Our skin is the largest organ in the body. Because it provides a direct interface with the outer environment, it is the body’s first line of defense against a host of external factors. Skin plays a key role in protecting us against pathogens and excessive water loss. It insulates the body and other vital organs, regulates body temperature, provides sensation, and initiates synthesis of vitamin D—now recognized to be one of the most critical nutrients. Because of its role as the gateway to the body, the skin provides the perfect canvas for asking, and answering, some of medicine’s most perplexing questions.
The impact of Dermatology, the medical discipline charged with care of the skin and skin diseases, is thus not at all “skin deep.” It is profound.

Dermatologists treat a wide range of skin diseases and conditions, many of which have dire consequences in terms of pain, discomfort, functional impairment, and disfigurement. Often skin disease is integrally related to a disorder in another area of the body; for example, imbalances in the immune system often show up first in the skin.

JOHNS HOPKINS DEPARTMENT OF DERMATOLOGY

The Department of Dermatology at Johns Hopkins is devoted to improving medical care for patients with skin diseases and disorders. Dermatology faculty accomplish this daily through conducting groundbreaking research that leads to important new knowledge and discoveries, through educating medical students, residents, and fellows who will become tomorrow’s leading dermatologists, and by providing dermatological care of unrivalled quality to their patients.

The Department’s priority is, always, patient care. Its world-class research researchers work hand-in-hand to bring discoveries made in the laboratory to the clinic and bedside. Their studies lead to innovative methods, more effective treatments, and approaches that will improve outcomes for patients at Johns Hopkins and nationally, even globally. Current research ranges from the use of stem cells for wound healing and special lasers for hair loss, especially in African-Americans, to killing melanoma cancer cells.

THE MOST COMMON CANCER

Skin cancer is the most common form of cancer in the United States. Each year, over two million people are diagnosed with more than 3.5 million skin cancers (melanomas and basal, squamous, and merkel cell carcinomas). New cases of skin cancer annually outnumber the combined incidences of breast, prostate, lung, and colon cancer.

A problem of this magnitude demands a strong, intensive, and coordinated response. To address the epidemic of skin cancers in the general population, and in high-risk groups such as organ and bone marrow transplant recipients, the Department of Dermatology proposes to create a Comprehensive Skin Cancer Program.

This program will provide highest quality medical treatment for patients with all types and stages of skin cancer, while also advocating for prevention and local control of the cancer.

DIFFERENT CARE FOR DIFFERENT SKIN

Approximately 70% of people living in Baltimore City consider themselves Asian, Black, Hispanic, Native-American, or of mixed race. Ethnic skin needs to be treated differently than Caucasian skin; certain skin diseases (such as lupus, keloids, sarcoidosis, and specific skin cancers) are more common or more severe in people with darker skin tones. Ethnic skin requires specialized care.

In January 2010, dermatologists at Johns Hopkins created the Ethnic Skin Program to meet the skin health
needs of Baltimore’s ethnically diverse community. This population is underserved and there is, as yet, little awareness that these individuals have distinct dermatological needs. The Ethnic Skin Program addresses the roles of race, genetics, environmental factors, and disparities in access to care in determining the emergence and course of skin disease. It provides specialized diagnosis and treatment of skin problems for individuals from ethnic backgrounds, and screens persons with ethnic skin for skin cancer. Community outreach and education are priorities. Through a variety of activities, the Ethnic Skin Program informs the public about diseases that disproportionately affect people with pigmented skin.

A SPECTRUM OF MEDICAL DISEASES REQUIRING COMPLEX, COORDINATED CARE
Medical dermatology treats a long list of skin diseases, ranging from household names such as eczema and psoriasis to little known conditions such as Stevens-Johnson Syndrome and Cutaneous T-Cell Lymphoma. Skin diseases often reflect a disorder in the human ecosystem; their care typically requires coordination among Dermatology faculty and amongst other disciplines. To most effectively manage the complexity of this discipline—its clinical, translational, and outcomes research; multidisciplinary clinics; and training programs in sub-specialty areas common to Internal Medicine and Dermatology—the Department proposes to create a Center of Excellence in Medical Dermatology.

Regenerating the Skin

Medical dermatology is both highly specialized and cross-disciplinary. For example, immune system imbalance, one of the most prevalent conditions treated by the Dermatology team, entails close partnership with specialists in disciplines such as oncology and rheumatology. Autoimmune diseases arise when the body’s immune system responds inappropriately, attacking its own tissues rather than invasive pathogens. Treatment for auto-immune diseases (such as Crohn’s Disease, lupus, and rheumatoid arthritis) typically involves immunosuppressants—medications which deactivate or decrease the efficiency of the immune system. While immune system manipulation greatly improves outcomes for patients with autoimmune diseases, it also introduces a new set of problems. Skin infections and skin cancer are two of the most frequent side effects of immunosuppressants.

As the usual point of entry for patients presenting with skin cancer or an adverse skin reaction to immunosuppression, the Department of Dermatology—specifically, medical dermatology—is uniquely positioned to address complex dermatological needs, such as those of patients with autoimmune disease. Additionally, Johns Hopkins dermatologists see a growing number of patients who are chronically immunosuppressed due to medical management of organ transplantation and cancer, as well as autoimmune diseases. The Center of Excellence thus arises in response to critical needs, and will have large impact for many patients, across many diseases and health conditions.

Regenerating the Skin

Clinician-scientists in the Department of Dermatology are advancing the science of Regenerative Medicine. In this field, the study of cell biology will lead to better understanding of the skin’s capacity to regenerate after trauma which, in turn, will lead to insights into how that capacity can be increased or activated, and to new clinical methods for skin regeneration. The Department of Dermatology intends to make major discoveries in regenerative medicine and to apply these discoveries to challenges in patient care. Some possibilities are: enabling patients to heal from catastrophic wounds, chronic wounds that will not heal, and other skin disfigurements; identifying and treating malignant melanomas before they are fatal; and recovering the body’s skin integrity after loss of a limb or limb replacement.

