VANDERBILT Dermatology

LEADING THE FUTURE IN SKIN HEALTH







Dr. Mary-Margaret Chren Professor and Chair, Department of Dermatology

January 2020

Dear Friends,

Warm greetings to all of you who have watched and helped the Vanderbilt Department of Dermatology grow and flourish: it's hard to believe we've been a Department for two years! We continue our long-standing priorities of providing uncompromising clinical care for our patients and clinical teaching for our students and trainees. But as a Department we have even more opportunities to grow and develop. Over the past year our faculty came together in a formal retreat to re-examine our academic values and strategic goals, and we're actively focused on achieving them. As a group we've drafted new documents that describe our business structure within the broader VUMC environment, and we have substantial new oversight of our clinical operations. We've composed explicit plans for growth and academic achievement, and have begun exciting new clinical, research, and educational initiatives. In this newsletter we're thrilled to highlight some of the year's achievements and our dreams for the future. Thank you for your interest in our progress! Please contact me directly at our offices at One Hundred Oaks in Nashville to learn more, or—better yet—to visit us in person.

Meg Chren



FACULTY

Back Row: Bill Stebbins, Zachary Jones, Eric Tkaczyk, Michel McDonald, Alan Boyd, Jo-David Fine, Darrel Ellis | *Middle Row*: Sally Monahan, Rachel Champion, Aleta Simmons, Anna Clayton, Eva Parker, Annie Dewan, Sharon Albers, Lee Wheless *Front Row*: John Zic, Jami Miller, Meg Chren, Jeff Byers, Lloyd King, | *Not Pictured*: Allison Hanlon, Jeffrey Zwerner, Shirley Russell.

Cover Story PEDIATRIC DERMATOLOGY by Dr. Sharon Albers

n 15 years, pediatric dermatology has made tremendous strides, from board certification to wide-ranging treatment innovations. There are 36 pediatric dermatology fellowships. I am pleased to highlight pediatric dermatology advances in this newsletter.

Our armamentarium of medications for pediatric skin diseases grows. This is an exciting time to be a pediatric dermatologist. For so long the therapeutic options for common diseases, such as atopic dermatitis and psoriasis, were limited. Now with the advent of immunobiologics we have targeted therapies for both. Dupilumab is now indicated

for treating atopic dermatitis in patients as young as 12, and in trials for those age 6 to 11. Immunobiologics are approved for psoriasis as young as age 4. These new treatments offer patients and their families welcome relief. Studies have shown that quality of life and family function vastly improve with effective treatment of atopic dermatitis and psoriasis. There is nothing more satisfying than seeing a patient's life turn around with better control of their skin disease.

Possibly the most significant development in pediatric dermatology is propranolol, approved by the FDA for treatment of infantile hemangiomas in 2014. Propranolol is a game changer for treatment of a very common vascular anomaly. Propranolol, a non-selective beta blocker, was first

Dr. Sharon Albers is Vanderbilt's pediatric dermatologist. Here she meets with pediatric patient, Emery, and discusses treatment options with her mother.

Vascular anomaly research has also exploded. To better serve these patients, the Vanderbilt Vascular Anomalies Multidisciplinary Clinic was started in June 2018. Many vascualr anomaly patients have found a medical home in this clinic. It's staffed by specialists in ENT, Hematology, Oncology, Genetics, Dermatology, Radiology, Pathology, Plastic Surgery, Neurology and Cardiology - all are pediatric specialists. The team also includes a patient advocate who is personally affected by a vascular condition. She volunteers to help others navigate their healthcare. This partnership allows us to care for patients holistically, serving physical

and psychosocial needs. The diagnostic dilemmas often involve evaluations for Klippel-Trenaunay syndrome, Proteus, CLOVES syndrome and other overgrowth conditions. As we gain genetic knowledge, we discover more patients with PIK3CA and RASA1 mutations. This clinic has been very well received by patients and families who until now felt lost in a system that did not understand their disease or concerns. Recently, the vascular anomaly team held a lunch event, giving patients a chance to share their experiences with us. We have so much to learn from people living with these rare disorders.

