

MEDICINE

NEWS FROM THE DEPARTMENT OF MEDICINE

MATTERS

MESSAGE FROM THE CHAIR

MAY 2022



Spring is here, and thus it is quite appropriate that we highlight the Division of Asthma, Allergy, and Immunology this month. While April showers bring May flowers, they also bring a host of seasonal allergies! The Division is led by Dr. Michael Nelson, who has made a tremendous impact as a stellar teacher, clinician, researcher, and mentor in his short time as Chief. As you will read, the Division

has a storied and rich history. It is also rewriting the science behind our understanding of allergic and immunologic diseases with ground-breaking research and cutting-edge clinical care. The Division has garnered much recognition with multiple high-profile publications, awards, and other accolades over the past few years. I would highly encourage everyone to read this edition of Medicine Matters and learn more.

A few other items to make you aware of as well. We will be continuing our monthly Department Town Halls, with the next session being at the end of May and focusing on research issues. We are also ready to move medicine grand rounds back to the in-person format, which will include lunch. We will continue to offer a virtual option for those who have difficulty attending in person. Lastly, a reminder that the Department of Medicine award nominations are due on May 15th.

Enjoy reading this edition of Medicine Matters.

With best wishes,

Mitchell H. Rosner, MD, MACP
Henry B. Mulholland Professor of Medicine
Chair, Department of Medicine

 **UVAHealth** | DEPARTMENT OF MEDICINE

MISSION

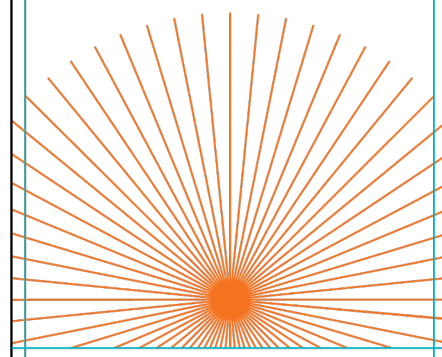
We are dedicated to preventing disease and treating illness, educating and inspiring future leaders in the field of internal medicine, and supporting innovative biomedical research.

VALUES

We strive for a sense of community, connection, and synergy among all faculty, staff, and trainees.

PLEDGE

We will conform to the highest ethical standards, uphold the values of our partner organizations, and give back to our community through public service.



DoM WEBSITE 

GRAND ROUNDS 

HIGHLIGHTED DIVISION . . . 

MINDFULLNESS MATTERS . . . 

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UVAHealth

DOM UPDATES & NOTES

DOM Financial Update

Department of Medicine Summary of Consolidated Financials FY21 as of March 31, 2022

	Budget YTD	Actual YTD	\$ Variance YTD
Work RVUs	795,045	795,143	99
Clinical Receipts (NPSR)	51,382,677	51,781,007	398,331
Total Revenues	142,040,078	153,466,999	11,426,920
Total Expenditures	140,508,387	149,125,580	(8,617,193)
Net Income	1,531,691	4,341,419	2,809,728

Summary Explanation of Variance:

For the fiscal year through March, 2022 DOM posted a consolidated net gain of \$4.3M and a favorable variance to YTD net income budget of \$2.8M. Clinical receipts outperformed budget by \$398K due to higher clinical charge volumes.

Total expenditures outpaced budget driven by timing and unbudgeted grant expenditures on new and existing awards.

Total revenues include FY22 CARES Phase 3 Allocations of \$460K, Phase 4 PRF Allocation of \$74K and \$1.2M Endowment revenue recorded for April through June.

New studies opened since March 1, 2022

Developmental Therapeutics

A Dose-Escalation and Expansion Study of the Safety and Pharmacokinetics of XL092 as Single-Agent and Combination Therapy in Subjects with Inoperable Locally Advanced or Metastatic Solid Tumors

IRB #HSR210282

CT. Gov. ID: NCT03845166

Sponsor Protocol XL092-001 Sponsor: EXELIXIS, Inc.

Principal Investigator: Dreicer, Robert

Study Contact: Alexandra Cash aec5gn@virginia.edu 434-243-4305

GenitoUrinary (GU)

A Phase 1b Open-Label, Clinical Trial to Evaluate the Safety, Tolerability, and Pharmacokinetics of ARV-110 in Combination with Abiraterone in Patients with Metastatic Prostate Cancer

IRB #HSR210509

CT. Gov. ID: NCT05177042

Sponsor Protocol ARV-110- mCRPC-103 Sponsor: Arvinas, Inc.

Principal Investigator: Devitt, Michael

Study Contact: Alexandra Cash aec5gn@virginia.edu 434-243-4305

Thoracic

Integration of Immunotherapy into Adjuvant Therapy for Resected NSCLC: Alchemist CEMO-10

IRB #HSR200238

CT. Gov. ID: NCT04267848

Sponsor Protocol A081801 Sponsor: Alliance

Principal Investigator: Hall, Richard

Study Contact: Gracie Hockenberry mgt4n@virginia.edu 434-297-7784



Mindfulness Matters

A Newsletter from the
UVA Mindfulness Center



**12 Mental
Health and
Wellness
Resources
For You To
Know About**

Save the Date!

2022 Michael J. Weber Symposium

The second annual Michael J. Weber Symposium to honor Dr. Weber's life and achievements will be held on October 14, 2022. The central theme will be "Multi-Omics Precision Oncology"

More information here: [2022 Michael J. Weber Symposium](#)

DOM UPDATES & NOTES



Shannon Moonah, MD



Mohan Nadkarni, MD



Caleb Martin



Matthew Goodman, MD, FACP



Taison Bell, MD



Costi Sifri, MD



Jeffery Wilson, MD



Jackie Hodges, MD, MPH



Dan Van Aartsen, MD



Kate McManus, MD



Michael Heckman

Awards and Achievements

Congratulations to **Dr. Shannon Moonah**, from the Division of Infectious Diseases on receiving the prestigious Hartwell Foundation Biomedical Research Award for his proposal, *“Engineering Protozoa to Prevent and Treat C. difficile Infection”*

Congratulations to **Dr. Mohan Nadkarni**, Chief of the Division of General, Geriatric, Palliative and Hospital Medicine, who has been elected as President of the *Association of Chiefs and Leaders in General Internal Medicine* (ACLGIM), a subgroup of the *Society of General Internal Medicine* (SGIM) and the national organization for division chiefs and leaders in General Internal Medicine. This recognition celebrates Dr. Nadkarni’s leadership and excellence in his field.

