

Ground-breaking Digital Transformation in Topical Product Development

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ABSTRACT: In this talk, we will explore the innovative digital formulation development techniques and their applications in dermatology. Specifically, we will discuss the use of computer-based skin permeation studies for selecting, optimising skin permeation enhancers, designing formulations, and virtually testing API permeation from formulation. These advancements enhance accuracy, reduce the need for in vivo studies, and optimize resource allocation. The design of virtual formulations and virtual skin permeation selection allows for rapid iteration and refinement, leading to better-performing products with less trial and error. This approach not only saves close to 30% of project time and 60% of resources but also opens new avenues for extensive idea testing. Ultimately, this transformative method significantly contributes to topical product development, fosters environmental sustainability, and sets new benchmarks in the field.