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May Shana'a,
Beiersdorf

“THE ART OF INNOVATION”

VIP of the Month

DR ANDREA MITAROTONDA
ORIFLAME

Experimenting as a vital prerequisite for innovation





THE ART OF SKIN CARE INNOVATION

Interview | May Shana'a explains why an innovator in skin care has to be more than just a scientist.

► **Interview with:**
May Shana'a, Senior Vice President
Research and Development
Beiersdorf, Hamburg, Germany
www.beiersdorf.com

COSSMA: You first worked in R&D for home care at Unilever. What made you join the cosmetics industry and what are the main differences in terms of R&D?

May Shana'a, Senior Vice President, Beiersdorf: Changing categories was simply an opportunity to learn new things. I must admit that at the beginning I thought there is no difference

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between the different categories – chemistry is chemistry. However, I soon learnt that even though the chemical principles might be the same, applications are extremely different. Dealing with living human skin versus cotton, wood or metal surfaces is simply incomparable. Apart from the obvious safety considerations, you have to be on top of the game in the field of science as well as understanding the human psyche. An innovator in skin care has to be both a scientist and an artist. He or she has to create functional products that are appealing enough to put on our skin or hair. The product has to deliver on the promise and must feel good, look good and smell good.

The package has to be both delightful and functional and the claims have to be aspirational, grounded in scientific proof but easily understood for every consumer by every consumer.

Personal care products have a high emotional element because we put them on us and the anticipation concerning the result is always high.

If you have sunburn or a bad hair day, that is not a good day. If your dishes are not so clean, you can clean them again. While science

is science, the difference is in the mindset.

What were the main challenges working as Vice President Global Skin Care for Johnson & Johnson and what were your major achievements there?

The main challenge joining a new company is always to understand what works and what does not work and to keep what is good and evolve the rest without causing a huge upheaval. There were a few challenges such as operating globally, addressing the needs of a portfolio of brands that compete in the same categories, and managing and changing a team that had not had an external leader for over a decade. The best achievements were creating a true global team and strong platform organisation in applied research, as well as attracting good, talented people, setting a skin care R&D strategy and securing the funds to deliver on the strategy. We delivered some unique technologies that are still paying off handsomely after so many years. That resulted in the great growth of the two largest brands, Neutrogena and Aveeno, to over one billion and half a billion dollars respectively.

What were the main challenges and your major achievements working as Group Vice President Technology and Growth Strategy for Ashland?

The biggest challenge for me was moving from making prod-

New scientific advancements in genetics or the human microbiome, artificial intelligence, sustainability or personalisation are key in **product development**

INNOVATIONS

In 2017 alone, **85 patents** were granted to Beiersdorf

Since the **end of 2015**, all of Beiersdorf personal care products have been **free of polyethylene particles**

ucts for a consumer to working on chemicals to sell to other businesses. It is a different mindset because this is one more step away from the application. The biggest achievement was to deliver a growth strategy and portfolio management process that did not exist previously. In addition, we opened much improved laboratories in England and India.

What, according to you, are the most striking differences between working for an ingredients supplier and a finished products producer?

The most striking difference is the closeness to the final product, to the application and to the consumer. Working in a chemical company is fascinating because on one day you might meet with a personal care company and on another with a cement or oil drilling company, a food manufacturing or agricultural company. The breadth of topics and the varied industrial challenges are fascinating, but as a developer, you never really know where your invention is applied. In a consumer product company, you see what you develop on the shelf, in your friends' and family's homes. It is very fulfilling to see when a thought or a concept becomes a real physical product that people all over the world choose to buy and use. Believe it or not, we become quite attached to these products and we protect and defend them as long as they exist.

What are currently the main challenges and your major achievements working as Senior VP R&D at Beiersdorf?

There is only one major challenge, and that is how to reinvent skin care. This requires the incorporation of all the new scientific advancements such as genetics, the human microbiome, the influence of artificial intelligence, sustainability or personalisation etc. How ▶



“AN INNOVATOR IN SKIN CARE HAS TO BE BOTH A SCIENTIST AND AN ARTIST”

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Beiersdorf has used no peeling particles made of polyethylene in any of its care products worldwide since the end of 2015

to let go of some of what made us successful in the past and replace it with technologies that we do not fully master yet. How to combine our internal strength with all the external knowledge that is accumulating at an unbelievable pace. How to evolve the culture that is excited about new possibilities to fully embrace the inevitable change.

Coming to achievements, I am happy to have taken over a strong technical organisation that is moving in the right direction. We have set new fundamentals that will help us deliver our vision of reinventing skin care. I am proud of enhancing our global reach by establishing more innovation hubs around the world. I am very proud of strengthening our external collaborations with scientific institutes, inventors and start-ups, not only through our Pearlfinders platform but also through our new accelerator program, and securing a fund to invest in companies advancing new scientific fields.

We have invested in new scientific fields that have passed some major milestones. Researching into epigenetics and into the human microbiome and its effect on skin health. Establishing a new team for material science with some fascinating approaches for deliv-

PRODUCTS

have to **deliver on the promise** and must feel, look and smell good

Cosmetic claims

have to be aspirational, grounded in scientific proof but easily understandable

LAUNCHES

200 new products are launched each year

Addressing the needs of a portfolio of **brands** that compete in the same categories is challenging

ering sustainability. We are also focusing on big data management and using the data for new scientific insights. Furthermore, strengthening our packaging organisation with new capabilities will help us change the game on delivery systems.

