DEPARTMENTAL MISSION & OVERVIEW

The Ronald O. Perelman Department of Dermatology at NYU Langone Medical Center is recognized nationally and internationally as a vital contributor to the field of dermatology. Indeed, the department counts among its faculty members and graduates many of the field’s leaders. Throughout its history, beginning with its origins as the New York Skin and Cancer Hospital, the department has upheld a tradition of excellence that spans the development of dermatology in the United States.

The department’s mission is fourfold: 1) to deliver the highest quality of care to patients with skin disorders by applying the latest advances in the diagnosis and treatment of skin diseases in an atmosphere of compassion and respect; 2) to train medical students, dermatology residents, graduate dermatologists, and other physicians to render the highest quality of patient care and to extend the clinical and scientific boundaries of medicine; 3) to advance the frontiers of knowledge concerning the mechanisms, diagnosis, and treatment of skin diseases, applying cutting-edge science to skin-related research questions; and 4) to identify risk factors that contribute to skin diseases, and to communicate this information to the public in lay journals, through lectures in community settings, and in dermatologic healthcare screenings.

Through the general and specialty clinics of the Skin and Cancer Unit at NYU Langone’s Ambulatory Care Center and the departmental Faculty Group Practice, as well as those at Bellevue Hospital Center and the VA New York Harbor Healthcare System, the staff members of the department provide primary outpatient and inpatient consultative dermatologic care to over 100,000 patients yearly. The department also provides dermatologic instruction for medical students, residents, and fellows through a variety of ACGME-accredited and non-accredited training programs. In addition, the faculty members of the department conduct multiple research projects aimed at the most significant dermatologic problems of our day, including but not limited to: melanoma and non-melanoma skin cancers, pigmentary disorders, inflammatory and autoimmune skin disorders such as psoriasis, lupus, dermatitis, and hair loss.
CLINICAL EDUCATION

Our department has designed its clinical education for residents to ensure that they master the medical and surgical components of dermatology, so that they can render the highest quality of medical care to patients with skin diseases.

Residents rotate through ambulatory clinics and inpatient consultation services at three different adjacent medical centers: NYU Langone Medical Center (including the Skin and Cancer Unit at NYU Langone’s Ambulatory Care Center and the Hospital for Joint Diseases), Bellevue Hospital Center, and the VA New York Harbor Healthcare System. Each resident is on a team made up of residents from all years of training. The team spends four months at each hospital before rotating to the next training site.

This rotational system affords residents exposure to a broad spectrum of dermatologic patients and disease. It also allows for continuity of care, as residents see their own follow-up patients during their rotation at each site, as well as in a weekly continuity clinic at one of the three teaching sites. Finally, it fosters a valuable camaraderie and nurtures the development of “team players.”

To complement the clinical education they receive at the three primary clinical sites, residents gain valuable training rotating through the practice offices of faculty members whose careers are focused on various facets of medical and procedural dermatology.

Clinic Sites: Where You Will Train

The Skin and Cancer Unit at NYU Langone’s Ambulatory Care Center
The attending staff is composed of full-time and voluntary faculty. In addition to eight general medical and two surgical and procedural dermatology sessions per week, a unique feature of the Skin and Cancer Unit is the extensive array of specialty clinics centered there. These specialty services include clinics dedicated to bullous diseases and immunodermatologic conditions, connective-tissue disease, contact dermatitis, cutaneous lymphoma, pediatric dermatology, photomedicine, pigmented lesion, psoriasis, wound care, hair and scalp, and nails. In addition, phototherapy is provided all day from Monday to Friday.

While at the Ambulatory Care Center, residents also rotate through preceptorships in several areas, including cosmetic dermatology, Mohs micrographic surgery, and several consultative practices.

There is an active consult service for both adult and pediatric inpatients at NYU Langone. There is no adult dermatology inpatient service; patients with dermatologic disorders requiring admission are hospitalized by a hospitalist, and the consult resident and a dermatology attending provide close consultation and supervision.

The Dermatology Clinical Studies Unit was established in the 1970s, and the unit has developed into one of the nation’s most distinguished clinical research centers in dermatology. Our mission is to advance the understanding of the mechanisms of skin disease acquired through basic and clinical research and to apply them by utilizing novel therapeutic interventions. The unit is responsible for carrying out clinical trials relating to a broad array of conditions ranging from inflammatory and autoimmune skin diseases, to skin cancer, to hair loss.

VA New York Harbor Healthcare System—New York Campus
The VA rotation takes place at the Veteran Affairs New York Harbor Healthcare System (VA NYHHS) Manhattan campus located on 23rd Street and First Avenue. The patients at the Manhattan VA Hospital have a diverse range of clinical pathology. At the VA, residents work closely with full time and part time faculty members who are clinical experts in areas including cutaneous lymphoma, pigmented lesions/dermoscopy, contact dermatitis and procedural subspecialties. A special emphasis of this rotation is on cutaneous surgery. There are seven surgical clinics weekly, including one half-day dedicated exclusively to first-year surgery didactics and cases. All of our surgery attendings have advanced training in dermatologic surgery. In addition to surgery clinics, the VA rotation includes eight general dermatology clinics weekly, a bi-weekly dermatopathology conference plus a wound healing specialty clinic. While on the VA rotation, residents will gain clinical experience with narrow band ultraviolet phototherapy, photo dynamic therapy, laser therapy, neurotoxin treatment for hyperhidrosis and treatment of HIV-lipoatrophy with dermal fillers.
The VA NYHHS consists of three campuses, Brooklyn, Queens and Manhattan - and is dedicated to providing high quality health care to veterans who served our nation. It is part of the Southern New York/New Jersey Veterans Integrated Service Network (VISN 3), one of 23 such networks serving the healthcare needs of veteran populations across the country. The Manhattan Campus of the VA NYHHS (otherwise known as the Manhattan VA Hospital) has been affiliated with New York University School of Medicine since 1961 and the majority of the physicians at the VA Medical Center New York hold faculty appointments at NYU School of Medicine. The New York Campus of the VA NYHHS is a tertiary-care medicine, surgery, and psychiatry facility with 171 beds. The New York Campus of the VA NYHHS has been designated as the referral center for all invasive cardiovascular procedures and neurosurgery in VISN 3. The hospital’s HIV/AIDS and Dialysis Programs have been designated as Veterans Health Administration (VHA) Centers of Excellence.