While the multidisciplinary clinic is an awesome venture, many hemangioma patients do not require a multidisciplinary approach. For example, meet

found to shrink hemangiomas in 2008. The drug has been on the market since the 1970s, indicated for a variety of cardiac issues. Its value in treating hemangiomas was discovered serendipitously when infants were treated for cardiac disease and their hemangiomas rapidly diminished. Now it is the firstline treatment for hemangiomas requiring treatment. Previous treatments for hemangiomas included high-dose steroids and vincristine. These agents are fraught with serious side effects. Propranolol has revolutionized the field of vascular anomalies. Emery, our feature baby. She is a delightful 4-month-old who presented at 10 weeks of age with a hemangioma on her lower lip. At her first clinic visit we discussed propranolol and opted for watchful waiting. Five weeks later, Emery's mother reported increasing growth with some ulceration and bleeding. Emery also seemed to have some difficulty with feeding. On follow up, after discussion with mom we decided to start her on propranolol. I am excited to watch Emery's progress.

NEW FACULTY =



DR. EVA PARKER

Dr. Parker is a native Nashvillian and an alumna of the University of Denver. She graduated *magna cum laude* with a B.S. in Environmental Science, and attended medical school at the University of Colorado, graduating as a member of the Alpha Omega Alpha honor society. After completing an Internal Medicine internship at St. Joseph's Hospital in Denver, Dr. Parker completed a residency in Dermatology at Northwestern University. She then joined the faculty of Loyola University Medical Center, serving as Associate Director of the Dermatology Residency Training Program and Director of the Inpatient Dermatology Consultation Service. After an additional 11 years in private practice in Chicago and locally as a practice owner in Franklin, Dr. Parker returned to academic medicine, joining Vanderbilt in the fall of 2019.

Dr. Parker is active in the greater dermatology community, previously serving as Scientific Committee Chair for the Chicago Dermatological Society and in her current roles as president of the Nashville Dermatologic Society and as a member of the American Academy of Dermatology's Expert Resource Group on Climate and Environmental Affairs. She volunteers locally at Siloam Health, serving Nashville's immigrant and refugee population, and is a member of Health Volunteers Overseas with upcoming assignments in Costa Rica and Uganda. Dr. Parker is an advocate for awareness and mitigation of the harmful effects of climate change on health, and has been invited to speak about the effects of climate change on skin cancer risk during the Skin-Environmental Interface Forum at the upcoming AAD Meeting. She is also a contributing author for an upcoming issue of the International Journal of Women's Dermatology that will be entirely dedicated to climate change.



DR. ZACHARY JONES

Dr. Jones grew up in Corpus Christi, Texas, and earned his bachelor's degree at Texas A&M University-Corpus Christi, where he graduated summa cum laude with a degree in Biomedical Science. He attended the University of Texas Medical Branch in Galveston for medical school, where he was a member of Alpha Omega Alpha honors society and received his degree summa cum laude. He completed an internship in Internal Medicine at Baylor University Medical Center in Dallas before completing residency in Dermatology at Vanderbilt. In his final year of residency, he served as Chief Resident. Upon completion of residency summer of 2019, Dr. Jones joined the Dermatology faculty at VUMC as an Assistant Professor, working primarily at the Franklin clinic.

Clinically, Dr. Jones has special interests in medical dermatology, cutaneous manifestations of rheumatologic diseases and dermatologic surgery. He enjoys teaching residents and medical students, and at the completion of his residency, received the Dr. Lloyd King Teaching Award for excellence in teaching junior residents and medical students. Dr. Jones is actively involved in advocacy for the field of Dermatology, both locally and nationally. In 2018, he attended the AADA legislative conference where he met with Congress men and women to promote interests of Dermatologists and physicians as a whole. He was also elected to serve on the Tennessee Dermatology Society board in October 2019.

