

# PENNDERM

PENN SKIN BIOLOGY & DISEASES RESOURCE-BASED CENTER



## Inside This Issue:

**7** **Quest for a Cure:**  
*Developing a new treatment for melanoma*

**13** **Old Wounds Provide New Insights:**  
*How clinical observation is being used to drive scientific discovery*

**20** **Global Dermatology:**  
*The Penn Global Dermatology Program continues to expand to Guatemala City*



FALL 2018



# CHAIRMAN'S MESSAGE

**A note from Dr. George Cotsarelis, MD, Milton Bixler Hartzell Professor and Chairman of the Department of Dermatology at the University of Pennsylvania Perelman School of Medicine**

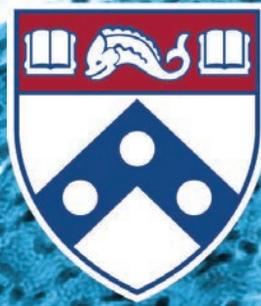
Dear Friends and Colleagues,

Our Department has a long history of innovation and discovery, from Louis Duhring's first description of dermatitis herpetiformis and Albert Kligman's discoveries of the miracles of retinoids to John Stanley's breakthroughs in pemphigus and staph scalded skin syndrome. We now enter a new phase, where our faculty study skin disease in the laboratory, and develop novel treatments that will then be studied in patients with the disease – from the bench to the bedside. In truly spectacular fashion, Dr. Todd Ridky, featured in this newsletter, and Dr. Aimee Payne, whose work will be featured in the upcoming edition, have brought discoveries from their labs to the clinic. Their work promises to not only lead to new treatments, but also to actual cures for lethal and debilitating diseases, such as melanoma and pemphigus.

The excitement here at Penn Dermatology is palpable as we believe we are at the right place at the right time to move dermatology forward. Recently, scientists at Penn have used gene therapy and cell-based therapy to cure certain types of blindness and leukemias, respectively. Dr. Carl June was the pioneer and driving force behind CAR-T

cell therapies for treating cancer. He recently gave remarks at a reception that I attended, recognizing his receipt of the Albany prize. He reached a striking conclusion: the pieces he needed to bring this therapy to patients could only have fallen into place at Penn. He was surrounded by the experts he needed, precisely when he needed them. Similarly, our faculty interact with experts within and outside our Department on a daily basis. These collaborations create synergies and an environment ripe for innovation. Dr. Thomas Leung, also highlighted in this newsletter, is yet another example of a physician-scientist who collaborates with clinicians and others across the Department and University. He is poised to move his research on wound healing and keloids from the laboratory to the clinic.

On the international front, our Global Dermatology Program continues to make an indelible mark with its Penn-Guatemala Partnership, spearheaded by Dr. Rudolph Roth with support from Drs. Jules Lipoff and Cory Simpson. Through visits to remote and underserved areas in Guatemala, our team provides expert care to those in need, as they work along with local



dermatologists and trainees to support the needs of the Guatemalan Community. A new element of the program now offers Guatemalan dermatology residents the opportunity to come to Philadelphia and work with our Penn team on-site, promoting increased interactions between the programs.

Our successful Penn Academy for Skin Health (PASH) Program continued for the second year in a row this past spring. This community outreach program, partially supported by our Skin Biology and Diseases Resource-Based Center grant, introduces students from local Philadelphia high schools to laboratory research and clinical dermatology through Saturday sessions as well as summer research internships.

We are at the forefront of technological advances in medicine, as demonstrated by continuous innovation such as Drs. Michael Ming, Emily Chu and Carrie Kovarik's MelaSight app, which helps high-risk melanoma patients track early changes in their skin and our new High Risk Patient Monitoring (HiRPM) project that was selected for financial support and development assistance by Penn's Innovation Accelerator Program, both recognized in our Highlights of Discovery. While technology is unequivocally a cornerstone of success in medicine, there is a genuine humanity that only personal relationships can afford both patients and physicians. Bringing science from the laboratory setting into the lives of patients can only

reach its full potential when coupled with the compassion and care that a physician can offer.

Lastly, we introduce a new section on alumni and their accomplishments. The inaugural story features Dr. Stuart Lessin, whom many of you know through his multiple roles in the dermatologic community, including developing topical treatments for cutaneous T cell lymphoma and as the vice president of the Dermatology Foundation. We look forward to highlighting many of our alumni in the future, showcasing their varied endeavors and numerous successes.

As you read about the impressive accomplishments of our faculty, please know that they could not have happened without the support of our colleagues in the community who are integral to our Department's continuous success. Sending patients and biopsies supports our missions of clinical care, research and education. Philanthropy, too, provides much needed funds for our three missions. With your continued support, the future will remain bright.

Best wishes for a happy and healthy holiday season,

A handwritten signature in black ink, appearing to read "George Cotsarelis".

George Cotsarelis, MD  
Milton Bixler Hartzell Professor and Chair

# PENN ACADEMY *for* SKIN HEALTH



**Pictured (above):** PASH student working in the lab with Christine Monteleon, PhD, and Laurice Flowers, PhD.

## *The Penn Academy for Skin Health offers local high school students exposure to skin biology and summer laboratory internships*

The Penn Academy for Skin Health (PASH) held its second annual session during the Spring 2018 semester. For four consecutive Saturdays, students from local Philadelphia high schools were introduced to the vast world of laboratory research and clinical dermatology. The program was sponsored for a second consecutive year by a generous grant from the Skin Biology and Diseases Resource-Based Center (SBDRC).

Each weekend session was a unique opportunity for students to learn about a different focus in the world of dermatology. Faculty, staff, and students from throughout the Department volunteered their time to come in and speak about their unique work in the laboratory, using tailored curricula that highlighted the various aspects of work going on here at Penn Dermatology. The PASH program also afforded students the opportunity to further their laboratory experience as summer interns at either the Penn or Jefferson hospitals.

Megan, a student alumnus of this year's program and a selected summer intern, shared the following when reflecting on her PASH experience:

*"It was extremely liberating to be able to speak on a scientific experiment in depth and really understand the lab research as a high school student."*

*"This year I am taking AP Biology for my final year of high school. My experiences during the summer allowed me to learn so much that I can take with me for my class this year... It gave me more confidence going into a rigorous science course that I had the ability to succeed."*

Chavalier, another student who completed the internship, recounted a similarly positive experience:

*"My favorite memories of my summer here at UPenn were the different connections I made with my mentor and the people from my lab. I loved asking them questions about what they were doing because they loved answering."*

*"I've learned a lot about science that I can bring back to class, I've got a first-hand experience in bench work. I now understand the processes that come before clinical work. All of the things I've learned about the lab will also contribute to my future decision making on whether I want to be a clinician or a researcher."*

This scholastic endeavor would not be possible without the help of our dedicated volunteers; they

are integral to making this experience meaningful and memorable for the students.

Christine Monteleon, PhD, a postdoctoral fellow in Dr. Todd Ridky's laboratory, investigates the cell biology that governs epithelial homeostasis and cutaneous tumor progression. As an instructor in the PASH program, Christine assisted in organizing and presenting the hands-on learning experiences. She was also involved in lecturing on basic science and laboratory techniques and how they apply to dermatology research.

*"When the students put on their white coats, goggles, and gloves," she says, "their previous notions of who a scientist may be fall away, and they are able to see themselves as scientists."*

After four Saturdays in the program, the students clearly have a newfound appreciation for the research behind medicine.

Laurice Flowers, PhD, served as the coordinator for PASH, and is a postdoctoral fellow in Dr. Elizabeth Grice's laboratory, where she is investigating the interplay of the microbiome with pathogenic microbes. She also gave the lecture on the skin

microbiome and worked with other volunteers in the skin microbiome laboratory. Laurice was drawn to the PASH program because she believes introducing a younger generation of students to laboratory science beyond the classroom is critical to the future advancement of science.

Deborah (DJ) Moran, PhD, is a graduate student in Dr. Sarah Millar's laboratory. Her project is focused on the functions of transcription factor KLF4 in adult epidermis and hair follicle stem cells. As a volunteer with the PASH program, DJ helped students learn a variety of techniques in the labs, including hematoxylin and eosin staining. She also assisted the students in learning about model organisms and why they are important to biomedical research. One of her favorite parts of the program was showing the students different mouse strains and explaining how they can be used to address questions about the skin. DJ is very grateful to have been a part of the PASH program and looks forward to future cohorts.

We are very excited about the PASH program and will be tracking the participants over time to see if they pick a career in science and/or dermatology. We hope to continue this program, ideally with the help of philanthropy, in the future.



**Pictured (above):** Local high school students from this year's PASH session with PennDerm faculty, staff, and student volunteers.

# 34th Annual PILLSBURY LECTURESHIP

The 34th annual Pillsbury Lectureship in Dermatology was held on May 10, 2018 at the Perelman School of Medicine at the University of Pennsylvania. This lecture celebrates the life and leadership of Dr. Donald M. Pillsbury, who helped raise the prestige of dermatology in the scientific world, the government, and in the public eye during his time at the University of Pennsylvania. Kim Yancey, MD, Professor and Chair of the Department of Dermatology at the University of Texas Southwestern Medical Center in Dallas, presented the lecture entitled, *“Patients Matter, People Matter.”*

Dr. Yancey graduated as Valedictorian from the University of Georgia, Summa Cum Laude, and earned his Medical Degree, Alpha Omega Alpha, from the Medical College of Georgia (MCG). He then went on to complete his internship in Internal Medicine and residency in Dermatology at MCG, followed by completion of his postdoctoral fellowship in the Dermatology Branch of the National Cancer Institute at the National Institutes of Health. Dr. Yancey is certified by the American Board of Dermatology and holds distinctive subspecialty certifications in Dermatologic Immunology and Diagnostic Laboratory Immunology.

Dr. Yancey maintains a strong commitment to public professional activities. Currently, he serves as the President of the Dermatology Foundation, is a member of the Board of Directors of the Association of Professors of Dermatology, and is on several Editorial Boards. He is also a member of the American Society for Clinical Investigation, the Society for Investigative Dermatology, the Dermatology Foundation, the American Academy of Dermatology, the American Dermatological



**Pictured (above):** Dr. George Cotsarelis and Pillsbury Lecturer, Dr. Kim Yancey.

Association, the Association of Professors of Dermatology, and several other high-impact professional organizations. He is the former Director and Vice President of the American Board of Dermatology, a former Deputy Editor of the Journal of Investigative Dermatology, and a former President of the Society for Investigative Dermatology. Dr. Yancey is also a former Chair of the Department of Dermatology at the Medical College of Wisconsin.

Dr. Yancey has received prestigious awards and honors for his work, including the renowned Marion Sulzberger Award given by the American Academy of Dermatology to an investigator who has made significant contributions to the understanding of clinical medicine via their basic research. He has published numerous research manuscripts and monographs, served on an array of grant review panels, and is frequently invited to present on his work in the United States and abroad. Dr. Yancey has also maintained strong research support from the National Institutes of Health for over twenty-five years.

It was a true privilege to host Dr. Yancey this year as our guest lecturer. A gifted dermatologist and investigator, he described his journey from the deep south to the NIH where he began an impressive research career studying cutaneous inflammation. He left lecture attendees feeling inspired and excited about the future of dermatologic research and medicine. We were thrilled to hear his story as our 34th Annual Pillsbury Lecturer.

# DR. STANLEY'S RETIREMENT DINNER



This spring, we had the pleasure of celebrating our beloved Dr. John R. Stanley with a dinner in honor of his retirement.

Numerous family members, dear friends, and Dermatology faculty and residents attended, making the evening enjoyable and memorable for all. Former trainees and colleagues came in from around the country (and world!) to celebrate Dr. Stanley's successful career at the University of Pennsylvania. Speech after speech praised Dr. Stanley's dedication to medicine and research, mentorship of residents and junior faculty, and valued Departmental

guidance. Each anecdote spoke to the true impact he has had on the University, and the indelible mark he made.