Bellevue Hospital Center
The attending staff is composed of full-time and voluntary faculty. The epicenter of the New York City Health and Hospitals Corporation, Bellevue Hospital Center is the oldest public hospital in the United States, and one of the largest public hospitals in the world. As part of the Ronald O. Perelman Department of Dermatology, Bellevue has played a historic role in the emergence of dermatology as a specialty. From the time its floors first opened, the hospital was the first institution in the city to respond to challenges of the epidemics of syphilis, measles, and other infectious diseases. More recently, the hospital squarely met the emerging AIDS epidemic by creating the first dermatology clinic in the country for the care of HIV-infected persons. Bellevue Hospital Center was also selected as the main referral site by the New York City Department of Health to evaluate patients with possible bioterrorism-induced infectious diseases. In addition, the department has the contract from the National Hansen's Disease Program to provide care for patients with Hansen’s disease in the region encompassing New York and bordering states. Also, patients with challenging genital skin disease from the STD clinics run by the NYC Department of Health are routinely referred for evaluation and treatment.

The Bellevue Hospital Center Department of Dermatology provides medical, surgical, and inpatient services, and is housed in an ambulatory care facility designed by the I.M. Pei architectural firm. Each week there are ten general dermatology clinics, two pediatric dermatology clinics, four skin surgery clinics, three procedural dermatology clinics, three sexually transmitted disease clinics, three wound healing clinics, three Hansen’s disease clinics, and five specialty clinics: vulvar diseases, complex medical dermatology, ethnic dermatology, cutaneous lymphoma, and phototherapy, which is provided all day from Monday to Friday. As part of continuity, residents are encouraged to develop clinics to foster their areas of interest, such as acne, pigmented lesions, hair disorders, and bullous diseases. Senior residents are provided with the opportunity for a greater degree of autonomy in their continuity clinic, which helps them to prepare for the rigors of future practice while having attending assistance available for all cases.

Close to 100 consultations are performed every month on the wards and in the Emergency Services Department. The consult resident rounds with an attending from Monday through Friday and, as needed, on weekends. The pediatric dermatology attending together with the pediatric dermatology fellow, conducts consult rounds with residents.

As an integral part of the Ronald O. Perelman Department of Dermatology, the missions of the Bellevue department revolve around the delivery of cutting-edge, evidence-based patient care and maintaining the highest standards of academic training for dermatology residents. The Dermatology Clinic and Consult services also provide popular educational opportunities for medical students from around the country, foreign physicians, and internal medicine and primary care residents. Fellows from the departments of ob/gyn, ENT, infectious diseases, pediatrics, and rheumatology have rotated through the department, affirming the close relationship and interactions between Dermatology and other departments in the hospital. Well-known for their ability to provide comprehensive dermatologic care to persons from all socioeconomic levels, our clinics are the leading referral sites for skin disease from multiple institutions within the city, which ensures a steady influx of fascinating cases and a wide spectrum of disease from around the world.
SPECIALTY TRAINING

Procedural Dermatology/Dermatologic Surgery
The program is designed to advance the understanding and surgical treatment of benign and malignant skin disease. Key elements include clinical rotations and surgery-specific didactic program of lectures and journal clubs. In terms of surgical training, the focus is on basic procedures in the first year of residency and progresses to intermediate and advanced procedures in the second and third years. First-Year Residents rotate through surgery clinics at all three clinical sites. Emphasis is on pre- and postoperative management, the basics of anesthesia, and layered closure on the face, trunk, and extremities.

Second- and Third-Year residents rotate through the Dermatologic Surgery Section and participate in Mohs micrographic surgery, flap, and graft reconstruction, staged repairs, cartilage grafts, and other advanced procedures. Residents learn cosmetic procedures including sclerotherapy, filler and toxin injection, and laser surgery. Residents gain firsthand experience with vascular, pigmented-lesion, hair-removal, and resurfacing lasers. Residents perform the overwhelming majority of surgical procedures, whether excisional or cosmetic. Consequently, NYU Langone dermatology residents graduate with strong skills, well-equipped to perform the full array of dermatologic surgical and cosmetic cases.

Pediatric and Adolescent Dermatology
The Pediatric and Adolescent Dermatology Unit at the Ronald O. Perelman Department of Dermatology is one of the oldest in the country, tracing its beginnings to 1962.

Residents care for children with skin problems in the pediatric dermatology clinics at Bellevue Hospital Center and the Skin and Cancer Unit, and participate in inpatient consultations at Bellevue and NYU Langone. Residents also perform Emergency Department consultations at NYU Langone and Bellevue Hospital Center, and rotate with faculty in their consultative faculty practice. To gain exposure to complex pediatric dermatologic problems, residents also take part in subspecialty clinics dedicated to genetic skin disease and pediatric contact dermatitis. In addition, residents regularly participate in pediatric dermatology journal club sessions and those committed to a career in pediatric dermatology can choose to have a pediatric focus in their continuity clinic.

Dermatopathology
The Dermatopathology Section of the Ronald O. Perelman Department of Dermatology is one of the busiest and the most well-known in academic dermatology.

Residents learn dermatopathology in a well-structured curriculum, providing a wide range of diagnostic services in the interpretation of skin specimens, which repeats each year. Introductory didactic sessions, which focus on the histology of “normal” skin, are followed by weekly sessions in which unknown glass slides provide the cornerstone for discussions by dermatopathology faculty. The subject matter includes all aspects of neoplastic and inflammatory dermatopathology. To round out the dermatopathology curriculum, residents spend dedicated time in the dermatopathology section, which has a teaching collection with thousands of glass slides. First- and second-year residents spend three weeks signing out cases with dermatopathology staff; third-year residents rotate through dermatopathology for a full six weeks. Additionally, the section trains two dermatopathology fellows per year.

Sulzberger Fellowship Residency Program
In the fall of their second year, residents who have performed in an outstanding fashion clinically and who have a serious interest in a future investigative career may apply to spend 80 percent of their time during their third year devoted to a mentored rigorous research project (which is generally laboratory-based but not required to be). Once selected, a Sulzberger Fellow has only two half days of clinical responsibilities: typically a half-day Continuity Clinic and a half-day chosen to complement their specific area of research interest. They continue to participate in all didactic and other responsibilities of a third-year resident, such that they are eligible to sit for the qualifying examination for board certification in dermatology upon completion of their third year.

