

# MEDICINE

NEWS FROM THE DEPARTMENT OF MEDICINE

# MATTERS

MAY 2020

 UVA Health | DEPARTMENT OF MEDICINE

## MISSION

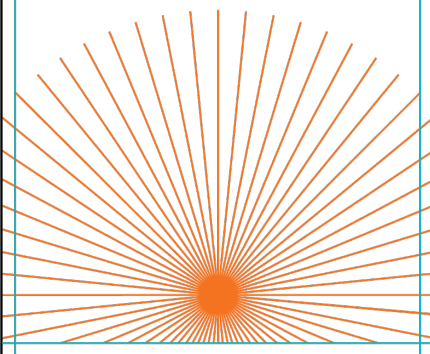
We are dedicated to preventing disease and treating illness, educating and inspiring future leaders in the field of internal medicine, and supporting innovative biomedical research.

## 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.



## QUICK LINKS

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[HIGHLIGHTED DIVISION](#)

[HOOS WELL](#)

[MINDFULNESS MATTERS](#)



WE CAN'T SAY IT ENOUGH  
**THANK YOU**  
ESSENTIAL & FRONTLINE  
**WORKERS**

## MESSAGE FROM THE CHAIR



Welcome to May's edition of *Medicine Matters*. The spring is a wonderful time to live in Charlottesville and the only downside is the peak in seasonal allergies which makes it a perfect time to feature the Division of Allergy and Immunology. The Division is led by Dr Thomas Platts-Mills and has a storied history of seminal discoveries that have transformed clinical care. In this edition, the ongoing research in the Division is reviewed. You will enjoy reading about their many accomplishments.

I hope that you will take time to get outside, go for walk and enjoy nature. At the same time, make sure that you maintain social distancing and use lots of hand sanitizer.

With best wishes,

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

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# DOM FINANCIAL UPDATE

## Department of Medicine Summary of Consolidated Financials FY20 as of March 31, 2020

	Budget YTD	Actual YTD	\$ Variance YTD
Work RVUs	693,664	668,231	(25,433)
Clinical Receipts (NPSR)	46,808,535	44,101,899	(2,706,636)
Total Revenues	136,104,472	136,347,413	242,942
Total Expenditures	139,246,460	137,327,469	1,918,990
<b>Net Income</b>	<b>(3,141,988)</b>	<b>(980,056)</b>	<b>2,161,932</b>

### Summary Explanation of Variance:

For the fiscal year ending March 31, 2020 DOM posted a consolidated net loss of \$980K and a favorable variance to net budget surplus of \$2.2M. The unfavorable variance in Net Patient Service Revenue is largely driven by the effects of the COVID-19 pandemic on clinical productivity and medicaid conversion rate. Non-Grants consolidated revenues outperformed budget while non-personnel expenditures remained steady.



Congratulations to Joe Leeds and his wife Yulin, on the arrival of baby Emma! Emma was born April 22rd, and weighed in at a healthy 7lb 3oz.



Congratulations to Margaret Kuhlman and her husband Greg on the birth of baby Evelyn Marie, arriving on April 2nd, weighing 7 lbs 15 oz.



Did you know that DOM has a Twitter account? Follow us here.

# DOM EDUCATION UPDATE

## TEAM ENGAGEMENT DURING COVID-19

By Joy Hilton, Department of Medicine Director of Education



### Team Members:

Joy Hilton – Director of Education  
Terry Bennett DOM Compliance Manager  
Karen Ward – UME Program Administrator  
Margaret Kuhlman – GME Program Administrator  
Erin Arnold – Residency Coordinator  
Tony Brinkman – Residency and Fellowship Coordinator  
Cheryl Etelvari – Cardiology Fellowship Program Administrator  
Lisa Mackey – Heme/Onc Fellowship Coordinator  
Leslie Stewart – GI/Transplant Hepatology Fellowship Coordinator  
Monica Olsen – Nephrology Fellowship Coordinator  
Kara Watts – Pulmonary Fellowship Coordinator  
Javanov Barksdale – Endo/Rheum Fellowship Coordinator  
Monte Parsons – Allergy Fellowship Coordinator  
Ginny Atwell – ID Fellowship Coordinator

together creative approaches for meeting work challenges, sharing successes and best practices, and trying to figure out how we will best support our faculty and trainees in the months ahead when we are typically ramping up for year-end/year-start events as well as program recruitment in a social distancing era. Folks continue to demonstrate a collaborative spirit as we send and receive rapid-fire emails containing suggestions, process maps, how-to's, and more, which prove invaluable as we maneuver our way through this uncharted territory.

To help keep track of what everyone is working on, we utilize both Monday.com and Google Sheets to provide weekly updates on project status. We recently held our “monthly” team meeting where we spent considerable time reviewing this month’s assigned ASPIRE value...excellence. This year’s team engagement project is to buddy up with a colleague and each month we take a deep dive to discuss the relevance of each assigned UVA ASPIRE value as it relates to our roles as education administrators. Podcasts and/or Ted talks related to each value are assigned in advance of the monthly meeting as are questions for stimulating discussion and insight. The co-presenters for each respective value share slides and handouts designed to inspire us to be exceptional in our performance for each named competency. Finally, we make a practice of regularly sharing “pearls” from professional development opportunities – workshops, webinars, conferences, etc. This sharing of information provides both valuable tips and keeps us engaged in conversations around work/life integration.

