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### Main UVA Health

# UVA PATH REPORT

### News from the UVA Department of Pathology



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# A Message from the Chairman



In this newsletter we will highlight the role of The UVA Department of Pathology in a major change and expansion of our medical institution. Though the University of Virginia has long labeled it's medical and nursing schools and allied hospital and clinics as a "health system" it wasn't until the last two years with the outright purchase of three community hospitals that we really became a multi-hospital health organization. We have been rebranded as "UVAHealth" and have created a subunit called UVA Community Health (UVACH) that contains the community hospitals and allied community clinics. While some clinicians that work in the UVACH facilities are employees of UVAHealth and have joined our University Physicians Group (UPG), the majority are independent practitioners that have clinical privileges at the facilities. The three community hospitals are: Culpeper Medical Center (a 70 bed hospital 40 miles from Charlottesville), Prince William Medical Center (a 130 bed hospital 82 miles from Charlottesville) and Haymarket Medical Center (a 60 bed hospital 82 miles from Charlottesville). There have been enormous changes at the community hospitals to accommodate our integration, the major lift being the adoption of our Epic electronic medical record, including the integrated Beaker laboratory information system. This means that all patient records, including lab results, created anywhere in UVAHealth are available to all Epic users throughout our system. There have been some hiccups as you can well imagine during this integration that affected our own medical lab ordering. The three community hospitals used to be fairly independent in terms of lab oversight, equipment and protocols, but have now been brought under a centralized UVACH lab administration that is separate from the lab administration at the UVA University Hospital. However, it was apparent from the start that we would have to have integrated laboratory services to provide uniformity in testing, high quality and cost efficiency. This has required a lot of work of the administrative leadership team of the University Hospital medical labs as well as

key Pathology faculty to oversee the deployment of new analyzers and techniques to provide uniformity and cost efficiency and harmonization of protocols and procedures to ensure quality. To aid in this integration, UVAHealth leadership has asked our department to provide medical directorship to the UVACH labs as we have always done for the University Hospital labs. Prior to this, all aspects of the community hospital labs were overseen by generalist community pathologists. We have put together a



leadership team that now offers subspecialty expertise in laboratory medical direction as shown in the chart below. Please read on in this newsletter to see the reflections of our UVACH laboratory medical directors on this transition and the future of the integrated UVAHealth laboratories.

Ter a. Moskaluk

Christopher A. Moskaluk, M.D., Ph.D. Walter Reed Professor and Chair, UVA Department of Pathology

# UVACH Laboratory Medical Directors



# In Focus: UVA Community Health cont.

### **Clinical Chemistry**



In July 2021, UVA assumed full ownership of Prince William, Haymarket, and Culpeper Medical Centers from Novant. The vision, from the UVA Pathology Department perspective, was to standardize the laboratories at the three community hospitals to the same critical values, laboratory instrumentation, and reference intervals. This would ensure that a patient would be able to get the same quality of testing at any hospital in the system, and values could be more easily trended throughout if they moved between hospitals. By April

Nicholas Larkey, Ph.D.

2024, this goal was mostly achieved for clinical chemistry, with critical values having been standardized and with all hospitals running the Abbott Alinity platform for their clinical chemistry testing. Currently, we have twenty-one Alinity modules throughout the system (11 c-side, 10 i-side), with more coming as UVAHealth grows.

The transition process officially started in early 2022, when the UVA Pathology department started to oversee Culpeper Medical Center. Oversight of Prince William and Haymarket Medical Centers didn't start until mid-2023. While Culpeper had its own contract for its chemistry testing, which would make it easier to transition them to UVA's instrumentation when the time came, Prince William and Haymarket laboratories were ran by Labcorp. Labcorp owned their instrumentation and had an exclusive contract for their reagents and other consumables, which meant that a "handoff" needed to be negotiated with Labcorp to ensure a seamless transition of testing. It was decided that the Labcorp



Prince William Medical Center

contract would cease at midnight, December 31st 2023, so we needed to make sure that testing could be converted before that time. Many months of instrument and test build validation were performed by Abbott, hospital laboratory, and IT staff to make the transition a reality.

On December 20<sup>th</sup> 2023, we switched on the Abbott Alinity analyzers and begun running testing at Prince William and Haymarket Medical Centers. At this point, three hospitals in our system were running the same tests for the majority of chemistry analytes. In April 2024, we went live with the Abbott Alinity analyzers at Culpeper Medical Center. Overall, the time between the purchase of the three hospitals in July 2021 to final go-live at Culpeper Medical Center in April 2024 was 33 months. The transition of the three UVA Community Health hospital laboratories could not have happened without the hard work of all of the hospital laboratory and IT staff, as well as the dedication of Lori Gauld, Alexis Jones, Toral Shah, Melynee Gallegos, Cindy Backe, and Michael Vinciguerra.

### **Transfusion Medicine**



Many people would be surprised to learn that the transfusion of a unit of blood is the most common medical procedure in hospitalized patients in the United States. It is also among the most regulated procedures, with the FDA, CAP, JCAHO, and AABB composing an alphabet soup of regulators ensuring that blood suppliers, blood banks, and blood transfusionists get the right blood to the right patient, at the right time, every time.

James Gorham, M.D., Ph.D.

Over the last century, blood banking has become ever more complex, both in the primary care setting and in the tertiary care setting. Whereas academic medical centers can and do hire experts with advanced training and advanced credentialing in the field of Transfusion Medicine, community hospitals typically do not have the resources to warrant hiring such a specialist. Instead, the pathologist on staff—who is typically a generalist, with basic but not necessarily advanced training in Blood Banking—is the medical director of the Blood Bank, handling the routine patient transfusion issues that may arise in the course of patient care. However, complex transfusion issues can and do appear in patients who get their care at community hospitals, challenging community hospital blood banks and the hospital's pathologist alike.

