

AGI Validates Liposome Delivery with Scientific Data Versus Nanotechnology

By Bob Kronemyer, Associate Editor

Although nanotechnology has been developed as an alternate delivery system to liposomes for products into the skin, the jury is still out as to its effectiveness. "By itself, nanotechnology is so broad that it means everything and nothing. For example, many common things are small, on the nanometer range, so that is not noteworthy. This is great technology that may change our lives in the future. But in the skincare arena, nanotechnology has largely been a buzzword for marketing," said Dan Yarosh, Ph.D., president of AGI Dermatics (Freeport, N.Y.)

In fact, one consumer group claims that particles 50 nanometers or less that penetrate the skin also enter the bloodstream. "This consumer group assumes such a scenario is dangerous, without any proof," Dr. Yarosh conveyed. "Subsequently, this has put many on the defensive about describing their products as nanotechnology. But I don't think nanotechnology has any clear meaning in skincare."

Dr. Yarosh has yet to see many research reports in nanotechnology that improve skincare. "It may well happen, but from a scientific point of view, we are in the very early stages as to what you can pack into these nanospheres, what they would be made out of and how to control the delivery of nanospheres," said Dr. Yarosh, author of the upcoming book *The New*

Science of Perfect Skin (Random House, New York, N.Y.). "There are a lot of technical issues that need to be addressed with nanotechnology. This is one of those cases where we are heavy on the excitement and light on the science."

AGI Dermatics is not involved with nanotechnology. Instead, the company uses a proprietary liposome technology for delivery into skin, in which botanical extracts for cosmetic ingredients are placed inside



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microscopic lipid spheres (fats). "Liposomes have been used in skincare products for many years and are now an accepted technology," Dr. Yarosh stated. "However, I believe we have the best ones because we have done the most research."

Dr. Yarosh compares today's stage of nanotechnology to where AGI Dermatics was 10 to 15 years ago with the development of liposomes. "Back then, liposomes were a scientific concept that received a lot of industry attention," he recalled. "Then, the industry moved onto other technologies that became the buzz. But we stayed with the liposomes and kept up with our research and published our data. Other companies and individuals have also pursued liposomes through the years. Now the buzz of liposomes has caught up with the science. Yet, what is contained inside one's liposomes is what really matters."

If there is validity to nanotechnology in skincare, it should become a standard skin delivery system within five to ten years, predicted Dr. Yarosh. "Safety is one of the issues to be worked out," he said. "Meanwhile, I believe it is much too soon to say that nanotechnology is either the greatest thing or a threat to health."