Welcome to **Caleb Martin** in his new roll as the Fellowship Coordinator for Infectious Diseases.

Congratulations to **Dr. Matthew Goodman**, from the Division of General Medicine, Geriatrics and Palliative Care, who submitted the winning entry in a *ACP Internist* recent cartoon caption contest which garnered 60% of the vote. To see Matt’s winning entry and the cartoon, go [here](#).

Congratulations to **Dr. Taison Bell**, who was featured in *The New York Times* article *“Who Should Get a 4th Covid Shot?”* - a discussion on COVID vaccine booster shots.

Congratulations to **Dr. Costi Sifri**, who was featured in *The Washington Post* article *“As Washington Relaxes Coronavirus Mandates, Another Variant Spreads.”*

Congratulations to senior author **Dr. Jeffery Wilson**, from the Division of Asthma, Allergy, and Immunology and his research team Behnam Keshavarz, Nathan Richards, Lisa Workman, Jaimin Patel, Lyndsey Muehling, Glenda Canderan, Deborah Murphy, Savannah Brovero, Samuel Ailsworth, Will Eschenbacher, Emily McGowan, Barbara Mann, Michael Nelson, Alexandra Kadl, Judith Woodfolk, and Thomas Platts-Mills, on the publication of their study *“Trajectory of IgG to SARS-CoV-2 After Vaccination With BNT162b2 or mRNA-1273 in an Employee Cohort and Comparison With Natural Infection”* in *Frontiers in Immunology* and which was featured in *U.S. News and World Report*.

Congratulations to Division of Infectious Diseases fellow (ABIM Research Pathway), **Dr. Jackie Hodges** on this important work and publication, *“Process evaluation for the adaptation, testing and dissemination of a mobile health platform to support people with HIV and tuberculosis in Irkutsk, Siberia”* in *BMJ Journals*.

Congratulations to **Dr. Dan Van Aartsen** and mentor **Dr. Scott Heysell** on this study of the importance of the effect of enteropathogens on anti-TB PK in children in Tanzania. *“Enteropathogen spectrum and effect on antimycobacterial pharmacokinetics among children with tuberculosis in rural Tanzania: a prospective cohort study.”*

Congratulations to **Dr. Kate McManus** on the publication of *“Associated Costs Are a Barrier to HIV Preexposure Prophylaxis Access in the United States”* in *The American Journal of Public Health*.

The Division of Hematology/Oncology would like to thank **Michael Heckman** for 13 years of service with the University and most recently as the Grant and Contracts Administrator as he will be retiring in May 2022. We wish Mike the best in his retirement.

Welcome To The World



Congratulations to Athidi and Kranthi who welcomed daughter Aashvi on April 26th, 2022.

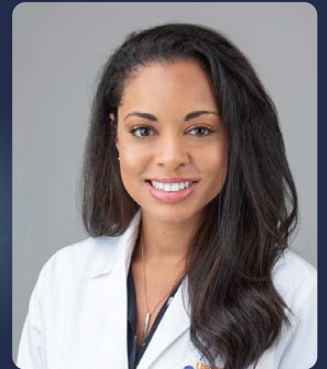


MINDFULNESS FOR HEALTHCARE EMPLOYEES

Mindfulness for Healthcare Employees
Free Summer 2022 Course
Live online via Zoom
Mondays, May 2 – June 20, 2022
6:00pm – 8:30pm
Retreat: Saturday, June 4, 2022
9:00am-1:00pm

'Shocking Mismanagement' in Our Organ Donation System Is Causing Needless Death

Co-Written by
Ebony Hilton, MD



Dr. Taison Bell Takes on New Role and Launches Podcast, "This Medicine Life"

Congratulations to Taison Bell, MD, on his new role within the Department of Medicine senior leadership team as Vice Chair for Faculty Affairs. In addition to working with the School of Medicine Faculty Development



Office and other groups within UVA medicine, Dr. Bell just dropped the inaugural episode of his podcast called "This Medicine Life," where he plans to interview those both inside and outside of UVA to connect and share stories and tips for success and growth as a community. Click to listen to the first episode!

FRIDAYS AT NOON via Zoom
Click for details and schedule.

UNIVERSITY OF VIRGINIA

MEDICINE GRAND ROUNDS

DEPARTMENT OF MEDICINE

DOM UPDATES & NOTES

Can you trust your rapid COVID test result? (Today)

Infectious disease specialist Amy Mathers, MD, shares that rapid tests still work for the omicron variant, but it's too early to tell how they'll work with BA.2 or other subvariants.



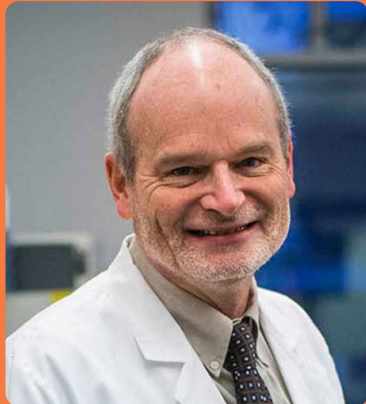
"Long-covid is the smoke in your lungs from the house-fire you survived" (Twitter link)

Dr. Hilton discusses the body's response to viruses and the possible long-term unknowns related to the COVID-19 pandemic.



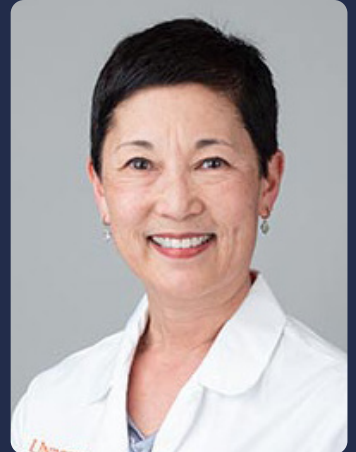
A Voice in the Darkness: How Dr. Petri Became a Champion During the Pandemic (UVAHealth)

An interview with UVA Health infectious disease expert William Petri, MD. During the pandemic these last two years, he has helped quell fears and clear up confusion about everything COVID during a scary, chaotic time.