Dr. Stanley was a member of the Penn Dermatology Faculty for 22 years, serving as the Milton B. Hartzell Professor and Chairman from 1995-2010. Under his leadership, the Department thrived. After announcing his retirement last summer, Dr. Stanley has seamlessly transitioned into the role of Professor Emeritus. We extend our most sincere thanks to Dr. Stanley for all that he has done to contribute to the enduring success of the University of Pennsylvania Department of Dermatology and wish him the very best in his retirement.

## WELCOME NEW FACULTY



**Dr. Amy Forrestel, MD:** *Assistant Professor of Clinical Dermatology*  
*Joined October 2018*

Dr. Forrestel received her BS degree from the University of Florida and MD from Yale University School of Medicine. She then completed a one-year fellowship in HIV dermatology in 2012 and a one-year internship in medicine in 2013 at Temple University Hospital in Philadelphia. Following, she completed a combined residency in Internal Medicine and Dermatology at the University of Pennsylvania School of Medicine in July 2018. Dr. Forrestel focuses on complex medical dermatology, inpatient dermatology, and global health. She will be seeing patients at the Perelman Center for Advanced Medicine and Presbyterian Hospital. She will also be spending three months of the year seeing patients in Botswana.



**Dr. Victoria (Tori) Williams, MD:** *Assistant Professor of Clinical Dermatology*  
*Joined October 2018*

Dr. Williams received her BS degree from the University of Texas, at Austin, and her MD from Baylor College of Medicine. She then went on to complete her internship at the Colorado Health Foundation, Presbyterian St. Luke's, and residency at the University of Colorado in the Department of Dermatology. Dr. Williams then spent two years serving as the Director of Dermatology at Princess Marina Hospital in Gaborone, Botswana, as the Site Director of the Botswana UPenn Partnership Dermatology Program, and managed patient care as the only dermatologist in the public health sector of Botswana. Her clinical and research interests focus on infectious skin disorders, HIV/AIDS related skin disorders, inflammatory skin disorders, skin cancer, tropical skin diseases and global health. Dr. Williams will be seeing patients at Penn Presbyterian Hospital and will also be spending three months of the year seeing patients in Botswana.

*Drs. Forrestel and Williams will enhance our global dermatology program, which is supported by Penn's Center for Global Health as well as numerous generous donations.*



## QUEST FOR A CURE

*Using an unexplained 2,400 year old dermatologic observation to inspire a new therapeutic approach to cancer*

It all stemmed from a seemingly obvious question, “why is it that women tend to do better than men when it comes to surviving cancer and responding to cancer treatments?” Female sex and a history of previous pregnancy are also associated with better outcomes for cancer. These clinical observations have puzzled physicians and researchers for decades, but the mechanisms responsible have been little-pursued by other physician-scientists. “The fact that women do better suggests some type of hormonal influence. Even tumors such as melanoma, not classically considered sex-hormone responsive, also exhibit these significant sex differences,” says Dr. Todd Ridky, MD, PhD, Assistant Professor of Dermatology and Principal Investigator on this project. “[Clearly] there was some reason ... women are doing better,” he noted. Hence, the clinical inspiration for the Ridky Lab’s findings.

The arc of a physician-scientist’s work begins with the patient and a clinical phenomenon that, in combination, inspires questions that have been overlooked, or where answers have remained elusive. By bringing the problem back to the laboratory, researchers seek to answer the clinically-inspired question. Ideally, the knowledge gained through this work opens up new therapeutic

opportunities that can be brought back to the bedside. This is precisely how Dr. Ridky and his team approached their research on the ‘melanoma-protective’ effect. Knowing only two pieces of information with certainty -- namely that women who were pregnant at some point in their lives were more likely to survive cancer than those who never were -- and that there existed a relationship between pregnancy hormones and normal melanocytes (mature melanin-forming skin cells) inspired the Ridky Lab to generate this hypothesis: the connection between pregnancy and cancer could potentially be the same as that connecting pregnancy to normal melanin-related changes in skin color, such as melasma and hyperpigmentation.

The challenge to this hypothesis was that pregnant women exhibit many changes, such as those involving sex and peptide hormones, growth factors and inflammatory cytokines. Many of these compounds are circulating throughout the woman’s body and are uniquely at-play during pregnancy. Presumably, one or a group of these factors were responsible for the changes exhibited, yet figuring out which factor it was, would be no easy feat. In addition to the two clinical clues, a third bedside observation helped the lab focus its

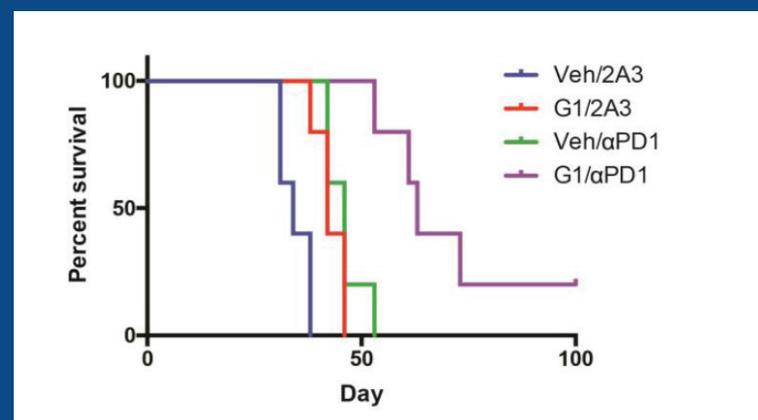
research. Melasma and hyperpigmentation were also seen in another clinical setting, that of oral contraceptive (OC) pills, particularly in the 1960s/70s when hormone concentrations in the pills were high. Another hypothesis emerged: the factor that causes hyperpigmentation as a result of OC use is the same factor that causes hyperpigmentation in pregnancy, and is the same factor that protects against cancer as well. The research focus then shifted to the two main components in birth control pills: estrogen and progesterone.

In the experiment that followed, the Ridky Lab took normal melanocytes from people and exposed them to pregnancy associated levels of estrogen and progesterone. Interestingly, melanocytes do not contain classic estrogen and progesterone receptors, which are generally considered required for sex hormones to produce an effect. Yet, the melanocytes responded to the hormones by altering their pigment production. The Ridky Lab determined that a new alternative estrogen receptor called the G protein-coupled estrogen receptor - GPER – was present in the melanocytes and responsible for the observed effects. This receptor had not previously been studied in skin, nor linked to pigmentation or melanoma. The GPER receptor was present in both melanocytes and melanoma cells from both men and women, and from human and mouse. Could this be the missing puzzle piece?

The Ridky team benefited from studies by Dr. Eric Prossnitz, PhD, of the University of New Mexico, who initially developed a synthetic compound called G-1, which specifically activates GPER without affecting the classical estrogen receptor. G-1 was developed as a research tool, but had not been developed for any therapeutic purpose and has never been used in people. In the next set of experiments, the Ridky Lab put this compound into melanocytes and observed that its effects were equivalent to those of estrogen, yet had the clear advantage of not turning on other estrogen mechanisms in the cell. The team observed that when G-1 was put on melanoma cells, it dramatically slowed down the cancerous cell's ability to proliferate. They continued this experiment using

several different models. The tumors shrank and survival improved. "If cancer growth is slowed, then survival can be extended. And, if we can extend survival, we have a cancer drug that can help people," reflected Dr. Ridky.

Making the leap from laboratory bench back to the clinical setting is daunting, with over 95% of drugs failing to make FDA approval. Nonetheless, all the preclinical studies in Ridky Lab's show remarkable results, such as tumor cell shrinkage and the adoption of a more differentiated state of the tumor cells in response to the drug. By programming the cancer cells to adopt a more differentiated state, the cells not only proliferated more slowly, they also became more immunogenic. "The tumor cells then expressed higher levels of melanocyte antigens on their surface, and as a result were more visible to the immune system," explains Dr. Ridky. "And, if a cancer cell is more visible, it is more vulnerable to immune system attack." This led to a third hypothesis: if cancer cells are treated with the GPER activator in combination with traditional anti-PD1 immunotherapy, cancer treatment would potentially be more effective. This is exactly what was observed in the mouse model experiments that followed. In fact, about half of the mice cleared their tumors entirely and remained healthy.



**Pictured (above):** Treatment of BBRafV600E YUMM1.7 melanoma bearing BL/6 mice with combination G-1 and aPD-1 immunotherapy, initiated at day 14 after tumors reached 5 mm, extended survival compared to aPD-1 alone, with 20% of mice completely clearing tumor.

In an additional series of experiments, the Ridky

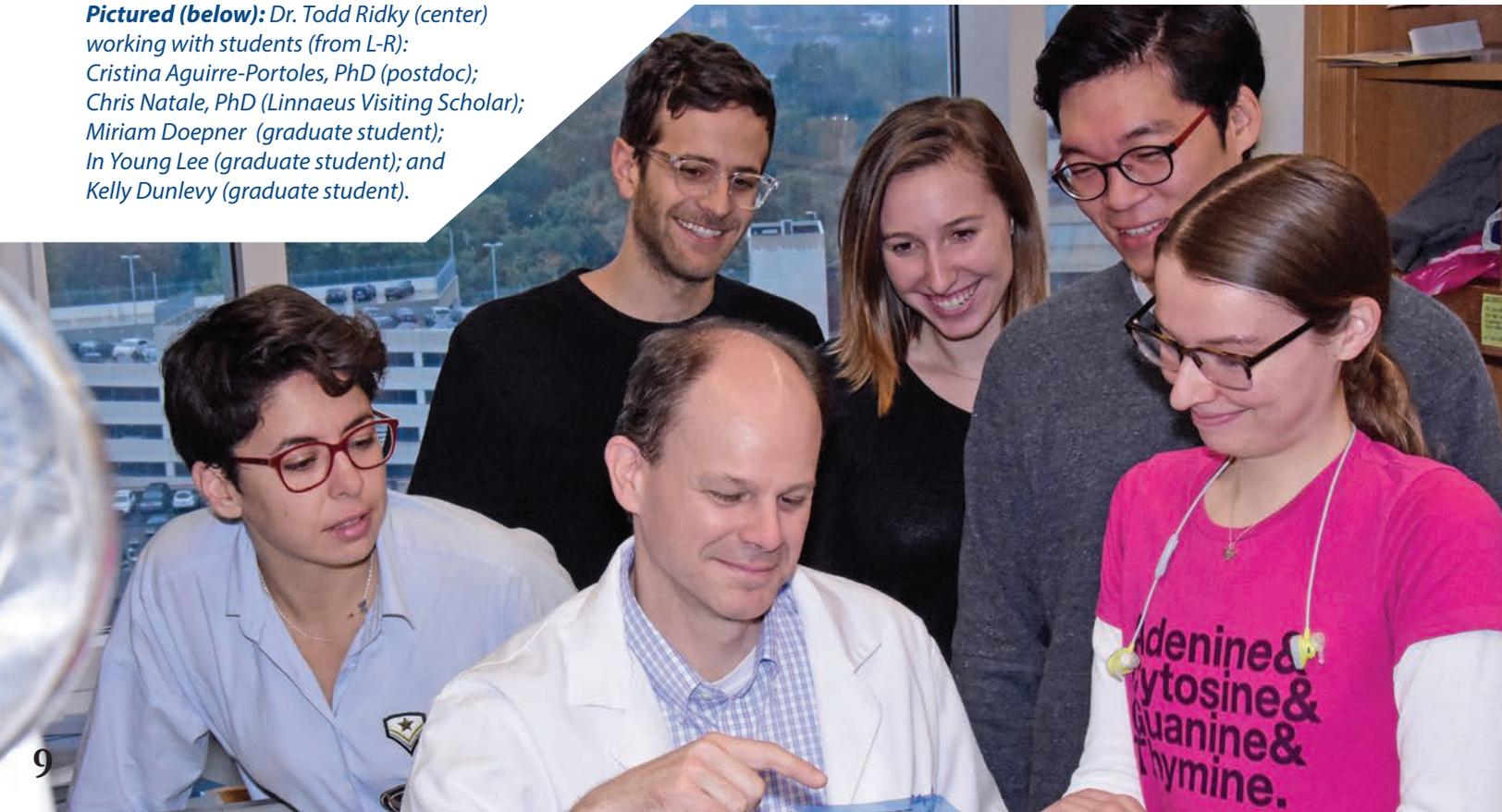
Lab confirmed the compound's ability to induce an immunogenic response. Two groups of mice were used: the first, control mice implanted with untreated tumor cells and the second, mice that had previously cleared tumors, also were implanted with untreated tumor cells. The first group died shortly following implantation, and the second did not form additional tumors. This demonstrated the 'gold standard assay' for establishing an immune mechanism. The Ridky team now had valid confirmation of their findings.

