PROJECT TITLE: Mechanism of a Novel Ingredient in Skin Care Products on Skin Health

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Project Description

The objective of the project is to provide fundamental understanding of the clinical efficacy of a novel ingredient in skin care products on skin health. It is hypothesized that this “pro-active” ingredient enhances the skin penetration of an excipient in the skin care products to improve/repair the barrier property of skin. The ultimate goal is to understand the mechanism of this “pro-active” ingredient and this will allow the identification of new ingredients and assist formulation development for the same or better skin health benefits.

In this research project, experiments will be conducted with cadaver skin in Franz diffusion cells in vitro. The penetration of excipients into skin will be investigated with and without the presence of novel “pro-active” ingredients under different conditions. The data will be analyzed to examine the skin penetration enhancement hypothesis.

Requirements: Students are required to have engineering, chemistry, or pre-pharmacy backgrounds and have completed their college sophomore level classes (including calculus, general chemistry, and physics). The study involves radioactive materials and human tissues. Radiation safety and biosafety trainings will be provided. The student assigned to this project will need to complete these trainings before starting the project. Protective gears will be provided and safety protocols will be followed.