With the recent merger of UVA Medical Center and the three Community Hospitals, such issues have come to the fore for Dr. Gorham and his Transfusion Medicine colleagues at UVA in Charlottesville. Over the last couple of years, Dr. Gorham has taken on the role of Medical Director of the Blood Banks at Culpeper,

# In Focus: UVA Community Health cont.



Culpeper Medical Center

Haymarket, and Prince William Hospitals. Since the beginning of 2024, Dr. Gorham has been traveling to the three Community Hospitals each month; such face-to-face interactions foster healthy working relationships among Dr. Gorham and the staff at each blood bank. In addition, advancements in communication technologies have rendered the distance between Charlottesville and the other three hospitals only a minor inconvenience. Video conferencing and instant messaging communication are invaluable for solving immediate issues in real time.

The staff at all four hospital Blood Banks have worked together over the last few years to harmonize systems, including unifying the blood bank information systems, and ensuring that all blood banks use the same blood supplier (The American Red Cross), to maximize economies of scale. One significant boon to the system is that the rate of wastage of blood due to out-dating is decreasing, as the hospitals can readily share units of blood with one another before such units reach the end of their storage life. In addition, Dr. Gorham has been working with the staff to ensure that all four hospitals have similar policies and procedures, ensuring provision of blood at state-of-the-industry standard to all UVA patients, regardless of the patient's location.

> As part of the University of Virginia (UVA) Community Health Partnership. the anatomic pathology (AP) laboratory

Haymarket Medical Centers. This

expansion has enhanced patient

access to state-of-the-art anatomic

In recent years, UVA established a

pathology services throughout Virginia.

at UVA has significantly broadened its scope by integrating operations and oversight of the laboratories at Culpeper, Prince William, and

### Anatomic Pathology



Sarah Zadeh, M.D.

partnership with Culpeper Medical Center, leading to the evaluation of AP specimens exclusively by UVA pathologists. This collaboration extended beyond primary diagnostics to include frozen section support for operating rooms and rapid-on-site cytology for interventional radiology, facilitated by the introduction of the



# In Focus: UVA Community Health cont.

Mikroscan telemicroscopy system. This advanced digital microscope enables our laboratory staff to prepare patient materials for remote pathologist review in real-time during procedures. Thanks to the dedicated efforts of the Culpeper and UVA laboratory teams, as well as UVA pathology faculty, we have achieved a steady-state, elevating the standard of care provided to UVA patients at a distance.

In 2024, UVA assumed leadership of the AP laboratory at Prince William/Haymarket Medical Center. This phase of the partnership has afforded us a unique opportunity to collaborate closely with on -site pathologists at Prince William. Our initial focus has been on quality improvement and refining AP laboratory processes, including the establishment and monitoring of laboratory metrics. Recently, we have extended our testing menu to include processing patient tissue and preparing pathology slides for our partner pathologists. Although primary diagnostics are conducted off-site at Prince William, many cancer biomarkers are interpreted by UVA faculty. Although this phase of the expansion is ongoing, our immediate objectives include adding a pathologist assistant to the Prince William team and incorporating the Mikroscan system for frozen section interpretation at Haymarket Medical Center.

We remain committed to strengthening our existing partnerships and exploring opportunities to extend our services to additional laboratories across Virginia.



Haymarket Medical Center

identification capabilities and enabling us to deliver state-of-the-art diagnostics.

Collaboration has been instrumental in strengthening the services at UVA Community Health. By streamlining fungal and acid-fast bacilli testing with UVA's main lab, we've reduced turnaround times, allowing for immediate action in cases with public health implications. We've also aligned testing protocols, such as the twostep Clostridioides difficile algorithm, to ensure a consistent approach across all sites. Our focus on staff training means our team is not only prepared to use new technologies but also understands the purpose behind them and can identify potential issues, ultimately improving the quality of patient care. These updates reflect our ongoing commitment to enhancing diagnostic services and delivering the best possible outcomes for our communities.

### **Clinical Microbiology**



Emily Snavely, Ph.D.

In the clinical microbiology laboratories at UVA Community Health, we've introduced rapid molecular testing advances across our four facilities—Culpeper Medical Center (CPMC), Prince William Medical Center (PWMC), Haymarket Medical Center, and Piedmont Family Practice—with a focus on modernizing CPMC and PWMC to improve patient care through faster turnaround times and enhanced diagnostic accuracy.

We've implemented several new systems designed to quickly identify

pathogens, especially for critical conditions like sepsis. The addition of the BioFire Torch at CPMC allows for rapid identification of agents from positive blood cultures, helping to ensure patients receive the right therapy sooner. At PWMC, the lab has been modernized with a new susceptibility testing system that generates more accurate antibiograms, guiding clinicians in making betterinformed antibiotic prescribing decisions. The introduction of MALDI-TOF mass spectrometry for bacterial identification has brought PWMC up to current standards, significantly expanding our

# **Faculty: Moving In**



**Margaret Moore, M.D.,** received her Bachelor of Science in Biochemistry and Molecular Biology at the University of Richmond. She received her M.D. from the University of Virginia. After medical school, she completed an anatomic and clinical pathology residency and hematopathology fellowship at UVA. Her research focuses on pathology education. Outside of the hospital, she enjoys spending time with her lovely wife and dog. Her hobbies include running, cycling, visiting local breweries, and knitting.



