2022 Diversity Research Supplement Award – Opportunity List

The following individuals are current or 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	Institution	Project Description
Crystal U. Aguh, M.D.	Johns Hopkins University	Central Centrifugal Cicatricial Alopecia is a form of scarring hair loss that affects black women almost exclusively. Preliminary data suggests overlap between CCCA and other diseases of abnormal scarring, sometimes termed 'fibroproliferative disorders'. In this study, I am studying the role of fibroblasts in disease progression and treatment response in patients with CCCA. Involved medical students will be expected to assist with patient recruitment, fibroblast culture and data analysis. There will be opportunities to assist in additional clinical research projects as well.
Zelma C. Chiesa Fuxench, M.D., M.S.C.E.	University of Pennsylvania	Atopic dermatitis (AD) is a chronic inflammatory disease characterized by episodes of acute disease flares, significant morbidity and disease burden to patients, care givers and health systems. AD is primarily considered a disease of children but increasing evidence suggests that it is highly prevalent in the adult population. Adult patients with AD may initially present during childhood and have persistent disease throughout their lifetime or they may also present with symptoms as an adult or adult-onset AD. While adult-onset AD is primarily a clinical diagnosis, this can often represent a challenge since it may not fit traditional diagnostic criteria. The purpose of this work is to explore the differences between childhood-onset and adult-onset AD in a cohort of adults with AD.

2022 Diversity Research Supplement Award – Opportunity List (Cont.)

Faculty Member/DF Awardee	Institution	Project Description
Marlys Fassett, M.D. Ph.D.	University of California, San Francisco	The UCSF "inflammatory itch" research group led by Dr. Marlys Fassett is located within the Ansel Laboratory in the Dept. of Microbiology and Immunology. We study the neuroimmunology of itchy rashes through the lens of interleukin-31, the "itch cytokine." Our exciting preliminary data suggests IL-31 has immunoregulatory properties in multiple epithelial barrier tissues including skin. The goal of this summer student project is to characterize the molecular and functional properties of IL-31-producing cells, using novel reagents we generated. The medical student who joins us will bring: A) wet laboratory research experience (cell culture, molecular biology, ELISA and/or flow cytometry), B) eagerness to learn, and C) appreciation for basic science with clinical correlates in dermatology!
Elena B. Hawryluk, M.D., Ph.D.	Harvard Medical School/ Massachusetts General Hospital	My clinical research focus is pigmented lesions in the pediatric population and this project will focus on pediatric melanoma, pediatric acquired nevi, congenital nevi, or specific pigmented lesions of interest. This DRSA opportunity will include a 6-12 week research project that explores an aspect of pediatric pigmented lesions retrospectively, intended to result in a poster and/or publication to summarize the findings. This DRSA experience will also offer clinic exposure and the opportunity to participate in patient case presentations and/or case reports if the trainee is interested.
Ben Kaffenberger M.D., M.S.	Ohio State University	My research is in outcomes of hospital dermatology. We have specific interests in differentiating inflammation and infection, drug eruptions, wounds, and autoimmune disease in this setting. We have a particular interest in defining the impact of various types of drug eruptions upon the hospital course of patients who are admitted for other diseases. We have various projects that are available within this framework and we can develop a question that is of interest to you. I will then mentor you to attempt to answer that question.

