Cosmetics"

A conversation with Irena James, Vice President of Product Development at YG Laboratories

EURO COSMETICS: *Irena, tell us something about your background and the path that led you to the cosmetic industry.*

Irena James: Over the last 25 years I've been involved in many different aspects of the skincare industry. My background was deeply rooted in traditional European herbalism, passed down to me from my great-grandmother. However, it was my own skin struggles and fascination with biochemistry and skin physiology that has shaped my educational and career choices. I studied medical, agricultural, and cosmetic sciences, esthetics and skincare therapy and teaching methodology for adult learners. Over the past two decades, I have been dedicated to increasing the awareness of advancements in the Cosmetic Sciences and have educated generations of students, clients and industry peers on skin care ingredients, treatment protocols, and brand development.

Product and protocol development have also been a large part of my career and I continue to actively develop high performance skin care formulation for various skin care markets.

I have also been a hands-on skin care therapist, Professor of Esthetics at Seneca College in Toronto, Canada, and Director of Business Development for Spa products and Devices in the EU. I am currently VP of Product Development at YG Laboratories and Instructor at the UCLA Extension Cosmetic Sciences Program and a cofounder and partner in several skin care brands.

EURO COSMETICS: *How did you get involved in product development and running an up and coming cosmetic company?*

Irena James: Fifteen years ago, I was teaching fundamentals of cosmetic chemistry at Seneca College in Toronto, Canada, when I became familiar with the published work of America's most influential ingredient



Irena James

guru, Rebecca James Gadberry. She was the CEO of YG Laboratories, skin care development and manufacturing facility in California and the Senior Instructor of UCLA Cosmetic Sciences Program. I frequently relied on research Rebecca published in articles, newsletters and columns as the most relevant, unbiased and accurate source of information. Her writing bridged the gap between the scientific community and the professional skincare industry. I reached out to Rebecca and asked to join the educational department at YG. She responded with interest and I was hired as YG's Director of Education. My position also included Product and Brand Development for the company and its clients. I then became active in the Society of Cos-

metic Chemists and focused intensively on researching new ingredient technologies. I also collaborated on the development of new formulations and protocols both for skincare and medical professionals, often utilizing devices and electrical treatment modalities. Eventually my work family became my real family when I married my mentor's son, YG's President Nik James in 2013. Shortly after, Rebecca retired from her position at the company I stepped into the role of VP of Product Development and VP of YG Laboratories.

EURO COSMETICS: *How long have you have been teaching cosmetic sciences at the UCLA Extension and how did that come about?*



Irena James: I have been teaching at the UCLA Extension since 2010 and this part of my career truly remains one of my major passions. I started teaching in my early twenties in Canada to both national and international audiences, and always enjoyed sharing fascinating facts ranging from new discoveries in cellular biology to ingredient technologies that make up today's skincare formulations. My teaching also extended to this day at the UCLA Extension which is one of the largest and most comprehensive continuing education providers in the US. The position combines a top-tier academic approach with practical, real-world applications. It is a natural fit for my mix of expertise, education and work experience.

EURO COSMETICS: *What type of courses do you teach at UCLA Extension?*

Irena James: The Cosmetic Sciences Program offers 2–3 courses every year for chemists and non-chemists who wish to understand more about cosmetic ingredients, skin conditions they treat, and the regulations affecting them. These courses also offer a foundation from which skincare professionals and beauty entrepreneurs – regardless of scientific background

– can understand current and future advances in skincare. Examples include: ingredient technologies, basics of skincare formulation development and essential compliance requirements regarding product labels, marketing and product performance claims. Some courses also provide an overview of the causes, physiology, and biochemical processes of common skin conditions that bestselling cosmetic formulations are developed to address.

EURO COSMETICS: *Your presentation at in-cosmetics North America last year, to a packed room, garnered significant industry attention. What was it that had the audience so interested?*

Irena James: My presentation included information on innovative and impactful trends in skincare, specifically research regarding skin's microbiome and the science behind the beauty sleep. I also discussed our changing attitudes toward sleep and nighttime skincare routines resulting from our technology use and new sources of light exposure which can have surprising effects on our Circadian Rhythms.

Modern habits of our modern civilization that frequently deviate from its rhythm,

making day out of night, are some of the most recent difficulties our bodies and our skin are facing today. Our dependence on the use of mobile devices, laptops and tablets that emit high energy blue light during the night has increased dramatically in recent years. This phenomenon has caused greater disturbances to our rhythm and melatonin production. We've known for a while that Circadian Rhythms and Clock Genes that control them have been of crucial importance for the function of every cell in our body. These biological phenomena affect not only our health, but also the ability of our skin to restore at night and defend itself efficiently during the day. The most significant research supporting the popular concept of the "Beauty Sleep" has recently been validated in the most profound way, as three American researchers have received Nobel Prize in Physiology and Medicine for their discovery of the precise genes and proteins involved in the self-regulation process of our internal clocks and their mechanisms.

EURO COSMETICS: *Please tell us some more about your use of technology that is associated with the recent Award of the Nobel Prize on the circadian rhythm.*



Irena James: Understanding how daily stressors, including pollutants, jet lag, increased technology use and sleep deprivation affect our circadian clocks is crucial in utilizing appropriate technologies in new development. For example, we now understand that blue-light exposure at night dramatically reduces melatonin production. Without melatonin our skin's ability to detoxify and repair at night diminishes dramatically. Incorporating blue light protection in both day and night products as well as melatonin boosters in night care formulations may be one of the most direct ways of addressing these issues. There are also ways to apply the principles of "Chrono-Pharmacology" to skin care development by emphasizing the timing of the application of skin care products to achieve maximum results. This approach would involve selecting those actives that best correspond with the varying function that our skin exhibits at certain times of the day. Boosting skin's exfoliation at night when natural cellular turnover takes place; or choosing actives that reinforce both the skin's barrier function and energy levels during the day may also present an effective approach to resynchronizing our cell's circadian rhythmicity.

EURO COSMETICS: *Where do you think the industry is heading?*

Irena James: Like all other industries, the skin care industry is affected by advances in technology. This natural evolution re-

sults in new ingredients, devices and modalities becoming available more rapidly than ever before. New testing methodologies are allowing us to better understand how ingredients interact with the skin cells, but also with our genes and skin's microbiota. As a result, new frontiers open up and result in new ingredient approaches. A deeper understanding of chronobiology and its effects on our skin will lead to new opportunities in product development and in turn we will be able to produce formulations with more precise and profound activity on the skin. New apps will also be allowing consumers to become more involved in the skin analysis and

product selection process. DNA-based skin care involving genetic testing and lifestyle assessment that results in the personalized product creation will also become more readily available and affordable.

EURO COSMETICS: *What are the most challenging and rewarding parts of being in the skin care industry?*

Irena James: The most challenging aspect of skin care product development is keeping up with the latest ingredient introductions and ensuring that the most viable technologies are included in next generation formulations. Many new technologies are becoming available daily, and maintaining a balance between those ingredients that have already gained traction and those that clients are familiar with and trust is a challenge. Incorporating new, exciting ingredients that are yet to spark consumer's interest is becoming more difficult when looked at from one view. However, the exponential sharing done by social media is significantly impacting this challenge. Fast-paced innovation is also the most rewarding part of being in this industry, as many new solutions are becoming available for previously hard-to-treat skin conditions and indications.

EURO COSMETICS: *Thank you for the conversation.* ■