Julie C. Fanburg-Smith, M.D., received her medical school degree from Vanderbilt University, general surgery internship from Dartmouth, and anatomic and clinical pathology residency from University of Vermont, She completed fellowships in surgical pathology and bone & soft tissue (musculoskeletal) pathology at Massachusetts General Hospital and hematopathology at NIH. After years at the AFIP as the Deputy Chair of Soft Tissue and Orthopedic Pathology and most recently with triple appointments in Pathology, Orthopedics, and Pediatrics at Penn State Health, where she directed Pulmonary and Musculoskeletal Pathology and signed out Surgical and Hematopathology, she joins the UVA Anatomic Pathology division in August of 2024. At UVA she will assume Directorships of Surgical Pathology and Musculoskeletal Pathology, with an adjunct appointment in Pediatrics. Her collaborative research is focused on the molecular profiling of tumors including mesenchymal tumors (sarcoma) of adults and pediatric age groups, novel fusions and targeted therapy. Methods include translational clinicoradiologic-pathologic-molecular correlative classification to clinical trial sarcoma review, to basic mouse model development, including the latter for vasculopathic neuropathic arthropathy in diabetes. She is Chair of the Members Meeting, Course Director, Presenter, and on the Executive Board of the International Skeletal Society, an interdisciplinary musculoskeletal society; Secretariat for the International Society of Bone and Soft Tissue Pathology for USCAP; and sarcoma reviewer for the Children's Oncology Group (COG). She has coauthored more than 300 peer-reviewed journal articles and chapters, including writing for several of the World Health Organization classifications of Bone and Soft Tissue, Head and Neck, Skin, Ophthalmologic, and Central Nervous System Tumours, on the Consensus Committee for the Bone and Soft Tissue Tumours World Health Organization Book under Dr. Christopher Fletcher in 2002. She studied under Franz Enzinger and other giant mentors from the AFIP. On editorial boards including skeletal radiology and annals of diagnostic pathology journals, she reviews for several journals. Writing the most recent synoptic reporting for Bone and Soft Tissue Tumors, GIST, and supporting the Pulmonary Synoptics for Thymic Tumors and Mesothelioma; she has this incredible opportunity as a member of the CAP Cancer Committee. She has been invited to present at regional, national, and international venues on clinical and research topics of interest, including at the Virginia Society for Pathology, the USCAP Palm Springs microscopic seminar, and for the European Society for Pathology. She thoroughly enjoys mentoring trainees in patient care diagnostic and consultative skills, and research, with previous experience as Director of Education and Vice Chair of Academic Affairs. She enthusiastically collaborates in research to help with scientific advancement and the success of her trainees and colleagues. Dr. Fanburg-Smith received the greatest honor of the musculoskeletal interdisciplinary International Skeletal Society, the 2024 Founders Medal Award-a lifetime achievement-in September 2024, where she represented UVA. She loves Charlottesville and enjoys spending her free time with her husband Joe, her children Jessie and Jake, and extended family and friends; they stay active with group activities such as running, pickleball, rock-climbing, hiking, skiing, and traveling.



**Vanessa Smith, M.D.**, received her Bachelor of Science in Biological Sciences from Stanford University, her Master of Science in Biochemistry and Molecular Biology from UCLA, and her M.D. from the University of Illinois College of Medicine Peoria. She completed an anatomic and clinical residency as well as fellowships in neuropathology and molecular genetic pathology at Duke University. Her clinical interests in neuropathology span the full spectrum: surgical neuropathology, autopsy neuropathology, neurodegenerative disease, neuromuscular pathology and ophthalmic pathology. Her research interests have at their heart the intersection of molecular pathology and neuropathology. She moved to Charlottesville with her husband Matt, her son Louis (4 years old), and her daughter Imogene (3 years old). They enjoy swimming, hiking, camping, rock climbing, and otherwise spending time outdoors as a family.

# Faculty: Moving Up



**Jinbo Fan, Ph.D.,** was promoted to Associate Professor of Pathology. Dr. Fan joined UVA in 2017 to serve as Associate Director of Clinical Cytogenetics and Genomics. In these roles, Dr. Fan has demonstrated a passion for test development and quality assurance. He has worked to expand the test menu of the UVA clinical cytogenetics and genomics lab, implemented automated workflows to improve efficiencies, and participated in numerous inspections of laboratories both nationally and internationally. Dr. Fan now serves as the Director of the UVA Health Clinical Cytogenetics lab. Dr. Fan has also shown an aptitude for education, receiving the Department of Pathology Faculty Teaching Award in 2019 and serving as Associate Director of the AP/CP Residency Program from 2019 to 2023. Dr. Fan is active in a number of national organizations, having served on committees for the Cancer Genomics Consortium aimed to improve diversity, equity, and inclusion in laboratory genetics, and for the American College of Medical Genetics and Genomics tasked with streamlining the maintenance of certification process of clinical and laboratory geneticists. Dr. Fan enjoys participating in collaborative research projects with a particular interest in genomic profiling of cancers. He has ongoing work investigating chromosomal microarray-based genomic profiling of T-cell large granular lymphocyte leukemia, a rare and incompletely understood form of blood cancer. When he's not working, Dr. Fan enjoys traveling with his wife and daughter.



**Kamal Alagib, Ph.D.,** has received promotion to the position of Associate Professor of Research, based on his critical role in the studies of megakaryocyte development in the Goldfarb lab. He has had first authorship (and co-corresponding authorship) in a series of high impact publications that unravel the molecular basis for fetal-adult differences in these platelet-producing cells. This work has direct clinical significance and has led to development of a novel drug treatment potentially applicable to several clinical conditions associated with low platelet counts. In addition, his work has served as the basis for several large NIH grants. His promotion also recognizes his dedication to teaching and collaboration within the SOM research community.

# **Faculty: Moving Out**



Julia lezzoni, M.D., received her B.A. in Biochemistry from UVA and her M.D. from Washington University at St. Louis. She joined UVA in 1992 in the Department of Pathology as an Assistant Professor on the Clinician Educator tenure track. She has provided clinical service as an expert in histologic disease diagnosis on the Surgical Pathology service at the UVA University Hospital throughout her career, with a special emphasis on diseases of the liver. She has been the sole faculty pathologist providing diagnostic support for the weekly Hepatology and Liver Transplant Pathology Conference for over 2 decades. Though she has published widely on topics in diagnostic surgical pathology, the bulk of her publications have been on liver diseases. She has been sought as a reviewer on this topic from many publications and was named to the Editorial Board of The American Journal of Surgical Pathology. She has been invited to teach courses and to moderate sessions on liver pathology frequently at national meetings of pathology associations and societies, including being the course director for "Medical Liver Biopsy Interpretation" for several annual meetings of the American Society for Clinical Pathology, the world's largest pathology society. She earned tenure in 2001 and achieved the rank of Professor in 2014. Despite her considerable accomplishments as a renowned diagnostician, it is Julia's credentials as an educator where she really shines. She has received consistently great reviews for her medical student teaching, and for this has received a dizzying array of teaching awards, including the School of Medicine Dean's Teaching Award (twice), the UVA All-University Outstanding Teaching Award, the School of Medicine Basic Science Teaching Award (twice), the Mulholland Teaching award, and has been named to the School of Medicine's Academy of Distinguished educators as a founding member. Julia is also an active teacher and award winner in graduate medical education, but it is her efforts recently in the reform of Pathology GME where she has achieved significant national prominence. She has served on the Pathology Review Committee for the Accreditation Council for Graduate Medical Education (ACGME) since 2008 and since 2012 has served as the Chair of this committee.