Selfishly, I enjoy seeing everyone’s face a few times a week (along with doggies, kitties, kids, and significant others). In the end, we’ll get through this together and I have no doubt that this extraordinary team will manage just fine as we move through this crisis and come out on the other side...stronger and more creative than ever!

Team engagement has always been a priority for the Department’s central education team. Each year, we have participated in projects designed to stay connected and motivated as we go about our UME and GME administrative tasks.

Now, more than ever, we look for ways to support and inspire one another as we all struggle to cope with the challenges posed by the COVID-19 pandemic.

This amazing group of administrators quickly mobilized to meet the demands for working remotely and, like so many others, became instant gurus of Zoom/Web-X conferencing and quickly pivoted to recreate our roles in our respective educational programs.

As a team, we meet at least three times a week via zoom (M-W-F). Sometimes it’s just a quick check in to gauge how everyone is doing. We may share stories about our families, home and yard projects, celebrate birthdays, newborns, share some laughs, and even burst into song from time to time. And, of course, Zoom dress up is not out of the question.

We have used this time to also brainstorm

# DOM UPDATES & NOTES



Mo Nadkarni, MD



Taison Bell, MD



Ebony Hilton-Buchholz, MD



Bryant Cameron Webb, MD



Leigh-Ann Webb, MD



Austin Robinson, MD



Laurie Archbald-Pannonem, MD



Amy Mathers, MD



Sho Morioka, PhD

Congratulations to **Dr Mo Nadkarni** who has received the Provost's office award for Public Service. This is an incredible honor, and completely in line with what we know about Mo and his lifetime of public service. You do us all proud!

Congratulations to **Drs Taison Bell, Ebony Hilton-Buchholz, Bryant Cameron Webb and Leigh-Ann Webb** for [their work which helped raise the alarm about the disproportionate impact of the COVID-19 virus in minority communities](#), particularly African American communities, pushing state and federal officials to release demographic data about its spread.

Congratulations to UVA fellow **Dr Austin Robinson** and co-authors for their publication in JAMA Cardiology on differences in anticoagulation approaches for LV thrombi, ["Off-label Use of Direct Oral Anticoagulants Compared With Warfarin for Left Ventricular Thrombi"](#)

Congratulations to **Dr Laurie Archbald-Pannonem** who was featured in a recent article on the CNN website.

Congratulations to **Dr Amy Mathers** whose efforts have been absolutely critical in allowing us to address and understand this pandemic and written about [here at Reuters](#).

Congratulations to **Sho Morioka, PhD**, Assistant Professor in the Division of Nephrology who is the recipient of a 5 year NIH K Award on ["Removal of apoptotic cells during acute kidney injury"](#).



## ***Welcome!***

Please welcome Kara Watts (pictured here with her family) who is the newest member of the DOM Central Education Team as Pulmonary/Critical Care Fellowship Coordinator. Kara has Kansas farm girl roots, but Charlottesville has been her true home for about 10 years. She moved here for the UVA dietetic internship program after getting a BS in Dietetics and Public Health Nutrition from Kansas State University. Since then, she has mostly worked for the public health nutrition program, WIC, and has also been an outpatient dietitian for UVA's pediatric diabetes and developmental pediatric clinics. She is so excited to be working at University of Virginia again! When she's not at work you'll find her in the woods with her husband, Patrick, her 3 year old, Olivia, and her very stinky, yet adorable dog, Willard.

## Division Chief Message - Dr Thomas AE Platts-Mills



**Thomas AE Platts-Mills, MD**

Our subspecialty has at least three branches which influence our clinics and our research. The primary branch of our practice focuses on traditional allergic diseases, and particularly allergic rhinitis, asthma, and drug allergy. The Division has had a major role in asthma research dating back to 1983, the year our first R01 grant was funded. Over the last ten years, our asthma research has focused on a model using the rhinovirus challenge in allergic patients. This was developed by Dr Peter Heymann, who has recently retired after playing a central role in our division for over 35 years. This year, he published an important paper on the role of the model to investigate the effects of an anti-IgE therapy on symptoms and immune parameters associated with rhinovirus infection. The model also provided information about the immune response to the virus which extended out to 21 days. In addition, Lindsey Muehling and Dr Judith Woodfolk have just published a detailed study on T-cell responses to the virus. Both papers are in the *Journal of Allergy and Clinical Immunology (JACI)* current Impact factor 14.4. An important part of the funding of the division's research comes from two U01 grants to investigate the responses to rhinovirus: PI's Dr Woodfolk and Dr Larry Borish.