The Ridky Lab's findings promise an exciting future and have the potential to transform the treatment paradigm for many cancers. Dr. Ridky, along with PhD student Christopher Natale, submitted a patent for use of G-1 to treat tumors and formed a company, Linnaeus Therapeutics Inc. The company has helped Dr. Ridky and his team acquire the necessary funding to pursue clinical trials and development of a new cancer drug. Venture capital through Kairos Ventures has contributed the bulk of the company's funding and an NIH Small Business Academic Industry Partnership Grant, the first awarded in Penn Dermatology's history, has also propelled next steps. Additional investments

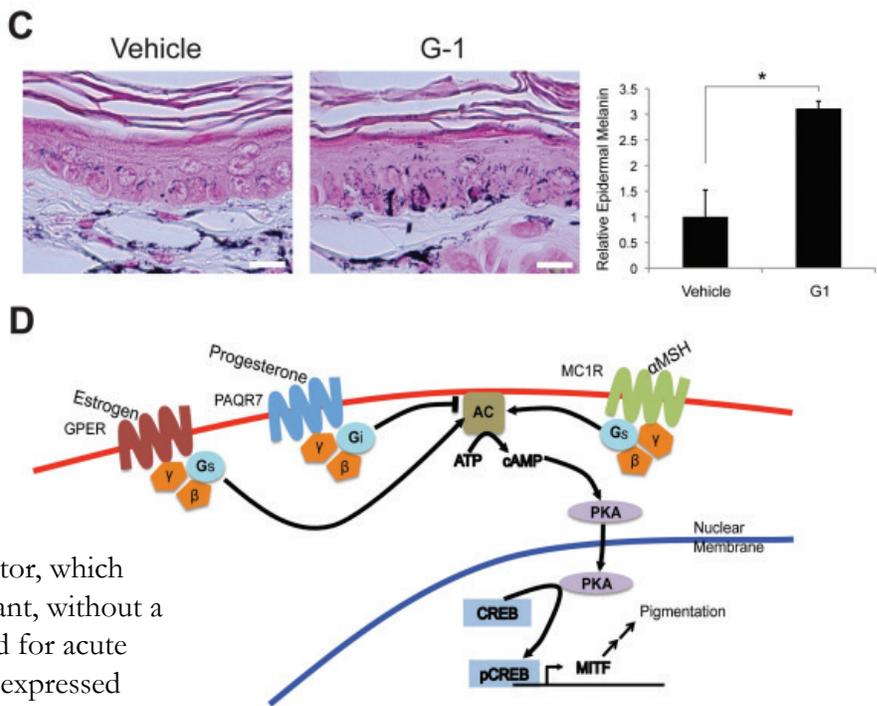
from the Penn Health System and individual donors have significantly contributed to the team's efforts, too. The team's next steps involve undergoing additional pre-clinical studies necessary to obtain approval by the FDA to do an in-human trial. An incredible amount of work goes in to manufacturing a safe and efficient drug compound with high levels of purity. Toxicity studies, product formulation, and other layers of complexity are the team's immediate focuses. If all goes as planned, the Ridky team hopes to begin human trials in the summer of 2019. "It's a tight timeline, but it is possible, so we want to try...everything would have to fall into place," says Dr. Ridky. Fortunately, it seems like everything is indeed falling into place for the busy team.

When asked why he believes that this drug, in particular, has the potential to work successfully with minimal side effects, Dr. Ridky said that "every cancer drug approved right now has been developed as an inhibitor of something...our compound doesn't inhibit anything except the cancer itself. It's an activator of a receptor." This, he believes, is why the drug has been well tolerated in all of the models. "Millions of years of evolution has selected

**Pictured (below):** Dr. Todd Ridky (center) working with students (from L-R): Cristina Aguirre-Portoles, PhD (postdoc); Chris Natale, PhD (Linnaeus Visiting Scholar); Miriam Doepner (graduate student); In Young Lee (graduate student); and Kelly Dunlevy (graduate student).



**Pictured (right): (C)** Fontana-Masson (melanin) staining of tissue sections from ears treated with either vehicle or 2% G-1, quantification of staining on right. **(D)** Schematic model of estrogen and progesterone signaling in melanocytes.  $n=3$  biologic replicates for each experiment. Error bars denote  $\pm$  s.d.,  $*p<0.5$ , scale bar = 20  $\mu$ m. DOI: 10.7554/eLife.15104.014



for the natural activation of this receptor, which happens every time a woman is pregnant, without a toxic effect. Evolution has not selected for acute pharmacologic inhibition of naturally expressed receptors,” he says. Inhibition is not the intended activity, and as a result, inhibitor drugs are generally toxic to normal cells that also need these pathways. By activating a receptor that is normally activated, but in a very unique way, the Ridky team hopes to have avoided the negative toxic side effects common to most cancer drugs. No competing drugs do what G-1 does, nor target the GPER pathway.

As if this finding weren’t already impressive, an added bonus is that the GPER receptor is not only expressed in melanocytes, but also in many organs of the body, including the pancreas, lungs, and colon. When pancreas mouse models from the Stanger Lab at the University of Pennsylvania were tested, the same effects were seen – tumors stopped growing, cells became more immunogenic, and GPER pathway receptivity was enhanced. There is robust evidence to believe that the Ridky Lab’s findings could extend anti-cancer therapy not just for melanoma, but for many other common tumors.

*“This is really rare - the opportunity to do something like this hardly ever comes up... You can spend your whole life and career and be very successful scientifically, but not have this chance,” says Dr. Ridky.*

“You have to be lucky on so many fronts, you have to ask the critical questions, you need a model system that allows you to see it, your mindset needs

to be in the right place, you need to be willing to recognize what doesn’t quite make sense, and you have to surround yourself with smart and clever students,” he adds. Timing is also unequivocally important, a point to which Dr. Ridky notes that immunotherapy is an area of interest right now. The combination of immunotherapy and the G-1 drug aligns perfectly with timing. Of course, the therapy combination also needs to work in an animal model system and not only in a dish- another factor that’s worked in the Ridky Lab’s favor. “So far, all of this has lined up – we’re really fortunate,” admits Dr. Ridky. Though Dr. Ridky realizes only a small percentage of drugs make it through phase II trials and achieve FDA approval, the stars seem to be aligned for G-1 to enter the clinic.

While many do, indeed, spend their whole careers hoping that an opportunity like this will come their way, Dr. Ridky realizes the incredible good fortune he has had in this research process. The hope is that his team can move the G-1 compound from the laboratory bench back to the bedside quickly and seamlessly. Creating an entirely new target and class of molecules takes tremendous luck and incomparable resolve. Dr. Ridky ended the conversation on this determined note: “We’ve put a huge amount of work into this, and there is still a huge amount left to do.” We share Dr. Ridky’s enthusiasm and wish him well in his quest to bring the G-1 drug to patients.

# RADNOR GROUNDBREAKING

*Penn Medicine begins construction on multispecialty outpatient facility in Radnor, PA*

---



On Friday, October 26th, Penn Medicine broke ground on a state-of-the-art four-story, 250,000-square-foot multispecialty outpatient facility in Radnor, PA, that will expand options for patients to receive advanced care close to home. Set to open in Summer 2020, the site will be home to the new Penn Medicine Radnor, and is roughly double the square footage of the current building. The new location will provide comprehensive cancer care, primary care, heart and vascular, orthopedic and neuroscience care. Additional services will include same-day surgery, with six operating rooms, four

endoscopy suites, and full radiology and laboratory services. Patients will also have access to cutting-edge Penn Medicine clinical trials, expanding access to more individuals without necessitating travel to Philadelphia. The Dermatology Department at Penn Medicine Radnor will have approximately 12 physicians with clinics covering a wide variety of sub-specialties including acne and rosacea, hair loss, cosmetic dermatology and laser treatment services, cutaneous T-cell lymphoma, psoriasis, and Mohs surgery.



*The 20th Annual*

# HOHENBERG LECTURE

*The 20th annual lecture given by our own Dr. Elizabeth A. Grice*



The 20th Annual Bernard L. Hohenberg Memorial Lecture took place on Thursday, June 7, 2018. This year's lecture, entitled *Polymicrobial biofilms of chronic wounds: Roles in inflammation, healing, and clinical outcomes*, was presented by Dr. Elizabeth A. Grice.

Dr. Grice received her BA in Biology from Luther College and her PhD in Human Genetics from Johns Hopkins University. She then completed a post-doctoral fellowship at the National Human Genome Research Institute of the National Institutes of Health under the direction of Dr. Julia Segre. Her pioneering work there

revealed the vast topographic and temporal diversity of the human skin microbiome.

Dr. Grice joined our faculty of the Department of Dermatology at the University of Pennsylvania in 2012, and was recently promoted to Associate Professor with tenure. She has a secondary appointment in the Department of Microbiology, and her research is funded by multiple NIH grants, industry, and private donors. Her research integrates microbiology, dermatology, genomics and bioinformatics towards investigating host-microbe interactions of the skin and elucidating their roles in skin health, disease, and wound healing.

Dr. Grice is on the board of directors of the Wound Healing Society and chairs admissions for the Penn Genomics and Computational Biology graduate program. She also serves as an associate editor for *Microbiome* and an editor for *mSystems*. In addition, Dr. Grice has received many notable awards for her work, including: the Penn Medicine Michael S. Brown New Investigator Award, the Penn One Health Award, and the Pathogenesis of Infectious Disease Award.



## OLD WOUNDS PROVIDE NEW INSIGHTS:

*How Dr. Leung and his laboratory use clinical observation to drive scientific discovery*

Chronic wounds affect over 6 million people annually, and the incidence continues to rise as the general population grows older. Wound care costs are expected to reach \$22 billion USD by 2022. However, wound care is an area of research that garners little attention, but one that Thomas Leung, MD, PhD, Assistant Professor of Dermatology at the University of Pennsylvania, became acquainted with early on in his career.

After completing his dermatology training and post-doctoral fellowship in developmental biology at Stanford University, Dr. Leung co-directed the genetic skin diseases clinic and saw many children with epidermolysis bullosa (EB). EB is a rare, chronic skin condition characterized by increased skin fragility and affected children are considered to be the sickest of all chronically ill patients. These patients inspired Dr. Leung with their resilience and strength, and as a physician-scientist, Dr. Leung wanted to help EB patients heal their wounds and improve their quality of life. In 2013, Dr. Leung established his lab at Penn Dermatology and his first project focused on wound healing and tissue regeneration.

Dr. Leung's passion for his regenerative tissue research is evident, as he shares that "One of the most exciting questions in biology is how organisms regenerate tissue without a scar. Everyone thinks about worms and salamanders, but there are examples of tissue regeneration even in humans—the adult liver fully regenerates from as little as a quarter of its original size and traumatic digital amputations in children fully regenerate without any intervention from dermatologists or plastic surgeons."