Julia has been an avid horsewoman throughout her life, and will continue to enjoy her horses and farm in Albemarle County in her retirement.

# Faculty: Moving Out cont.



**M. Beatriz (Bea) Lopes, M.D.,** Professor of Pathology and Neurosurgery, Director of Neuropathology and Autopsy Divisions and the Neuropathology Fellowship training program, stepped down from her clinical and leadership roles as of July 1, 2024, and is now retired as Professor Emeritus. Dr. Lopes is happily enjoying her first taste of retirement, with newfound freedom to spend time with family in Brazil and all over the world, but is maintaining an active role in the Department, providing consultation on difficult cases, especially pituitary lesions, her area of international renown. She will also continue to take part in several ongoing research collaborations, editorial duties, and resident and fellow graduate medical education.

Dr. Lopes arrived at UVA shortly after finishing her Anatomic Pathology training at the University of Sao Paulo in 1989, completing two years of Neuropathology Fellowship training under the guidance of Dr. Lucien Rubenstein, an internationally prominent brain tumor neuropathologist, and Dr. Scott Vandenberg, both of whom were recruited from Stanford University by former Chair Dr. Tom Tillack. Dr. Lopes joined the faculty at UVA. in 1993 as Assistant Professor of Neuropathology and rose through the ranks to become Full Professor in 2006. In 2003 she took on the roles of Division Director of Neuropathology and Autopsy, as well as program director for the ACGME-accredited Neuropathology Fellowship training program, which has trained many highly successful pathologists now in academic, forensic, and private practice across the country and around the world. She was awarded the Harrison Distinguished Educator Award from 2013-2024. Because of her scholarship and intense dedication to work on brain tumor and pituitary pathology, the Department of Neurosurgery made her a member of their department in 2006. Dr. Lopes developed international recognition in pituitary pathology and served on the WHO Brain Tumor Classification Committee since 2016. In addition to her intense dedication to patient care, medical education, and Departmental service, Dr. Lopes has been a prolific scholar, with well over 200 authored publications. Recognizing her long-term commitment to the field of Neuropathology, the American Association of Neuropathologists elected her to the position of President in 2021. This recognition caps an amazing career, one that all of the UVA Pathology family should celebrate and emulate! Congratulations Bea!

# **First-Year Trainees**

### **First-Year Residents**



**Sahil Chaudhary, M.B.B.S.** UVA is a dream come true for Sahil. While presenting at a UVA conference last year, he got a chance to interact with the program director and other residents, and immediately fell in love with this place. Nestled in the serene hills of Charlottesville, UVA hosts some of the kindest and most inspiring people, making it somewhere he is proud to call his home. Each day, he wakes up with a renewed energy to give his best to this supporting community and learn every step of the way. In his free time, he loves working out, swimming, reading books (productivity and self-help is his favorite genre), and listening to podcasts. By the way, he is a morning bird who hits the gym right when it opens at 5am – so early morning work shifts are never boring for him!



**Masha Hajizadeh, M.D.**, paints and enjoys hiking as hobbies. She earned her M.D. in Iran, spent three years at Johns Hopkins University, and later moved to Charlottesville for an observership, where she was captivated by the beauty of the city and the warmth of the people. She was deeply impressed by the program's focus on patient care and resident training, and how wellness is prioritized, with Charlottesville ranking second in the country for wellness. This combination of professional excellence and community care made her fall in love with the program and the city. Charlottesville is a great city with many good restaurants and outdoor activities, despite its small size.



**Benjamin Highland, M.D.**, grew up in Hickory, North Carolina and attended The College of William and Mary, where he majored in Religious Studies and minored in Biology while concurrently completing pre-medical requirements. After college, he pursued a graduate degree at The University of Auckland in New Zealand, during which time he focused the scientific and evolutionary study of religion. Upon completion of his graduate degree, Ben returned home to North Carolina to attend medical school at Wake Forest School of Medicine. In his free time, Ben enjoys playing piano/guitar, playing strategy games of all kinds, and spending time with his lovely girlfriend Taylor (who is a Dermatology PA at the University of Virginia). Together, they have three cats – Doppler, Miso, and May.



**Madison Karabinus, D.O.,** grew up near Chicago, Illinois before moving to North Carolina to attend medical school at Campbell University. She fell in love with pathology after completing an independent study in histology during undergrad. Madison was able to couples match with her husband, who is completing his internal medicine residency at Mary Washington, so she commutes daily from Richmond, VA. In her free time, she enjoys eating Korean BBQ, watching horror movies, playing video games, and riding motorcycles with her husband. However, her absolute favorite thing to do is rewatch the Lord of the Rings trilogy with her two cats, Bruce and Boots.



**Nicola Litchfield**, **D.O.**, is originally from North Carolina, but has spent the last 3 years in the Charlottesville area. Prior to medicine, she studied forensic anthropology and worked as an autopsy technician, which afforded her the opportunity to meet her husband while he was in pathology residency himself. After medical school, Nicola completed two years of family medicine residency, but eventually found her "path back to path." She and her husband are thrilled to stay in the area and are so grateful to be part of such a welcoming group of pathologists! In her spare time she loves to read, watch true crime, cook, and hang out with her husband and their two cats, Jasper and Opal!

### Fellows



**Eyas Alzayadneh, M.D., (Gynecologic and Breast Pathology)** grew up in Jordan, where he completed his medical degree. Following graduation, he took a one-year required internship (because six years wasn't quite enough!), followed by a transitional year in internal medicine and a year in anatomic pathology residency. 4 years ago, after his final year in Jordan, he relocated to Iowa, for his AP/CP residency. Over the next two years, he will be completing fellowships in gynecologic and breast pathology, as well as cytopathology, both at UVA. Outside of work, Eyas enjoys relaxing with his cats, Hera and Apollo. He has a keen interest in history and linguistics, and loves music, anime, and collecting antiques.