The second major area of focus centers on the expansion of the divisional, clinical, and academic practice related to the investigation of Immune Deficiency Cases. This includes both adult and pediatric clinics, and Dr Monica Lawrence plays an important role in both. In the adult clinics, Dr Borish is a vital team member, while both Jonathan Hemler, MD, and Samantha Minnicozzi, MD are involved in pediatric immune deficiency. Our immunodeficiency program achieved a major milestone last year with recognition by the Jeffrey Modell Foundation. With a rapid increase in our understanding of the genetic basis of primary immunodeficiencies, we also have advocates for dividing the cases between immune-deficiency and other forms of allergy. The important thing is that the subspecialty is developing both in research and clinically and it appears likely to continue changing and expanding.

The third major branch of the subspecialty today relates to food allergy. The well-established immediate reactions which are dominant in children, being food allergens such as peanut, egg, tree nut and milk, all of which have increased dramatically over the last 20 years. More significant to the Division's research are two forms of food allergy that are not manifest immediately following exposure and have both appeared since 1990. These two forms are eosinophilic esophagitis (EoE) and delayed anaphylaxis to red meat, also known as the alpha-gal syndrome (AGS). Dr Emily McGowan has established successfully combined clinics in EoE with Dr Bryan Sauer in adult gastroenterology and Dr Barrett Barnes in pediatric gastroenterology. Together, they have enrolled over 250 subjects with EoE, and that research is currently funded by two R-21 grants. There are multiple aspects to this research, which focuses on understanding the etiology and management of the disease. An important part of the research relates to understanding the relevance of IgG4 antibody response to milk and wheat proteins. In this respect, Dr Rung Chi Li has been investigating the nature of the IgG4 deposits that are found in the esophageal biopsies.

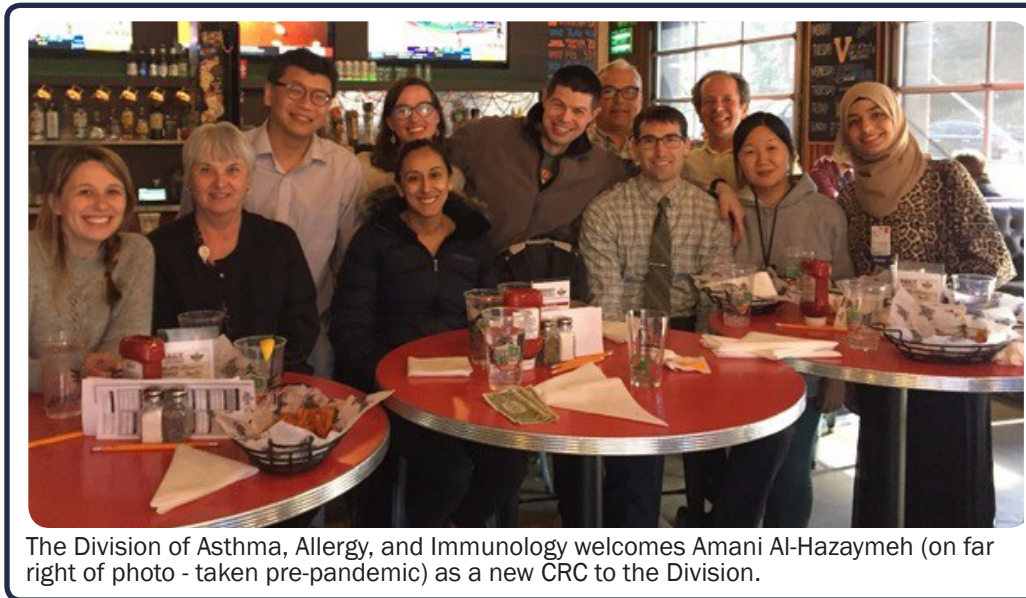
The cases of alpha-gal syndrome (AGS) have continued to appear in our clinics. However, there have been some new forms of clinical presentation (See T. Platts-Mills et al *JACI in Practice* 2020). A major aim of the current funding of the R-37 was to understand the geographic distribution of cases of AGS. We have recently completed a national survey of the syndrome, which provides additional evidence that alpha-gal cases overlap with the territory of the lone star tick. A large number of cases have been reported in the Southeast, but cases have also presented in areas of the Midwest and Coastal Atlantic. The primary factor is clearly the relationship to the lone star tick and its primary breeding host, the deer on our lawns. Additionally, we have demonstrated a strong negative correlation between both the geographic distribution of the imported fire ant and cases of fire ant anaphylaxis and the number of cases of AGS seen by regional allergists. The work has relied heavily on the geospatial mapping skills of Behnam Keshavarz, PhD, and Dr Jeffrey Wilson has also played a major role. Our manuscript on this distribution has recently been

# ASTHMA, ALLERGY & IMMUNOLOGY - CLINICAL HIGHLIGHT

*Chief's Message continued...*

reviewed, and we are currently revising it for JACI. The important element of the results is two-fold: 1) it is possible to predict that the area where the syndrome is common will continue to move north with climate change, and 2) that cases in the south will probably be decreased by ecological competition between the tick and the imported fire ant. We also have several ongoing collaborations to further understand the putative connection between alpha-gal and cardiovascular disease. This includes projects with our UVA colleagues Dr Coleen McNamara and Dr Angela Taylor in the cardiology group and Dr Robert Hawkins in cardiothoracic surgery. In addition, we have become increasingly aware of the significance of abdominal symptoms in patients with AGS. In some cases this includes severe G.I. pain as a feature of anaphylaxis, in other cases, the symptoms are easily confused with irritable bowel syndrome (IBS). In this respect, we have recently started a collaboration with local G.I. providers to carry out an investigation of alpha-gal syndrome presenting as IBS.