Criteria
Three critical factors are considered in the application review process:

- the candidate, including their track record and personal qualities
- the mentor, their track records, and commitment to mentoring dermatology resident trainees
- the project, including relevance and feasibility.

The application(s) are reviewed by a committee of faculty members. Although the department has had, on average, one Sulzberger Fellow a year, in extraordinary circumstances and based upon manpower availability, more than one resident may be allowed to pursue a Sulzberger Fellowship.
EDUCATIONAL CURRICULUM

The educational curriculum was structured with the department’s mission in mind, and seeks to provide the skills needed to pursue and achieve lifelong learning in dermatology.

Introductory Course for First-Year Residents:
The initial six weeks of the year are dedicated to providing first-year residents with the basic tools they need as dermatology residents. A curriculum of reading centered around some of the more common dermatoses is coordinated with a differential diagnosis course. The goal is to arm residents with a sound approach to clinical diagnosis. During this time period, second- and third-year residents review recently published CME articles.

Morning Didactic Sessions
After the first six weeks of the academic year, the first-year residents join the second- and third-year residents for the morning didactic teaching sessions, which include lectures, seminars, and conferences. A committee directs resident didactic education. A core curriculum in medical and pediatric dermatology, dermatologic surgery, dermatopathology, and the basic sciences is supplemented by Journal Club, which is aimed at developing residents’ skills in critical review of the literature. There are also several clinical conferences, during which the translation of academic knowledge into clinical practice is emphasized.

Residents meet daily from 8:00 a.m. to 9:00 a.m. for didactic sessions. All sessions are moderated or led by full- or part-time faculty members who possess a range of expertise that covers the spectrum of dermatology.

Weekly Didactics Schedule

Monday: Textbook Review
The medical and basic science dermatology curriculum is covered in this session, which is resident-run under faculty direction. Residents become “mini-experts” in the topics they review and are provided with a structured framework for their weekly reading. An interactive format is encouraged, with a focus on synthesis of the material in current major dermatology textbooks, clinical pearls, and pertinent information from the recent literature.

Tuesday: Residents’ Lecture Series
Senior residents invite faculty and other experts to lecture on a range of topics, including dermatologic surgery, pediatric dermatology, and the basic sciences. In addition, the medical dermatology curriculum is enhanced through lectures by specialists on a variety of topics and regular case review sessions, in which differential diagnoses and therapeutic strategies are discussed in an interactive manner.

Wednesday: Journal Club
Residents review journal articles from major dermatology journals as well as the relevant non-dermatology literature; discussion takes place under the direction of multiple faculty. This session serves not only to keep residents and faculty abreast of the advances in our field, but to encourage critical reading and knowledge of evidence-based medicine.

Thursday: Dermatopathology
Dermatopathology faculty members lead this discussion of “unknown slides” that have been reviewed by residents prior to the session. A well-established and successful curriculum is updated annually. Clinico-pathologic correlation sessions are held approximately once per month.

Friday: Grand Rounds (Howard Fox Lecture Series)
Formal lectures on topics of dermatologic relevance are presented by leading members of the national academic dermatologic communities, as well as related experts from outside the field of dermatology. Residents are thus exposed to the latest advances across the spectrum of the specialty.
EDUCATIONAL EXPERIENCES

Tuesday Night Conferences
This conference series provides residents with a live patient viewing opportunity. Residents prepare protocols on interesting and unusual cases, and a member of the full-time or voluntary clinical faculty leads a discussion based on these cases. Dermatologists throughout the New York Metropolitan area attend the conference. The evening also provides a forum for residents to hone their presentation skills. Each resident and clinical fellow speaks on a subject of his or her choice at one of these conferences yearly. There are five such conferences per year.

Faculty and Trainee Educational Conference
The Ronald O. Perelman Department of Dermatology’s Educational Seminars provide a comfortable and open environment for participants to learn, discuss, and review subjects that may occur in daily activities within their working environment. The seminars allow faculty, trainees, and, on occasion, staff members to work as a group to understand each other, while educating our faculty and trainees on dermatology advances. This boosts confidence and communication on all levels, creating a friendly working environment. At the conclusion of each seminar activity, participants will be able to recognize important new developments in medical and procedural dermatology and in basic interpersonal situations.

Cutaneous Biology and Dermatology Annual Research Day
Research Day is an annual, full-day educational, training, and networking event led by the chair. Postdoctoral basic and clinical fellows, residents, and faculty performing dermatologic research share their current research findings through presentations and poster sessions. The audience includes the department’s Cutaneous Biology Program’s basic science faculty and physician-investigators in addition to our clinicians. A leading expert in the field of research is invited annually to give a lecture on a topic of importance for conducting research or developing an investigative career. Past lectures have included how to conduct clinical research at NYU Langone Medical Center, funding research, presentation skills, journal writing, building collaborative translational research teams, and designing multifaceted/multicentered clinical trials. In addition to presentations there are also poster sessions to present additional research projects that are ongoing within the department and the department’s Cutaneous Biology Program. The event is considered a forum to openly discuss research findings, as well as to foster new collaborations for future studies.

Advances in Dermatology Symposium
Each year in June, the department hosts a two-day Continuing Medical Education conference to update participants on the latest information about a broad array of topics relevant to clinical dermatology. Presentations are made by NYU Langone faculty from dermatology and other departments, fellows, and visiting faculty. The goal is to expose participants to current knowledge in dermatology and related topics. This popular conference draws a national audience.

Local Conferences
Residents attend meetings of the New York Academy of Medicine’s Section of Dermatology and the Dermatologic Society of Greater New York, the country’s largest regional dermatologic organization. Highlights include annual resident competitions held by each society.

National Conferences
First- and third-year residents attend the annual meeting of the American Academy of Dermatology (AAD). Second-year residents divide coverage for clinical responsibilities during the AAD Meeting. Additionally, residents may be sponsored to attend other national dermatologic meetings, with prior approval, at which they present clinical or research findings.
RESEARCH

The Ronald O. Perelman Department of Dermatology at NYU Langone has an extremely active research program. Through the Resident Research Program, residents participate in research projects with clinical- or laboratory-based faculty.