Aline Rangel-Pozzo, M.Sc., Ph.D., (Lab Genetics & Genomics) is from Rio de Janeiro, Brazil. She holds an undergraduate degree in Biomedicine, and also has two master's degrees, one in Cancer Care and the other in Bioinformatics, as well as a Ph.D. in Oncology. Aline completed her postdoctoral training at CancerCare Manitoba and spent seven years working in Canada. In her free time, she enjoys spending time with her husband, Jeferson, and her son, Enzo.



**Ryan Sauls, D.O., (Hematopathology)** grew up in Winfield, TN. He attended Maryville College earning a B.S. in biology. He then attended Lincoln Memorial University for his master's degree in anatomy and for medical school, graduating in 2020. He completed his AP/CP residency at the University of Tennessee Medical Center – Knoxville. He enjoys fishing, hiking, cooking, reading, growing/making bonsai trees, and traveling with his wife. Iceland has been his favorite destination thus far!



**Abby Wills, M.D., (Dermatopathology)** received her B.A. in Psychology from Carleton College in Northfield, MN and her M.D. from Oregon Health & Science University. She completed a dermatology residency at the University of Virginia and is continuing her training in dermatopathology. She plans to split her time practicing both general dermatology and dermatopathology.



Abigail Ansah Zame, Ph.D., (Clinical Chemistry) grew up in Ghana and worked for a couple of years before moving to the US. She earned her Bachelor of Science degree in Chemistry from Youngstown State in Ohio and a Ph.D. in Clinical Bioanalytical Chemistry from Cleveland State University, Ohio. Outside of work, she enjoys spending time with her husband and her girls. She loves to engage the girls in baking, cooking, and trying out new recipes. She likes to dance, sing, and listen to podcasts.



**Jenny Zhang, M.D., (Hematopathology)** spent her early childhood bouncing across the U.S. before her family finally settled in Gaithersburg, Maryland. She received a Bachelor of Science in molecular genetics and cell biology from the University of Maryland before working as a research assistant at the Firefighters' Burn and Surgical Research Laboratory in Washington DC, where she discovered her love for pathology. She received her M.D. from the University of Queensland Faculty of Medicine in Brisbane, Australia as a part of the UQ-Ochsner Clinical School cohort and completed an AP/CP residency at the University of Arizona Tucson. Outside of the hospital, she enjoys drawing, reading, playing video games, cooking, and discovering good restaurants.



**Raeshun Glover, M.D., (Transfusion Medicine)** is a clinical pathologist currently completing a fellowship in blood banking at the University of Virginia. A native of northern Virginia, he earned a biology degree from George Mason University and attended medical school at Howard University, after which he completed his residency in clinical pathology at Vanderbilt University. Outside of medicine, he enjoys cooking, attending plays and art shows, and is an avid film buff with a love for sci-fi films.



### **Graduate Students**

**Martyna Glowczyk,** is from Poland and received her B.S. in Biotechnology from Jagiellonian University in Krakow, Poland. As an undergraduate, she investigated the oxidative stress in plant cells studying the activity of ascorbate peroxidase and catalase as a defensive mechanism caused by an increase in reactive oxygen species. She received her M.S. in Molecular Biotechnology from Jagiellonian University in Krakow, Poland. During her master's degree, she led a cancer biology project investigating the effect of MCPIP1 RNase activity on post-translational modifications of  $\beta$ -catenin in the progression of Clear cell renal cell carcinoma (ccRCC). She came to UVA in 2022 and joined Dr. Hui Li's lab as a visiting graduate researcher as part of Fulbright's Visiting Graduate Research Training Program (BioLAB). After this one-year internship, she joined UVA's Biomedical Sciences Graduate Program in 2023 and started her doctoral work investigating the role of AVIL oncogene in Rhabdomyosarcoma under the mentorship of Dr. Hui Li. In her free time, Martyna enjoys working out to clear her mind, baking, and long walks with her fiancé.



**Alicja Kuzniewska,** received her Bachelor of Science and Master of Science in Biotechnology from the Medical University of Gdańsk (MUG) in Poland. Afterward, she began her Ph.D. at MUG, focusing on the role of the complement system in rare inflammatory diseases and cancer immunotherapy. In her third year, she decided to undertake a year-long research internship at UVA through the BioLab Fulbright Program. She joined the Arandjelovic Lab, where she has been investigating how cytoskeletal rearrangement influences neutrophil activity in rheumatoid arthritis. Captivated by the lab's impactful research and extensive academic resources at UVA, she quickly decided to pursue a Ph.D. program here.



**Aaron Streit** is from New Paris, IN and received his B.S. in Biomedical Engineering from Trine University in May of 2023. His passion for research flourished through coursework and leading several undergraduate research projects at Trine. He used genetic tools to study potential colorectal cancer targets during an internship in Dr. Giovanna Tosato's lab at the National Cancer Institute in Bethesda, MD. After joining the UVA BIMS program in 2023, he began his thesis research, studying metabolic defects of tumor-infiltrating lymphocytes in the context of melanoma tumors in Dr. Timothy Bullock's laboratory. Outside the lab, Aaron enjoys spending time with family, playing tennis and basketball, and reading fiction books.



**Lucia Wagner** is originally from Iowa City, Iowa, and graduated from St. Olaf College with degrees in Mathematics and Chemistry. Following graduation, she spent a year as a Fulbright fellow in Bergen, Norway. Lucia is currently in the dual M.D./Ph.D. program here at UVA, where she is pursuing her graduate studies in the Farber lab. As a physician-scientist, Lucia plans to specialize in neurological and orthopedic rehabilitation. Fun fact: she hiked all 7 mountains in Bergen, Norway in one day – accumulating to 40 KM/25 mi long and 7,600 feet of elevation.