Could you please characterise your activities in R&D?

Our Skin Research Centre is one of the largest and most modern in Europe. Globally, we have R&D centres in Brazil, China, India, Japan, Mexico and the USA. Almost 800 people work for our company's R&D on a global level to study and meet regional skin care needs. In 2017, we invested 143 million Euro into our R&D activities. Our activities cover a multitude of disciplines starting with research into new scientific fields to delivering new products into the market. This of course covers all aspects of a product formula, packaging, claim creation and support, safety, quality, toxicology, consumer and clinical testing. R&D operates with a long-term strategic vision and all our activities feed into that strategy. Sustainability is a major topic as well as delivering highly effective skin and personal care products. In addition, we have a team that focuses on external collaborations and connect with start-ups and research institutes. Our regu-

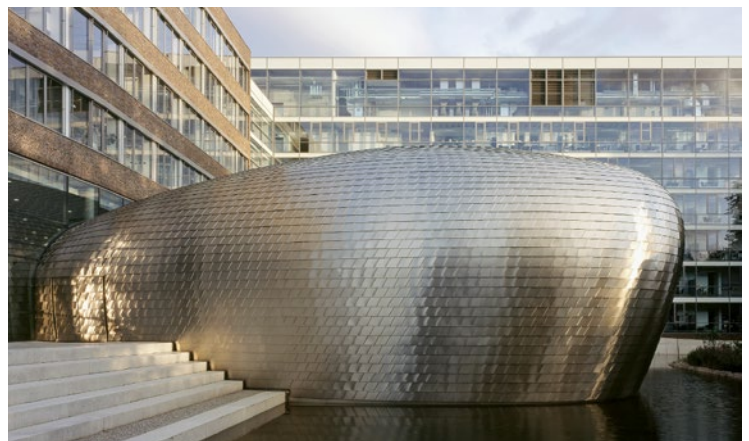
latory team keeps on top of all regulatory changes around the world and makes sure that we operate according to those regulations. We launch more than 200 new products each year and conduct nearly 1,800 consumer and clinical studies with our 44,000 volunteers all over the world. In 2017 alone, 85 patents were granted.

What is the procedure for a raw material to be included in a formulation?

At our company, safety comes first. Both human and ecological. In order for a new raw material to be declared safe and dermatologically beneficial, it undergoes a rigorous approval process. Every new material must endure a series of tests starting with the effect on cell cultures, to full skin replicas, in silico toxicological screening before ultimately being tested on human volunteers. We also conduct a thorough assessment on ecotoxicology before admitting the material into our material portfolio.

What is your approach to microplastics?

Microplastics in cosmetics and skin care are an increasing topic of discussion. In 2013, Beiersdorf decided to no longer use peeling particles made of polyethylene



Beiersdorf's Skin Research Centre is one of the largest and most modern in Europe

“THE ONE AND ONLY MAJOR CHALLENGE IS HOW TO REINVENT SKIN CARE”

May Shana’a, Senior Vice President Research and Development, Beiersdorf

(PE) in its care products, making it one of the first companies to take action in this area.

Since the end of 2015, no peeling particles made of polyethylene have been used in any of our care products worldwide. They have been replaced with more environmentally-friendly alternatives. We are also working hard to develop formulas for our rinse-off products without other microscopic, solid polymer ingredients by 2020. Additionally, we will also completely cease use of nylon as an ingredient in all our products by the end of 2020.

What have you done lately to optimise the sustainability of product packaging?

We continuously work to optimise our packaging in accordance with the sustainability principles of “avoid, reduce, reuse, and recycle”. In packaging development, we specifically develop alternative packaging solutions that are environmentally and resource-friendly. For example, our optimised packaging for Nivea In-Shower products saved approximately 20 tons of plastic last year, simply by reducing the wall thickness.

Another good example is changing the way our Nivea cream tins are produced. We have managed to reduce the total number of materials used for our tins by around 14t of aluminium per year.

Another good example is the change in our hair styling aerosol cans. Without compromising on quality, we switched all of our Nivea hairstyling product aerosol cans from a conventional solvent-based coating to a water-based exterior coating. Our eco-friendly exterior coating reduces the

amount of solvent used in the production process by up to 45%. This will result in a significant reduction in solvent use and ultimately CO₂ emission. We are currently looking at switching over other cans and tins to water-based coatings to further reduce our use of solvents.

Our plastic packaging is recyclable and in 2019, we will increase our use of recycled materials to further drive our sustainability agenda.

What have been your latest and most striking product innovations?

The best innovations in my opinion are those that are simple, easy to use and deliver on their promise. We are in so many categories that it is not easy to choose. There are many products that have been on the market for more than a year and are still highly innovative. From the most recent launches, Nivea sun “clothing protection” is great. It solves an industry problem that we have struggled with for decades. Another recent product is Nivea Micellar hair shampoo. It is very basic, very simple. It just gently cleans your hair. Nivea Q10 + C product for face care. I love this product because it builds on Q10 and enhances the benefits. The product, the communication and the results are all excellent and very convincing. Aquaphor spray, launched in the USA, is a superb innovation. Based on a deep insight that people with problematic skin have difficulties spreading some of the thick therapeutic skin care products, the product delivers the care of the original product in a convenient way for the people who need it most. □

Additional information can be found on the Internet – see Internet panel



Beiersdorf changed the way the Nivea cream tins are produced and reduced the number of materials used for the tins



For the optimised packaging for Nivea In-Shower the wall thickness was reduced



Saving packaging material is key