Dr. Leung's current research evaluates a well-established clinical observation. "Many dermatologists and plastic surgeons have observed that older people heal their surgical wounds with thinner scars, but why and how this occurs is not well understood," notes Dr. Leung, who found epidemiological data to back up this clinical observation. Indeed, the incidence of forming

.....  
***Pictured (above) from R-L, back row first:***  
*Hali Kim (undergraduate student); Nicolette Johnson (graduate student); Dr. Thomas Leung (attending physician); Casey Spencer (research assistant); Dr. Emily Liebling (medical resident); Jenny Wei (medical student); (front row) Mailyn Nishiguchi (graduate student).*

thickened scars (for example, keloid scars and hypertrophic scars) peaks in humans in their 20s and virtually ceases around their 60s. Therefore, Dr. Leung saw this as an opportunity to explore how aging normally affects scar thickness.

To study this process, his research group set out to replicate this human finding in mice. When studying biological processes, mice offer advantageous genetic tools that humans cannot. When the skin of young mice was exposed to trauma, they formed a scar. Dr. Leung discovered that when the skin of elderly mice was exposed to trauma, their skin wounds repaired without a scar. They successfully recreated this striking aged-defined human behavior in mouse skin.

### *How does this process work?*

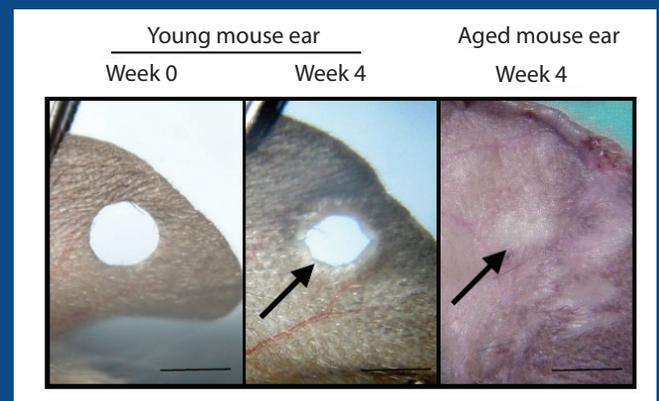
To identify the mechanism, the Leung Lab turned to the well-established technique of parabiosis, where two different mice are surgically joined to share a common circulatory system. This technique answers the question of whether a circulating factor in the blood may be responsible for scar formation or tissue regeneration. Once joined together, the mouse skin was then injured. When pairs of young mice were connected, their skin healed with scars. When pairs of elderly mice were connected, their skin healed without scars. However, when the lab connected a young and old mouse together, the old mouse skin adopted the young mouse phenotype and formed a scar. They concluded that young blood contains a factor that promotes scar formation and prevents tissue regeneration.

### *What, then, is this factor in young blood?*

To identify the circulating factor, the team from Penn used genomic studies to compare injured young and elderly mouse skin. They focused only on genes of circulating proteins and quickly honed in on SDF1, a protein previously shown to play a role in tissue regeneration of the skin, lung, and liver. Dr. Leung hypothesized that skin injuries cause SDF1 to be released, and SDF1 signals immune cells to repair the wound with a scar.

The lab confirmed that injured young skin secretes SDF1 and injured elderly skin did not. To prove that SDF1 may be the causal factor, they engineered a mouse that lacked SDF1 only in the skin. When SDF1 function in the skin was eliminated, even young mice began to regenerate skin, behaving, in this sense, like older mice. The lab then took this one step further and used parabiosis to connect an elderly mouse to their SDF1-deficient mouse. In the previous parabiosis experiment, the young mouse blood forced injured elderly mouse skin to form a scar. Here, the young mouse blood deficient in SDF1 could not promote scar formation and the elderly mouse skin healed with less scar formation. Thus, Dr. Leung concluded that SDF1 is secreted from the skin and circulates in the blood to promote scar formation.

How does getting older shut off SDF1 production? A different protein, called EZH2, modifies the DNA at the SDF1 gene and prevents the gene from being activated. “For example, you’re a mail carrier delivering mail. One household goes on vacation, and the mail carrier puts a flag to stop their mail from being delivered. EZH2 places a similar flag on genes to stop their activation. As mice aged, we found more EZH2 and its flag at the SDF1 gene,” Dr. Leung explains. “We used a drug to block EZH2 function in elderly mice. The loss of EZH2 removes all of its flags on the SDF1 gene and



**Pictured (above):** Aged mice regenerate injured ear holes. Representative photographs of young and aged mouse ears before and 1-month after injury. Black arrows mark healed hole.

allows SDF1 to be activated,” he adds. The team saw that drug-treated elderly mice regained SDF1 induction and lost their ability to regenerate their skin.

The team next wanted to see if these findings held true in human skin. Just as in mice, skin injury in young people triggered SDF1 production and was diminished in elderly human skin. “We performed some additional experiments to show that EZH2 is also the reason why SDF induction is lost between young and old skin. In this case, mouse and human skin behaved in the same way. This may explain the original clinical observation of why elderly heal skin wounds with thinner scars,” shared Dr. Leung.

### *Why do mice and humans form more scars when they are young?*

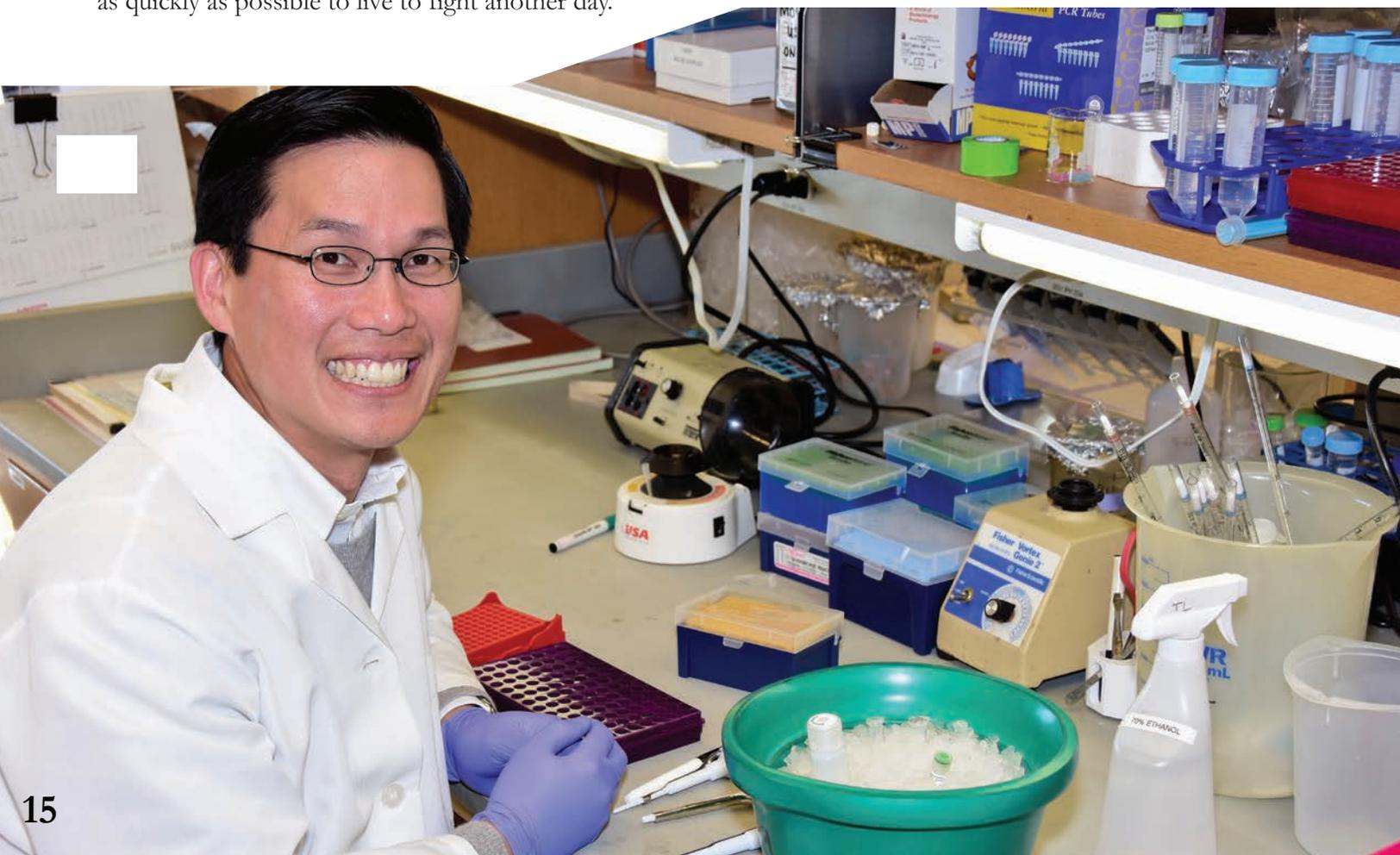
Dr. Leung theorizes that scar formation in younger mice is preferable. “It is speed versus quality,” says Dr. Leung. “Tissue regeneration is a slow process – it takes a month for our skin injuries to regenerate. Meanwhile, a scar can form in as little as 3-5 days. As a young animal, one would want an injury to heal as quickly as possible to live to fight another day.

You will tolerate imperfect healing for a faster response,” he adds.

The researchers are currently planning a clinical trial with the drug plerixafor, an existing FDA-approved SDF1 inhibitor, to test its efficacy in preventing scar formation in humans. They are hoping this approach may be beneficial for many types of human tissue injuries, including EB patients.

Dr. Leung came to Penn Dermatology because the Department promotes synergy between clinicians and basic scientists.

*“Synergy is really elusive. It requires the right leadership, really motivated colleagues, positive can-do attitudes, and the right opportunities. I found it at Penn Derm. This is the ideal situation for all physician-scientists, and I hope to make big impacts in regenerative medicine in the next 5-10 years.”*





*Congratulations*  
**Brittany Lamboy**  
CPUP  
**EMPLOYEE OF THE YEAR**

Congratulations to Brittany Lamboy for being named CPUP Employee of the Year! Brittany joined the Department in 2015 and was nominated for the award by Dr. Misha Rosenbach. Brittany's innovative additions to an already complex consultation process have saved patients ER trips, valuable time, and money. Moreover, her genuine caring demeanor and tenacious dedication to her patients makes them feel comfortable and confident in their level of care. Brittany's positive attitude and work ethic is appreciated by her co-workers who say she is a team player and always willing to jump in whenever needed.



Brittany's work as an RN has been exemplary, and her impact on the department and the patients she cares for cannot be understated. Thank you Brittany for all that you do and Congratulations – this award is truly well deserved!

Brittany's work as an RN has been exemplary, and her impact on the department and the patients she cares for cannot be understated. Thank you Brittany for all that you do and Congratulations – this award is truly well deserved!

**2018 AWARDS**



For the third year in a row, the Department of Dermatology has received a large number of Patient Satisfaction awards during Penn Medicine Experience week. The 2018 awards are listed below, and they highlight the outstanding work that our physicians, nurse practitioners, and clinical staff do in providing exceptional patient care each and every day. Congratulations to all of these winners for the well-deserved recognition and appreciation from your patients!

**LIKELIHOOD TO RECOMMEND:**

- Medical Dermatology - Bucks County
- Surgical Dermatology - Bucks County
- Surgical Dermatology - Perelman Center
- Medical Dermatology - Cherry Hill

**MOVING THROUGH YOUR VISIT:**

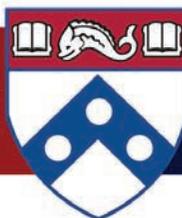
- Surgical Dermatology - Bucks County
- Medical Dermatology - Cherry Hill

**ACCESS:**

- Surgical Dermatology - Bucks County

**OVERALL SERVICE EXCELLENCE:**

- Surgical Dermatology - Bucks County



# PARTNERING WITH PENNDERM

Penn has consistently moved the field of dermatology forward through personalized care and therapeutic advances. The Department of Dermatology works continuously to develop new techniques and therapies through research and to educate the next generation of outstanding physicians and researchers.