**Feifan Xu (Janny),** grew up in China. She came to the States as a foreign exchange student in 2014 and received a B.S. in Biomedical Science from Liberty University in 2021. As an undergraduate, she investigated the characteristics of a folate-deficient-related transcription factor, *Zfp410*, and developed antibodies to study its functions with the goal of understanding genetic alterations led by cognitive defects induced by folic acid deficiency. After graduation, she worked at UVA as a postbaccalaureate researcher under the supervision of Dr. Mayuresh Abhyankar in Dr. William Petri's lab. During this time, she evaluated the immunogenicity of a novel adjuvanted peptide vaccine against *Entamoeba Histolytica* in rhesus macaques. With its impressive progress, the vaccine is close to entering a phase I clinical trial. After joining UVA's BIMS program in 2023, Janny started exploring the synergetic relationship between tumor cognate CD4+ and CD8+ T cells under the mentorship of Dr. Craig Slingluff and Dr. Timothy Bullock, with the goal of understanding the mechanism of memory T cells development induced by cancer vaccines and how it improved outcomes for patients with advanced melanoma. In her free time, she enjoys playing piano, movies, hiking, traveling, and cooking.



**Xindi Zeng,** is from Chongqing, China. She completed her undergraduate studies in Molecular and Cellular Biology at the University of California, Davis. Xindi started in the BIMS program in 2024, and she joined the Ma lab to research diabetes-related diseases in terms of metabolic or inflammatory perspectives. Now during her graduate years, Xindi is passionate about translating scientific discoveries into practical treatments and interventions that can improve diabetic patient outcomes. Outside of science, she enjoys baking and traveling.



**Rachel Mulavelil**, came to the US from India for her undergraduate studies at Calvin University in Grand Rapids where she received her bachelors in Biology with a minor in Biochemistry. After her undergraduate studies she worked as a research assistant at UT San Antonio, Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases and worked on clinical Alzheimer's Disease (AD) studies, which included the PEACE AD study. She then went on to pursue her Masters at Georgetown University in Integrative Neuroscience and did her masters project under Dr. Sarah Flowers investigating how APOE genotype impacted the effectiveness of potential AD therapeutics. Following her masters she moved to UVA with the Flowers lab where she continues her work on potential AD therapeutics response as well as studying metabolism dysfunction in AD. In her free time she likes to read and watch TV shows. She is exploring her artistic side and spends some of her free time drawing or painting with her roommates.

# **Grants and Contracts**

#### **New Grants and Contracts**

#### PI: Timothy Bullock, Ph.D.

**The University of Texas at Austin** Chemical proteomic investigation of lipid kinase specificity and druggability 02/01/2024-12/31/2027 Total Budget: \$79,728 2024 Budget: \$19,932

#### PI: Hui Li, Ph.D.

VA Innovation Partnership Corporation

Preclinicalmodel testing of AVIL inhibitors 05/07/2024-05/06/2025 Total Budget: \$100,001 2024 Budget: \$100,001

#### PI: Jianguo Tao, M.D., Ph.D. Leukemia & Lymphoma Society

Understanding Resistance Mechanism to Enhance CAR-T Immunotherapy for MCL 07/01/2023-06/30/2027 Total Budget: \$2,999,980 2024 Budget: \$749,997

### PI: Bon Trinh, Ph.D.

National Cancer Institute The role of long noncoding RNAs in acute myeloid leukemia 08/01/2024-07/31/2026 Total Budget: \$415,259 2024 Budget: \$415,259

#### PI: James Zimring, M.D., Ph.D. National Heart, Lung and Blood Institute

Basic and Translational Mechanisms of Alloimmunization to RBC Transfusion Total Budget: \$11,333,123 2024 Budget: \$2,430,789

#### National Heart, Lung and Blood Institute

Nqo2 in Primaquine-Induced Hemolysis of G6PD-deficient RBCs 05/15/2024-04/30/2028 Total Budget: \$2,895,582 2024 Budget: \$746,958

#### National Institute of Allergy and Infectious Diseases

Role of IFITs in RBC Alloimmunization 02/19/2024-13/21/2025 Total Budget: \$421,921 2024 Budget: \$199,858

### Regents of the University of Colorado (NHLBI-R01)

The role of ferroptosis in red cell aging in vivo and in vitro 05/01/2024-04/30/2028 Total Budget: \$1,259,700 2024 Budget: 290,700

# Other Active Grants and Contracts (Federal Funding)

### PI: Timothy Bullock, Ph.D.

Melanoma Research Alliance Armoring CD8+ T cells against energetic deficiency in melanoma 06/01/2023 - 05/31/2026 Total Budget: \$375,000 2024 Budget: \$125,000

### PI: Adam Goldfarb, M.D.

National Institute of Diabetes & Digestive & Kidney Diseases Dissection and Manipulation of the Cellular Response to Iron Restriction 09/09/2019-06/30/2024 2024 Budget: \$477,832

#### National Heart, Lung and Blood Institute

Targeting Dyrk1a to Promote Donorindependent Platelet Production 02/20/2020-01/31/2024 2024 NCE

#### PI: Hui Li, Ph.D.

National Cancer Institute Targeting AVIL in Glioblastoma 03/01/2020-02/28/2025 2024 Budget: \$471,745

#### National Cancer Institute

Chimeric RNAs and their implication in lymphatic metastasis of bladder cancer 03/01/2020-02/28/2025 2024 Budget: \$195,618

#### National Cancer Institute

Targeting AVIL, a novel oncogene in rhabdomyosarcoma 01/01/2023 - 12/31/2027 Total Budget: \$2,511,543 2024 Budget: \$478,467

#### PI: John Luckey, M.D., Ph.D.

National Heart, Lung, and Blood Institute Molecular determinants of anti-RBC alloantibody evanescence 09/13/2022 - 10/31/2023 Total Budget: \$798,296 2024 NCE

### PI: Mani Mahadevan, M.D.

National Heart, Lung, and Blood Institute The role of TGFβs and cFAPs in Cardiac Pathology from RNA Toxicity 07/01/2023 – 05/31/2027 Total Budget: \$3,227,992 2024 Budget: \$790,858

#### National Heart, Lung, and Blood Institute

RNA Toxicity and Cardiac Pathology 09/21/2022 - 08/31/2024 Total Budget: \$754,977 2024 NCE

#### PI: Chris Moskaluk, M.D., Ph.D. National Cancer Institute

Biospecimen Procurement & Tissue Microarray Manufacture for the CHTN 04/01/2019-03/31/2025 2024 Budget: \$654,719

#### PI: Scott VandePol, M.D., Ph.D. National Institute of Allergy and Infectious Diseases

Papillomavirus E6 cellular targets 09/17/2021 - 08/31/2025 2024 Budget: \$517,850