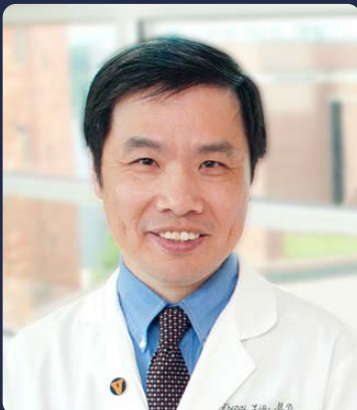
How stress can damage your brain and body (The Washington Post)

Gastroenterologist Cynthia Yoshida, MD, shares that stress decreases gastrointestinal motility, which causes you to feel nauseous, bloated, or constipated.



Telling the Twincretins Apart: Incretins and Type 2 Diabetes Management (Podcast)

Host Aaron Lohr talks about incretins and type 2 diabetes management with **Zhenqi Liu, MD**, the James M. Moss Professor of Diabetes at the University of Virginia School of Medicine.



UVA Health expert weighs in on new COVID breath test (CBS19)

Dr. Costi Sifri discusses the new test and if we should expect to see it at UVA.



DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

Message from Asthma, Allergy & Immunology Division Chief, Michael Nelson, MD, PhD



Michael Nelson, MD, PhD

I can't believe a year has passed since my return to the University of Virginia as Division Chief during the last academic year. In that time, every one of my expectations has been exceeded, and I couldn't be prouder of this Division that continues to shine no matter the challenge.

Looking back, I am impressed with the resilience of our personnel in overcoming unprecedented clinic nursing and access staff turnover, space challenges, compensation, and pandemic-related barriers to our normal clinical and research activities. I am humbled to be surrounded by such a talented and productive team that is so selflessly dedicated to advancing the specialty and each other.

Highlights of the past year are many. Perhaps none more significant than the 60th Annual Swineford Meeting and celebration at Boar's Head last month on April 8th and 9th. Course Director Dr. Thomas Platts-Mills and the planning committee outdid themselves with an incredible lineup of distinguished national and international speakers

in a forum unlike any other. The Swineford meeting remains the longest-running CME program at UVA. Last Fall, the Division conducted an informative and inspiring research retreat with collaborators across the School of Medicine at Morven Farms. The event enhanced awareness of Division research excellence and has spurred new collaborations already leading to new research initiatives, funding opportunities, publications, and monthly multi-specialty research meetings. Dr. Tim Kyin, Dr. Anna Smith, and I initiated a hypersensitivity high-risk COVID-19 vaccine clinic for our community's team members and members. This dedicated clinic was well received and deeply appreciated by the hundreds of patients that overcame their hesitancy for a vaccination with our assistance. In addition, our fellows, graduate students, and post-docs had a stellar year garnering multiple awards and high-profile clinical and scholarly accomplishments in alpha-Gal allergy, eosinophilic disorders, vaccine immune response, and asthma pathogenesis, and COVID-19 vaccine immune response.

This was also a big year for a long-overdue recognition of the Asthma, Allergy, and Immunology Division leaders. Dr. Monica Lawrence was selected as the incoming Vice-Chair of the national Allergy-Immunology Fellowship Program Directors Assembly. Dr. Larry Borish was chosen as the American College of Physicians Virginia Teacher of the Year. Dr. Judith Woodfolk and her COVID19 biorepository team were awarded the UVA Dean of the School of Medicine Team Science Award. Second-year fellow Dr. Ryan Eid was awarded 2nd place in the 2021 American College of Asthma, Allergy, and Immunology prestigious Clemons von Pirquet fellow research competition. For their scientific abstracts, Dr. Lindsey Muehling and Dr. Glenda Canderan were both honored at the 2022 American Academy of Asthma, Allergy, and Immunology meeting. Dr. Jeff Wilson and collaborators demonstrating differences in the immune response to mRNA COVID-19 vaccines have attracted national media attention with each publication.

For hails and farewells, we were saddened by the departure of Carol King, RN, who had over 35 years of dedicated service to UVA and our Northridge clinic, Julie Negri from the Borish Lab, Amani Al-Hazaymeh from the McGowan Lab, and Nathan Richards from the Platts-Mills and Wilson Labs. With every goodbye, we are most fortunate to welcome Emily Noonan to the McGowan Lab, Sam Ailsworth to the Platts-Mills and Wilson Labs, Paul Dell to the Woodfolk Lab, and Martha Joy Spano Lindsay Somerville to the Borish Lab. We are also grateful for Rebecca Wade, RN as our new Clinic Manager, assembling a stellar new team of access and nursing support after critical losses over the past year. And, as you will read in our Fellow Spotlight, we were excited to welcome baby Liam, whose mother is one of our first-year fellows, Kelly Boyd, MD.

~Michael Nelson, MD, PhD

DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

The 60th Annual Swineford Conference Held April 2022



By Thomas Platts-Mills

The second week of April 2022 culminated with the 60th Annual Swineford Allergy Conference and a triumphant return to an in-person educational event. This is the longest-running, academic Allergy meeting in the United States for those keeping score. Our Division has held this conference as a scientific gathering dedicated to educating physicians involved in caring for patients with allergic disorders and for the scientists who work with them developing novel understanding of and treatments for allergic diseases.

From left: (all UVA unless otherwise noted) Judith Woodfolk, MBCHb, Michael Nelson, MD, Jonathan Hemler, MD, Peter Heymann, MD, Stephen Durham, MD (Imperial College, UK), Larry Borish, MD, Thomas Fleisher, MD (NIH), James Baker, MD (U of MI), Thomas Platts-Mills, MD, Samantha Minnicozzi, MD, Glenda Canderan, PhD, Seema Aceves, MD (UC San Diego), Cecilia Berin, PhD (Mount Sinai), Monica Lawrence, MD, Emily McGowan, MD PhD, Ryan Eid, MD, and Jaimin Patel, DO.