To maximize our expertise and potential, improvements to our research infrastructure are required. Basic, translational and clinical research activities are the hallmark of our clinical care and patient outcomes. With significant philanthropic investments, this department will move forward addressing pressing medical challenges in dermatologic care and will be instrumental in improving diagnoses, new surgical techniques and quality of life. Lastly, offering the best multidisciplinary care for our patients remains a top priority.

## Department of Dermatology Fundraising Priorities .....

### Pilot Research Projects

#### *Honoring Leaders*

As the oldest dermatology department in the country, Penn Dermatology has been shaped by many great leaders whose legacies live on through their scientific breakthroughs. Established in 1874 by Dr. Louis Duhring, Penn Dermatology follows the traditions of many great 19th and 20th century physician researchers who worked collaboratively and across disciplines, such as with the engineering school. As a contributor to pilot research projects in cutaneous regeneration, Penn investigators gain the ability to impact patients worldwide with novel approaches to skin diseases, innovative treatments and potential for cures.

### Fellowship Training Programs

#### *Supporting New Investigators*

Penn Dermatology's training programs attract the most outstanding candidates, developing leaders in dermatologic research, academic, and clinical dermatology. Funds directed toward fellowship training programs guarantee Penn Dermatology's long tradition of educating exceptional scientists and physicians.

### Endowed Professorships

#### *Rewarding Innovation*

Supporting the work of Penn's physician scientists is of utmost priority. Endowed professorships in investigative dermatology provide Penn Dermatology with the ability to retain and attract exceptional faculty. For decades, Penn's preeminent dermatologists and researchers consistently receive recognition for excellence in patient care, research discoveries and education. Endowed professorships are instrumental in permanently recognizing the dedication of the Department's faculty and their important work.

### Laboratories and Research Facilities

#### *Promoting Scientific Advancement*

Research space is of great necessity. New laboratories and instruments provide the path to great discoveries. With the right resources, Penn Dermatology will develop a cutaneous regeneration and tissue engineering effort focused on developing new treatments for skin disorders.

Private philanthropy meets funding needs not covered by government grants or insurance reimbursements. Your donation enables us to break new ground and to improve upon existing therapies.

Philanthropic gifts of all sizes to support our research, educational and clinical endeavors are greatly appreciated. Naming opportunities within the Department begin at the \$25,000-level. Additionally, any gift can be given outright, through a planned giving vehicle, or can be structured to be paid over a 5-year period.

For more information about partnering with Penn Dermatology, please contact **Caitlin Crowe Doelp** at Penn Medicine Development & Alumni Relations at (215) 746-2167 or [ccrowe@upenn.edu](mailto:ccrowe@upenn.edu).

## Alumni Q & A:

# SPOTLIGHT on STU LESSIN, MD

*“I was always grateful to train here and be a part of this program. It was like playing for the New York Yankees!”*

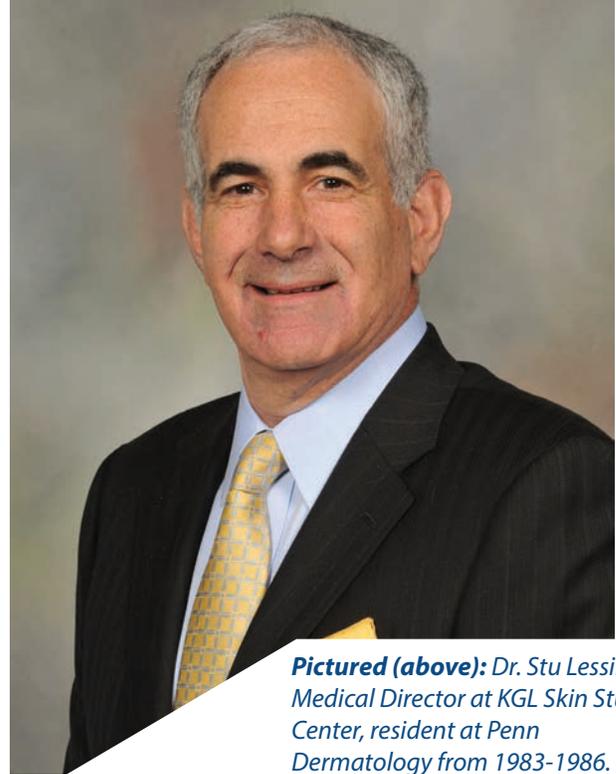
Stuart Lessin, MD, began his dermatology career as a dermatology resident at the University of Pennsylvania Perelman School of Medicine from 1983-1986. He then graduated to fellowship status, and joined the team as a full-time faculty member in 1987. All in all, Dr. Lessin enjoyed 17 years here at Penn, from 1983-2000. Since then, he has made great strides in the field of dermatology, all of which he attributes to his training here at Penn.

**Q: Why did you choose to go into Dermatology?**

**A:** For me, it was primarily my interest in cancer. While in medical school, I completed an oncology rotation followed by a dermatology rotation. After that experience, I felt that I could study skin cancers and combine clinical care with research more readily as a dermatologist. I went to Temple Medical School, and Dr. Eric Vonderheid was really my first dermatology mentor. When I told him that I was interested in dermatology, he picked up the phone and called Dr. Jim Leyden, who then arranged for me to do a research project with him and Dr. Gary Grove. That was really my entrée to Penn!

**Q: What attracted you to the Penn Dermatology Residency program?**

**A:** I think it was my exposure through Drs. Jim



**Pictured (above):** Dr. Stu Lessin, Medical Director at KGL Skin Study Center, resident at Penn Dermatology from 1983-1986.

Leyden, Gary Grove and Wallace Clark – it was instantaneous. I thought Penn was top notch. It was actually the second year of the Dermatology Match when I matched. Penn was my first choice and I never looked back.

**Q: Tell me more about the work you’ve been doing developing topical treatments for cutaneous T-cell lymphoma.**

**A:** While I was at Penn, I received NIH funding to run a laboratory. My focus, in that lab, was cutaneous T cell lymphoma (CTCL). I collaborated very closely with Dr. Alain Rook, and together started a cutaneous lymphoma program, of which Dr. Rook is still a Director. When Alain [Rook] and I got started, photopheresis was just approved as the first FDA approved treatment for CTCL.

One of the “off-label” topical therapies for CTCL had always been topical nitrogen mustard (Mechlorethamine), which was a systemic chemotherapy agent. When it was first used for CTCL, pharmacies would compound the nitrogen mustard power from intravenous vials into water or ointment form for patients to rub on. In the late 1990’s, there were often drug shortages. The inconsistent accessibility concerned patients, so I got involved with the patient advocacy group for

CTCL (The Cutaneous Lymphoma Foundation). The idea of developing a manufactured ointment as opposed to a compound ointment took hold in the early 2000's.

In 2000, I became Director of Dermatology at Fox Chase Cancer Center, where I established and directed clinical care programs in skin cancer, chemotherapy-associated skin toxicities and wound care along with a clinical trial program. During that time, I led a pivotal, multi-center trial that ultimately secured FDA approval of topical Mechlorethamine for treatment of CTCL. At the time, it was the largest single trial in CTCL. It was supported by a FDA orphan drug development grant and was a real collaborative effort between industry, academia, the Cutaneous Lymphoma Foundation and the FDA.

**Q: You've done a lot since your time here at Penn – how has the training you received here contributed to your success?**

**A:** First class. I learned the standards of excellence in clinical care, in research – it really was transformative. I trained with giants in the field and master clinicians – Albert Kligman, Wallace Clark, Jim Leyden, Jerry Lazarus, Ed Bondi. When we were residents we used to say: if you wanted to know the differential diagnosis of a rash, you would ask Jerry Lazarus. If you wanted to know what the diagnosis was, you would ask Jim Leyden. And if you wanted to know how you treated it, you would ask Ed Bondi. We knew we had all-stars for faculty. We rotated at different hospitals, we saw such great pathology; we knew we were getting the best training in the country. And Penn still is a Top 3 dermatology program. By all the benchmarks, Penn really is phenomenal. There are very few other places like it. The standard of excellence, the innovation, the discovery – they are true leaders in the field. I was always grateful to train here and be a part of this program. It was like playing for the NY Yankees!

# PENN CUTANEOUS PATHOLOGY SERVICES

A facility of the University of Pennsylvania Health System



(866) DERM-LAB  
(866.337.6522)

**SUPPORT AN EXCEPTIONAL HISTORY OF EDUCATION, RESEARCH, AND THE HIGHEST STANDARD IN PATIENT CARE.**

**INTERNATIONALLY RECOGNIZED  
DERMATOPATHOLOGISTS**

**FAST TURNAROUND TIME**

**ELECTRONIC INTERFACING**

**IMMUNOFLUORESCENCE AND  
ELISA TESTING**

*7 Dermatopathologists with Specialties including:*

- Melanoma & Melanocytic Lesions
- Pediatric Dermatology
- Alopecia
- Adnexal Tumors
- Genetic Skin Diseases
- Nail Disorders & Histopathology of the Nail Unit
- Tropical & Infectious Dermtologic Conditions
- Cutaneous Lymphoma

*Oral Pathologist with specialties in:*

- Inflammatory & Autoimmune Mucosal Lesions,
- Oral Preneoplasia and Cancer



# GLOBAL DERMATOLOGY

## *The Penn Dermatology Global Program continues to expand to Guatemala City*

The Dermatology Department at the University of Pennsylvania continues to develop its strong global presence, under the umbrella of the Penn Global Dermatology Program, through partnerships with dermatology residency programs in Guatemala City. The Penn-Guatemala Partnership team, led by Dr. Rudolf Roth, travels to Guatemala twice a year to provide expert care and build lasting relationships with students, residents, and attendings in dermatology. Through visits to remote and tremendously underserved areas in Guatemala, Dr. Roth, along with co-program director Dr. Jules Lipoff, Dr. Cory Simpson, and Penn residents, works in teams along with local dermatologists and trainees to support the needs of the Guatemalan communities.

The Penn-Guatemala Partnership goes back over 100 years, beginning with the work of the Penn Museum in Guatemala. In 2005, the Penn-Guatemala health initiative was formed, with partnerships between several medical institutions in Guatemala and the University of Pennsylvania. The central hallmark of that program is a two-way exchange between Guatemala and Penn, with faculty and residents moving in both directions. Within dermatology, there are four core elements: 1) Penn faculty members collaborate with faculty from Guatemalan Institutions; 2) Penn team members visit the Guatemalan residency programs;

3) Penn physicians work one-on-one with Guatemalan residents, imparting training and skills; and 4) Guatemalan residents come to Philadelphia and work with our Penn team on-site, helping promote both program-wide and individual-specific relationship-building. “I have to say that the biggest difference our partnership makes is to the Guatemalan residents, who are able to work with us, learn from us, and spend time with us at Penn,” shares Dr. Roth. He adds that “in addition to providing great care that the students can continue to contribute to their communities, we build relationships - relationships that have great impacts on the communities we aim to serve.”

The people in Guatemala are so appreciative of the dermatologic care that they are given. In fact, in the parts of the country that Penn visits, individuals don’t have any access to any trained dermatologist for 50 miles and will travel long distances to be seen by Penn physicians during the trips. For many, this is their only opportunity to gain access to dermatology specialists, without spending 4-6 hours on an uncomfortable and often unaffordable bus trip to the capital city. “We really feel this sense that we are

.....  
***Pictured (above) from L-R: Dr. Ata Moshiri (Dermatopathology fellow); Dr. Zelma Chiesa-Fuxench (attending physician); Dr. Caroline Nelson (former medical resident); Dr. Monica Paz (Inderma alumna).***

**Pictured (above) L-R:** Dr. Rudolf Roth (Penn Derm attending); Peter Chansky (Penn medical student); Dr. Ata Moshiri (Dermatopathology fellow); Dr. Zelma Chiesa-Fuxench (Penn Derm attending); Dr. Cory Simpson (Penn Derm attending); Dr. Monica Paz (Inderma alumna); Dr. Catalina Araya (Inderma resident); Dr. Caroline Nelson (former Penn Derm resident); Dr. Kenneth Salazar (Inderma resident).



able to help in ways that others have not been able to,” notes Dr. Roth.

