

“The concept of anti-ageing should, therefore, include youth preservation as part of its objective”

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Operating in approximately 50 markets worldwide in the Americas, Asia, Europe, Africa and the Pacific, Nu Skin is revolutionising the industry with products that offer comprehensive anti-ageing concerns. By targeting the ultimate sources of ageing, Nu Skin's ageLOC products dramatically diminish the appearance of ageing. Backed by more than 35 years of scientific research, Nu Skin develops innovative products including Nu Skin personal care, Pharmanex nutrition and the ageLOC anti-ageing brand, which includes an award-winning line of beauty device systems. To find out more about the company's expertise in the area of anti-ageing, BioSpectrum Asia spoke to Joseph Y. Chang, PhD, Chief Scientific Officer and Executive Vice President- Product Development, Nu Skin Enterprises. With over 35 years of experience in the pharmaceutical and dietary supplement industries, Dr Chang enjoys a comprehensive knowledge of both of these industries and serves as a member of the Executive Committee for Nu Skin Enterprises.

What are your views on the growth and challenges of the anti-ageing market in Asian countries?

With the success of medicine and new technologies, people are living longer. With the rate of ageing in Asian countries accelerating and exceeding the rate of ageing in the western world, the anti-ageing market in Asia will grow to around \$120 billion by 2030. And skin care products that address skin ageing form a significant percentage of this market.

An integrated approach of modern and ancient medicine to beauty and wellness is attractive to consumers. But the holistic approach of ancient medicine system, for example Ayurveda medicine, does not have enough scientific understanding of the ingredients that are used in Ayurvedic medicine. In order to extract more value, a scientific evaluation could increase its appeal to a wider audience.

Whilst anti-ageing products have a strong appeal to an older population, younger consumers are more attracted to products that can preserve their youthfulness. This is likely to be a growing trend in the future. The concept of anti-ageing should, therefore, include youth preservation as part of its objective.

How do you foresee the intervention of science and technology in anti- ageing in the coming years?

Looking for the sources of ageing and identifying the cause of ageing is vital. Intervening at an earlier point of ageing will lead to a better outcome. More research and understanding of the overall expression of the genes, alongside identifying and targeting gene expression patterns, specific genes which influence aspects of ageing, is required.

When it comes to the healthy ageing of our skin, modulating sun exposure plays an important role. Oxygen free radicals generated by the ultraviolet (UV) rays cause skin wrinkles because such free radicals can damage the two structural proteins, Collagen and Elastin, which confer elasticity and firmness in healthy skin

Skin aging occurs differently between Asians and Caucasians. For example, an uneven complexion is usually an early sign of ageing among Asians whereas Caucasians tend to develop wrinkles earlier instead. Identifying certain clusters of genes and addressing gene expression responsible for such changes is something that scientists are still trying to understand.

Nu Skin had collaborated with scientists from the University of Wisconsin in the US to expand the genetic understanding of ageing. To live healthily and have good quality of life is something which we live by at Nu Skin.

What role does metabolic health play in the process of healthy ageing? How is Nu Skin exploring this link?

Metabolic health is our body's biochemistry that impacts key indicators like cholesterol and triglycerides, insulin sensitivity, blood pressure and blood sugar. It comprises a full range of biochemical processes that affect every part of our body. Stress, erratic work hours, poor sleeping habits and irregular eating can throw our body chemistry out of sync. Unhealthy lifestyle choices can also affect one's body by impacting vital organs health, producing free radicals, creating metabolic imbalance, and gut health.

A seven-year research effort exclusive to Nu Skin found anthocyanins to have a salutary effect on metabolic health. These are powerful compounds with potent antioxidant effects found in dark purple fruits and vegetables. In addition to their antioxidant properties, some anthocyanins also support healthy inflammatory balance and immune benefits. Research revealed that certain anthocyanins such as cyanidin and delphinidin are the most effective types of anthocyanins at protecting cells from inflammatory-induced damage. Some of the superfoods that are rich in cyanidin and delphinidin are black currants, bilberries, and black rice. The anthocyanins from these three superfoods support better overall metabolic health.

Metabolic health is highly dependent on a healthy lifestyle such as doing regular exercises, having a healthy diet, getting adequate sleep, eating lots of fruits and vegetables and stopping smoking. The earlier you adopt a healthy lifestyle, the better it is for you. There are a lot of healthy bacteria (aka probiotics) in our gastrointestinal tract which help to promote a healthy microbiome. There is an increasing understanding, for example, that a healthy gut boosts system-wide immunity, which is an important aspect of healthy ageing. This is illustrative of the importance of orchestrating a holistic approach to overall body's health and healthy living in general.

What new products are in the pipeline at Nu Skin for the Asian market? What are the major future plans?

A Nu Skin product related to promoting metabolic health has already been launched in some markets. Nu skin products undergo a rigorous process to ensure a safe and effective product. Part of the product development pathway at Nu Skin, is a six-step process, called 6S process, to check the natural ingredients which are being used in the products. This process ensures validation of the safety and efficacy of our products.

The company is also fully committed to developing products that are suited for each region of the world. Nu Skin has established a leading position in beauty devices and has launched several devices that employ proprietary, clinically proven technology to promote healthy skin. At Nu Skin, we believe an integrated approach, beauty from the inside and beauty from the outside, is optimum for beauty and wellness. Clearly, topical skincare products when used with nutritional supplements, are likely to provide better benefits, as shown recently by our research.

Are you planning to expand your presence in Asia with new R&D centres?

Nu Skin has R&D centres in US and China at present. As of now, there are no plans to invest or expand our research footprint further although collaboration with global research institutions is surely something that we will continue to do.

Do you see a talent crunch in the field of science, especially related to anti - ageing expertise? How can we improve the skilled workforce in this domain?

There is a huge demand for anti-ageing products. At Nu Skin, there are already more than seventy-five qualified scientists who are focused on anti-ageing research. Globally, there are many scientists who are studying ageing in academic centers. Japan is leading and setting an example by doing extensive research. The demand is so high that even Google has established a company to study ageing. So, the interest in anti-ageing is growing and something that has a bright future.