2022 Diversity Research Supplement Award – Opportunity List (Cont.)

Faculty Member/DF	Institution	Project Description
Indermeet Kohli, Ph.D.	Henry Ford Health System	Visible light (VL) has been shown to induce biological effects on human skin; however, there is lack of products offering protection against VL, and standardized testing methods for VL photoprotection. This research project is to investigate the impact of spectral composition of VL on skin responses and evaluate the underlying mechanisms. Assessment methods will include clinical, spectroscopic, histologic and immunohistochemical techniques. Study findings will yield an important understanding of cutaneous responses in individuals of different skin phototypes to this part of sunlight and allow for potential development, and accurate guidelines for improved assessment of novel photoprotective agents.
Shawn G. Kwatra, M.D.	Johns Hopkins University	Prurigo nodularis is an inflammatory skin disease that disproportionately affects African Americans (AA). AA patients with PN have larger, more firm, often times fibrotic nodules as compared to other populations. A recent study by our group also revealed greater systemic inflammation in AA PN patients. In this study we will use RNA sequencing to analyze differences in fibroblast cell lines obtained from PN patients. Patients with PN and healthy controls will be recruited from the Johns Hopkins Outpatient Center Dermatology clinic. Patients will undergo both lesional and non-lesional skin biopsies and fibroblast cell lines will be generated. Gene expression of fibroblast cell lines will be employed to investigate racial and ethnic differences in fibroblast composition in PN patients.
Aaron Mangold, M.D.	Mayo Clinic, Arizona	Mycosis fungoides and Sezary syndrome in skin of color- this project will entail re-examination of the clinical, histological, management, and outcomes in individuals with mycosis fungoides and Sezary syndrome in skin of color. Over a 6-12 week period, data abstracted will be analyzed in depth to develop an understanding of the diagnostic and management differences between individuals with mycosis fungoides and Sezary syndrome with skin of color.

2022 Diversity Research Supplement Award – Opportunity List (Cont.)

Faculty Member/DF Awardee	Institution	Project Description
Lynn M. Petukhova, Ph.D.	Columbia University	Hidradenitis suppurativa (HS) is a prevalent and debilitating skin disease that arises from pathological inflammation in the hair follicle, particularly those located within the axillae, groin and buttocks. There is a high degree of clinical heterogeneity and variability in treatment responses, which is thought to arise from etiological heterogeneity. The goal of our research program is to resolve HS disease heterogeneity using two approaches, including human genetic studies and data driven analyses of structured data in electronic health records. Several projects are on-going related to this goal.
Jillian M. Richmond, Ph.D.	University of Massachusetts	Our laboratory studies autoimmune skin diseases and cancers. Opportunities for students include analysis of datasets as pertinent to their interests and our lab's needs. We have a variety of opportunities including mouse models, spontaneous canine models, and ex vivo human tissue studies.
Cory L. Simpson, M.D., Ph.D.	University of Washington	My lab aims to understand how the epidermis continually forms a barrier tissue for the body and how this fundamental biological process is compromised in skin disease. Using high-resolution live microscopy, we focus on human keratinocytes (the main cells of the epidermis) at the level of single organelles. To replicate epidermis in the lab, we grow human keratinocytes in a skin model that permits us to directly visualize the development of this multi-layered tissue and test its ability to recover from damaging insults like ultraviolet radiation. Combining this organoid system with advanced methods in genetics, we can model human diseases in vitro and try to identify potential therapies for inherited disorders of epidermal function like Darier disease, ichthyosis, and atopic dermatitis.
Junko Takeshita, M.D., Ph.D., M.S.C.E.	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 health outcomes, 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 and skill set. Students with quantitative or qualitative research skills are preferred.

2022 Diversity Research Supplement Award – Opportunity List (Cont.)

Faculty Member/DF	Institution	Project Description
Howa Yeung, M.D. M.Sc.	Emory University	The student will work on an ongoing NIAMS K23-funded project to characterize factors salient to differential acne research participation in transgender persons in a convergent, parallel mixed-methods study using surveys and in-depth interviews. We will recruit transgender persons with diverse acne experiences across healthcare settings purposively to maximize variation of responses. We will identify facilitators and barriers to acne research recruitment; explore potential venues and methods of participant recruitment and follow up; and elicit recommendations on integrating acne care and research in the context of gender-affirming hormone therapy. These data will highlight transgender research participants' insights into effective and efficient methods for recruitment and data collection for future prospective research of acne outcomes in transgender persons.
JiaDe (Jeff) Yu, M.D.	Harvard Medical School/ Massachusetts General Hospital	Allergic contact dermatitis (ACD) is prevalent in up to 20% of people. ACD affects all ages and races. However, studies in children, especially children of color are not present in the literature. The North American Pediatric Allergic Contact Dermatitis Registry was created in 2017 and supported by a Dermatology Foundation Career Development Award. The registry includes patch testing results from nearly 500 children of all races from various centers. The motivated medical student will utilize the data available to evaluate the differences in ACD between different races, overall prevalence of ACD, and relationship of ACD to other atopic diseases including hay fever, and asthma. This study can be performed remotely or in person with an opportunity to rotate in clinic.