Shifting away from our research endeavors, our clinical practice has flourished during this past academic year, at least up to March! The clinical practice is led by Dr Timothy Kyin and Dr Anna Smith. Our entire Division is now learning how to run clinics by phone or E-mail. Fortunately, there are many aspects of outpatient medicine that can be handled by telephone or Telemedicine. We are all especially grateful to the dedicated nurses and staff who run the clinic. Their willingness and ability handle so many of the questions raised by our patients, and the countless hurdles to cross, as we work through this unprecedented situation together, stand as a testament to our Division's strength. And, I want to personally acknowledge all the dedicated and professional members of our Division not previously mentioned: our lab support staff, (without whom we would not be able to undertake our valuable research), our administrative and fiscal support team, our grants and clinical trial support team, our dedicated team of Fellows, and all of my fellow clinical and research faculty in the Division. ~ Thomas AE Platts-Mills, MD



The Division of Asthma, Allergy, and Immunology welcomes Amani Al-Hazaymeh (on far right of photo - taken pre-pandemic) as a new CRC to the Division.

## **SWINEFORD CONFERENCE UPDATE**

I wanted to provide an update on our annually-occurring Swineford Conference. April 17th marked the day that would have been the 59th convening of one of the regions longest running educational conferences. Unfortunately, its cancellation is all too familiar to so many of us who had local, national, or international meetings and conferences canceled this Spring as a result of the COVID-19 pandemic.

We are in the process of arranging to hold virtual conferences in lieu of hosting an in-person meeting this year, aiming to discuss many of the topics originally slated for this year's meeting. But, admittedly, I will regret the opportunity missed to spend time with the guest faculty and the many regional providers who always attend our event.

I am excited to announce that we are also making initial preparations for our 60th Swineford Conference next April. I have spoken with several of this year's guest faculty, and many look forward to participating next year. We will be developing a program that will surely be educational and thought-inspiring, and create a collegial environment befitting the event considered prestigious by many in our specialty. As the details are arranged, I will share them with you.

You can contact our CME Program Manager, [Pamela Lace](#), with any questions. ~ Thomas AE Platts-Mills, MD

# ASTHMA, ALLERGY & IMMUNOLOGY - CLINICAL HIGHLIGHT

## ***Food allergy***

We are establishing an extensive network for the diagnosis and management of food allergies including protocols for advanced diagnostic testing and challenges. Patients are also invited as appropriate to participate in many of the novel therapeutic desensitization clinical research protocols currently being developed.

## ***Drug Allergy***

We have established a Drug Allergy Clinic as part of antimicrobial stewardship. In this clinic, we evaluate not only beta-lactam (penicillin) allergy, but also evaluate for other drug allergies as well as contrast allergy. Approximately 10% of people report an allergy to penicillin, but on further investigation, up to 90% of those people are able to tolerate penicillin. The time elapsed since the clinical reaction is useful information because penicillin allergy can wane over time. Patients with recent reactions are more likely to be allergic than patients with distant reactions.

Approximately 50% of patients with penicillin allergy lose their sensitivity 5 years after reacting, and this percentage increases to about 80% in 10 years. Listed penicillin allergy results in increased use of broad-spectrum antibiotics, increased healthcare-associated infections, increased length of hospital stay, increased risk of readmission, as well as the increased monetary cost to the patient from the alternative agents chosen instead of penicillin. We test for these drug allergies and if appropriate will try to de-label the patient of the allergy.

## ***Severe Asthma***

Through our close collaboration with Drs Jonathan Hemler and Samantha Minnicozzi (Department of Pediatrics), we are establishing an extensive network for the diagnosis and management of food allergies including protocols for advanced diagnostic testing and challenges. We are additionally preparing for the roll-out of the first FDA-approved treatment of peanut allergy, Palforzia, which will be available for clinical use in the near future.

## ***Dermatologic Manifestations of Allergic Disease and Immunodeficiency***

The combined allergy, immunology and dermatology clinic provides care for adult and pediatric patients with a variety of skin conditions, including severe atopic dermatitis, chronic urticaria, and skin conditions associated with immunodeficiencies (Dr Monica Lawrence and Dr Barrett Zlotoff – Dermatology)

## ***Eosinophilic Esophagitis (EoE)***

In order to provide integrated care to patients with EoE, we have established a multidisciplinary EoE clinic, which combines the expertise of allergy (Emily McGowan, MD), gastroenterology (Bryan Sauer, MD [adult] and Barrett Barnes, MD [pediatric]), and nutrition (Tegan Medico and Alexa West). Patients with EoE receive comprehensive care in the diagnosis, treatment, and management of this condition, which includes the opportunities to pursue either medical or dietary therapy and participate in ongoing clinical trials.