CLINICAL UPDATES

by Dr. Jeff Byers, Vice Chair of Clinical Affairs, and Dr. Michel McDonald, Director of Mohs Surgery



Blue light technology is demonstrated in phototherapy as a treatment for many skin conditions

anderbilt Dermatology is entering a new era of unprecedented independence and growth. First, the Division of Dermatology became the Department of Dermatology in January 2018, and then our clinical enterprise, formerly within the Medicine Patient Care Center (PCC), became its own Dermatology PCC in July 2019. This new entity is headed by our Chair, Dr. Meg Chren and adds Margaret Jones, MBA as our new Associate Operations Officer.

We now have 22 clinical faculty and 14 (soon to be 15) residents, along with one clinical fellow. Our One Hundred

Oaks facility is our

flagship headquarters and the home of many general and specialty

dermatology practices as well as procedural dermatology/Mohs micrographic surgery, dermatopathology, and Department and PCC administration. We

now have five medical

faculty and one nurse

practitioner at our



Drs. Hicks and Dewan discuss a patient's chart at a clinic workstation

second main anchor in Franklin, and we also continue to offer clinics in Belle Meade and Shelbyville.

We look forward to expanding and developing the services we offer in the greater Nashville area. In all of this, we keep closely in mind the excellence, standards, and vision of Dr. Lloyd King, Dr. George Stricklin, and many other predecessors as we strive to move forward, leading the future in skin health.

MOHS MICROGRAPHIC SURGERY

Mohs Micrographic Surgery continues to thrive at Vanderbilt, under the leadership of Dr. Michel McDonald. The Micrographic Surgery and Cutaneous Oncology Fellowship continues under the leadership of Dr. Anna Clayton, and Dr. William Stebbins continues to grow and lead the laser and cosmetic surgery service. This year, he received the five star service award from patients, and was part of the group that published evidence based clinical practice guidelines for Microcystic Adnexal Carcinoma.

Dr. Allison Hanlon is Chief of Dermatology at the VA Medical Center along with having a cutaneous surgery and oncology practice. This year, she published on both Merkel Cell Carcinoma and guidelines for initial skin cancer screening for solid organ transplant recipients. Currently, she is partnering with VICC to initiate a Pembrolizumab trial for patients with high risk cutaneous squamous cell carcinoma.

All of our Mohs team will be lecturing at the upcoming ACMS annual meeting in Nashville this May. We look forward to seeing all of you who will be attending.



Mohs Micrographic Surgery Team with Fellow, Dr. Stacy McMurray (Not pictured: Dr. Allison Hanlon)

SKIN OF COLOR

Dr. Aleta Simmons (middle) and medical students at the Student National Medical Association (SNMA) Recruitment Fair The Department of Dermatology is making efforts to address diversity and inclusion within the department. Dr. Aleta Simmons joined our faculty in November 2018. She has joined Dr. Sharon Albers in working on the department's initiatives.



INPATIENT CONSULT SERVICE

The Inpatient Dermatology Consult Service remains busy, seeing higher patient numbers than ever. In the first quarter of this academic year, the average number of consults was 76 per month, which is approximately 30% higher than in previous years. We attribute this change to both increased visibility at the hospital, and the ever-increasing medical complexity of admitted patients requiring specialist care. In the past year, residents have managed everything from congenital self-healing reticulohistiocytosis in a newborn to bone marrow transplant patients with disseminated fusarium infections. As the use of immunotherapy for cancer continues to rise, residents are also becoming experts in managing severe dermatologic reactions to drugs.

This year, the new consult room renovations were finished, providing a home base for our residents and medical students during busy consult days, and allowing for enhanced teaching in a quiet, spacious environment. We aim to become a leader in the field of consultative dermatology through multidisciplinary expertise, advanced educational initiatives, and cutting edge clinical research. In April 2019, Dr. Simmons traveled to Philadelphia with the Vanderbilt Office of Diversity and Inclusion and the Minority Housestaff for Medical and Academic Achievement (MHAMA) to recruit for Vanderbilt's residency programs at the Student National Medical Association's Annual Medical Education Conference. We are interviewing two of the students that we met at the conference during this residency selection cycle.

