Dermatology Foundation

2019 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
Katrina E. Abuabara, M.D. Assistant Professor	University of California, San Francisco	Our research group uses a comprehensive approach to understanding chronic inflammatory disease. Atopic dermatitis is one of the most common and burdensome childhood diseases and has been increasing in incidence worldwide. Yet little is known about persistence of atopic dermatitis into adulthood. Our research uses population-based methods to describe individual disease trajectories and investigate the role of genetic, environmental, and social factors on variation in outcomes. Specific projects focus on the genetic epidemiology of atopic dermatitis, disease patterns in childhood and adolescence, and understand the presentation and comorbidities of eczema in older adults. A desire to be part of a positive, collaborative team and ability to work independently are essential. Basic epidemiology and/or biostatistics coursework and experience using Stata or R are preferred.
Sherrie J. Divito, M.D., Ph.D. Assistant Professor	Brigham and Women's Hospital/Harvard Medical School	My laboratory investigates the immune-pathogenesis of severe drug allergies, drug reactions to anti-cancer therapies (immune checkpoint inhibitors for example) and graft-versus-host disease. Research is translational and aims to directly impact patient care. We work with both human specimens (retrospective and prospective) and novel humanized mouse models of disease. Our research utilizes both traditional immunologic techniques (immunofluorescence/immunohistochemistry, microscopy, flow cytometry and sorting, ELISA, western blot, etc) and novel technologies (ex. high-throughput TCR sequencing, nanostring transcriptome analysis, RNAseq, multispectral labeling and imaging of tissue, laser capture microscopy).

Dermatology Foundation 1560 Sherman Avenue, Ste. 500 Evanston, IL 60201 847-328-2256 dermatologyfoundation.org

2019 Diversity Research Supplement Award – Opportunity List (Cont.)

Masaoki Kawasumi, M.D., Ph.D. Assistant Professor	University of Washington	Skin cancer is the most prevalent cancer in humans and is associated with ultraviolet (UV) radiation. Inactivation of tumor suppressor genes, including p16, is a frequent event in UV skin carcinogenesis. Intriguingly, the p16 gene itself is not mutated in a substantial portion of skin cancers. Instead, the promoter region of the p16 gene is methylated, leading to suppression of p16 gene transcription. This epigenetic change (p16 DNA methylation) is of therapeutic interest because it has the potential to be reversed to restore p16 expression. Recent advances in CRISPR-Cas9-based epigenome editing enable modulation of DNA methylation and histone marks at specific genomic loci. We will develop a highly specific tool to demethylate the p16 promoter and restore p16 expression in cell culture and mouse models. We hypothesize that p16-specific DNA demethylation inhibits cancer growth and metastasis.
Aaron Mangold, M.D. Assistant Professor	Mayo Clinic Arizona	The loss of inositol polyphosphate-5-phosphatase (INPP5a) may be an early event in the development and progression of SCC. INPP5a, a membrane-associated type I inositol phosphatase, has been shown to play a role in the transformation of a benign lesion (actinic keratosis) to cSCC, as well as in the evolution of localized to metastatic oropharyngeal SCC. Recently, our group demonstrated that INPP5a expression level is a potential adjunct for clinical management of cSCC. Specifically, we found that the loss of INPP5a expression in SCC is correlated with more aggressive tumors with high-risk features and worse clinical outcome. The prognostic value of INPP5a in local recurrence and metastasis is unknown. This study will examine INPP5a protein expression in metastatic and recurrent disease.

Dermatology Foundation

2019 Diversity Research Supplement Award – Opportunity List (Cont.)

Misha A. Rosenbach, M.D. Associate Professor	University of Pennsylvania	Project opportunities include: --Sarcoidosis (and other granulomatous diseases) --Drug reactions (particularly severe drug eruptions) --Access-to-care (urgent care models and impact on hospitalizations/readmissions) --Inpatient dermatology --Medical Education
Junko Takeshita, M.D., Ph.D. Assistant Professor	University of Pennsylvania	My research program is broadly 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 chronic inflammatory skin diseases (e.g., psoriasis, atopic dermatitis, acne, etc.) and qualitative studies to understand patient and provider perspectives on the experience of various skin diseases and treatment decision-making processes. There are opportunities to work on any of these quantitative or qualitative projects depending on a student's interests.

December 2018

Dermatology Foundation 1560 Sherman Avenue, Ste. 500 Evanston, IL 60201 847-328-2256 dermatologyfoundation.org