## ***Chronic Sinusitis***

Our sinusitis clinics involve combined appointments with members of the allergy division (Drs Larry Borish and Anna Smith) who work in close collaborations with two colleagues in the Department of Otolaryngology (Drs. Spencer Payne and José Mattos). Patients are thereby offered a comprehensive evaluation of anatomical, allergic, and immunologic mechanisms driving their disease, thorough assessments with nasal endoscopy, and radiographic analysis followed by team developed medical and surgical individualized protocols. As with all of our other specialty clinics we have a strong research interest including studies regarding pathogenic mechanisms of eosinophilic chronic sinusitis, mechanisms of aspirin-exacerbated respiratory disease, and evaluation of causes of anosmia in these diseases. In addition, as appropriate, patients are offered opportunities to participate in clinical trials of the numerous biologic therapies being developed for these disorders.

## ***Primary Immunodeficiencies***

Honored in April 2019 with the designation as a Jeffrey Modell Diagnostic and Research Center for Primary Immunodeficiencies, our Primary Immunodeficiency Clinic provides cutting edge care for patients with complex primary immunodeficiency and immunodysregulatory disorders, as well as conducts research in the pursuit of answers for primary immunodeficiency patients. Our center has several unique features that contribute to the quality of patient care, including dedicated adult and pediatric clinics with the ability to seamlessly transition patients from the pediatric to the adult clinic, giving patients continuity of care over their lifetime; an established network of specialists with expertise in particular disorders associated with primary immunodeficiency; and a care team including doctors, fellows, and a dedicated and experienced nurse care coordinator, Darla Low, RN.

## Platts-Mills Lab



Thomas AE Platts-Mills, MD

Platts-Mills LabCore team members in Dr Thomas A.E. Platts-Mills' lab include Jeffrey Wilson, MD, PhD, Behnam Keshavarz, PhD and Lisa Workman, BA. Working as a team, a major area of research in the Platts-Mills lab relates to the tick-acquired mammalian meat allergy, often referred to as the 'α-Gal syndrome'. Since the initial description of the syndrome a little over 10 years ago, the lab has continued to play an important role in increasing our understanding of the pathophysiology and manifestations of the syndrome. Current interests relate to emerging evidence that IgE sensitization to the relevant carbohydrate allergen – galactose-α-1,3-galactose (α-Gal) – could have implications for disorders that are not traditionally considered to be 'allergic diseases'. To pursue the hypothesis that α-Gal could be relevant to heart disease we are collaborating with Coleen McNamara, MD and Angela Taylor, MD, MPH in cardiology, Robert Hawkins, MD in Cardiothoracic surgery and also Ani Manichaikul, PhD in the School of Public Health Sciences. A major new interest relates to the possibility that α-Gal could be an important cause of IBS-like symptoms among subjects who live in areas where the lone star tick is endemic. To better understand risk factors for α-Gal sensitization we are collaborating with Cade Nylund, PhD at the Uniformed Services University of the Health Sciences in DoD-funded research to assess sensitization incidence among military recruits. We are also working closely with Phil Cooper, PhD to study α-Gal sensitization in a cohort of children in rural Ecuador who live in an area that is largely still pre-industrial. The group also has ongoing interests in the nature of antibody responses to common food and aero-allergens, such as cow's milk and dust mite, with a specific focus on how these responses differ among different populations. Striking differences that are seen between children living in pre- and post-industrial societies likely have implications for thinking about the factors that have contributed to the rise of allergic diseases. The group has several recent publications and is currently funded by an NIH R-37 and R-21 grant. In addition, Dr Wilson was recently awarded an AAAAI Faculty Development Award for work related to the α-Gal syndrome.

## Borish Lab



Larry Borish, MD

Dr Larry Borish's laboratory's primary focus remains the role of rhinovirus in precipitating asthma exacerbations. These NIH funded studies include an R01 designed to define the role of an innate immune responses, including anti-viral and T2-promoting immune responses, by infected airway epithelial cells as they might distinguish the consequences of RV infections in asthmatics and healthy control subjects. These studies are further supported by an R21 that will investigate evidences for nascent type 2 inflammation in the lungs of pre-school children with problematic wheeze undergoing clinically-indicated bronchoscopies in whom rhinovirus (RV) infection is identified. In addition, for the next 2½ yrs, 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 continues to collaborate closely with Dr Gerry Teague in pediatrics as co-PI for the UVA commitment to the NHLBI funded PreCISE Asthma Network Clinical Centers. These are studies that will enroll severe treatment-resistant asthmatics and investigate novel therapeutics in this refractory population. Finally, we also have several investigator-initiated pharmaceutical studies. Currently, we are enrolling patients in a GSK sponsored study to investigate type 2 inflammation in COPD and more specifically the expression of IL-5 receptor on airway neutrophils. And, lastly, we are supported by a Genentech funded investigator-initiated award involving the presence of type 2 inflammation in cystic fibrosis and the safety and efficacy of omalizumab in that population.