In addition to its outstanding clinical facilities, the department supports a broad range of research programs, including a dedicated Dermatology Clinical Studies Unit to perform industry and investigator-initiated clinical trials, and a robust translational research program under the auspices of the Cutaneous Biology Program, which occupies the entire 4th floor of the Joan and Joel Smilow Research Center. The competitive Sulzberger Fellowship Program offers training to residents who wish to dedicate their third year of training to research, typically laboratory-based.

Physician-scientists also have the opportunity to apply to our Cutaneous Biology and Skin Disease Training Program, for entry upon completion of residency training. This training program supports postdoctoral trainees for up to two years through a T32 grant from the National Institute of Arthritis and Musculoskeletal and Skin Diseases. Sixteen outstanding mentors are available to work with, all with NIH-funded laboratories and proven training records from diverse areas of cutaneous and basic biological expertise, while collaborating with the rest of a selected mentoring committee composed of at least one physician-scientist or clinician with dermatologic expertise; this ensures that this postdoctoral training is translational and impactful to the study and treatment of skin diseases. In some cases, when a candidate’s research interests may not align with the current program mentors, a new mentor selected from other NYU Langone faculty may be approved by the Training Program Executive Committee.

Dermatology Clinical Studies Unit

Our Dermatology Clinical Studies Unit is a resource for all investigators looking to perform clinical trials with commercial, governmental, or foundation support. The unit employs research coordinators and fellows to support these endeavors and, combined, have over 35 years of FDA regulatory compliance, human subjects, and clinical trials research experience. Their portfolio of studies includes biologic, small molecules, and devices to treat cutaneous diseases and non-melanoma skin cancer. The team provides guidance for human subjects research from protocol development, Institutional Review Board approval, and subsequent study performance. Two exam rooms and a clinical specimen preparation laboratory round out the unit to provide complete support for these investigations. Our unit has been involved in several key studies advancing novel therapies into clinical practice.

Cutaneous Biology Program

Historically, academic biomedical research was focused primarily on reductionism—dissecting cellular reactions into their smallest component parts. Today’s goals now build upon these accomplishments, focusing on “translating” or adapting discoveries so they can be utilized as medical applications in the patient care arena. This “translational research” has the added emphasis of using clinical observations to guide laboratory-based research, with the goal of shortening the time from scientific discovery to improved patient care.

This change in research strategy has paid off, especially in dermatology. Never before have new dermatologic therapies developed in the research laboratory been applied to the patient setting as rapidly as they are today. We are beginning to understand the molecular basis of major dermatologic problems, including inflammatory and autoimmune disorders such as psoriasis, acne, atopic dermatitis (eczema), alopecia areata, and vitiligo; blistering diseases such as epidermolysis bullosa, pemphigus, and pemphigoid; and the major skin malignancies, including melanoma, basal and squamous cell carcinoma, and Merkel cell carcinoma. Within the next decade, we expect to apply that understanding to the development of groundbreaking genetic, biochemical, and immunologic therapies.

Melanoma and Melanocyte Biology

Researchers and clinicians in the department are studying all stages of the melanoma disease process, from clinical and genetic factors that predispose patients to the formation of this potentially fatal malignancy, to the early recognition and diagnosis of melanomas using advanced skin imaging modalities, to how melanomas grow and spread from their primary site in the skin, to developing new means to detect and treat advanced melanomas based upon a deeper understanding of their biology.
For decades, NYU Langone has been recognized as one of the foremost centers for melanoma care and investigation. The Perlmutter Cancer Center’s Interdisciplinary Melanoma Cooperative Group (IMCG) includes 34 NYU investigators and multiple cross-institutional collaborations, and offers a weekly seminar series. The IMCG also maintains growing clinicopathologic resources, accruing more than three-thousand biospecimens and a corresponding long-term clinical follow-up databank for each patient. The progress to date is evident as IMCG researchers have over 200 publications to their credit, while active collaborations and prolific research efforts continue to unite them as the forefront in the fight against melanoma.

Melanocyte stem cells hold the potential for novel treatments for the regeneration of melanocytes lost by disease, aging, and even re-growing digits. Investigator projects have made major contributions to the field, published in Cell, Nature, and Nature Medicine in just five short years of pursuing this line of investigation.

Departmental researchers are also studying normal melanocytes to better understand the genetic and biochemical factors that control skin pigmentation. In addition to learning more about the basic biology of melanocytes, the translational research goals of these studies are to find new treatments for clinical disorders of pigmentation. Vitiligo is one such area of focus, as departmental investigators examine the earliest steps in melanocyte death and how these might trigger autoimmune disease.

Epithelial Biology, Stem Cells, and Non-Melanoma Skin Cancers
From the stem cells that supply the skin and hair follicles with a renewable source of cells, to the signals that inform skin as to how to develop, researchers are delving into many basic scientific questions concerning the largest organ in the body. Questions that relate not only to normal skin development, but also to the regeneration of skin in the process of wound healing, are under active investigation.

Recently recruited faculty members have already contributed to advance our understanding of non-melanoma skin cancers (NMSCs), such as basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), including recent publications in Nature Medicine. Key faculty have established a non-melanoma database based on the Perlmutter Cancer Center’s IMCG model, and this resource is utilized in several active, NIH-funded, collaborative projects in the department, including the identification of cancer stem cells in human cutaneous SCCs; understanding their mechanisms of self-renewal, differentiation, and long-term tumor growth; and developing CSC-specific therapies that target SCCs at their roots.

Researchers are also exploring pharmacologic strategies for the prevention of NMSC. The fact that the number of NMSCs, cutaneous lymphomas, and other skin malignancies diagnosed per year far exceeds the total for all other cancers combined in the United States strongly reinforces the need for further research into the causes and mechanisms of these cancers.

Immunology and Inflammation
Immunology research spans both laboratory and clinical studies. New biologic agents for use in autoimmune skin diseases such as psoriasis and cutaneous lupus are in active clinical trials through the Dermatology Clinical Studies Unit, along with correlating wet lab projects through our active collaborations with the Department of Rheumatology. These new therapies are designed to specifically inhibit the key cells and proteins of the immune response that are critical to the disease process, without causing global immune suppression. Others study autoimmune diseases, including the so-called ‘collagen vascular diseases’ such as lupus and dermatomyositis, as well as the interactions of the human host with microbes such as the leprosy mycobacterium and the interplay between psoriasis and the skin microbiome. Vitiligo is another autoimmune disease actively being studied in the department. Departmental researchers are also involved in boosting the immune response against melanoma. In addition, new blood-based markers are under investigation to measure patients’ responses to melanoma therapies, and to help improve the early detection of recurrent disease.

