

DERMATOLOGY

The Department of Dermatology provides instruction directed at the basic science aspects of the skin and at clinical cutaneous disease during each of the medical school years. The emphasis of the department is upon the pathophysiology of cutaneous reaction patterns, a correlation of skin lesions (gross Pathology) with microscopic changes, the recognition and treatment of diseases that primarily affect the skin, and the identification of skin changes that reflect diseases in other organ systems.

We welcome students to take a dermatology clerkship regardless of the medical discipline they intend to pursue. This should take place after completing several core clerkships including Medicine, Surgery and Pediatrics. We believe students should receive as broad exposure to medicine as possible before taking our introductory clerkship (Clinical Clerkship in Dermatology) and making career decisions. If further experience/learning is desired, we also suggest taking our Advanced Clinical Clerkship in Dermatology. For those students with a career interest in Dermatology, taking electives in related sub-specialties such as Rheumatology, Immunology, and Plastic Surgery are encouraged.

For more information on student electives please visit; <https://somroselfservice.jhmi.edu/ROElectiveBook> (<https://somroselfservice.jhmi.edu/ROElectiveBook/>).

Program Requirements

Code	Title	Credits
Dermatology-First and Second Years		
	Preclinical (first/second) years of Genes to Society (GTS) curriculum	
Elective Opportunities		
	Elective courses must be approved by the preceptor; any member of the department may act as preceptor.	
CLINICAL CLERKSHIP IN DERMATOLOGY		
	Students may apply towards the end of their 3rd year or in their 4th year of medical school for a clinical elective in dermatology where the focus is placed on intensive exposure to a large number of patients in different clinical settings. Students will spend time exclusively at the Johns Hopkins facilities (Outpatient Center, Greenspring Station, Harriet Lane Pediatrics Center and Johns Hopkins Hospital Dermatology consult service). Our clinical services at these locations provide an excellent opportunity for students to interact with different types of patients and to be exposed to a wide range of skin problems. Parallel to the clinical activities, there are didactic sessions held either in the mornings or on Wednesday. Formal lectures on basic dermatology topics are given by dermatology residents and faculty members. No formal exam is given and grading is based on the evaluations submitted by residents and faculty members and a short oral presentation.	
ME.220.699	Dermatology Elective	
ADVANCED CLINICAL CLERKSHIP IN DERMATOLOGY		

Students who have already taken the Clinical Clerkship in Dermatology at Johns Hopkins and who are interested in a specific area of dermatology or in dermatology research may benefit from this elective. This elective gives the student the opportunity for more "in depth" participation in specific areas of interest within the department of dermatology under guidance of a faculty mentor. Arrangements have to be made between the interested student and the faculty member who will be mentoring them PRIOR TO BEGINNING THE ELECTIVE. The main objective is active participation in a small clinical research project, or clinical and scholarly work with a faculty member with a certain specialty focus. The faculty mentor will provide the specific schedule. Students are encouraged to participate in all didactic activities including Grand Rounds and faculty lectures during the time spent in the department.

Research Opportunities in the Department of Dermatology

Dr. Martin Alphonse

Our goal is to understand the immune responses in skin diseases and to develop biomarkers and potential therapeutic targets. Our research is focused on understanding the innate and adaptive immune response in skin infections and disease. We study inflammasome biology, caspase signaling, and immune metabolism in inflammatory skin diseases, including *S. aureus* skin infections, and atopic dermatitis.

Dr. Crystal Aguh

Ethnic Skin Program and Fellowship

Our research employs multiple clinical and translational approaches to investigate pathophysiology and treatment for various forms of alopecia, particularly scarring alopecia. We also study conditions that disproportionately impact minority populations as well, including conditions such as acral lentiginous melanoma, disorders of pigmentation, and alopecia areata.

Dr. Nathan Archer

Our research focus is to understand mechanisms of protective innate and adaptive immune responses to skin pathogens, in particular *S. aureus*, and the role of aberrant immune responses and the skin microbiome in the pathogenesis of inflammatory skin diseases, including atopic dermatitis and psoriasis. Our long-term goal is to discover mechanisms that can serve as targets for future immune-based therapies and vaccination strategies.

Dr. Kristin Bibee

Translational research in cancer biology, clinical research on social determinants of health and patient reported outcomes as it relates to dermatologic care, technologic innovations in Dermatology Surgery.

Dr. Anna Chien

Translational research in general dermatology; mechanism of skin aging; photobiology.

Dr. Luis Garza

Stem cells, Regeneration, Wound healing.

Dr. Myriam Vega Gonzalez

Clinical laser research in treatment of various skin conditions.
Transgender skin health.

Dr. Sarah Hsu

Clinical research on the use of lasers and energy-based devices to treat various skin conditions.

Dr. Courtney Johnson

Basic science and translational research in cutaneous lymphomas, clinical research in skin of color.

Dr. Jun Kang

Clinical and translational research in rheumatologic dermatology and in-patient consultative dermatology. AI and full body photography in dermatology.

Dr. Shawn Kwatra

During this rotation, students can participate in epidemiologic and translational itch research using a variety of resources. Preference for students with previous experience with R or other coding software.

Dr. Elise Ng

Research areas: AI in dermatologic surgery, scar outcomes, melanoma, investigate factors that impact clinical surgical practice.

Dr. Sima Rozati

Translational research in cutaneous lymphoma, oncodermatology.

Dr. Inbal Sander

Rheumatologic dermatology diseases, dermatopathology.

Dr. Julie Stein Deutsch

Tissue-based predictive biomarker development for response to immunotherapy; pan tumor pathologic response assessment following immunotherapy.

Dr. Joel Sunshine

Synthetic nanomaterials for immune engineering of the melanoma tumor microenvironment (TME); 3D histology; multiplex immunofluorescence for TME profiling with a focus on antigen presentation in the melanoma TME and less common melanoma subtypes.

Dr. Janis Taube

Current research emphasis involves development of the AstroPath platform for immunotherapy biomarker discovery. Image analysis algorithms from astronomy are applied to pathology specimens from patients with melanoma and other tumor types to help identify spatial, multispectral signatures to help predict which patients are most likely to respond to a given therapeutic regimen. Tumor-immune atlases are generated and links to machine learning/AI algorithms are under development.

Dr. Joy Wan

Epidemiologic and clinical research investigations focused on pediatric dermatology; atopic dermatitis; psychosocial and life impact of chronic skin disease.