Drs. Albers and Simmons spend time mentoring students inside and outside of clinic as well as lecturing medical students at Meharry Medical College.

In addition to the recruitment efforts this year, Drs. Albers and Simmons participated in the AAD's inaugural Diversity Champion Workshop which preceded the Association of Professors of Dermatology meeting in Chicago, IL.

TELEDERMATOLOGY

Our Pediatric Teledermatology pilot has been a great success. Since launching in April 2019, we have done more than 30 Store and Forward consults. The diagnoses have ranged from eczema to acne, moles, tinea versicolor and a wide spectrum of skin conditions. The initiative has been so successful that we now have plans to expand the service to Vanderbilt satellite pediatric offices, and are collaborating with the Shade Tree clinic, the Vanderbilt medical student run free clinic, to provide dermatologic care to the underserved in Nashville.

Teledermatology is truly changing the way healthcare is delivered and having a positive impact on a patient demographic that may find specialist visits challenging. This technology has been embraced by patients and referring providers and has been rated 5/5 by all parents who have utilized the program.

Each visit is being entered into our teledermatology registry which we will be able to analyze in the future to improve upon this service and demonstrate the effectiveness of this technology.

DR. JOHN P. SUNDBERG

COLLABORATION WITH DR. LLOYD E. KING, JR., RESULTS IN MANY MOUSE MODELS FOR HUMAN SKIN DISEASES

r. John P. Sundberg, a veterinary pathologist at The Jackson Laboratory in Bar Harbor, Maine, who develops animal models for human diseases, met Dr. Lloyd E. King, Jr., the Chief of Vanderbilt Dermatology at the time, in 1990 at the first Alopecia Areata workshop in Bethesda, MD. Dr. Sundberg presented an overview of mouse models for a wide variety of human alopecias but not alopecia areata, as there was no known model at the time. Over dinner, they discussed many mouse models available for skin research, and Dr. King followed up by coming to The Jackson Laboratory in March 1991. This turned out to be very serendipitous as literally two weeks before his arrival, Dr. Sundberg identified a potential

naturally occurring mouse model for alopecia areata. Concurring with the diagnosis, they wrote a small grant to the National Alopecia Areata Foundation for \$10,000 to develop the model, which was funded! These initial interactions led to a 3-decade long collaboration that developed this mouse model into a key tool for dissecting the pathogenesis and genetics of this very complicated disease. This collaboration expanded to investigations of many other mouse models for human skin, hair, and nail disorders resulting in more than 60 primary research papers, reviews, and book chapters.

Dr. Sundberg has been an adjunct professor in the Division of Dermatology since 1997. This continues in the new Department of Dermatology. He recently changed his appointment at The Jackson Laboratory to Active Emeritus Professor, which allows him time and flexibility to spend more time in Nashville. He now comes three times a year for a week at a time to work not only with Dr. King, but also other members of the department. Because of his long adjunct status and collaborations with many other scientists throughout Vanderbilt University, he is



helping to encourage new interactions between Dermatology faculty and others on the main campus.

Dr. Sundberg and Dr. King have demonstrated the strength and value of integrating the skills of a veterinarian and principal investigator who develops animal models with those of a dermatopathologist to accurately compare and contrast these models with specific human diseases. This type of collaboration, built on mutual respect, is itself a model for how to develop and validate models that hold up through scientific rigor over time and truly make a difference to help us better understand the molecular basis and ultimately the treatment of human skin diseases.

Dr. Lloyd E. King, Jr. and Dr. John P. Sundberg

VDTRC VANDERBILT TRANSLATIONAL _____



On December 11, 2019, members of the Vanderbilt Dermatology Translational Research Clinic (VDTRC) participated in the 8th Annual Vanderbilt Institute for Surgery and Engineering (VISE) Symposium, presenting eight posters. Pictured: Yvette Ssempijja, Laura Wang, and Kelsey Parks