Why is Johns Hopkins the Best Place for Advances in Dermatology?

The Department of Dermatology is optimally positioned for excellence. U.S. News & World Report has consistently ranked Johns Hopkins Hospital as America’s Best Hospital. John Hopkins faculty represent the crème de la crème in academic medicine; they comprise the country’s best clinicians, brightest scholars, and most talented researchers. A culture of collaboration, and of care focused always on the patient, supports outstanding, compassionate, clinical care and best possible outcomes for each patient.

In Dermatology, the mission of Johns Hopkins Medicine is taken very seriously—to improve the health of the
Philanthropy is needed now more than ever before. Research grants have become increasingly competitive. The success rate for grants submitted to the National Institutes of Health (NIH) hit an all-time low of 17% in 2011, down dramatically from 32% in 1999-2003.¹ Simultaneously, changes in healthcare financing have resulted in reduced clinical revenues; whereas once clinical margins were sufficient to cross-subsidize activities related to education and training, and to support the pilot studies that are so critical but are not generally funded by research grants, now clinical revenues are needed to meet clinical expenses. As NIH support continues to decrease and clinical care can no longer cover the costs of education, discovery, and special programs, the Department of Dermatology must depend on significant philanthropic support.

**What role does philanthropy play?** Philanthropy is needed now more than ever before. Research grants have become increasingly competitive. The success rate for grants submitted to the National Institutes of Health (NIH) hit an all-time low of 17% in 2011, down dramatically from 32% in 1999-2003. Simultaneously, changes in healthcare financing have resulted in reduced clinical revenues; whereas once clinical margins were sufficient to cross-subsidize activities related to education and training, and to support the pilot studies that are so critical but are not generally funded by research grants, now clinical revenues are needed to meet clinical expenses. As NIH support continues to decrease and clinical care can no longer cover the costs of education, discovery, and special programs, the Department of Dermatology must depend on significant philanthropic support.


**Philanthropy can make the difference.** Philanthropic funding will enable the Department of Dermatology to recruit the best and the brightest clinician-scientists, those individuals who can drive innovation in skin disease and its treatment. This sort of funding can help jumpstart new research studies, make rapid progress with current research agendas, and build research capacity that will powerfully support future studies. Being more flexible than grant funding, philanthropic dollars can enhance programs and services in ways that make care more patient-friendly, accessible, and comprehensive. These critical funds can underwrite important nonclinical (i.e., not reimbursed) activities that expand the services offered to patients and the community—for example, efforts to educate the wider community about skin cancer. Philanthropy is, quite simply, the leverage that will allow us to move not just “from good to great,” but from excellent to truly outstanding.

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>SPECIFIC FUNDING NEEDS</th>
<th>CURRENT USE</th>
<th>ENDOWMENT</th>
<th>FUNDS NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Skin Cancer Program</td>
<td>Endowed Professorship</td>
<td>—</td>
<td>$2,500,000</td>
<td>$2,500,000</td>
</tr>
<tr>
<td></td>
<td>Multi-disciplinary clinic for high-risk skin cancer patients</td>
<td>$1,000,000</td>
<td>—</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td>Research support: causation, treatment, prevention, study of outcomes</td>
<td>$500,000</td>
<td>—</td>
<td>$500,000</td>
</tr>
<tr>
<td>Ethnic Skin Program</td>
<td>Recruitment of full-time faculty member</td>
<td>—</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td></td>
<td>Clinical, translational, and outcomes research</td>
<td>$500,000</td>
<td>—</td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td>Education: fellowship training, nurse educator</td>
<td>$100,000</td>
<td>—</td>
<td>$100,000</td>
</tr>
<tr>
<td></td>
<td>Community outreach and education</td>
<td>$50,000</td>
<td>—</td>
<td>$50,000</td>
</tr>
<tr>
<td>Center of Excellence in Medical Dermatology</td>
<td>Clinical, translational, and outcomes research</td>
<td>$800,000</td>
<td>—</td>
<td>$800,000</td>
</tr>
<tr>
<td></td>
<td>Education: fellowship training</td>
<td>$300,000</td>
<td>—</td>
<td>$300,000</td>
</tr>
<tr>
<td>Regenerative Medicine</td>
<td>Research support: laboratory core, database</td>
<td>$500,000</td>
<td>—</td>
<td>$500,000</td>
</tr>
<tr>
<td></td>
<td>Faculty support</td>
<td>$500,000</td>
<td>—</td>
<td>$500,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$4,250,000</td>
<td>$3,500,000</td>
<td>$7,750,000</td>
</tr>
</tbody>
</table>

**What will it take?**

---

Philanthropy is needed now more than ever before. Research grants have become increasingly competitive. The success rate for grants submitted to the National Institutes of Health (NIH) hit an all-time low of 17% in 2011, down dramatically from 32% in 1999-2003. Simultaneously, changes in healthcare financing have resulted in reduced clinical revenues; whereas once clinical margins were sufficient to cross-subsidize activities related to education and training, and to support the pilot studies that are so critical but are not generally funded by research grants, now clinical revenues are needed to meet clinical expenses. As NIH support continues to decrease and clinical care can no longer cover the costs of education, discovery, and special programs, the Department of Dermatology must depend on significant philanthropic support.


---
Rising to the Challenge: The Campaign for Johns Hopkins
The Johns Hopkins Department of Dermatology
601 North Caroline Street, Suite 6062
Baltimore, Maryland 21287
443-287-2036
rising.jhu.edu

rev. 03/03/14