#### PI: James Zimring, M.D., Ph.D. The Trustees of Columbia University in the City of New York (NHLBI-R01)

The Impact of Oxidative Stress on Erythrocyte Biology 09/25/2019-02/29/2024 2024 NCE

#### University Of Colorado (NHLBI-R01)

Interactions between the ADORA2b/Sphk1 axis and the AE1-Hb switch in red blood cell aging in vivo and in vitro 03/15/2020-02/29/2024 2024 Budget: \$32,203

# University of California at San Francisco (NHLBI-R35)

Immune Mechanisms in Normal and Injured Lung 01/01/2023-12/31/2028 Total Budget: \$145,836 2024 Budget: \$18,584

#### Total Annual Federal Funding: \$8,716,370

# Other Active Grants and Contracts (Non-Federal Funding)

#### <u>PI's:</u>

Timothy Bullock, Ph.D. Robin Felder, Ph.D. James Gorham, M.D., Ph.D. Marshall Kadin, M.D. Hui Li, Ph.D. Chris Moskaluk, M.D., Ph.D. Melinda Poulter, Ph.D. Jianguo Tao, MD, Ph.D. Yubo Wu, D.O.

Total Annual Non-Federal Funding: \$996,713

# **Publications and Awards**

### **Selected Faculty Publications**

### **Journal Articles**

Auerbach A, **Aguilera NS**. The changing landscape of pediatric histiocytoses: Birth, life, and transdifferentiation of pediatric histiocytes. Semin Diagn Pathol. 2023 Nov;40(6):420-428. PMID: 37258365. Epub 2023 May 20

Baker J, **Zadeh SL, Aguilera NS**. ALK-positive large B-cell lymphoma (ALK+LBCL) with aberrant CD3 expression. J Hematop. 2024 Jun;17(2):109-114. PMID: 38573563. Epub 2024 Apr 04

Whitehair R. Craig J, Aguilera NS. Histologic features of IGG4-related lymphadenopathy are common in excised lymph nodes from children and adolescents without IGG\$-related disease. J Hematopathol

"Splenic MARCO<sup>+</sup> marginal zone macrophages regulate rapid production of MCP-1 and KC but are dispensable for alloantibody generation in response to stored RBCs in a murine model." **Arneja A**, Salazar JE, **Medved J**, Ratcliffe SJ, Smolkin ME, Santhanakrishnan M, Stowell SR, Hudson KE, **Zimring JC,** Hendrickson JE, **Luckey CJ.** Manuscript Submitted

Sarpong KAN, Hee Kim S, McCartney CR, Wiencek JR, **Bazydlo LAL**. Spironolactone metabolite causes falsely increased progesterone in the Abbott Architect immunoassay. Clin Biochem. 2024 Apr;126:110747. PMID: 38484829. Epub 2024 Mar 12

Michienzi A, Hamlin J, Farah R, **Bazydio L**. Notes from the Field: Schedule I Substances Identified in Nootropic Gummies Containing Amanita muscaria or Other Mushrooms -Charlottesville, Virginia, 2023-2024. MMWR Morb Mortal Wkly Rep. 2024 Jul 18;73 (28):628-630. PMID: 39024197. Epub 2024 Jul 18

Stevens MG, Mason FM, **Bullock TNJ**. The mitochondrial fission protein DRP1 influences memory CD8+ T cell formation and function. J Leukoc Biol. 2024 Mar 29;115(4):679-694. PMID: 38057151

Mariani RA, **Courville EL.** Reactive Lymphadenopathy in the Pediatric Population with a Focus on Potential Mimics of Lymphoma. Semin Diagn Pathol. 2023 Nov;40(6):371-378. PMID: 37295994. Epub 2023 Jun 01 Singh AP, **Courville EL.** Advances in Monitoring and Prognostication for Lymphoma by Flow Cytometry. Clin Lab Med. 2023 Sep;43(3):351-361. PMID: 37481316. Epub 2023 Jun 01

Gupta S, **Courville EL.** Bone marrow findings post allogeneic transplant for myeloproliferative neoplasms and chronic myelomonocytic leukemia with increased fibrosis. Lab Med. 2024 Sep 4;55(5):602-608. PMID: 38603517

Gupta S, **Craig JW**. Classic Hodgkin lymphoma in young people. Semin Diagn Pathol. 2023 Nov;40(6):379-391. PMID: 37451943. Epub 2023 Jun 30

Kim JL, Gerrie AS, Savage KJ, Villa D, Scott D, **Craig JW**, Farinha P, Skinnider B, Slack G, Connors JM, Sehn LH, Venner C, Freeman CL. Frontline therapy with bendamustine rituximab (BR) and rituximab cyclophosphamide vincristine prednisone (RCVP) confers similar long-term outcomes in patients with treatment naïve Waldenström macroglobulinemia in a real-world setting: a population-based analysis. Leuk Lymphoma. 2024 Mar;65(3):346-352. PMID: 38156444. Epub 2023 Dec 29

Whitehair RM, **Aguilera NS**, **Pramoonjago P**, **Craig JW**. Increased IgG4+ plasma cells are common in excised lymph nodes from children and adolescents without IgG4related disease. J Hematop. 2023 Dec;16 (4):209-216. PMID: 38175435. Epub 2023 Nov 09

Yue W, Tran HT, Wang J, Shiermeyer K, **Gildea** JJ, Xu P, **Felder RA**. The hypertension related gene G-Protein Coupled Kinase 4 contributes to breast cancer proliferation. Breast Cancer: Basic and Clinical Research.15:1-8, 2021. DOI 10.1177/1178223421 1015753.