One of the most special aspects of the Global Dermatology Program is that Penn residents gain insight into how care is practiced across the world, through the lens of a different culture, in a completely new setting, with far fewer resources than they are accustomed to. “We often only see things done in one particular way, and we assume it’s the only correct way to practice care,” shares Dr. Lipoff. “The Penn-Guatemala Partnership gives residents a chance to work in an environment with few resources and see how little medical knowledge can easily be applied to great charity.” Residents come to appreciate different care styles, and in doing so build a sustainable collaboration.

*“We didn’t want this to be just a medical mission – this is an exchange of ideas and experiences,” says Dr. Lipoff.*

Dr. Cory Simpson, who participated in the program twice as a resident, and now continues to lead as an attending, is excited about the future of the Penn Guatemala Partnership. “There is annual continuity and bi-directional exchanges, which are important to the program – Dr. Roth has built a great system that works to expand patient access while supporting collaborations between Penn and Guatemalan dermatologists,” he says. “It would also be nice to expand this program to other locations in need in Latin America who could benefit from this intersection with Penn,” he adds. Potential goals for the future include creating more sustainable year-round care, connecting with additional local partners, and expanding beyond Guatemala. According to Dr. Roth, there is growing interest from Penn students and faculty to participate in the trip. This, he says, is very gratifying; and a true measure of success of the relationships we have built.

**Pictured (below):** Dr. Rudolf Roth examining a child in the Basurero neighborhood of Guatemala City.



# FACULTY AWARDS & HONORS

*Our talented faculty members receive numerous awards and recognition for their outstanding contributions and achievements*



## Dr. George Cotsarelis

- Will receive the Phil Frost Kligman Lecture Award at SID
- Received a \$565,000 Leo Foundation grant to develop Cell based therapies for alopecia



## Dr. Rosalie Elenitsas

- Inducted into Penn's 2018 Academy of Master Clinicians
- Will serve as President of the American Society of Dermatopathology, from Nov. 2018-Oct. 2019



## Dr. John Stanley

- Received honorary membership to the Society for Investigative Dermatology



## Dr. David Margolis

- RO1 funded and commenced June 1, 2018 – 1RO1DK116199-01, research entitled “NOS1AP and Capon Associated Impaired Healing in Those with Diabetic Foot Ulcers”



## Dr. Sarah Millar

- Elected as Vice President of the Society for Investigative Dermatology



## Dr. Aimee Payne

- Received a Transformative R01 for \$451,000 to pursue canine clinical trials of CAAR-T for pemphigus



## Dr. Joel Gelfand

- Received a \$365,000 grant from Ortho Dermatologics to examine biologic treatment persistence in the Optum Insight dataset
- Received \$50,000 NPF Medical

Dermatology Fellowship to support Dr. Joy Wan, who will start a postdoctoral fellowship on August 1, 2019

- Received \$5,000 NPF summer and student fellowship that will support Max Roling, a Penn Freshman, on a machine learning project
- Received \$104,000 Pfizer postdoctoral fellowship in dermatology that will support Dr. John Barbieri, a post-doctoral fellow working with Dr. David Margolis



## Dr. Alain Rook

- Received a new RO1 grant from NIAMS to study the effects of a novel TLR agonist in collaboration with Dr. Rachel Clark at Harvard



## Dr. Victoria Werth

- Received funding for an NIH R01 grant entitled: “Optimization of Clinical Design in Cutaneous Lupus”
- Receiving funding for her proposal for an investigator initiated project

from industry: “Comparing Two Interferon-gamma Release Assay Tests in Patients with Autoimmune Skin Disease: A Prospective Study”



## Dr. William James

- Selected to be a 2019 Master of Dermatology for the American Academy of Dermatology, the AAD's top clinical honor



**Dr. Katherine Brown**

- Promoted to Associate Professor



**Dr. Elizabeth Grice**

- Received tenure and was promoted to Associate Professor  
- Serves as Co-PI with Dr. David Margolis on NIH T32 Dermatology Research Training Grant



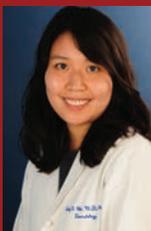
**Dr. Carrie Kovarik**

- Received Diversity Mentorship Grants from the AAD to allow five underrepresented students to spend a month in our Department this summer  
- Working on a project to create an app that will help patients with their skin exam, which has received news coverage on ABC and FOX 29



**Dr. Jules Lipoff**

- Awarded a Penn Medicine CAREs Grant in the amount of \$1000, for his project entitled “Derm Care for HIV Patients”



**Dr. Emily Chu**

- Working on a project to create an app that will help patients with their skin exam, which has received news coverage on ABC and FOX 29



**Dr. Pantelis Rompolas**

- Received a \$792,000 American Cancer Society Research Scholar Grant, entitled “Capturing the origins of UV-induced skin carcinogenesis by live imaging”



**Dr. Misha Rosenbach**

- Will be the Medical Dermatology Society president-elect 2018-2019 (followed by president)  
- Awarded a multidisciplinary grant for two years for a total of \$80,000

(Pulmonary, GI, Rheumatology, Skin) to support Sarcoidosis Research Clinical Studies Network site  
- Launched Sarcoidosis mobile app on Android in addition to existing iOS and in development for possible international launch  
- Received \$50,000 grant from Processa Pharmaceuticals to develop instrument for a Necrobiosis Lipoidica scoring tool and clinical study planning (anticipate clinical trial in Winter 2018)  
- Founded the Climate Change and Environmental Issues expert resource group within the AAD, which is advising the AAD BoD re: climate/environmental issues  
- Selected as the new Deputy Editor of JAMA Dermatology



**Dr. Douglas Pugliese**

-Received the Dean’s Award for Excellence in Clinical Teaching at an affiliated hospital (established in 1986 to recognize teaching excellence and commitment to medical education at affiliated hospitals)



**Dr. Brian Cappell**

- Received the Damon Runyon Clinical Investigator Award Grant in the amount of \$450,000 for his lab, entitled “Defining the Role of Epigenetic Enhancer Dysfunction in Epithelial Carcinogenesis”



**Dr. Paul Haun**

- Received the McCabe Award, a pilot research award from the University of Pennsylvania for new early career faculty members to start projects of interest  
- Received \$21,000 for 2018-2019 with the goal of utilizing Laser Capture Microscopy and RNA-seq in order to determine genetic/epigenetic mutations in mycosis fungoides with large cell transformation



**Dr. Robert Micheletti**

- Named Section Editor for new “Clinical Images” section in JAMA Dermatology
- Assumed role of Chair of the Scientific Task Force for the Society of Dermatology Hospitalists



**Dr. Jeremy Etzkorn**

- Received a \$15,000 Grant, entitled “Assessment of Quality of Life and Nasal Function following Interpolated Flap Repair of Nasal Defects after Mohs Surgery” from the Center for Human Appearance at Penn



**Dr. Bruce Brod**

- Named to the Journal of the American Academy of Dermatology Editorial Board
- Testified on behalf of the American Academy of Dermatology to the FDA

on Drug Shortages

- Completed the certificate program at Penn in Health Care Innovation in August 2018 and is going on to complete his master’s degree at Penn in the Healthcare Innovation Program



**Dr. Michael Ming**

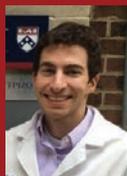
- Working on a project to create an app that will help patients with their skin exam, which has received news coverage on ABC and FOX 29

**Instructors and Post-Doctoral Fellows**



**Dr. Cory Simpson**

- Recognized by the AAD as their “Access Hero” for August 2018
- Received Diversity Mentorship Grants from the AAD to allow five underrepresented students to spend a month in our Department this summer



**Dr. John Barbieri**

- Received the Everett C. Fox, MD Memorial Lecture Award for his talk at the Residents and Fellows Session at the AAD Annual Meeting



**Dr. Junko Takeshita**

- Received a Dermatology Foundation research supplement award to support an underrepresented minority medical student (Alexis Homes, University of Pennsylvania Perelman School of Medicine) and participate in her research
- Received a grant from Pfizer for \$150,000 under their ASPIRE awards program to study perceptions of treatments and emollient use among adults with atopic dermatitis



**Dr. Richard Wortzel**

- Re-elected to the National Epic Dermatology Steering Committee



**Dr. Adam Rubin**

- Awarded the Department of Dermatology’s Bennett L. Johnson, Jr. Attending Teaching Award for Dedication to Teaching

**TOP DOCTORS**

*A number of our talented faculty were awarded Philadelphia Magazine’s 2018 Top Doctors recognition:*

- |                       |                        |
|-----------------------|------------------------|
| Dr. George Cotsarelis | Dr. Victoria Werth     |
| Dr. Edward Bondi      | Dr. Cherie Ditre       |
| Dr. William James     | Dr. Christopher Miller |
| Dr. Ellen Kim         | Dr. Michael Ming       |
| Dr. Alain Rook        | Dr. Misha Rosenbach    |
| Dr. John Stanley      | Dr. Susan Taylor       |
| Dr. Adam Rubin        | Dr. Joseph Sobanko     |
| Dr. Bruce Brod        |                        |

**ALUMNI RELATIONS**

We are committed to staying connected with our talented alumni. Please share with us updates of your recent activities and accomplishments or simply send us your most current contact information so that we can stay connected. Whether it has been 50 or 5 years since your time with us, we look forward to hearing about all of the exciting things you have been up to at the following email address:

[PennDermAlumni@uphs.upenn.edu](mailto:PennDermAlumni@uphs.upenn.edu)

# HIGHLIGHTS OF DISCOVERIES

## *Penn App Could Prove Lifesaving for High-Risk Melanoma Patients*

*Adapted from [www.Philly.com](http://www.Philly.com)*

MelaSight, a new mobile app developed by dermatologists here at the University of Pennsylvania, is designed to help high-risk melanoma patients track early changes in their skin between dermatology visits. There is a clear link between conducting your own skin examination and finding a melanoma while it is thinner and more amenable to treatment. Yet, as few as 7% of adults in the United States check their skin regularly; and, among people in high-risk groups, the rate rises only slightly to about 10%.

Here's how MelaSight works: Professional photos of a patient's skin are uploaded onto a password-protected mobile site. The photos are also encrypted to enhance privacy, given that this is a record of the entire body. Using the camera in their smart phones, patients can zoom in on suspicious skin changes, which are automatically compared with the images taken earlier. Patients can also flag areas of concern for their doctors to check out right away, and make note of them for future reference. The app also lets high-risk patients track whether they meet the once-a-month goal for self-exams.

Penn already uses total-body digital photographs, printed out or stored on a CD, to help patients and doctors check for new or changing skin lesions. But, comparing a new lesion with a photo record is far harder than using a phone app that automatically makes the comparison. "The hope is that greater satisfaction with the—mobile app, compared to printed photos or digital prints, will lead to increased self-exams and earlier detection of melanomas," says **Dr. Michael Ming**, Associate Professor of Dermatology at the Hospital of the University of Pennsylvania and one of the study's authors. He adds that "it's all about early

detection...that's where these tools can really help."

Results of the trial study of MelaSight show that patients using the app reported a 94% satisfaction rate over six months compared with 54% for the group employing prints or CD images to share photos with their physicians. Dr. Ming, along with colleagues **Dr. Emily Chu** and **Dr. Carrie Kovarik** are working to make the app available to other patients in their clinics, not just those enrolled in the study.