Being an in-person meeting, we were very excited to welcome to the University of Virginia and Charlottesville several stars in our field as Conference Faculty. Our visitors hailed from California (Seema Aceves, MD from the University of

California, San Diego), Michigan (James Baker, MD from the University of Michigan), Wisconsin (Dan Jackson, MD from the University of Wisconsin), New York (Cecilia Berin, PhD from Mount Sinai), and Maryland (Thomas Fleisher, MD from the National Institute of Health). We also hosted Dr. Stephen Durham from the National Heart and Lung Institute from the Imperial College, London. In keeping with the traditions of this meeting, there were excellent discussions on multiple topics, including different forms of immunotherapy, Eosinophilic Esophagitis, and the relevance of nanoparticles to allergic disease.

Not to be outdone by our external Conference Faculty, UVA was well represented by those giving talks which are our internal colleagues: Jonathan Hemler, MD from PEDS Pulmonary and Allergy, Alexandra Kadl, MD from Pulmonary and Critical Care Medicine, and Sean Moore, MD from PEDS Gastroenterology. In keeping with a long-standing tradition, we had three presentations by our trainees: Ryan Eid, MD, and Jaimin Patel, DO, who are both Allergy Fellows, and Jonathan Medernach, MD, who is a PEDS resident. We have already started to plan for next year's edition, our 61st Swineford. Be on the lookout for the information in the Fall!

Ask the Expert: When should someone with allergies see an allergy specialist?



DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

Research Update



From left: Larry Borish, MD, Ryan Eid, MD, Elaine Etter, PhD, Deborah Murphy, RN, Tom Makin, MD, Kelly Boyd, MD, Emily McGowan, MD, PhD, Monica Lawrence, MD, Emily Noonan, CRC

Borish Lab

The Larry Borish, MD laboratory's primary focus remains the role of rhinovirus in precipitating asthma exacerbations. These NIH-funded studies include a U01 grant designed to define the role of innate immune responses, including antiviral and T2-promoting immune responses, by infected airway epithelial cells as they might distinguish the consequences of rhinovirus (RV) infections in asthmatics and healthy control subjects. These studies are further supported by an R21 grant that investigates evidence for nascent type 2 inflammation in the lungs of pre-school children with problematic wheeze undergoing clinically-indicated bronchoscopies in whom RV infection is identified.

The Borish lab recently received an R56 grant to generate preliminary data supporting the concept that RV infections produce long-term remodeling in the airway, including expanded populations of IL-25-producing chemosensory cells. In addition, for the next 2½ years, the Borish laboratory will be the co-lead sponsor of a Regeneron-funded investigator-initiated study entitled "Viral infection in asthma (VIA) Study: A randomized, placebo-controlled study to assess cellular and molecular markers related to experimental rhinovirus infection in mild asthmatics, and the effect of dupilumab in this investigational model." The goal of this study will be to assess the molecular and cellular basis by which dupilumab prevents the development of an RV-induced asthma exacerbation. Unrelated to the RV studies, the Borish lab collaborates closely with Dr. Gerry Teague in pediatrics as co-PI for the UVA commitment to the NHLBI-funded PreCISE Asthma Network Clinical Centers. These studies will enroll severe treatment-resistant asthmatics and investigate novel therapeutics in this refractory population. We also have several investigator-initiated pharmaceutical studies. We are currently enrolling patients in a Regeneron-sponsored study to demonstrate the ability of dupilumab to attenuate staphylococcus aureus infection in chronic sinusitis and ameliorate the dysbiotic state, including with restoration of a healthier antimicrobial state. Finally, we have recently completed a GSK-sponsored study to investigate type 2 inflammation in COPD and, more specifically, the expression of IL-5 receptors on airway neutrophils.

Lawrence Lab

In collaboration with Dr. Larry Borish, Dr. Monica Lawrence is working with Dr. W. Gerald Teague in Pediatrics to continue studies on severe treatment-refractory asthma in children. She also continues as head of the Rhinovirus core laboratory and is working with Dr. Borish and Dr. Judith Woodfolk in ongoing investigations of rhinovirus-induced asthma exacerbations. She and Dr. Borish have collaborated with Dr. Malpass and Dr. Barros in Pulmonary to evaluate the expression of the IL-5 receptor on lung neutrophils in patients with COPD. Along with Dr. Borish and Allergy/Immunology fellow Dr. Thomas Makin, she is also continuing to research the role of a low IgE as a sentinel biomarker for evolving humoral immunodeficiency (research sponsored by the Jeffrey Modell Foundation and CSL Behring).

DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

Research Update

McGowan Lab

Dr. McGowan's group continues to expand their research on an emerging form of food allergy, eosinophilic esophagitis (EoE). Through her NIH/NIAID K23 Award, Dr. McGowan established the University of Virginia EoE Cohort with her collaborators, Drs. Bryan Sauer (Adult Gastroenterology) and Barrett Barnes (Pediatric Gastroenterology). This cohort longitudinally follows over 300 patients, and it was designed to examine the environmental, nutritional, and immunologic drivers of this disease. In addition, Dr. McGowan and her colleagues are investigating the mechanisms by which food drives this disease, including the role of non-IgE mediated activation of mast cells via food-derived peptides and the role of IgG4 in activating local immune cells. Dr. McGowan's group is also interested in whether EoE is underdiagnosed in patients with allergic diseases. They are investigating this further using a novel minimally-invasive device called the Cytosponge. Finally, the University of Virginia participated in the international, multi-center Phase III trial of Dupilumab in treating Eosinophilic Esophagitis (R668-EE-1774).



From left: Naomi Bryant, Judith Woodfolk, MBChB, PhD, Glenda Canderan, PhD, Lyndsey Muehling, PhD (Not pictured, Paul Wright)

Woodfolk Lab

The Woodfolk lab studies adaptive immunity to respiratory viruses and allergens in man and how this goes awry in patients with chronic respiratory and allergic diseases. The lab uses an inter-disciplinary approach to collect and analyze large cell datasets to gain insight into the immune response and its relation to clinical disease. Ongoing significant initiatives include: (1) Analyzing the evolution of T cell responses to SARS-CoV-2 in recovered patients to identify biomarkers of post-acute pulmonary complications; (2) Assessing the effects of type 2 cytokine blockade on the immune response to rhinovirus in patients with allergic asthma; and (3) Studying protective and pathogenic immune responses to food and inhalant allergens in human systems.



