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Dr David Moore has been involved in skin barrier research science and topical formulation development for 25 years. He is currently based in Edinburgh leading Scientific Engagement and Business Development for Tioga Research in Europe. Prior to joining Tioga Research in 2020 David spent seven years at GSK where he led skin health R&D innovation and product development activities in North Carolina, New Jersey, and the United Kingdom. David has led R&D groups focused on skin barrier and membrane biophysics, measurement science, skin biology, soft matter, topical formulations and materials science at TRI-Princeton, Unilever, and International Specialty Products (now Ashland). In addition to his industrial roles, David has held visiting academic positions at Rutgers University and Princeton University and served as an industrial advisor to doctoral students at University College London, Stanford University, Princeton University, Rutgers University in the US and the Universities of Newcastle, Durham, Leeds and Edinburgh in the UK. David has authored over 100 peer-reviewed papers, review articles and book chapters in the fields of skin barrier science, topical delivery, lipid biophysics, spectroscopy and imaging, and presents often at international scientific and dermatological conferences. He is an elected fellow of the Royal Society of Chemistry and was co-chair of the 2019 Gordon Research Conference on The Barrier Function of Mammalian Skin.

Abstract:

“Barrier Mimicry in the Development of Topical Skin Health Formulations”

This presentation will describe some key aspects of our scientific understanding of the skin barrier focusing on the extracellular lipid matrix of the stratum corneum. In particular, the presentation will discuss our increased “materials science” understanding of skin barrier over the last 10-20 years including the use of molecular spectroscopy, and other in vitro biophysical methods, to characterize the properties of healthy and compromised skin. The application of this understanding, and the use of these biophysical in vitro techniques to develop and characterize biomimetic topical formulations, will be discussed in the context of developing clinical efficacious barrier mimetic topical formulations.