## *Psoriasis Drug May Lower Heart Disease Risk*

*Adapted from [www.medicalnewstoday.com](http://www.medicalnewstoday.com)*

Over the years, a link has been found between psoriasis and an increased risk of cardiovascular disease. This relationship is particularly pronounced in individuals who have severe psoriasis. Ustekinumab, sold as Stelara, is an antibody that interferes with the body's inflammatory response. It is prescribed for people whose psoriasis has not responded well to other treatments, or who cannot tolerate other available medicines.

Recently, researchers from the Perelman School of Medicine at the University of Pennsylvania joined forces with a team from the National Heart, Lung, and Blood Institute. Because ustekinumab reduces the inflammation associated with psoriasis, the researchers wanted to explore whether or not it could benefit heart health by reducing inflammation there. The study involved 43 participants with psoriasis, of whom 21 were assigned to the control group and 22 received ustekinumab. Their findings were presented at the 2018 American Academy of Dermatology Annual Meeting, held in San Diego, CA.

First study author, **Dr. Joel Gelfand**, Professor of Dermatology and Epidemiology at the University

of Pennsylvania, explains the thought process behind this study, saying “the type of inflammation we see in psoriasis is similar to what we see in atherosclerosis,” which he describes as “a type of heart disease that involves the buildup of fats, cholesterol, and inflammatory cells in the artery walls.” He adds that “since ustekinumab blocks the specific pathways involved in both skin and cardiovascular inflammation, we wanted to test whether it can improve aortic inflammation.”

The results were relatively clear-cut. As expected, more than three quarters of the participants who took ustekinumab saw significant improvement in their psoriasis. The most interesting changes were measured in the heart: the participants in the control group saw a 12% increase in aortic inflammation, whereas members of the experimental group showed a decrease of 6.6%. This means that, relative to individuals not taking the drug, ustekinumab was responsible for a 19% reduction in aortic inflammation.

“This is the first placebo-controlled trial of a biologic drug to show a benefit in aortic inflammation, a key marker of cardiovascular disease. The effect is similar to what we would expect if we put the patient on a statin,” says Dr. Gelfand. He adds that “this study represents promise that this treatment may reduce the risk of heart attack and stroke in the future. It’s an encouraging finding.” Of course, this is just the start of the investigative journey; much more work needs to be done, involving many more participants, and further, it is important to understand whether the effect on aortic inflammation persists for study participants. The next phase of trials is already in the pipeline.

### *Forget ‘Man vs. Machine.’ When Doctors Compete with Artificial Intelligence, Patients Lose*

*Adapted from [www.washingtonpost.com](http://www.washingtonpost.com)*

Last month, dermatologists were told that they had narrowly lost a competition. “Man against machine,” a study by Holger Haenssle and colleagues, found that artificial intelligence (AI), known as deep learning convolutional neural network, edged out 58 dermatologists in the photographic diagnosis of melanoma. They were charged with differentiating melanoma from benign moles using images obtained via dermoscopy. This story made headlines: “AI

beats doctors at cancer diagnoses.” Dermatologists **Drs. Caroline Nelson, Carrie Kovarik, and John Barbieri** read the headlines with surprise and thought, “Aren’t we on the same team?” To optimize the potential benefits of AI while preserving the doctor-patient relationship, they believe that collaboration, not competition, is the winning strategy.

Human-computer symbiosis provides a valuable lens through which to view the appropriate role of AI in medicine. As AI becomes more powerful, rather than fostering competition, we should develop solutions that can be integrated into our practice. The promise of AI is considerable with potential gains in efficiency, patient outcomes, and access to care. But, so too is the risk. AI is only as intelligent as its outputs. The conventional neuronal networks are “trained” by viewing thousands of images, learning to recognize patterns alongside diagnoses and improving through feedback. Inaccurate or incomplete training of this form of AI could result in misdiagnoses in patients. By working together with AI systems, physicians can ensure that AI tools are valuable and safe for patients.

Ultimately, only a human doctor can view a patient holistically – as a complex physical and emotional being. In addition, the doctor and the patient are brought together by a goal not simply of diagnosing and managing a single spot or disease, but of healing. As dermatologists, our shared humanity enables us to emphasize with patients suffering from melanoma and other skin diseases. A valuable trajectory for AI would be the development of tools that reduce our administrative and documentation burdens and afford us more time to communicate with our patients.

In dermatology, we are constantly working to deepen our understanding of skin diseases in the hopes of discovering new therapies. While AI may advance the current practice of medicine, it cannot identify, prioritize and solve future problems. We applaud the work of Haenssle and other innovators to make strides toward early detection of melanoma. We also believe that rhetoric that sensationalizes a competition between humans and technology is counterproductive and has the potential to undermine the human doctor-patient relationship.

Throughout history, doctors have evolved in a symbiotic relationship with technology to confront

symbiotic relationship with technology to confront the burden of human disease. If artificial intelligence becomes another tool in our toolbox, it will support the time-honored lesson that man with machine is superior to either alone.

## *Dermatomyositis Requires Second-Line Treatment*

*Adapted from Dermatology Times*

A study published in the December issue of the “International Journal of Women’s Dermatology” finds that second-line agents need to be incorporated into treatment for moderate-to-severe dermatomyositis (DM), which is otherwise very difficult to treat. “The results show that management of cutaneous DM often requires second-line agents because anti-malarial medications alone are insufficient to treat most patients with skin-only disease,” researchers wrote.

The study, here at the University of Pennsylvania, assessed the impact of care delivered using a treatment algorithm to determine systemic treatment for 41 patients with skin only DM – those with clinically amyopathic DM and no lung involvement – seen at a center between July 2009 and April 2013. A combination of first line, second line, and third line treatments was tested over the course of this trial given symptoms and patient responses. 23 patients (56.1%) received the first line antimalarial medications alone and 18 patients (43.9%) received second or third-line agents. Initial disease severity and outcomes were assessed using the Cutaneous Dermatomyositis Disease Area and Severity Index (CDASI).

After a median duration of treatment of 24 months, the median final CDASI score for all patients with skin-only disease was 13.5. Most patients did not experience complete resolution of skin symptoms and had at least mild disease activity at the time of their final visit. 11 patients (26.8%) received prednisone which may have contributed to clinical improvements and changes in CDASI activity scores.

Prospective trials have reported significant improvements in cutaneous DM symptoms with the second-line Intravenous Immunoglobulin treatment, and good results were seen in the small number of most refractory patient treatment with IVIg in the University of Pennsylvania study. However, the researchers point out that since

patients with a more severe disease status received escalating therapy, it was difficult to compare final CDASI scores across treatment groups and that clinical trials are needed to assess the efficacy of agents alone or in combination with others.

**Author Victoria Werth, MD**, Professor of Dermatology at the Hospital of the University of Pennsylvania and the Veteran’s Administration Medical Center, Department of Dermatology, Perelman School of Medicine, University of Pennsylvania, said “better treatments are needed for both moderate/severe and mild disease, since current treatments are relatively toxic and don’t always work.” She adds, “with relatively new disease severity tools that measure the skin (CDASI), it is now possible to assess new therapeutics using the skin as a window. This is a very exciting time for developing new therapeutics using the skin as a window.”

In terms of potential new treatments, Dr. Werth’s group has just completed a single centre NIH-funded phase 2 randomized, placebo-controlled trial of skin-predominant dermatomyositis with nonpsychoactive cannabinoid called lenabasum, which is the first placebo controlled randomized trial for skin predominant disease. The results, presented at the American College of Rheumatology meeting in November, showed that patients on active drugs demonstrated greater improvement in disease activity and several measurements of quality of life, and that the drug was well tolerated. A larger study is now in the planning stages.

## ACKNOWLEDGEMENTS

The creation of this newsletter would not have been possible without time and dedication from the following individuals: Dawn MacMillan, Diana Zarowin, Dena Paffas, Michael Passanante, Anne Rulinski, Lara Liebmann, and Collin Kather. We extend special thanks to them for their commitment to the Department of Dermatology and for helping us share all of our exciting news and activities with friends of the Department.

## BLUEJEANS REMOTE LOGIN

We now have the capability for attendees of our Duhring Case Conferences & Lectureships to join via web conference using BlueJeans. We encourage all alumni and faculty to log on every Thursday to view the talks of our invited speakers and our Duhring Grand Rounds Case Conferences.

For more information on this wonderful opportunity, please contact:

[PennDermAlumni@uphs.upenn.edu](mailto:PennDermAlumni@uphs.upenn.edu)

# A Note on Hi-RPM

Penn Dermatology's High Risk Patient Monitoring (HiRPM) project was selected for financial support and development assistance by Penn's Innovation Accelerator Program. As an Epic integrated application, HiRPM interacts directly with patients, physicians, and medical staff to ensure that vital and time-sensitive labs are obtained, the results received, and reviewed per protocol. This will replace current manual methods for patient lab tracking, such as spreadsheets or patient lists.

The trigger for HiRPM patient monitoring begins with a medication and lab order in Epic. The HiRPM smart set triggers enrollment into automatic notifications and tracking. Once the nursing staff initiates the patient's monitoring cycle for a medication, they are automatically placed into a dashboard that gives an at-a-glance view of all patients requiring monitoring. With a few clicks, a dashboard can be configured for the entire department, a division, a group of physicians, or an individual physician. Notifications to patients of upcoming due dates for labs are sent via their choice of text or voice messaging. Once the patient confirms they've completed the labs, non-Epic interfaced laboratories are automatically reminded to send results to a dedicated HiRPM fax system. Electronic receipt of incoming lab results are forwarded to the physician provider for review. Various tracking monitors show the real time status of each lab due and pending steps in the process: lab drawn, received, reviewed, patient notified.

*The initial pilot of HiRPM will begin in January 2019, with the expectation that it will be in full use by July 2019.*

# FACULTY 2018



**George Cotsarelis, MD**  
**Chairman**  
 Hair & Scalp Disorders  
 (215) 662-2737



**Joel Gelfand, MD, MSCE**  
**Vice Chair, Clinical Research**  
 Acne, Eczema, & Psoriasis  
 (215) 662-2737



**William James, MD**  
**Vice Chair, Education**  
 Immunodermatology,  
 Travel Related Disorders,  
 Acne & Rosacea  
 (215) 662-2737



**David Margolis, MD, PhD**  
**Vice Chair, Faculty Affairs**  
 Chronic Wounds and  
 Leg Ulcers  
 (215) 662-2737



**Sarah Millar, PhD**  
**Vice Chair, Basic Research**  
 Signaling Mechanisms,  
 Refuting the Embryonic  
 Development of Postnatal  
 Growth of Skin Appendages  
 (215) 898-2633



**Carmela Vittorio, MD**  
**Vice Chair, Operations**  
 General Dermatology, Skin  
 Cancer, Cutaneous T-Cell  
 Lymphoma, Acne Vulgaris,  
 Rosacea and Laser Hair  
 Removal  
 (215) 662-2737



**Faizan Alawi, DDS**  
 Oral and Maxillofacial  
 Pathology  
 (215) 573-7638



**Elena Bernardis, PhD**  
 Image Segmentation, Contour  
 Grouping, Tracking, Shape  
 Analysis & Representation  
 (215) 662-2223



**Edward Bondi, MD**  
 Sun Damaged Skin, Melanoma  
 and Non-Melanoma Skin  
 Cancer  
 (215) 662-2737



**Bruce Brod, MD**  
 Contact Dermatitis and  
 Occupational Dermatology  
 (215) 662-2737



**Katherine Brown, MD**  
 General Dermatology  
 (610) 902-2400



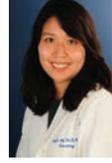
**Brian Capell, MD, PhD**  
 Epigenetics and Health  
 Imbalances of the Skin  
 (215) 662-2737