T32 Interdepartmental Collaborative Projects
Through our T32, participating mentors from outside the department paired with a physician-investigator within our department, broadening the expertise within each area, including: molecular design and computational biochemistry; environmental exposures, such as the effect of metals in relation to UV exposure in skin carcinogenesis; the pharmacology of anti-inflammatory drugs; the action of adenosine in fibrosis and wound healing; the regulation of differentiation of T lymphocytes; the biology of RORγ and Th17 cells; the signaling networks maintaining homeostasis of the immune system with commensal microflora; F-box proteins and deregulated cell cycle control and proteolysis in cancer; and the role of post-translational modification of Ras-related proteins, as well as the enzymes that modify these proteins in both inflammatory and malignant cells.
HISTORY

Dermatology in the United States has made tremendous strides since the first lectures on the subject were given in 1837 by Henry Daggett Bulkley, MD at the Broome Street Infirmary for Diseases of the Skin in New York. Dr. Bulkley’s pioneering work left an indelible impression on his son, Lucius Duncan Bulkley, AM, MD, who, in 1882 with a number of distinguished laymen, founded the New York Skin and Cancer Hospital, the first institution in America devoted entirely to the care of cutaneous diseases and cancer. It began operation in January 1883, in a small private house at 243 East 34th Street.

In 1884 an outpatient department at Fordham Heights was started and maintained by the hospital for 13 years. The Bronx property was sold in 1897 when the city quarters were enlarged, and the hospital became a unit of New York Post-Graduate Medical School. It functioned in this way until 1949, when a merger agreement between New York Skin and Cancer Hospital and officials of NYU made it part of the Department of Dermatology of NYU Medical Center. When the University Hospital building was completed in 1963, the Skin and Cancer Unit moved into its own pavilion.

In 1991 the department was named in honor of Ronald O. Perelman in recognition of a generous gift supporting the future development of the department. In 2006, the department marked the opening of an entire floor of the state-of-the-art Joan and Joel Smilow Research Center, devoted entirely to the care of cutaneous diseases and cancer. A year after its induction, Dr. Piffard created the first training program for postgraduates in dermatology at NYU Medical College. The program was moved in 1882 to the New York Post-Graduate Medical School.

1874: Henry G. Piffard, MD (1842–1910)
Raised in Piffard, New York, Dr. Piffard received his medical degree from the College of Physicians and Surgeons in 1864. In order to pursue his graduate work, he traveled to the University College Hospital in London and specialized in dermatology. Dr. Piffard returned to the United States and became a professor of dermatology at the University of New York, as well as a surgeon to the New York Dispensary for Diseases of the Skin. He later became the first chair of dermatology in the University of the City of New York.

A year after his induction, Dr. Piffard created the first training program for postgraduates in dermatology at NYU Medical College. The program was moved in 1882 to the New York Post-Graduate Medical School.

1882: Lucius Duncan Bulkley, MD (1845–1928)
Dr. Bulkley was a physician in the Skin Department of New York Hospital. He founded the first dermatological journal in 1874, Archives of Dermatology: A Quarterly Journal of Skin and Venereal Diseases. In 1884, after purchasing a small amount of land, Dr. Bulkley founded the New York Skin and Cancer Hospital at 243 East 34th Street. Its main objectives as a hospital were:

- the treatment of diseases of the skin and cancer by all known medical and surgical methods;
- the study of the etiology and pathology of cancer;
- the study of cancer with a view to its medical treatment; and
- the reception and care of patients with chronic cancer.

1927: George Miller MacKee, MD (1878–1955)
Born in New Jersey and raised in Connecticut, Dr. MacKee achieved success in many areas, including medicine, mechanical engineering, and athletics. He received his medical degree from NYU and Bellevue Hospital Medical College, and was later hired in 1903 as a physician. He is best known for his revolutionary work on radiotherapy. As a chair, Dr. MacKee was able to preserve the Department of Dermatology as the New York Skin and Cancer
Hospital evolved and combined with the New York Post-Graduate Medical School and Hospital. Over the next few decades, the Skin and Cancer Unit would blossom into a world-class dermatologic clinic. Throughout the 1930s to 1940s, Dr. MacKee welcomed many of the most prominent European dermatologists who escaped the Nazis to the Skin and Cancer Unit.

1949: Marion B. Sulzberger, MD (1895–1983)
Raised in New York, Dr. Sulzberger was an avid fan of Latin-rooted languages. He spoke four fluently and found work in a number of odd jobs before landing in the U.S. Naval Service as an aviator during World War I. In 1920 he moved to Geneva, Switzerland, to study medicine, and later received his medical degree from the University of Zurich. In World War II, Dr. Sulzberger served as a lieutenant commander and performed research on dermatoses caused by burns, poisonous gases, and tropical dermatological diseases. He later became the advisor for the U.S. Government, president of the American Dermatological Association, and founder of the Society for Investigative Dermatology.

As our chair, Dr. Sulzberger altered the department’s name in 1960 to be formally titled the NYU Department of Dermatology. He later expanded the departmental scope to include dermatologic services at the University Hospital, Bellevue Hospital Center, and the Manhattan Veterans Affairs Hospital.

Dr. Baer was born in Strasbourg, which was, at the time, part of Germany, where his ancestors lived since the 1600s. In 1934 he received his medical degree from the University of Basel, Switzerland. At 23 years old and in the middle of heightened Nazi persecution, Dr. Baer left for New York City in 1934. He was able to find a one-year internship in internal medicine at Beth Israel Hospital. He found a lifetime interest in cutaneous allergic responses and completed his training at Montefiore Medical Center. He was on the faculty of Columbia University until he joined NYU in 1948.

Under Dr. Baer’s leadership, the NYU Department of Dermatology took on a new educational structure which remains in place over 50 years later. He created an integrated residency program, so residents would now spend their training years rotating between the three sites at the NYU, Bellevue, and Manhattan Veterans Affairs hospitals.

