

STH INTERNATIONAL CONFERENCE ON ADVANCED PHARMACOLOGY & TOXICOLOGY RESEARCH

November 14-15, 2025 | Lisbon, Portugal



Andreas M Papas PhD

Adjunct Professor of the College of Medicine, East Tennessee State University CEO, Antares Health Products Inc.

Overcoming Challenges in the Development of mRNA Therapeutics

Development of novel, high potential mRNA therapeutics is associated with major challenges which include: Formulation for parenteral administration, the prevalent route for large molecule actives; stability in the formulation and after administration; transport, intracellular delivery, and uptake; safety, including immune-related, off-target binding and sequence-induced toxicity.

The presentation will discuss the use of vitamin E TPGS and other agents in liposomal, polymeric and other nanoparticle formulations for facilitating transport, release, targeted intracellular delivery, uptake and efficacy; support of formulation stability and reduction of oxidative damage, prior and after administration and metabolism of the actives; reduced toxicity and increased safety by regulation of reactive oxidative species which affect stability, by-products and immune-related and other toxicity; and interactions and potential synergies with actives using emerging technologies such as conjugates, prodrugs, and nanomedicine formulation for increased efficacy and safety.

Biography

Dr. Papas is Adjunct Professor of the College of Medicine, East Tennessee State University and CEO and member of the Board of Directors of Antares Health Products, Inc. A Fulbright Scholar, Dr. Papas is a graduate of the University of Illinois and author of The Vitamin E Factor paperback and editor of the scientific book Antioxidant Status, Diet, Nutrition and Health.

Dr. Papas also founded YASOO Health and led the company as President and Chair of the Board of Directors. He developed product concepts and managed successful commercialization including formulation, clinical evaluation supported by the National Institutes of Health and the Cystic Fibrosis Foundation, stability and safety testing, pilot, and commercial production.