Asthma, Allergy, and Immunology Faculty and Fellows 2022

DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

Research Update



Front Row: Thomas Platts-Mills, MD, Lisa Workman, Samuel Ailsworth, Benham Keshavarz, PhD
Back Row: Jaimin Patel, DO, Jeff Wilson, MD, PhD

Platts-Mills Lab

The Platts-Mills lab has a long-standing interest in understanding environmental and immunologic contributions to allergic disease. Historically, a significant focus of the lab is related to understanding how dust mite and cat allergen were causally related to asthma and respiratory allergies. More recently, the lab has been a leader in studying two unusual forms of food allergy – eosinophilic esophagitis (EoE) and the tick-acquired mammalian meat allergy (aka – the α -Gal syndrome). The recruitment of patients has facilitated these studies from the Allergy Clinics at UVA and close collaborations with several outside investigators, including the Boston-based Viva birth cohort, Phil Cooper's studies on children in rural Ecuador, and Elizabeth Erwin's studies on children with EoE in Columbus, OH. The lab recently published on the epidemiology of the α -Gal syndrome in the USA and about connections between helminth infections and striking rates of alpha-gal sensitization observed in rural Ecuador and Africa. A primary ongoing analysis of the Viva cohort suggests that changes in the living environment over the past 20 years may have led to decreases in asthma and changes in pollen allergy patterns. Dr. Platts-Mills is funded by an NIH R-37 Merit award for his work in asthma, EoE, and the α -Gal syndrome. He continues to serve as the Division's most senior research mentor, fostering and supporting the professional development of independent physician-scientists and basic science investigators.

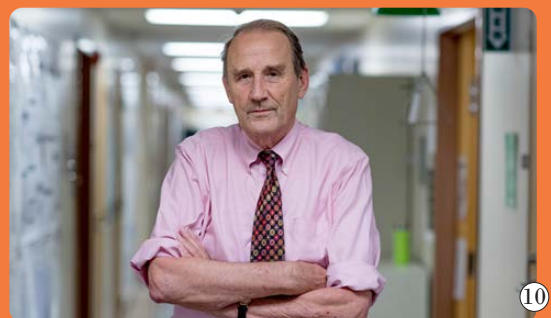
Wilson Lab

Dr. Jeffrey Wilson has a major clinical and research focus on the α -Gal syndrome. Over the past two years, has been studying antibody responses to SARS-CoV-2 in response to natural infection and vaccination. Working with Dr. Platts-Mills and colleagues, Dr. Wilson has been involved in studies to characterize the prevalence of alpha-gal sensitization in the community. He also investigates different ways that α -Gal syndrome can manifest – e.g., traditional allergic symptoms (e.g., hives or anaphylaxis), isolated abdominal pain, or tolerance of mammalian meat despite making IgE antibodies to α -Gal.

This work involves DoD-funded research collaborating with Cade Nylund, PhD at the Uniformed Services University of the Health Sciences, to assess sensitization incidence among military recruits. Dr. Wilson is also the PI of a UVA employee COVID-19 vaccine study and an IRB-approved study that will assess in vivo immunologic responses to α -Gal in patients challenged with traditional pork vs. genetically modified pork that lacks α -Gal (GalSafe pork, Revivacor Inc.). Dr. Wilson is the recipient of an AAAAI Faculty Development Award honoring his collaboration with Coleen McNamara, MD, and Angela Taylor, MD, MPH in cardiology, which studies the putative association between α -Gal sensitization and coronary artery disease. Dr. Wilson is also the recipient of the 2021 McCausland Fellowship, which supports his ongoing research interests.

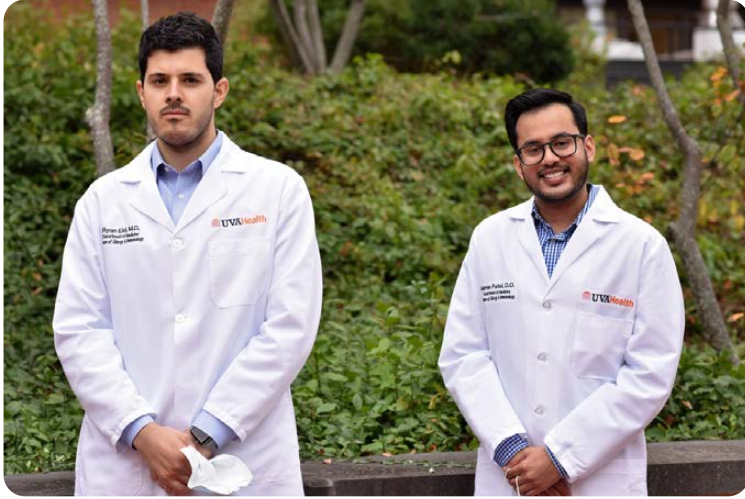
Single tick bite can cause a life-threatening meat allergy: report

Thomas Platts-Mills discusses tick season and the potentially life-threatening food allergy called alpha-gal syndrome that may occur after certain tick bites.



DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

Educational Update



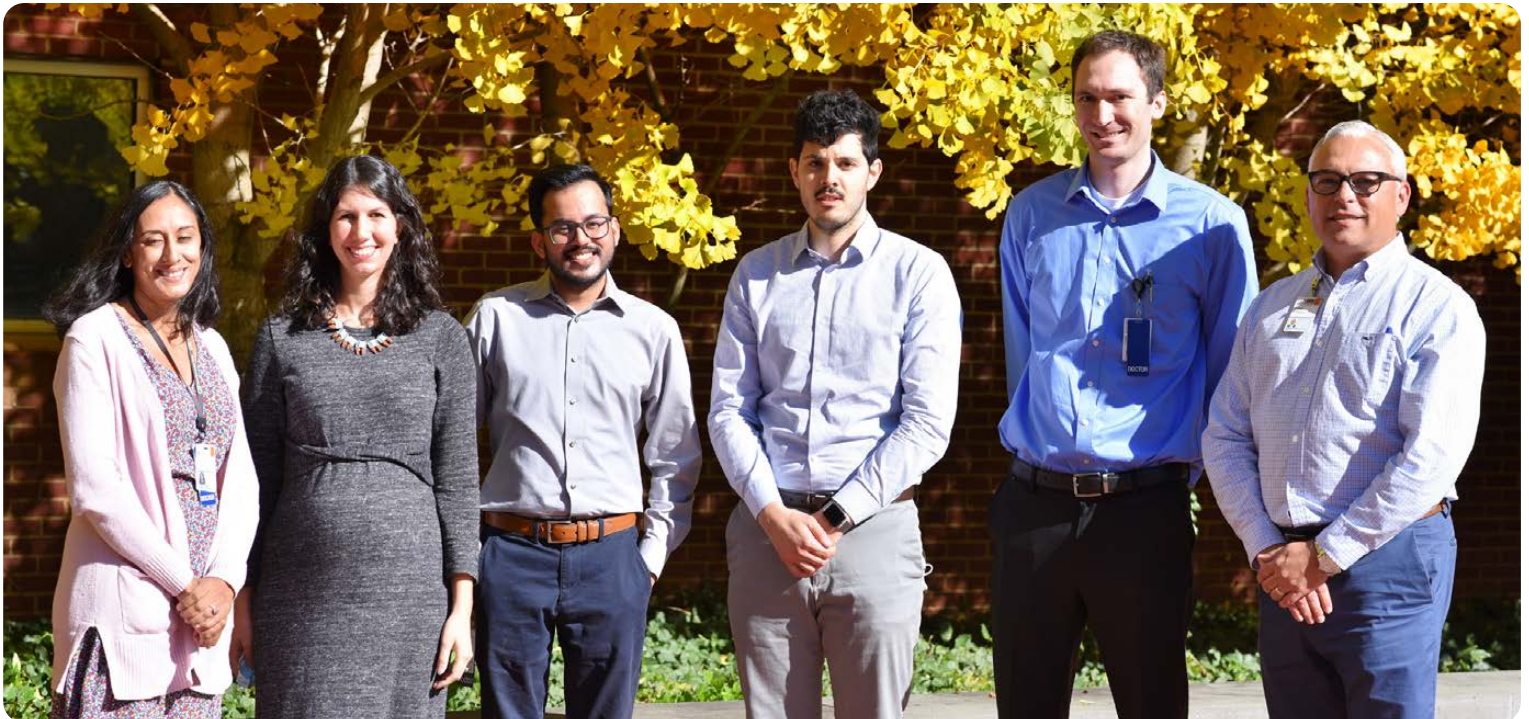
Ryan Eid, MD and Jaimin Patel, MD

The Division of Asthma, Allergy, and Immunology's long-standing fellowship program, led by Monica Lawrence, MD (Program Director) and Anna R. Smith, MD (Associate Program Director), continues to celebrate the many achievements of our fellows-in-training. In July of 2021, we welcomed two new fellows into the program: Dr. Kelly Boyd (University of Texas Southwestern, Pediatrics) and Dr. Thomas Makin (University of Virginia, Internal Medicine). We congratulate our 2022 graduating fellows, Dr. Ryan Eid, who will be entering an academically-affiliated private practice in Boston, Massachusetts, and Dr. Jaimin Patel, who will be entering private practice in Richmond, Virginia.

We also completed a very successful virtual recruitment season and are excited to welcome two new incoming fellows in July 2022: Dr. Charlene Dunaway Altamirano (Cleveland Clinic, Internal Medicine) and Dr. Marc Breidenbaugh (University of Virginia, Pediatrics).

Our fellows have stayed very busy despite the challenges of the COVID pandemic and have continued to actively participate in research projects on alpha-gal allergy (Dr. Patel; mentors Dr. Wilson and Dr. Platts-Mills); eosinophilic esophagitis (Dr. Eid, mentor Dr. McGowan); selective IgE deficiency (Dr. Makin; mentors Dr. Borish, Dr. Lawrence and Dr. Wilson); and preschool asthma (Dr. Boyd; mentors Dr. Borish and Dr. Teague). They have presented their work at the American Academy of Asthma Allergy & Immunology (AAAAI) and American College of Asthma Allergy & Immunology (ACAAI) national meetings, as well as the recent 60th Annual Swineford Allergy Conference held on Grounds in April 2022. Dr. Eid was recognized for his outstanding meeting abstract with the Clemens von Pirquet award second place at this year's ACAAI meeting.

This past year, Dr. Monica Lawrence was elected to serve as the Vice-Chair of the AAAAI/ACAAI Program Director's Assembly in recognition of her leadership, dedication, and passion for medical education.



Monica Lawrence, MD, Kelly Boyd, MD, PhD, Jaimin Patel, MD, Ryan Eid, MD, Tom Makin, MD, Monte Parsons

DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

SELECT PUBLICATIONS

Eschenbacher W, Eid RC, Borish L. “Recent discoveries regarding the pathogenesis of chronic rhinosinusitis and their implications for future therapies.” *Ann Allergy Asthma Immunol.* 2021 Feb;126(2):107-108. doi: 10.1016/j.anai.2020.11.006. PMID: 33509376.

Eid, RC, Borish L. “Eosinophils in anti-viral immunity and (perhaps) a benefit of having asthma during a SARS-CoV2 pandemic. *Annals of Allergy, Asthma & Immunology.*” 2021 Jul;127(1):3-4. doi: 10.1016/j.anai.2021.03.017. PMID: 34154787; PMCID: PMC8213382.

Eid R, Yan CH, Stevens W, Doherty TA, Borish L. “Innate immune cell dysregulation drives inflammation and disease in aspirin-exacerbated respiratory disease.” *J Allergy Clin Immunol.* 2021 Aug;148(2):309-318. doi: 10.1016/j.jaci.2021.06.016. PMID: 34364539; PMCID: PMC8363117.

Tracy M, Vieira C, Garshick E, Wang V, Alahmad B, Eid R, Schwartz J, Schiff J, Vokonas P, Koutrakis P. “Associations between solar and geomagnetic activity and peripheral white blood cells in the Normative Aging Study. *Environmental Research.*” Volume 204, Part B, 2022, 112066, ISSN 0013-9351.