1981: Irwin M. Freedberg, MD (1933–2005)
Hailing from Massachusetts, Dr. Freedberg received his medical degree in 1956 from Harvard. He taught there from 1962 to 1977 and became a professor of dermatology. Dr. Freedberg later moved to Johns Hopkins University as the director of the Department of Dermatology. He left in 1981 to chair the NYU Department of Dermatology. While in this position, he was elected into the National Academy of Science’s Institute of Medicine (1995) and was elected as president of the American Dermatologic Association (1997). Following in the footsteps of past NYU Medical Center chairs, Dr. Freedberg was at one point editor-in-chief of the Journal of Investigative Dermatology.

As a chair, Dr. Freedberg developed new laboratory programs, bringing on non-physician basic scientists with interests in biochemistry and cellular biology. With the department’s endowment, he secured for Dermatology the use of an entire floor in a new building the Medical Center was erecting for translational research. In 1991, after a gracious donation, the department was named the Ronald O. Perelman Department of Dermatology, marking the first time in the School of Medicine’s then 150-year history that a specific department was named for an individual.

2006: Seth J. Orlow, MD, PhD
Born in Brooklyn, NY, Dr. Orlow is the department’s first chair to have been formally educated as a physician-scientist, having received his PhD in molecular pharmacology from the Albert Einstein College of Medicine while simultaneously earning his medical degree. As a medical student in the 1980s, Dr. Orlow had been inspired to enter the dermatology field after attending a lecture given by Alvin E. Friedman-Kien, MD, at one of the first congresses devoted to the then-emerging AIDS epidemic, alerting him to research possibilities within the field. Following an internship in pediatrics at Mt. Sinai, Dr. Orlow was a resident and fellow in dermatology at Yale. He joined the department in 1990 as its first full-time pediatric dermatologist, and became chair in 2006.
Milestones

1952: We performed the first hair transplantation. Norman Orentreich, MD, completed the first successful hair transplant in 1952, a mere four years after completing his MD degree. In 1959 he established his famous “donor dominance” theory; that is, that transplanted hair will maintain the properties of its donor site. This set the stage for future transplant research.

1972: We created the first skin cancer multidisciplinary program. Under the leadership of Alfred Kopf, MD, physicians from dermatology, plastic surgery, surgical oncology, pathology, and other specialties gathered regularly to evaluate and discuss the evaluation and management of patients referred with complicated skin cancers.

1981: We first identified AIDS-related Kaposi’s sarcoma. In the early months of 1981, NYU dermatologist and virologist Alvin E. Friedman-Kien, MD, began seeing male patients with Kaposi’s sarcoma who were generally less than 50 years old and homosexual. Dr. Friedman-Kien noted that the patients seemed immunosuppressed and often exhibited generalized lymphadenopathy, and that this type of Kaposi’s sarcoma was not the kind that appeared in elderly European men, but a more aggressive form, disseminated with tumors appearing in a variety of shapes, colors, and sizes. This form of Kaposi’s sarcoma sometimes appeared in equatorial Africa, or in renal transplant patients who received immunosuppressive therapies. Most notably, the new frequency coincided with outbreaks of Pneumocystis carinii pneumonia and other new, startling opportunistic infections that were cropping up in gay men, cementing the suspicion that there was a larger epidemic at play. He traced its early epidemiology in the article “Kaposi’s sarcoma and pneumocystis pneumonia among homosexual men—New York City and California,” which ran in the Center for Disease Control’s (CDC) Morbidity and Mortality Weekly Report (MMWR) in early July of 1981.

1982: We codified the first melanoma self-examination process of “ABCDEs.” In 1982 NYU Langone Medical Center dermatologists developed and refined the first melanoma self-examination process. Known as the “ABCDEs” of melanoma detection, the acronym provides five steps, or criteria, for self-diagnosing, as well as physician diagnosing. To this day, it remains an applicable method to detect and diagnose melanoma, a form of skin cancer with the highest mortality rate.

2013: We discovered nail stem cells capable of finger and toe regeneration. In 2013 a team of researchers led by Mayumi Ito, PhD, discovered that nail stem cells (found at the base of the nail) were capable of regenerating digit tips. Dr. Ito’s team found that a signaling pathway known as Wnt played a major role in nail growth: “What we learned from these experiments is that the nail epithelial cells form a sort of command center that coordinates the formation of the new digit. Using the Wnt signaling pathway, they set in motion the complex process of building tissues and assembling them into a new, intact toe tip.” With this knowledge, the hope is that one day we may harness the ability to create new treatments for amputees.
**Miroslav Blumenberg, PhD**  
*Associate Professor of Dermatology, Biochemistry and Molecular Pharmacology*  
- Cellular and molecular biology of keratinocytes  
- ‘Skinomics,’ the use of omics in dermatology and skin biology  
- Transcriptional profiling in skin  
- Microbiota on skin  
Massachusetts Institute of Technology, PhD (Organic Chemistry)  
Stanford University School of Medicine, Postdoctoral Fellowship (Microbiology, Human Genetics)

**Nooshin Brinster, MD**  
*Assistant Professor of Dermatology*  
- Alopecia  
- Inflammatory Dermatoses  
- Connective Tissue Disorders  
- Melanocytic lesions  
University of Pennsylvania School of Medicine, MD  
University of California, San Francisco, Intern (Internal Medicine)  
Johns Hopkins Hospital, Baltimore, MD, Resident (Dermatology)  
Harvard Medical School, Brigham & Women’s Hospital, Fellow (Dermatopathology)

**John A. Carucci, MD, PhD**  
*Chief of Mohs Micrographic and Dermatologic Surgery*  
*Director, Procedural Dermatology Fellowship Training Program*  
*Associate Professor of Dermatology*  
- Mohs micrographic surgery  
- Flap and graft reconstructive surgery  
- Treatment of skin cancers, including basal cell and squamous cell carcinomas and melanoma  
- Treatment of less common nonmelanoma skin cancers  
- Laser procedures  
State University of New York - Health Science Center, Brooklyn, MD, PhD (Immunology)  
Yale New Haven Hospital, Intern (Internal Medicine)  
NYU School of Medicine, Resident (Dermatology)  
Yale New Haven Hospital, Fellow (Mohs Micrographic and Advanced Dermatologic Surgery)

