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THE USE OF NANOTECHNOLOGIES IN THE FORMULATION OF DERMATOCOSMETICS

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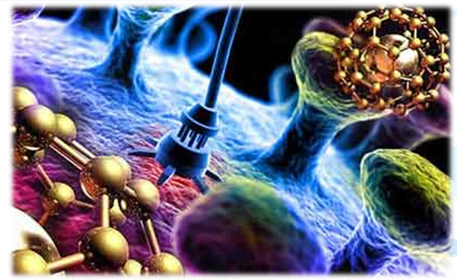

Introduction

Nanotechnology in cosmetology offers an extraordinary opportunity for the future, being considered one of the most promising trends. Currently in the cosmetics industry, nano-sized ingredients are used, which offer better UV protection, a deeper penetration of the skin, production of long-lasting effects, etc.

Purpose

Study of dermatocosmetics nano-formulations with hyaluronic acid.

Material and methods

Analytical synthesis of the literature in the field of technology for the production and use of nanocosmetics.

Keywords

nanotechnology, cosmetics, hyaluronic acid

Results

Nano-formulations improve the stability of various cosmetic ingredients. By encapsulating them in nanoparticles increase the efficiency and stability of UV filters on the skin surface and the penetration of active ingredients into the epidermis. Hyaluronic acid is used in the form of nano-molecular sodium hyaluronate, which is better absorbed, and studies had shown that its injection into the inner layers of the skin forms a protective film that prevents water evaporation, moisturizes, regenerates cells and reduces wrinkles. Transferosomes have systems that reach the deepest layers of the skin, being effective in various skin applications.

NP penetration (fig.1) is a highly controversial topic among the scientific community for at least two main reasons: 1) the toxicological implications of nanotechnology; 2) the need to disclose the role of nanomaterials as carriers for enhancing the penetration of the bioactive agent.

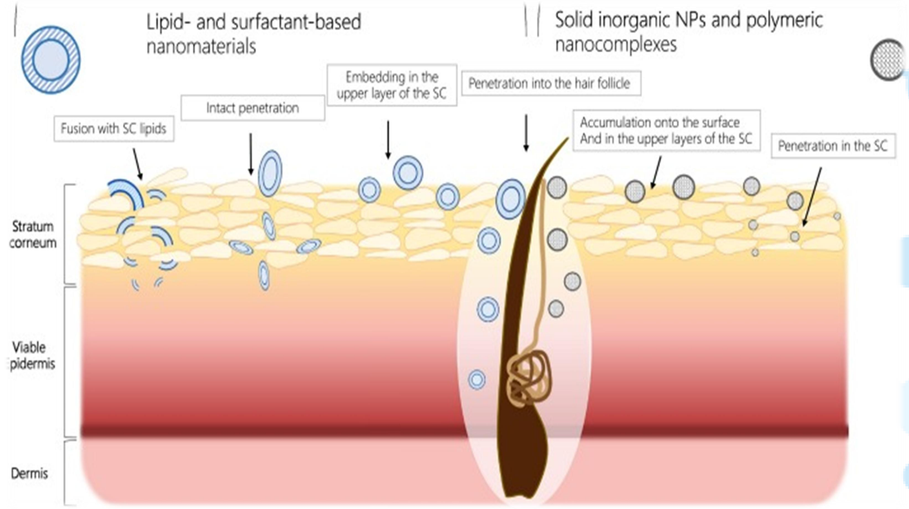

Fig 1.Potential routes of the penetration of nanomaterials into the skin

Concluzion

Nanotechnology is applied in the field of dermatocosmetics and is currently considered the most advanced technology, by using nanoparticles with hyaluronic acid in the form of creams, nanoemulsions, transferosomes, serums, etc. The cosmetics industry shows great interest in nanotechnology applications, and the superior properties of nanomaterials encourage research and development of innovative products. Moreover, regulatory requirements in the field of cosmetics are much less demanding than in the pharmaceutical sector, which opens up many opportunities for nanocosmetics.