## Woolfolk Lab



Judith Woolfolk, MD, PhD

The overarching objective of current work is to understand immune mechanisms that drive chronic inflammatory processes in the lungs of patients with asthma and to identify mitigating strategies. Rhinovirus (RV) is a major trigger of asthma exacerbations. Ongoing work applies systems biology methods to analyze the immune response to RV in health and disease in human experimental infection models. Our findings support the view that pathogenic Th1 cells targeting RV, are pivotal to promoting and maintaining allergic asthma, even in the absence of infection (Muehling et al., 2016, 2018, and 2020; Wisniewski, Muehling et al, 2018). This shifts the spotlight away from Th2 cells and raises new questions regarding the persistence of viral antigens, and the systemic nature of RV infection. We are forging collaborations with scientists in the Division of Pulmonary and Critical Care Medicine to explore whether RV-specific T cells can contribute to lung pathology in a variety of other disease states. In other work, we have identified a key role for T-bet<sup>+</sup> B cells that can bind different RV strains, in the secretion of cross-reactive IgG at the site of RV infection (Eccles et al, 2020). We are currently using a novel model that involves challenging healthy subjects with 2 distinct RV strains, in order to better understand how components of the adaptive response link to cross-protective immunity. Through an inter-disciplinary network of collaborators, we are developing single-cell and integrative analytical pipelines that can build a comprehensive picture of the immune response to RV. The ultimate goals are to inform the rational design of vaccines for RV infection in at-risk populations and to provide tools for immune monitoring in broader disease settings. Work in the Woodfolk lab is supported by U01, R01, and R21 grants from NIH/NIAID.

## McGowan Lab



Emily McGowan, MD

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 UVA EoE Cohort with her collaborators Drs Bryan Sauer (Adult Gastroenterology) and Barrett Barnes (Pediatric Gastroenterology). This cohort longitudinally follows approximately 300 patients, and it was designed to examine the environmental, nutritional, and immunologic drivers of this disease. In addition, Dr. McGowan recently received a NIH/NIAID R21 Award to examine non-IgE mediated activation of mast cells via food-derived peptides and the role of this pathway in EoE. In a recently funded American College of Gastroenterology award, she and her fellow PI, Dr Bryan Sauer, are working to better understand the role of dietary triggers in the pathogenesis of EoE. Her group is also collaborating with Dr. Irving Allen (Virginia Tech School of Veterinary Medicine), through a recently funded iTHRIV pilot grant (NIH/NCATS) to investigate the role of the non-canonical NF-kB pathway in the pathogenesis of this disease. Finally, UVA is now a site for the international, multi-center Phase III trial of Dupilumab in treating Eosinophilic Esophagitis (R668-EE-1774).

## Lawrence Lab



Monica Lawrence, MD

Dr Monica Lawrence is working with Dr W. Gerald Teague in Pediatrics, Dr Caitlin Welch (Pulmonary/Critical Care fellow) and Dr. Larry Borish to continue studies on the expression of the IL-5 receptor on lung neutrophils of children with severe treatment-refractory asthma, with the support of the Allergic Respiratory Diseases Award from the American Lung Association and the American Academy of Asthma, Allergy, and Immunology. Along with Dr Borish and Allergy/Immunology fellow Dr Matthew Straesser, she is also researching the role of a low IgE as a sentinel biomarker for evolving humoral immunodeficiency (research sponsored by the Jeffrey Modell Foundation and CSL Behring).

# ASTHMA, ALLERGY & IMMUNOLOGY - RESEARCH HIGHLIGHT

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# ASTHMA, ALLERGY & IMMUNOLOGY SPOTLIGHT PROFILE

## FACULTY PROFILE - Emily McGowan



### *Tell us a little bit about yourself.*

I was born in Washington, D.C. and grew up in Fairfax, Virginia. I then attended Duke University as an undergraduate, where I majored in French and Comparative Area Studies (similar to International Relations). I took a year off after college and worked at the NIH (mostly because I didn't get my dream job of driving the Oscar Mayer wiener mobile cross-country), and then came to UVA for medical school. After pursuing internship/residency in Internal Medicine at Beth Israel Deaconess Medical Center, fellowship in Allergy/Immunology at Johns Hopkins, and a PhD in Clinical Investigation at the Johns Hopkins Bloomberg School of Public Health, I came back to UVA as faculty in 2016. I live in Crozet with my husband, three daughters (ages 4, 3, and 3), and our dog, Mayor McCheese.

### *Why healthcare?*

When I was little, I had severe asthma, and I had a lot of interactions with the health care system. When I was in 4th grade, my parents took me to an allergist in Northern Virginia, who had a substantial influence on my

life. Under her care, my asthma became manageable, and I vowed at that time that I wanted to pursue a similar career and help other people with allergy-driven diseases. All these years later, I'm still happy with my decision!

### *What brought you to Charlottesville?*

My husband and I met at UVA when we were medical students. We were married here in 2008 and always hoped that we would come back to Charlottesville one day to raise our family. After spending a few years in Boston, and then Baltimore, two job opportunities opened up for us in 2016, and we jumped on them!

