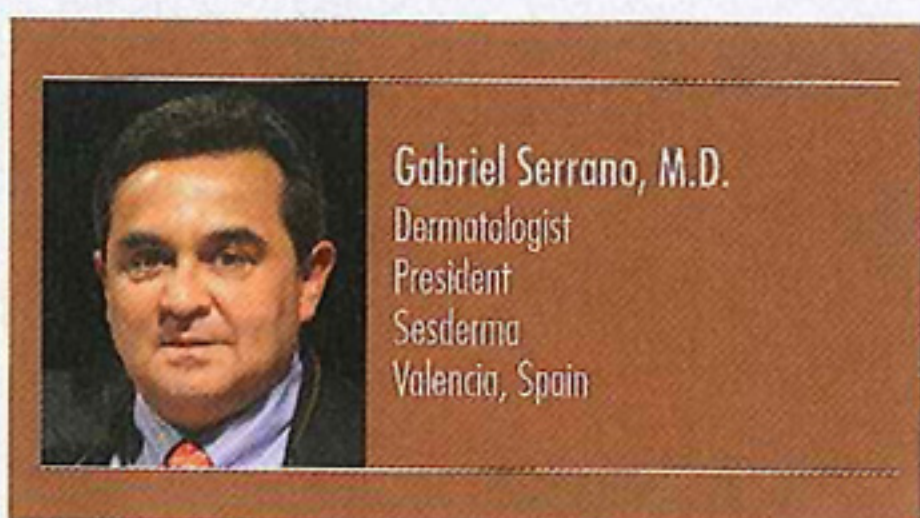


# Nanotechnology Delivery System Improves Penetration of Active Ingredients

By Sean McKinney, Contributing Editor

Founded by dermatologists 25 years ago, Sesderma's mission has always been to stay at the forefront of topical skincare by creating high-quality products that address a wide-range of pathologies. For the past five years Sesderma has been involved in the research and development of nanotechnology products and has introduced a complete portfolio of skincare and nutritive supplements to the dermatological and medical aesthetic markets.



Gabriel Serrano, M.D.  
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"Nanotechnology affects the design, characterization, production and application of structures, devices and systems by controlling shape and size at the nanometer scale, which ranges from 1 to 100 nanometers," explained Gabriel Serrano, M.D., a dermatologist and president of Sesderma.

"One nanometer equals 1 billionth of a meter," Dr. Serrano continued. "Large molecules do not penetrate the skin; therefore, many skincare products remain in the upper layers of the epidermis and never reach the intended target due to the skin's barrier function. With nanotechnology, active ingredients are encapsulated in small liposomes, which improves the stability of chemically unstable ingredients (such as vitamin C), protects the active molecule and increases penetration through the skin to the targeted area."



C-VIT FACIAL / Liposomal Serum

"Due to their phospholipid composition, nanosomes pass through the layers of the skin within a few minutes," Dr. Serrano explained. "Although nanosomes can be absorbed through the sebaceous glands and hair follicles, many times, we need the active ingredient to reach deeper structures, such as subcutaneous tissue. Once inside these structures, nanosomes execute the therapeutic action to repair and rejuvenate the skin."

Recently, the *Spanish Pharmaceutical Association* recognized Sesderma's C-VIT Liposomal Serum as one of the best and most innovative products of the past year. This product has a mixture of active ingredients encapsulated in liposomes. Chemicals include a low molecular weight hyaluronic acid (<50 kDa), ascorbyl glucoside (a very stable vitamin C derivative), *Morus alba* extract, glycerine, panthenol and biomimetic peptides. C-VIT Liposomal Serum is ideal for all skin types, has a very light texture, as well as great moisturizing and anti-aging properties. In addition, it prevents redness and sun-induced hyperpigmentation.

"Encapsulating vitamin C in a phospholipid creates great advantages

because it has no barriers and is able to reach the deep layers of the skin, where we need it," said Dr. Serrano. "C-VIT offers the antioxidant, anti-wrinkle and depigmentation effect of vitamin C, in combination with other liposome active ingredients, to improve anti-aging results."

Within the range of nanosome products for professional use, the company also offers the LIPOSOMAL FERULAC Anti-Aging System, an antioxidant peel system to treat and prevent the symptoms of photo-aging (wrinkles, flaccidity, uneven skin tone, sun/age spots) and dry and rough skin.



LIPOSOMAL FERULAC Anti-Aging System

"What makes all of the nanotechnology products so important is the fast action and very high effectiveness," said Dr. Serrano. "This is particularly true with liposomal products designed to penetrate the skin and target cell structures, melanocytes or fibroblasts, as well as nails, hair and sebaceous glands. Our goal is to immediately and visibly improve the quality of the skin with specialized treatments that are scientifically proven, ensuring the best results for your patients."