



with **JULIA SOLNIER, PhD**  
Director, Medical & Scientific Affairs

## LIPOMICEL® TECHNOLOGY

**We asked Dr. Julia Solnier, our Director of Medical and Scientific Affairs, to share some insights on Natural Factors' patent-pending LipoMistel technology.**

**Q:** Dr. Julia, creating a brand-new form of technology is an expensive endeavour. What was the main motivation behind the concept?

**A:** At Natural Factors, we take our commitment to science very seriously. We're always thinking ahead – how can we do something better, make it more efficacious? This is the question we should all be asking: "Is the supplement that I am taking really working for me?" With LipoMistel technology, we are not only innovating, but we are also researching the products to demonstrate better bioavailability and, most importantly, clinical efficacy.

**Q:** Why is it necessary to increase the bioavailability of some nutrients?

**A:** While many nutrients are readily absorbed by the body, some are very poorly absorbed. Poorly absorbed nutrients have limited therapeutic value because of early degradation and poor solubility in the gastrointestinal tract and extensive metabolism, as well as rapid excretion from the body. These absorption issues could severely impact the *bioavailability* of a compound. The absorption of a bioactive nutrient in the body is determined by its physicochemical properties (e.g., water and fat solubility, molecular weight) and *formulation*. A bioactive compound must cross several cell membranes before it reaches the circulatory system and enters

our tissue. This requires a certain balance between water solubility and fat solubility to penetrate our cell membranes.

**Q:** How does this innovative delivery technology overcome these absorption barriers?

**A:** LipoMistel presents a phospholipid molecule of amphipathic nature, meaning it consists of both polar, hydrophilic (water-soluble) and nonpolar, hydrophobic (not water-soluble) portions in its structure at the same time – just like the cell membranes of our body. This enables LipoMistel technology to work effectively with both hydrophobic (fat-loving) and hydrophilic (water-loving) compounds. Once a poorly absorbed nutrient is microencapsulated within LipoMistel, it can now overcome barriers in the gastrointestinal tract, cross cell membranes, and enter the blood circulation, leading to significantly higher blood concentrations and more of the nutrient doing what it needs to do in your body instead of being degraded or excreted early.

**Q:** What distinguishes LipoMistel technology from other types of absorption technology?

**A:** The fact that LipoMistel technology works with both water-soluble and fat-soluble nutrients distinguishes it from all other advanced absorption technologies. It is also

important to remember that bioavailability is important, but clinical efficacy is everything. LipoMistel has been clinically studied in numerous trials showing better absorption as well as clinical efficacy with results published in peer-reviewed journals. In the world of research, peer-reviewed journals are the most important proof that a product is really working.

**Q:** Natural Factors currently has four published studies on nutrients utilizing LipoMistel technology, with six more in process. Is this just the start of the research?

**A:** Yes, this is only the beginning; more LipoMistel supplements are coming. Natural Factors is committed to research and scientific substantiation for our products and the claims that we make. For example, preliminary studies of our LipoMistel berberine suggest absorption rates of up to six times better and a blood glucose reduction of 12% after only two days of 500 mg/day. More research and larger studies are needed for us to assert that on the label. The research has only just begun!

Email us at [US-education@naturalfactors.com](mailto:US-education@naturalfactors.com) for references.



### JULIA SOLNIER, PhD, Director, Medical & Scientific Affairs

Dr. Julia Solnier has a doctorate in Pharmaceutical Sciences from the University of Graz, Austria. She is an expert in pharmacognosy (medicinal plant research) with lecturing experience in herbal medicine. Julia works in Research & Development at Natural Factors. She focuses on conducting clinical trials and developing innovative delivery solutions.