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DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

SELECT PRESENTATIONS

ORAL ABSTRACTS

Eid RC. “*Determinants of Esophageal Eosinophilia in Children with Inflammatory Bowel Disease*” American College of Asthma, Allergy and Immunology. National Conference. New Orleans, LA: November 7th, 2021.

Muehling L, Heymann P, Carper H, Murphy D, Kennedy J, Early S, Soto-Quiros M, Avila L, Workman L, Platts-Mills T, Woodfolk J. “*Unsupervised cluster analysis of nasal cytokines during RV infection identifies distinct immunophenotypes in both children and adults with allergic asthma.*” American Academy of Allergy, Asthma, & Immunology (AAAAI) Annual Meeting, Phoenix, AZ, February 27, 2022. Outstanding Pediatric Allergy and Immunology Abstract Award

Muehling L, Turner R, Paul A, Denby Taylor C, Kwok W, Woodfolk J. “*Failure of adaptive immunity to the common cold to protect from re-infection in a human sequential infection model.*” Carey-Marshall-Thorner Research & Scholars Day, University of Virginia, May 6, 2022-- Most Outstanding Oral Presentation Award

Muehling L. “*Investigating Rhinovirus infection profiles in health and asthma: T Cells and beyond.*” 59th Annual Swineford Allergy Conference, University of Virginia, April 9, 2021.

Muehling L, Turner R, Paul A, Denby Taylor C, Kwok W, Woodfolk J. “*Recent common cold does not reliably protect from re-infection and fails to cross-protect fifteen weeks later, despite involvement of cross-reactive T cells.*” AAAAI Virtual Annual Meeting, February 28, 2021.

POSTER PRESENTATIONS

Eid RC, Mounzer C, Mendoza M, Middleton J, Barnes B, McGowan E. “*Increased Prevalence of Eosinophilic Esophagitis (EoE) in Children with Inflammatory Bowel Disease (IBD)*” American Academy of Allergy Asthma and Immunology Meeting. February 26th, 2021, Virtual

Eid RC, Corden, E Minnicozzi SM. “*Successful use of a 10-Step Oral Doxycycline desensitization protocol in a child with early neurologic Lyme disease*” American Academy of Allergy Asthma and Immunology Meeting. February 26th, 2021, Virtual

Hughes E, Eid RC, Minnicozzi S. “*A Case of Hypogammaglobulinemia of Infancy Leading to Retropharyngeal Abscess, Complicated by Necrotizing Fasciitis*” American Academy of Allergy Asthma and Immunology Meeting. February 26th, 2021, Virtual

Eid RC, Mounzer C, Mendoza M, Middleton J, Barnes B, McGowan E. “*Determinants of Esophageal Eosinophilia in Children with Inflammatory Bowel Disease*” 33rd Annual Research Symposium, University of Virginia Child Health Research Center. May 27th. 2021, Virtual

Eid RC, Noonan E, Al-Hazaymeh A, McGowan E. “*Prevalence of Dysphagia in Atopic Patients Without a Known History of Eosinophilic Esophagitis*” American Academy of Allergy Asthma and Immunology Meeting. February 26th, 2022, Pheonix, AZ

Canderan G*, Muehling L*, Murphy D, Ramani C, Kadl A, Sturek J, Wright P, Keshavarz B, Wilson J, Barone S, Irish J, Bonham C, Woodfolk J. “*Enhanced activation of circulating T cells is present in patients who experience persistent respiratory symptoms after severe COVID-19 illness.*” AAAAI Annual Meeting, Phoenix, AZ, February 27, 2022. *Equal contribution.

Keshavarz, B., Wiencek, J., Bazydlo, L., Straesser, M., Workman, L., Platts-Mills, T., & Wilson, J. Quantitative Measurement of IgG to SARS-CoV-2 Proteins Using the Phadia ImmunoCAP 250. AAAAI 2021.

DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

PROFILE - Elaine Etter



Elaine and her husband on the Outer Banks

and mostly how life works. I have been doing experiments and looking through a microscope since middle school. The doctors couldn't explain why my young father's heart deteriorated and failed when I was a teenager. I saw that our ability to heal and understand how our bodies thrive or succumb to disease is a "work in progress." That is why I am a research scientist. I could have become rich designing chips with my classmates in Silicon Valley, but I wanted to study the electrical properties of living cells.

How did you meet your partner?

My graduate degree is from the University of Rochester, where I learned to cross country ski. Still, I moved with my mentor to the University of Maryland, and most of my thesis work was done in Baltimore. That is where I met my husband. He came to ask me about Rochester because he was about to leave to start a post-doc there. I finished my thesis and moved to Worcester to do my post-doc at the University of Massachusetts Medical Center. Eventually, we got married, and later my husband took a position at UVA.

What brought you to Charlottesville?

After our daughter was born, she and I joined Daddy in Charlottesville to be a family. Charlottesville was a great place for her to grow up. She went to great schools, and I got to be a band parent and cheered at all the marching band competitions. She is a Georgetown alumna and is now doing her graduate work in Molecular Biology at the University of Connecticut Health Center. My husband is a retired Professor of Molecular Physiology. And I swim laps every morning at UVA's North Grounds Recreation Center.

What excites me about my work?

Discovery! I get to explore, discover, and solve complex puzzles on the job. We ask essential questions about how our bodies fight disease, and I am eager to find the answers. My cultured cells are beautiful! I am fascinated by the complexity of regulatory mechanisms in our bodies and inside cells. I get satisfaction from understanding how a piece of equipment works or mastering a biochemical technique. Finding an unexpected result can be as exciting as finally seeing what we thought was there. Putting together several little discoveries to get a big picture is the final challenge. Having others share in the "ah ha" moment is the best.

What am I usually doing on the weekend?

I go hiking with my husband on the Blue Ridge, in the National Park, or walking on O-Hill or Ivy Creek. In the winter, pre-pandemic, we skied Saturday nights at Massanutten or Sundays at Wintergreen. Weekends are when I have time to cook something good. If it is raining, I do laundry.



Elaine and her daughter near the Grand Tetons

What is your favorite vacation/activity spot?