### *What excites you about your work?*

Most of my job at this point involves researching a rapidly emerging form of food allergy called eosinophilic esophagitis (EoE). This is an incredibly exciting field, as there is so much that we don't know yet about this disease, and every day we are learning more. I love identifying the gaps in our knowledge and then thinking about how we can answer those questions with the resources we have here at UVA. I also love working with my colleagues in gastroenterology (Drs. Barrett Barnes and Bryan Sauer) and nutrition (Tegan Medico and Alexa West), who all approach the same disease from different viewpoints and work together to provide outstanding care for these patients.

### *Proudest/greatest achievement outside the professional realm?*

No question—my family. I married an amazing man who is able to balance his own career with caring for our children, while also making us laugh about the mayhem that is our crazy life. And, while our girls are still really small, it's amazing watching them become little people with distinct personalities and interests. There's nothing better in this world.

### *Next life?*

Maybe I'll finally get that job driving the Oscar Mayer wiener mobile.

### *What are you usually doing on the weekend?*

You can usually find us taking the kids on a hike, visiting a winery/brewery, and doing all the outdoor things that make Charlottesville so great. My parents and in-laws both live in town as well, so we spend a lot of time with family.

### *How did you meet your partner?*

I first met my husband after he did a stand-up comedy set in medical school, and I thought he was hilarious. A year later, we had our first date, and we bonded over our love of former Olympic athletes, John Stewart, and Victory Golden Monkey.

### *What's one thing you always have in your fridge?*

Frank's Red Hot.

### *Favorite vacation/activity spot?*

Sea Island, Georgia.

### *What about you would surprise us?*

I had a (albeit short-term) gig as a radio DJ in college. I was also a waitress at Chili's for 3 years.

### *Favorite fictional characters?*

Midge Maisel.

### *What is the last book you read for pleasure?*

"Where the Crawdads Sing" (Delia Owens). I highly recommend it.

### *Do you collect anything?*

Vinyl records.

### *What was your first job, how old were you?*

Swim team coach (16).



# ASTHMA, ALLERGY & IMMUNOLOGY SPOTLIGHT PROFILE

## FELLOW PROFILE - Alice Knoedler



*Tell us a little bit about yourself.*

I have been at UVA for 9 months now after completing my Internal Medicine Residency at Georgetown University. I am originally from Minnesota. I moved to Charlottesville with my two kids (7 months and 2 years old at the time) in June 2019. My husband left for a 9-month deployment in Afghanistan just one month before fellowship started. He just returned home this month and we are thrilled!

*Why Medicine?*

I have wanted to be a doctor since I was a little kid. One of my initial interests was in public health. I started off working at a methadone clinic in Baltimore, Maryland during college. This led to a later position working at a crisis center for homeless youth in Newark, NJ after graduation. I loved the one-on-one interactions so much with the patients that I decided to apply to medical school after I completed my work. During my residency, I thought about several specialty options for the continuation of my medical

education. I ultimately decided on Allergy and Immunology.

*What brought you to Charlottesville?*

Allergy and Immunology Fellowship. My love for UVA actually started in medical school when I did an away rotation in the Allergy and Immunology department for a month! My husband is a Navy physician and is stationed in Virginia. Charlottesville is a nice midway point for us. Also, the quality of life, not to mention the traffic, is much better than D.C.!

*What excites you about your work?*

I love seeing both kids and adults. It is especially exciting to see pediatric patients after a residency in adult medicine. Allergy and Immunology are both fascinating fields with innovative and promising new therapies.

*Proudest/greatest achievement outside the professional realm?*

Having two kids during a three year residency with a deployed spouse. Let's not do that again!

*Next life?*

In another life, I'd be a YouTube mom star doing organization videos. I love to organize! I am not above telling others how they could be better organized.

*What are you usually doing on the weekend?*

Weekends are spent hanging out with my co-fellows and our many children. Weekends are also spent buying things at Costco I "need" for the house. Costco is where I go to relax.

*How did you meet your partner?*

We met on the alpine ski racing team in middle school. We actually went to prom together, but did not start dating until just before we went to medical school.

*What's one thing you always have in your fridge?*

Half and half. I drink a lot of coffee.

*Favorite vacation/activity spot?*

Big Sky, MT. My husband and I love to downhill ski.

*Best advice anyone ever gave you?*

"Be who you are and be that well." St. Francis de Sales

I went to an all-girls Catholic school for many years in Minnesota, and this was a favorite quote among the girls and the nuns.

*What about you would surprise us?*

I am terrified of blood. Residency was tough.

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

I always wanted to be an Olympic gymnast. It is too late.

*Favorite fictional characters?/If you could go back in time, what year would you travel to?*

The 1920s. I would love to live a day in the life of Lady Mary Crawley from Downton Abbey.

*What is the last book you read for pleasure?*

Becoming, by Michelle Obama. It was the Audible version. I have not physically read a non-medical book in years.