KELSEY PARKS

Kelsey Parks is from Bentonville, Arkansas, and completed her bachelor's degree from the University of Tulsa. After her third year of medical school at the University of Arkansas, Kelsey was thrilled to move to Nashville to join the VDTRC for one academic year. In her role with the VDTRC, she is exploring the use of 3D photography to identify and quantify active disease in patients with chronic graft-versushost disease. Kelsey is working closely with computer science colleagues at Vanderbilt University and serves as a key connection between the artificial intelligence and clinical medicine realms of the project. Specifically, the team is evaluating the use of computer algorithms to recognize and quantify erythema from patient photos. Kelsey has developed a standardized photo acquisition protocol and is actively recruiting and photographing patients. These photos are then demarcated by her and two colleagues in order to develop a well-annotated dataset with expert-approved markings, which will be used to train neural networks.

n December 7-10, VDTRC members Eric Tkaczyk, Laura Wang, Inga Saknite, and alumna, now MD, PHD student at Yale University, Fuyao Chen, presented their work at the 61st Annual Meeting of the American Society of Hematology in Orlando. Two of the four presented abstracts won ASH Abstract Achievement Award: Fuyao Chen's study on the detection of sclerotic

YVETTE SSEMPIJJA

Yvette Ssempijja grew up in Milwaukee, Wisconsin and earned her bachelor's degree at Loyola University Chicago. After her first year of medical school at Meharry Medical College, Yvette had the opportunity to work in a dermatology clinic in Uganda, sparking her interest in the field. After the completion of her third year, Yvette was selected to spend one year dedicated to research through the Vanderbilt Medical Scholars Research Program. She works under the mentorship of Dr. Tkaczyk to explore the use of the Myoton device to objectively measure cutaneous sclerosis in patients with chronic graft versus host disease (cGVHD). Yvette recently attended the Vanderbilt Translational Research Forum, where she presented a crosssectional study of the diagnostic potential of the Myoton. These findings revealed a significant difference in three of the five parameters compared to healthy age-matched controls. She is currently recruiting cGVHD patients, with and without sclerosis, to study the natural course of the disease. Yvette looks forward to sharing the relationship between skin biomechanics, response to second-line therapies, patient/provider perception of change, and the National Institute of Health skin score.



Dr. Inga Saknite, Fuyao Chen, Laura Wang, Dr. Eric Tkaczyk

chronic graft-versus-host disease via the Myoton device, and Inga Saknite's work on the evaluation of cutaneous acute graft-versus-host disease features by noninvasive reflectance confocal microscopy.

DEPARTMENT RESEARCH

ealthcare at Vanderbilt and across the country has an unprecedented opportunity to incorporate patientreported outcome measures (PROMs) into routine clinical care. The melding of the patient perspective with our electronic healthcare records will allow us to personalize the care provided to our patients effectively.

Yet significant challenges remain. Dr. Mary-Margaret Chren was awarded a grant by the National Institute of Health (NIH) to discover how to best measure chronic itching, a disabling symptom associated with poor well-being, including depressed mood, anxiety, and diminished quality of sleep, affecting 10-20% of people. Most people experience itching as an uncomfortable sensation that is alleviated by scratching. Relentless itching is not relieved by scratching; instead, scratching can increase the itching sensation. Chronic itch can also be associated with pain.

This research will provide an accurate, user-friendly, and interpretable measure of itch and its effects for use in clinical trials. This project will generate sufficient data for us to submit the measurement tool to the FDA's Clinical Outcome Assessment Qualification Program for qualification as a patient-reported outcome measure for effectiveness determination in clinical trials of interventions to improve itch.

Furthermore, Vanderbilt Dermatology will begin the implementation of PROMs and improve how our patients experience and how they value the care provided. The most obvious change will be the use of a computer tablet to capture information instead of using paper forms electronically. However, these changes will also allow a patient to view more of their health records using My Health @ Vanderbilt, message their healthcare team directly, and update information needed to provide first-rate care.

