

On the Cusp of a New Class of Therapeutics

Sun Pharma Funds Inflammatory Disease Research

Skin microbiome expert Elizabeth A. Grice, PhD, Associate Professor of Dermatology at the University of Pennsylvania, is the first recipient of the DF's new Sun Pharma Award. This mid-career award is enabling her to launch highly insightful research into microbially derived molecules with the potential for a totally new type of therapeutic for inflammatory skin diseases. Dr. Grice's inspiration took shape as she pursued her research to understand interactions between the skin and its microbiome constituents.

Dr. Grice has been studying the skin microbiome—comprising the skin's highly complex communities of resident microorganisms—since 2007, when this research first began at the NIH. “We have learned that microbes modulate barrier function and immune and inflammatory processes,” she notes. It is essential to skin health. As Dr. Grice has probed the microbiome's interactions with the skin, she realized that individual commensal bugs must be secreting small molecules to achieve their

effects—and she recognized the strong potential for harnessing their mechanisms to treat inflammatory and infectious skin diseases. Already accurately and effectively targeted, these molecules would act with significantly greater selectivity than current systemic immunotherapy approaches that

sometimes have undesirable side effects.

Dr. Grice is deeply grateful for her Sun Pharma Research Award. Her research is well underway with a screen of >4,000 human skin commensal bacterial strains to identify those with anti-inflammatory activity. She and her lab are currently working to identify the most promising candidates for changing the course of

atopic dermatitis (AD), which will be tested in mouse models of AD and skin inflammation.

“My Sun Pharma award is allowing me to take my research in a new and exciting direction, and identify microbially derived molecules with therapeutic value,” Dr. Grice explains. “This unique approach to treating inflammatory skin disease holds the potential to impact the way medicine is practiced.”



Elizabeth Grice, MD, PhD