Our vacations always involve traveling and being outdoors. I like to go home to California. I love hiking in the Sierras, skiing at Lake Tahoe, sailing on San Francisco Bay with my brother, and playing on the beaches south of Santa Cruz with my brothers and sister and mom and our families. I enjoy being with my siblings.

Who is the person you admire the most, and why?

I admire my husband because he is skilled at finding the information he needs and applying it. He can teach himself how to do anything. And he can analyze information, draw conclusions and make predictions. That can be annoying too.

What about you would surprise us?

I love to cook and eat.

What is the most unusual thing you have ever eaten?

I had tripe in Madrid. Nice sauce, but I am sure there was a hairy cheek in there. I would love to return to Spain. I want to go to Cordoba, and I want to eat lots of appropriately refrigerated flan.

What was your first job?

When I was sixteen, I assembled plastic music cassette cases for Memorex in a tin-roofed shed that once was part of a tomato cannery. I only worked there long enough to pay for my summer flute lessons. This was about two sheds down from where the first Apple computer was built.

Tell us a little bit about yourself.

I have been cumulatively at the University of Virginia for twenty years, continuing my career as a biomedical research scientist. I have a B.S. in Physics and a Ph.D. in Physiology. At UVA, I studied intracellular and molecular mechanisms regulating contractility in the heart and smooth muscle, and multi-drug resistance. I had my AHA funding for a couple of years. During my five-year intermission from UVA I earned my teaching credentials and taught high school and middle school math. I have now enjoyed almost three years in the Asthma and Allergic Diseases Center. I am learning clinical immunology and helping research physicians accomplish laboratory projects in their clinical research. I show fellows how to use lab techniques. They show me all that doctors do and the research questions they need to answer to improve their patients' health.

Why Research?

I like learning how things work



My daughter when we were skiing at Lake Tahoe

DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

FELLOW PROFILE - Kelly Boyd



Tell us a little bit about yourself.

I have been at the University of Virginia for eight months after completing a pediatric residency in Dallas, Texas. I was born and raised in Hickory, North Carolina. I attended college at UNC Chapel Hill (go heels!) and medical school at East Carolina University. After living in the mountains, triangle, and east coast of North Carolina, I wanted to discover a new part of the country which led me to the University of Texas Southwestern in Dallas for residency. After three years in the hot Texas sun, I was ready to move back closer to home and am now a first yellow fellow in Allergy and Immunology at UVA.

Why Healthcare?

I grew up surrounded by medicine, with both of my parents in the medical field. However, I did not realize I wanted to go into medicine until the later part of college. I started as an economics major before switching to chemistry. I had a passion for science and loved interacting with people, making medicine the perfect fit.

What brought you to Charlottesville?

I moved to Charlottesville for Allergy & Immunology fellowship. After living in Dallas and enjoying the big city life, my husband and I wanted to move back to the East coast. We missed the mountains! When I interviewed for a fellowship, I was drawn to the program at UVA, with excellent faculty mentors and numerous research opportunities.

What excites you about your work?

I love getting to know patients and their families and seeing the positive impact we can have on their quality of life. Allergy and Immunology is a rapidly advancing field, and I am excited to be training alongside faculty at the forefront of this field.

What do you consider to be your greatest achievement outside the professional realm?

Becoming a mom to our sweet three-month-old boy.

What are you usually doing on the weekend?

I am always looking for new places to explore around Charlottesville. I love going for a hike followed by an afternoon at a winery.



How did you meet your partner?

We met in college at UNC through mutual friends.

What is the one thing you always have in your fridge?

Ben and Jerry's New York Super Fudge Chunk (technically, in the freezer!)

What is your favorite vacation/activity spot?

It is hard to pick a favorite, but I would have to say Australia. During college, I studied abroad in Australia and cannot wait to go back again.

Who is the person you admire most, and why?

This probably is cliché, but my mom has been my biggest role model. She immigrated to the United States without knowing any English, went to medical school, and started her practice. She has shown me how to balance work and family while still having fun.

What is the best advice anyone ever gave you?

Growing up, my dad would always tell me "make yourself proud."

What about you would surprise us?

I played violin growing up and minored in music in college.



DIVISION OF ASTHMA, ALLERGY & IMMUNOLOGY

FACULTY PROFILE - Anna Smith



Tell us a little bit about yourself.
I've been at the University of Virginia for over ten years. It all began when I was matched at the University of Virginia for internal medicine residency. After three years of residency, then a year as a Hospitalist, I started my fellowship in Allergy & Immunology also at UVA. After completing training, I transitioned to clinical faculty in the Asthma, Allergy, and Immunology Division. I've been fortunate to spend most of my career here at UVA and can't imagine a better place to practice and teach.

Why Healthcare?

As cliché as it sounds, I've always wanted to help people. Since I was a kid, I've been interested in pursuing a career in healthcare. I was and continue to be in awe of the impact of healthcare workers on the lives of other people. And as I got older, I was most

drawn to my science courses. I found healthcare was the perfect fit, melding my interest in biology and wanting to help others.

What brought you to Charlottesville?

While interviewing for an internal medicine residency, UVA stood out. I was impressed by the camaraderie and esprit de corps (as Dr. Donowitz would say). When I found out on Match Day that I was coming to UVA, I was thrilled to know I'd be joining such an outstanding program. Since then, Charlottesville has become my home. It's where we started and grew our family and have made lifelong friends.

What excites you about your work?

There are so many things about work that excite me. The two most significant, I would say, are being able to make a difference in someone's health and working with such a dedicated and astute group of individuals.

Next life?

In my next life, I think I'd like to be an expert baker. For someone with a major sweet tooth, I absolutely cannot bake! So, in my next life, I'd love to be able to prepare some delicious desserts.

What is your favorite vacation/activity spot?

Hiking in Arizona has been one of my top vacations. The rock formations and the views were unlike anything I had seen before. Definitely, a place I'd recommend visiting and a place I hope to come back to one day.

What is a talent or skill you don't have that you wish you did?

I wish I were more musical. I enjoy a lot about music, but its ability to connect me back to significant memories is the thing I appreciate most about it. But sadly, I can't carry a tune or tickle the ivories to save my life! So, I'd wish to have more musical talent if I could.