Vanderbilt Dermatology is seizing the opportunity provided by advanced technologies, our research, and changes we have implemented during 2019. Beginning early in the New Year, everyone will experience the increased clinic efficiency allowing our team to make more time available for better care, permitting us to advance VUMC's pillar goals of providing excellent, personalized care for each patient. r. Lee Wheless has spent the past year developing machine learning algorithms to identify transplant patients from the electronic health record, and to count the number of skin cancers per person. Both tasks are not as easy as one might assume



in fragmented health-care systems. Most studies to date have focused on individuals being cases or noncases when it comes to skin cancer, but we know that the patient who gets only one or two skin cancers likely has very different environmental, genetic, and pharmacologic exposures than the patient who gets hundreds. Dr. Wheless is currently investigating how these factors contribute to the total number of skin cancers organ transplant recipients develop, with a goal of identifying pharmacogenomic risk factors to guide the immunosuppression regimens of transplant patients. In building toward this goal, he is currently looking at how cumulative doses of different immunosuppressants impact the risk of developing multiple skin cancers.



On November 29, Dr. Inga Saknite was invited to give a talk at the Federal University of ABC (UFABC) in Santo André, Brazil, as part of the Optical Society of America (OSA) Traveling Lecturer Program. As a former Vice-President of the University of Latvia OSA Student Chapter, she also shared her experience and advice on chapter management and opportunities.

= WHERE ARE THEY NOW? =



DR. SUMMER J. CLARK specializes in Mohs micrographic surgery at Proffer Surgical Associates in Amarillo, Texas. In her spare time, she enjoys spending time with her husband and children, traveling, and knitting. DR. LILLY ZHU -Dr. Zhu is a boardcertified dermatologist who specializes in medical, surgical, and cosmetic dermatology at Brentwood Dermatology in Nashville, Tennessee.

DR. ZACHARY JONES Dr. Jones is a boardcertified dermatologist who specializes in general dermatology as an Assistant Professor in the Department of



Dermatology at Vanderbilt University Medical Center.

DR. JONATHAN BRAUE - Dr. Braue is a board-certified dermatologist specializing in all aspects of cutaneous oncology and medical dermatology at Cleveland Clinic Indian River Hospital in Vero Beach, Florida.

DR. BRANDON DANFORD - Dr. Danford is a board-certified dermatologist specializing in cosmetic, surgical, and general dermatology at Dallas Associated Dermatology in Dallas, Texas.

After residency, **DR. DAVID ROFFWARG** worked in private practice in Nashville for about three years before moving back to his hometown in Atlanta, where he now practices. He and his wife Polly have a 2 year old son named Emmitt. Outside of work, he and his family love to travel and hike. He recommends residents take time to learn as much as they can during residency, saying, "stay late and ask to watch procedures you've never seen and ask to take part in these things so you come out of training well versed in all aspects of dermatology."

After residency, **DR. SUNAINA BHUCHAR** joined a private practice in Houston for a year before moving



Class of 2014 reuniting in Nashville a few months ago with their families

to Boston where her husband had matched for a fellowship at MGH. There, she joined a brand-new dermatology department at Cambridge Health Alliance, a multispecialty community health organization. She had the opportunity to help develop the program, starting both a pediatric and an excision clinic, which have continued to thrive since she and her husband moved back to Houston. For the past three years, she has been at Kelsey Seybold clinic, practicing mostly medical and surgical dermatology. She has a 3 year old daughter, Isha, and a 1 year old son, Shyam.





Dermatology Family Picnic

Fall Tailgate Potluck



Staff Holiday Party



Resident and Fellow Graduation Celebration





Donna Oates Receives Administrative Professional Award



Staff Holiday Party



Halloween Grand Rounds

ALUMNI REUNION

We look forward to seeing alumni who are attending the American Academy of Dermatology annual meeting. Please stop by the Vanderbilt Alumni Reunion to enjoy some food and drink!

FRIDAY, MARCH 20TH 5:30 - 7:30 PM SHERATON DENVER DOWNTOWN HOTEL GOVERNORS SQUARE 11

We hope to see you there!



AAD Alumni Reunion 2019



AAD Alumni Reunion 2019



Vanderbilt Dermatology Faculty and Housestaff

Dermatology

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