**Zelma Chiesa-Fuxench, MD, MSCE**  
 Inflammatory Skin Diseases  
 (215) 662-2737



**Juliana Choi, MD, PhD**  
 General Dermatology, Acne,  
 Rosacea and Hyperhidrosis  
 (215) 662-2737



**Emily Chu, MD, PhD**  
 Genodermatosis,  
 Dermatopathology and  
 Cutaneous Oncology  
 (215) 360-0909



**Magaly Del Monaco, DO**  
 General and Cosmetic  
 Dermatology  
 (215) 504-7700



**Cherie Ditre, MD**  
 Cosmetic Dermatology  
 (610) 902-2400



**Rosalie Elenitsas, MD**  
 Pigmented Lesions and  
 Melanoma  
 (215) 662-2737



**Jeremy Etkorn, MD**  
 Micrographic Surgery,  
 Reconstructive Surgery and  
 Cutaneous Oncology  
 (215) 504-7700



**Amy Forrestel, MD**  
 Complex Medical Dermatology,  
 Inpatient Dermatology, and  
 Global Health Dermatology  
 (215) 662-2737



**Elizabeth Grice, PhD**  
 Wound Healing, Genomics,  
 Microbiome and Innate  
 Immunity  
 (215) 898-3179



**Paul Haun, MD, MS**  
 Cutaneous T-Cell Lymphoma  
 and Dermatopathology  
 (215) 662-2737



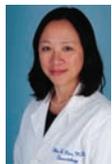
**Phillip Holler, MD, PhD**  
 Medical Dermatology and  
 Diseases of the Scalp  
 (215) 504-7700



**Nicole Howe, MD**  
 Micrographic Surgery,  
 Reconstructive Surgery and  
 Cutaneous Oncology  
 (215) 360-0909



**Jing Huang, MD**  
 General Dermatology  
 (215) 662-2737



**Ellen Kim, MD**  
 Cutaneous T-Cell Lymphoma,  
 General Dermatology and  
 Melanoma and Pigmentary  
 Disorders  
 (215) 662-2737



**Joseph Kist, MD**  
 General Dermatology  
 (215) 662-2737



**Carrie Kovarik, MD**  
 Tropical and Infectious  
 Dermatologic Disorders and  
 Dermatopathology  
 (215) 662-2737



**Thomas Leung, MD, PhD**  
 Wound Healing, Regenerative  
 Medicine and Inflammatory Skin  
 Diseases  
 (215) 662-2737



**James Leyden, MD**  
**Emeritus**  
 Acne  
 (215) 662-2737



**Jules Lipoff, MD**  
 General and Medical  
 Dermatology, HIV and  
 Immunosuppression  
 Dermatology  
 (215) 662-2737



**Ming-Lin Liu, MD, PhD**  
 Autoimmune Skin  
 Inflammation and Diseases  
 (215) 823-4439



**Robert Micheletti, MD**  
 Graft versus Host Disease,  
 Vasculitis and Infectious  
 Diseases  
 (215) 662-2737



**Christopher Miller, MD**  
 Micrographic Surgery,  
 Reconstructive Surgery and  
 Cutaneous Oncology  
 (215) 360-0909



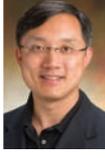
**Michael Ming, MD**  
 Melanoma, Dysplastic Nevi and  
 Pigmented Lesions  
 (215) 360-0909



**Temitayo Ogunleye, MD**  
 General Dermatology; Skin of  
 Color and Hair Disorders  
 (215) 662-2737

 <b>Lisa Pappas-Taffer, MD</b> General Dermatology, Autoimmune Conditions, Side Effects of Chemotherapy and Urticaria (215) 504-7700	 <b>Aimee Payne, MD, PhD</b> General Dermatology and Autoimmune Blistering Diseases (215) 662-2737	 <b>Douglas Pugliese, MD</b> General Dermatology and Wound Healing (215) 662-2737	 <b>Catherine Quirk, MD</b> General and Medical Dermatology (610) 902-2400
 <b>Todd Ridky, MD, PhD</b> General and Medical Dermatology, Tissue Engineering, Cancer Biology and Oncogene Signaling (610) 902-2400	 <b>Pantelis Rombolas, PhD</b> Cutaneous Stem Cells in Regeneration, Homeostasis and Pathophysiology (215) 573-4002	 <b>Alain Rook, MD</b> Cutaneous T-Cell Lymphoma and Other Immune Mediated Diseases (215) 662-2737	 <b>Misha Rosenbach, MD</b> Cutaneous Sarcoidosis, Adverse Drug Reactions and Autoimmune Skin Diseases (Connective Tissue and Blistering) (215) 662-2737
 <b>Rudolf Roth, MD</b> General Dermatology and Dermatologic Surgery (610) 902-2400	 <b>Adam Rubin, MD</b> Nail Disorders, Histopathology of the Nail Unit and Dermatopathology (215) 662-2737	 <b>Sara Samimi, MD</b> General Dermatology, Cutaneous T-Cell Lymphoma and Melanoma (215) 662-2737	 <b>John Seykora, MD, PhD</b> Dermatopathology and Cutaneous Diseases Exhibiting Abnormal Keratinocyte Differentiation (215) 898-0170
 <b>Thuzar Shin, MD, PhD</b> Micrographic Surgery, Reconstructive Surgery and Cutaneous Oncology (215) 360-0909	 <b>Joseph Sobanko, MD</b> Micrographic Surgery, Reconstructive Surgery and Cosmetic Dermatology (215) 360-0909	 <b>Shobana Sood, MD</b> Micrographic Surgery, Photodynamic Therapy, Laser Therapy and Cosmetic Dermatology (610) 902-2400	 <b>Katherine Steele, MD</b> Complex Medical Dermatology, Inpatient Consultations and Dermatologic Oncology (215) 662-2737
 <b>John Stanley, MD</b> <b>Emeritus</b> Blistering Diseases and Pemphigus (215) 662-2737	 <b>Junko Takeshita, MD, PhD, MSCE</b> Health Disparities and Inflammatory Skin Diseases (215) 662-2737	 <b>Susan Taylor, MD</b> Cosmetic Dermatology and Skin of Color (215) 662-2737	 <b>Jennifer Villaseñor-Park, MD, PhD</b> Skin Lymphoma, Non-Melanoma Skin Cancer, General Dermatology and Cosmetic Dermatology (215) 504-7700
 <b>Julie Wahrman Cramer, MD</b> General Dermatology, Pediatric Dermatology and Cosmetic Dermatology (215) 504-7700	 <b>Victoria Werth, MD</b> Autoimmune Blistering and Connective Tissue Diseases (215) 662-2737	 <b>Victoria (Tori) Williams, MD</b> General Dermatology, Infectious Diseases, and Complex Medical Dermatology (215) 662-2737	 <b>Richard Wortzel, MD, PhD</b> General Dermatology, Skin Cancer, Psoriasis and Eczema (215) 504-7700
 <b>Sandra Wortzel, MD</b> General Dermatology (215) 504-7700			

## ASSOCIATED FACULTY

 <b>Leslie Castelo-Soccio, MD, PhD</b> Pediatric Dermatology and Pediatric Hair Disorders (215) 662-2737	 <b>Glen Crawford, MD</b> Allergic, Environmental, and Occupational Dermatology (215) 662-2737	 <b>Steven Fakharzadeh, MD</b> General Dermatology and Genetic Skin Disorders (215) 573-5709	 <b>Paul Gross, MD</b> Clinical Dermatology and Dermatopathology (215) 829-3576
 <b>Melinda Jen, MD</b> Pediatric Dermatology (215) 590-2169	 <b>Patrick McMahon, MD</b> Pediatric Dermatology (215) 590-2169	 <b>Marissa Perman, MD</b> Pediatric Dermatology, Epidermolysis Bullosa and Polycystic Ovarian Syndrome (215) 590-2169	 <b>Daniel Roling, MD</b> General Dermatology (215) 662-2737
 <b>Jenna Streicher, MD</b> General Dermatology (215) 590-2169	 <b>James Treat, MD</b> Acne, Atopic Eczema, Genetic Skin Disorders, Hemangiomas, Port Wine Stains and Other Vascular Anomalies (215) 662-2737	 <b>Albert Yan, MD</b> Acne, Atopic Dermatitis, Childhood Blistering Diseases, Hemangiomas and Vascular Lesions (215) 590-2169	

## DUHRING GRAND ROUNDS SCHEDULE

### DECEMBER 20, 2018

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### DECEMBER 27, 2018

No Grand Rounds - Happy Holidays!

### JANUARY 3, 10, 17, 24, 31 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### FEBRUARY 7, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, BRB Auditorium  
11:00 am - 12:00 pm Lecturer: **Lillit Garibyan, MD, PhD**, Assoc. Prof. of Dermatology, Massachusetts General Hospital, Title: *The Magic Wand Initiative and my journey for finding better treatment for pain* Location: SCTR Auditorium

### FEBRUARY 14, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium  
11:00 am - 12:00 pm Lecturer: **Robert Micheletti, MD**, Assist. Prof., Department of Dermatology Title: *TBD* Location: SCTR Auditorium

### FEBRUARY 21, 28, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### MARCH 7, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium  
11:00 am - 12:00 pm Lecturer: **Sarah Tishkoff, PhD**, David and Lyn Silfen University Professor, Departments of Genetics and Biology, Perelman School of Medicine, School of Arts and Sciences, University of Penn. Title: *TBD* Location: SCTR Auditorium

### MARCH 14, 2019

8:00 am - 2:00 pm Penn Dermatology Trainee Research Day  
11:00 am - 12:00 pm Lecturer: **Tamia A. Harris-Tyron, PhD**, Assist. Prof, Department of Dermatology, UT Southwestern Medical Center at Dallas Title: *TBD* Location: SCTR Auditorium

### MARCH 21, 28, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### APRIL 4, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium  
11:00 am - 12:00 pm Lecturer: **Emma Guttman, MD, PhD**, Title: *The translational path to atopic dermatitis & beyond* Location: SCTR Auditorium

### APRIL 11, 2019

No Grand Rounds (CHOP Philly Derm on April 12)

### APRIL 18, 25, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### MAY 2, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium  
11:00 am - 12:00 pm Lecturer: **Ruth Ann Vleugels, MD, MPH**, Director, Autoimmune Skin Diseases Program, Prog. Dir., Dermatology-Rheumatology Fellowship, Vice-Chair, Brigham and Women's Hospital Dept. of Derm., Assoc. Prof., Harvard Medical School Title: *Cutaneous Dermatomyositis: An Evolving Therapeutic Landscape* Location: SCTR Auditorium

### MAY 9, 2019

No Grand Rounds

### MAY 16, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### MAY 23, 2019

10:00 am - 11:00 am No Patient Viewing or Discussion  
**Pillsbury Lectureship**  
Lecturer: **Amy Paller, MD**, Chair, Dept. of Derm., Director, Northwestern University Skin Disease Research Center, Walter J Hamlin Prof. of Derm, Prof. of Dermatology and Pediatrics Title: *TBD* Location: SCTR Auditorium  
**Luncheon**

11:00 am - 12:00 pm

### MAY 30, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium

### JUNE 6, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 pm Patient Discussion, SCTR Auditorium  
11:00 am - 12:00 pm Lecturer: **Aristidis Veves, MD, DSc**, Rongxiang Xu, MD, Professor of Surgery, Harvard Medical School, Dir., The Rongxiang Xu, MD, Center for Regenerative Therapeutics, Res. Dir., Joslin-Beth Israel Deaconess Foot Ctr, Beth Israel Deaconess Medical Center Title: *TBD* Location: SCTR Auditorium

### JUNE 13, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 pm Patient Discussion, SCTR Auditorium  
11:00 am - 12:00 pm Lecturer: **Warren Heymann, MD**, Head, Division of Derm., Cooper University Health, Prof. of Derm. and Pediatrics, Cooper Medical School of Rowan University Title: *TBD* Location: SCTR Auditorium

### JUNE 20, 27, 2019

9:00 am - 10:00 am Patient Viewing, PCAM, Suite 1-330S  
10:00 am - 11:00 am Patient Discussion, SCTR Auditorium