**David E. Cohen, MD, MPH**  
*Vice Chairman for Clinical Affairs*  
*Director of NYU Dermatologic Associates*  
*Director of Allergic, Occupational and Environmental Dermatology*  
*Charles C. and Dorothea E. Harris Professor of Dermatology*  
- Allergic and Irritant Contact Dermatitis  
- Occupational and Environmental Skin Disorders and Infections  
- Inflammatory Skin Diseases (Eczema and Psoriasis)  
- Facial Dermatoses (Acne, Rosacea)  
State University of New York, Stony Brook School of Medicine, MD  
Columbia University School of Public Health, MPH (Environmental Science)  
NYU School of Medicine, Resident (Dermatology)  
Columbia University School of Public Health, Resident (Occupational and Environmental Medicine)

**Nada Elbuluk, MD, MSc**  
*Assistant Professor of Dermatology*  
- Pigmentary Disorders including vitiligo, melasma, postinflammatory hyperpigmentation  
- Skin of color dermatology  
- Laser procedures and Cosmetic Dermatology  
- General Dermatology  
University of Michigan School of Medicine, MD  
University of Michigan School of Public Health and Rackham Graduate School, MSc  
Johns Hopkins Hospital, Resident (Dermatology)  
University of Pennsylvania, Fellow (Dermatology)
Alisa Femia, MD  
Assistant Professor of Dermatology  
• Autoimmune Connective Tissue Disease/Dermatology-Rheumatology including lupus of the skin, scleroderma, morphea, dermatomyositis, eosinophilic fasciitis, Raynaud's, panniculitis  
• Inpatient Dermatology  
• Complex Medical Dermatology  
State University of New York, Stony Brook School of Medicine, MD  
Mount Sinai Medical Center, Intern (Internal Medicine)  
State University of New York, Stony Brook School of Medicine, Resident (Dermatology)  
Brigham & Women's, Harvard Medical School and Boston Children's Hospital, Fellow (Dermatology-Rheumatology)

Roger S. Ho, MD, MS, MPH  
Assistant Professor of Dermatology  
• General medical dermatology (psoriasis, eczema, acne, rosacea, skin cancer detection, and other rashes)  
• Role of vitamin D in skin health  
• Male dermatological care  
Johns Hopkins University School of Medicine, MD  
Yale University, M.S. (Molecular Biochemistry and Biophysics)  
Johns Hopkins University Bloomberg School of Public Health, M.P.H. (Epidemiology and Biostatistics)  
Johns Hopkins Bayview Medical Center, Intern (Internal Medicine)  
University of Pittsburgh Medical Center, Resident (Dermatology)

Mayumi Ito, PhD  
Associate Professor of Dermatology and Cell Biology  
• Hair follicle biology  
• Cutaneous epithelial stem cells and melanocyte stem cells  
• Skin regeneration and wound healing  
Nagoya University, BS, MS, PhD  
University of Pennsylvania School of Medicine, Postdoctoral Fellowship (Biological Science)

Susan E. Katz, MD  
Clinical Assistant Professor of Dermatology  
• Psoriasis, eczema and other inflammatory dermatoses: diagnosis and therapeutics  
• Photodamage, precancers, skin cancers, moles and aging of the skin; anti-aging regimens  
• Cutaneous manifestations of systemic disease  
• Principles of practice of dermatology in a changing medical environment  
NYU School of Medicine, MD  
Columbia University/The Roosevelt Hospital, Intern (Medicine)  
Columbia University/The Roosevelt Hospital, Resident (Medicine)  
Albert Einstein College of Medicine, Resident (Dermatology)

Jo-Ann M. Latkowski, MD  
Director, Dermatology Residency Training Program  
Acting Director, Department of Dermatology, Manhattan Veterans Administration Hospital  
Assistant Professor of Dermatology  
• Cutaneous lymphomas including mycosis fungoides, Sézary Syndrome, cutaneous anaplastic large cell lymphoma, lymphomatoid papulosis, cutaneous B cell lymphoma and pseudolymphoma  
• Complex medical dermatological conditions  
NYU School of Medicine, MD  
Beth Israel Hospital, Intern (Internal Medicine)  
NYU School of Medicine, Resident (Dermatology)

Marie Leger, MD, PhD  
Assistant Professor of Dermatology  
• Acne, acne scarring, rosacea, bullous disease (pemphigus vulgaris and foliaceus, bullous pemphigoid), skin of color, botulinum products, fillers, and general skin wellness  
• Technology and health, telemedicine and international dermatology  
University of Illinois School of Medicine, MD  
Institute of Communications Research, University of Illinois, PhD (Communications Research)  
University of Chicago, Intern (Internal Medicine)  
NYU School of Medicine, Resident (Dermatology)
George Lipkin, MD  
*Professor of Dermatology*

- Biology of melanoma
- Development of oncologic therapeutics
- General dermatology

State University of New York - Health Science Center, Brooklyn, MD
Montefiore Medical Center, Intern (Medicine-Surgery)
Bellevue Hospital and NYU Postgraduate Medical School, Resident (Dermatology)

Prashiela Manga, PhD  
*Assistant Professor of Dermatology and Cell Biology*

- Cellular and molecular biology of melanocytes
- Pathogenesis of pigment-related disorders including albinism and vitiligo
- Development of therapeutics for pigment-related disorders

University of the Witwatersrand, South Africa, PhD (Human Genetics)
NYU School of Medicine, Postdoctoral Fellowship (Dermatology)

Shane Meehan, MD  
*Director, Dermatopathology Section*

*Director, Dermatopathology Fellowship Training Program*

*Associate Professor of Dermatology and Pathology*

- Microscopic diagnosis of melanoma and nevi including Spitz nevi, atypical nevi, and congenital nevi and inflammatory dermatoses

Dartmouth Medical School, MD
University of California, San Francisco, Student Fellow (Anatomic Pathology and Dermatopathology)
Stanford University School of Medicine, Resident (Anatomic Pathology)
Stanford University School of Medicine, Fellow (Surgical Pathology)
NYU School of Medicine, Fellow (Dermatopathology)

Andrea Neimann, MD, MSCE  
*Director, Dermatology Clinical Studies Unit*

*Assistant Professor of Dermatology*

- Psoriasis and psoriasiform dermatoses
- Psoriasis, cardiovascular disease and cardiovascular risk factors
- New and innovative therapies for psoriasis and inflammatory skin disease

University of the Witwatersrand, South Africa, MD
Albert Einstein Medical Center, Resident (Internal Medicine)
University of Pennsylvania, NRSA Fellow, MSCE (Dermatopharmacology)
Albert Einstein College of Medicine, Fellow (Dermatopharmacology)
Albert Einstein College of Medicine, Resident (Dermatology)