*What's the most unusual thing you have ever eaten?*

I do not eat unusual things.

*Do you collect anything?*

Yes, lots of supplies and snacks from Costco.

*What was your first job, how old were you?*

A very engaged babysitter at age 11.

*Most admired person, and why?*

Mr. Rogers because he makes everyone feel better.



# ASTHMA, ALLERGY & IMMUNOLOGY SPOTLIGHT PROFILE

## RN STAFF PROFILE - Darla Low



### *Tell us a little bit about yourself.*

I have worked at UVAHS for 35 years. I started off working in adult, then pediatric rehab. I took 3 years off while raising children. I came back and worked in Infection Prevention and Control for 24 years. In 2014, I started working at the Asthma, Allergy, and Immunology Clinic. I am currently a Care Coordinator. I live in Earlysville with my husband and two dogs. We have 4 children and 3 grandchildren.

### *Why Healthcare?*

I don't believe there was ever a question about my career path. That path began during one of the numerous trips my mom, my younger brother Shane and I made to the local ED. I was always tasked with stemming the bleeding from his recent slash, puncture or laceration and trying to calm him when he would ask, "Am I going to get a shot?" Nursing has always been a passion for me and a desire to help patients.

### *What brought you to Charlottesville?*

A trip to Charlottesville on Spring Break from college sold me. The beautiful countryside and the escape from Maine's Mud Season lured me here.

### *What excites you about your work?*

The new discoveries in Science and Medications are fascinating. It shapes patient care and improves outcomes.

### *Proudest/greatest achievement outside the professional realm?*

Raising 4 wonderful children. The youngest just passed her nursing boards.

### *Next life?*

Traveling and being "Grammy" and "Gree" to my three – and counting - grandkids.

### *What are you usually doing on the weekend?*

Cooking and hanging out with family and friends. Enjoying watching my husband do laundry – he even separates darks, whites and towels – but it took months to get him to that point.

### *How did you meet your partner?*

We met in 6th grade homeroom, but it took the two of us 50 years and two marriages before we reconnected.

### *What's something you nearly always have in your fridge?*

Half and half or vanilla ice cream on the rare occasion when we're out of half and half.

### *Favorite vacation/activity spot?*

At "Camp" - our cabin on Embden Pond, Maine.

### *Most admired person, and why?*

Dr Barry Farr (former UVA Hospital Epidemiologist) who was years ahead of his time in his vision to control resistant organisms and to prevent hospital acquired infections. I was very fortunate to have Barry for a mentor for nearly 25 years.

### *Best advice anyone ever gave you?*

You're not in control, so turn it over to your higher power.

### *What about you would surprise us?*

I have fostered several children over the years.

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

I wish I could sing. And so does my husband.



### *Favorite fictional characters?*

Mike Bowditch, Stacy Stevens, and Charlie Stevens in Paul Dorion's novels.

### *If you could go back in time, what year would you travel to?*

Sanibel Island in the 50's.

### *What is the last book you read for pleasure?*

Where the Crawdads Sing

### *What's the most unusual thing you have ever eaten?*

Alligator.

### *Do you collect anything?*

I don't intentionally collect things but being raised by family who lived through the Depression, I tend to unintentionally amass things. Hence, I am always prepared for an unplanned event.

### *What was your first job, how old were you?*

Officially - working as a waitress when I was 15 years old. Unofficially, stemming the bleeding and comforting my kid brother.....



## ALLERGY WORD SEARCH

N P F J Q W U L Y X D D U S T B Z G C A  
Y Z L V O I C R Q A C C E F I V J X O C  
Q P S A Y W Y E K N S S N E E Z E K N L  
N T E C N B V A R T K R J P O S T R J P  
F K N V T T S C Q I I O A X X K E E U F  
W I S C O T S T T G N U B S W A A C N V  
I M I I Y M K I H E P S U O H U R L C I  
F C T M C L U O M N S B X I L Y S J T U  
C C I M J B V N R H A Y F E V E R Z I R  
H L V U L N E R A B I L I T Y Q D I V I  
E P I N Y S S V X I O C X D Y Z A R I T  
M O T E Y Y E R T N L Q W X O J A R T C  
I L Y T Q M A Q G D T T G U S M V I I H  
S L O R V P S A N I M A L S X Z E T S Y  
T E X I S T O Y K C Q G W U H T R A O E  
R N S G C O N O B A T T R S I N S N F D  
Y L Z G X M A F R T T I O E V Y I T V F  
V Q I E Y S L Q S O X J C T E D O B P P  
E C U R H I N O R R H E A K S D N R E U  
K N L J G D Y J R S M U N G S Z F J T Q

CONJUNCTIVITIS

IMMUNETRIGGER

VULNERABILITY

INDICATORS

CHEMISTRY

REACTION

AVERSION

RHINORRHEA

SENSITIVITY

HAY FEVER

ANIMALS

SEASONAL

POLLEN

IRRITANT

PLANTS

SNEEZE

TEARS

TICKS

DUST

RASH

SKIN

SYMPTOMS

ANTIGEN

ITCHY

HIVES