2021 Diversity Research Supplement Award – Opportunity List

The following individuals are former Career Development Award recipients and current faculty members in dermatology departments or divisions. Each has provided an opportunity for a medical student to work on a 6-12-week research project sponsored by a DF Diversity Research Supplement Award (DRSA). Medical students may contact Beth Rankin at the DF for the email addresses for these individuals, to inquire further about a short-term research opportunity. Please note, eligible individuals may apply for the DRSA regardless of whether they provided an opportunity for this list.

Faculty Member/DF Awardee	Institution	Project Description
Zelma C. Chiesa Fuxench, M.D. Assistant Professor	University of Pennsylvania	Atopic dermatitis (AD) is a chronic, highly pruritic, inflammatory skin disease which is characterized by episodes of acute flares and significant impairments in quality of life. Patients with AD are at higher risk for developing skin and systemic infections due in part to the severity of their disease as well as exposure to multiple immunosuppressive agents throughout their lifetime. With the advent of newer systemic agents for AD on the horizon it is imperative that we develop a better understanding of this risk due to its potential impact on clinical decision making. The purpose of this study is to examine the risk of herpes zoster infection among adult patients with AD treated with systemic agents by way of a systematic review and meta-estimate of clinical trial data.
Alina Markova, M.D. Assistant Attending	Memorial Sloan Kettering Cancer Center	Using data from MSK-IMPACT, a targeted tumor-sequencing test available to patients at Memorial Sloan Kettering Cancer Center, the student will compare mutations in cutaneous metastases with the mutations of their primary tumor. Although the histopathologic and immunohistochemical features of cutaneous metastases have been well reported, no studies have characterized the genetic mutations of these malignancies and compared them to those of the primary cancer. The results from this project will provide insight into the role of driver mutations in cutaneous metastases and may aid in the development of future therapeutic targets.

Faculty Member/DF Awardee	Institution	Project Description
Megan Noe, M.D., M.P.H., M.S.C.E. Assistant Professor	Brigham and Women's Hospital	Our research program uses clinical research to improve care for patients with chronic skin diseases, with a focus on understanding and preventing the infectious complications of dermatology medications. Ongoing projects include understanding the patient-specific and medication-specific risk factors for infection and developing dermatology-specific vaccination guidelines. We use a variety of research methods including quantitative analysis of institutional electronic medical records datasets and larger administrative healthcare claims datasets. We are also doing ongoing qualitative studies to understand both patient and provider vaccine behaviors.
Bethany E. Perez White, Ph.D. Assistant Professor	Northwestern University	We conduct research in epidermal biology to impact medicine and advance our understanding of skin. We incorporate hypothesis-driven research with innovative disease models and discovery approaches. Specifically, we employ 3D models of human epidermis with proteomics and transcriptomics. We use primary keratinocytes to identify signals that drive the physiological state and how they may be hijacked to contribute to pathological states. Our research aims to define receptor tyrosine kinase signal networks in epidermal homeostasis. We are specifically interested in the impact of signal transduction on tight junctions, an indispensable component of the epidermal barrier. Perturbations in tight junctions are relevant to skin disorders such as cancer, atopic dermatitis, and psoriasis.
Junko Takeshita, M.D., Ph.D. Assistant Professor	University of Pennsylvania	My research program is focused on identifying, understanding, and eliminating health and healthcare disparities in dermatology. Ongoing research projects include quantitative studies using large databases to identify disparities in healthcare utilization for and treatment of skin diseases and qualitative studies to understand patient and medical provider perspectives on the experience of and treatment of skin diseases, respectively. There are opportunities to work on any of these projects depending on a student's interests. Students with quantitative or qualitative research skill are preferred.

2021 Diversity Research Supplement Award – Opportunity List (Cont.)

Faculty Member/DF Awardee	Institution	Project Description
Iwei Yeh, M.D., Ph.D. Associate Professor	University of California, San Francisco	The medical student will be working on understanding the molecular mechanism of protein kinase C fusions, a recently discovered oncogene in melanocytic tumors. They will help generate and analyze genetic, expression and proteomic data as well as perform functional experiments in vitro. I expect this work to lead to a better understanding of the biology of melanocytic tumors as well as potentially uncover new avenues for therapy.

October 2020