

ABSTRACT

How to obtain skin whitening in a safe and effective way?



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Melanin the natural color in our skin is synthesized by melanocytes. The distribution pattern in the surrounding keratinocytes and the nature of the formed melanin determine the actual color of our skin. Melanin forms through a series of oxidative reactions involving the amino acid tyrosine in the presence of the enzyme tyrosinase. Skin whitening agents often inhibit the activity of tyrosinase, for example, by competitive or non-competitive inhibition of its catalytic activity, by inhibiting its maturation, or by accelerating its degradation.

The cosmetic industry is looking for novel, effective, possibly "natural" ingredients of low or absent side effects. With hydroquinone, the previous benchmark in this field, fast and effective results to whiten skin were obtained. The drawback of the fast effect was the high cytotoxicity of hydroquinone and its huge irritation potential. New active ingredients with a much improved toxicology profile have been developed instead. They often provide the whitening effect in a reversible way, demonstrating that the biology of melanin production will only be suppressed during treatment but not destroyed. These new kinds of natural whitening ingredients however force us to become more patient. They do work well if they get the time the biochemistry of the skin needs and surprisingly they can even provide skin protection.

AUTHOR'S BIOGRAPHY



Maria Lueder holds a degree in chemical engineering specializing in biochemistry, from the University of Applied Sciences in Krefeld, Germany. She began her career as an R&D project manager in Germany and France within the cosmetic industry and then progressed through the area of regional sales responsibility at BFGoodrich, Germany into global application & technical service management at Uniqema, The Netherlands. She moved from a technical position into global marketing responsibilities at Ciba Specialty Chemicals, Switzerland and into a general management position at Med Beauty Trading, Switzerland.

Maria has more than 20 years of experience in the cosmetic industry and has published numerous papers in scientific journals and has made regular presentations at conferences in the area of emulsion technology, polymers and cosmetic actives. In November 2007 Maria founded her own company Qenax in Zug, Switzerland together with two partners. She is managing the company together with one of the partners, leading R&D and Marketing. Her company is developing and marketing natural cosmetic actives.

In May 2010 Maria Lueder became a board member of the Swiss SCC.