Seth J. Orlow, MD, PhD  
*Chairman, The Ronald O. Perelman Department of Dermatology*

*Samuel Weinberg Professor of Pediatric Dermatology*

*Professor of Cell Biology and of Pediatrics*

*Director, Program for Cutaneous Biology and Skin Disease*

- Cellular and molecular biology of melanocytes
- Dermatologic and oncologic therapeutics
- Pediatric and adolescent dermatology including skin, hair, nail disorders
- Congenital and genetic skin disorders

Albert Einstein College of Medicine, MD, PhD (Molecular Pharmacology)
Mount Sinai Medical Center, Intern (Pediatrics)
Yale University School of Medicine, Resident (Dermatology)
Yale University School of Medicine, Fellow (Dermatology)
Iman Osman, MD  
Director, Interdisciplinary Melanoma Cooperative Group (IMCG)  
Associate Director for Interdisciplinary Program Development and Education, Perlmutter Cancer Center  
Professor of Dermatology, Medicine, and Urology  
- Melanoma  
- Prostate Cancer  
Cairo Medical School, Egypt, MD  
National Cancer Institute, Egypt, PhD (Medical Oncology)  
Cairo Medical School, Egypt, Intern  
National Cancer Institute, Egypt, Fellowship (Medical Oncology)  
Memorial Sloan-Kettering Cancer Center, Fellowship (Molecular Pathology)  
Memorial Sloan-Kettering Cancer Center, Fellowship (Oncology Clinical Research)  

David Polsky, MD, PhD  
Director, Pigmented Lesion Section  
Professor of Dermatology and Pathology  
Alfred W. Kopf Professor of Dermatologic Oncology  
- Development of blood-based molecular biomarkers for monitoring patients with melanoma  
- Development of melanoma risk prediction models that integrate genetic, environmental and phenotypic factors  
- Clinical interests include atypical nevi, melanoma, skin cancer  
- Dermoscopy  
Albert Einstein College of Medicine, MD, PhD (Molecular Genetics)  
Montefiore Medical Center, Intern (Medicine)  
NYU School of Medicine, Resident (Dermatology)  
Memorial Sloan-Kettering Cancer Center, Research Fellow (Molecular Pathology)  

Miriam K. Pomeranz, MD  
Associate Director, Dermatology & Syphilology, Bellevue Hospital  
Director of Vulvar Disease, Bellevue Hospital  
Chair, Residency Selection Committee  
Associate Professor of Dermatology  
- Adult medical dermatology  
- Pregnancy dermatoses  
- Vulvar dermatoses  
University of Pennsylvania School of Medicine, MD  
Columbia University Medical Center, Intern (Internal Medicine)  
Mount Sinai Medical Center, Resident (Dermatology)  
NYU School of Medicine, Fellow (Dermatopharmacology)  

Sarika Ramachandran, MD  
Assistant Professor of Dermatology  
- Dermatologic manifestations of autoimmune connective tissue diseases including lupus, morphea/scleroderma, dermatomyositis and others  
State University of New York, Stony Brook School of Medicine, MD  
Winthrop University Hospital, Intern (Medicine)  
Stony Brook University Medical Center, Resident (Dermatology)  

Miguel Sanchez, MD  
Director, Dermatology & Syphilology, Bellevue Hospital  
Associate Professor of Dermatology  
- Infectious diseases  
- Sexually Transmitted Diseases  
- Wound healing  
- Sarcoidosis  
Albert Einstein College of Medicine, MD  
Montefiore Medical Center, Resident (Pediatrics)  
Montefiore Medical Center, Resident (Family Medicine)  
NYU School of Medicine, Resident (Dermatology)
Markus Schober, PhD  
Assistant Professor of Dermatology and Cell Biology  
- Mechanisms of self-renewal and differentiation in homeostasis and cancer  
- Phenotypic heterogeneity in cancers and therapy resistance  
- Squamous cell carcinoma  
- Melanoma  
University of Vienna, Austria, PhD (Biochemistry and Cell Biology)  
Harvard Medical School, PhD (Genetics)  
Rockefeller University, Postdoctoral Fellow (Cancer Cell Biology)

Ladan Shahabi, MD  
Associate Director of Cosmetic Dermatology  
Assistant Professor of Dermatology  
- Anti-aging skin care, laser procedures, chemical peels, soft tissue fillers, botulinum toxin and sclerotherapy  
- Acne, melasma, rosacea, actinic keratoses, skin cancer screening  
University of Michigan, Ann Arbor, MD  
St. Joseph Mercy Hospital, Ann Arbor, Intern (Internal Medicine)  
University of Michigan, Ann Arbor, Resident (Dermatology)  
University of Pittsburgh, Fellowship (Cosmetic Dermatology)

Jerry Shapiro, MD  
Adjunct Professor of Dermatology  
Clinical Professor of Dermatology, The University of British Columbia  
- Hair disorders: alopecia areata, scarring alopecia, male and female pattern hair loss  
McGill University Medical School, MD  
University of British Columbia, Resident (Dermatology)

Nicholas A. Soter, MD  
Medical Director, Skin and Cancer Unit, NYU Langone Medical Center  
Professor of Dermatology  
- Mast cell biology  
- Inflammatory mediators in dermatologic disorders  
- Pathophysiology of urticaria, photosensitivity disorders, cutaneous necrotizing vasculitis, and mastocytosis  
University of Texas Southwestern Medical School, MD  
Boston City Hospital, Intern (Medicine)  
Baylor University Affiliated Hospitals, Resident (Dermatology)  
Massachusetts General Hospital, Resident (Dermatology)  
Harvard Medical School, Research Fellow (Immunology)

Jennifer A. Stein, MD, PhD  
Associate Director, Pigmented Lesion Section  
Assistant Professor of Dermatology  
- Melanoma, atypical moles, pigmented lesions, dermoscopy  
- Non-melanoma skin cancer, actinic keratoses  
- Skin disease in organ transplant patients  
- General dermatology, psoriasis  
NYU School of Medicine, MD, PhD (Cell Biology and Developmental Genetics)  
NYU School of Medicine, Intern (Medicine)  
NYU School of Medicine, Resident (Dermatology)