**Gradecki SE, Stelow EB**. INI1-deficient carcinoma with yolk sac tumor differentiation: case report and review of the literature. Am J Surg Pathol Case Rep

Al-Dojaily Y, Omieste W, Flowers R, **Gradecki SE**. Chronic leg ulcerations and subcutaneous panniculitis due to dermal herpes zoster in an immunosuppressed woman. (Under review at International Journal of Dermatology

Larkey NE, Paulson VA. Joint Consensus Recommendations for Validating Cell-Free DNA Assays. Clin Chem. 2024 Jul 5;70 (7):1000-1001. PMID: 38965697

Larkey NE, Obiorah IE. Advances and Progress in Automated Urine Analyzers. Clin Lab Med. 2024 Sep;44(3):409-421. PMID: 39089747. Epub 2024 May 27 Larkey NE and Obiorah IE. Progress and advances in automated urinalysis. Clinics in Laboratory Medicine. July 2024. DOI:10.1016/j.cll.2024.04.003

Boeding E, Benson P, **LeGallo RD**\*. Sudden Death Due to Ruptured Three-Vessel Giant Coronary Artery Aneurysm in a 28-Year-Old Woman with Trisomy 21. Acad Forensic Pathol

Stephan C, Barone P, Kim J, **Ma L**. Primary cutaneous marginal zone lymphoproliferative disorder following COVID-19 vaccination. J Cutan Pathol. 2024 Mar;51(3):193-197. PMID: 38018231. Epub 2023 Nov 28

Medved J., Burnett E., Boscia A., Thorkelsdottir G., Acharya S., Niebuhr C., Tarrah S., Li A., Santhanakrishnan M., Hendrickson J., Zimring J., Luckey C., IL-21 receptor signaling drives anti-RBC alloantibody production in response to transfusion of stored red blood cells., In preparation

**Medved J.**, Burnett E., Tarrah S., Li A., Thorkelsdottir G., Acharya S., Salazar J., **Arneja A., Luckey C.,** STAT3 signaling in B cells drives anti-red blood cell alloantibody production in response to transfusion of stored blood, In preparation

Medved J., Li A., Carrasco-Alfonso M., Luckey C., Pou6f1 – A Novel Regulator of Immune Memory., In preparation

Medved J., Moscovich T., Shah N., Muppidi R., Raghavan R., Maram J., Stern-Green E., Niebuhr C., Li A., Salazar J.,

Santhanakrishnan M., Zimring J.,

Hendrickson J., **Luckey C.,** Transfusion of RBCs favors the production of short-lived low affinity antibodies over long-lived high affinity alloantibodies... In preparation

Medved J., Prakash A., Boscia A., Burnett E., Singh A., Swain W., Hester B., Niebuhr C., Selden O., Salazar J., Santhanakrishnan M., Howie H., Hudson K., Hendrickson J., Zimring J., Luckey C., IL-4 signaling is required for class switching to IgG1 in anti-red blood cell alloantibody production in the KEL system., In preparation

Medved J., Shah N., Hester B., Burnett E., Boscia A., Moscovich T., Swain W., Chandler A., Schwartzschild C., Kodali A., Cherakaoui I., Strand J., Trubetskoy M., Muppidi R., Stern-Green E., Niebuhr C., Li A., Salazar J., Santhanakrishnan M., Zimring J., Hendrickson J., Luckey C., Transfused RBCs are Weak Inducers of IgG Class-Switching Due to Inefficient Induction of CD4+ T cell Help., In preparation

# Publications and Awards cont.

Medved J., Tarrah S., Thorkelsdottir G., Acharya S., Li A., Salazar J., Arneja A., Luckey C., IL-6 signaling controls the evanescence of anti-RBC alloantibodies in response to transfusion of stored blood, In preparation

Moore ME, Aguilera NS, Obiorah I, Williams E, Courville E. Assessment for acceleration and transformation of chronic lymphocytic leukemia/small lymphocytic lymphoma using histologic and immunohistochemical features: a case series. J Hematop. 2024 Sep;17(3):139-147. PMID: 39042242. Epub 2024 Jul 23

Singh A, **Obiorah IE**. Aggressive non-Hodgkin lymphoma in the pediatric and young adult population; diagnostic and molecular pearls of wisdom. Semin Diagn Pathol. 2023 Nov;40 (6):392-400. PMID: 37400280. Epub 2023 Jun 22

**Obiorah IE**, Upadhyaya KD, Calvo KR. Germline Predisposition to Myeloid Neoplasms: Diagnostic Concepts and Classifications. Clin Lab Med. 2023 Dec;43 (4):615-638. PMID: 37865507. Epub 2023 Aug 08

**Oliveira, AK,** et al. Oral cancer cell-derived extracellular vesicles can modulate an immunosuppressive microenvironment through M2 phenotype polarization

**Oliveira, AK**, Sá, JO, Oliveira, ES, Domingues, R, Sherman, N, Porterfield, V, Fox, JW, Paes Leme, AF. Extracellular vesicles from oral cancer-induced cancer stem markers in reprogrammed iPSC from gingival fibroblast.

**de Oliveira, AK,** et al. Spatial Transcriptomic neighboring reveals cancer-drive components associated with an inflammatory and protumorigenic microenvironment in normal human dense breast tissue. St Jean SC, Ricart Arbona RJ, Mishkin N, Monette S, Wipf JRK, Henderson KS, Cheleuitte-Nieves C, Lipman NS, Carrasco SE. Chlamydia muridarum infection causes bronchointerstitial pneumonia in NOD.Cg-Prkdcscidll2rgtm1Wjl/SzJ (NSG) mice. Vet Pathol. 2024 Jan;61(1):145-156. PMID: 37434451. Epub 2023 Jul 11

Coppock JD, **Stelow EB**. Biphenotypic sinonasal sarcoma. Am J Surg Pathol Case

Crawford MP, **Stelow EB**. HPV-related multiphenotypic sinonasal carcinoma. Am J Surg Pathol Case Rep

Mallinger W, Reid P, **Stelow EB**. Fraternal coopers develop sinonasal intestinal-type adenocarcinoma. Am J Surg Pathol Case Rep; Whitehair R, **Stelow EB**. Sinonasal ameloblastoma: a case report and a review of gnoathic lesions that occur in the sinonasal press.

Dusenbery AC, Petersen WC, Ring KL, Thomas MH, Adams DM, **Williams ES**. *PTEN* Somatic Mosaicism in a Pediatric Patient with Lower Extremity Hemihypertrophy and Arteriovenous Malformation. *Pathol Int, In press.* 

**Wu Y**, Lepe M. Benchtop fine needle aspirations: An untapped source of cytologic educational material. Diagn Cytopathol. 2024 Feb;52(2):E48-E53. PMID: 37991114. Epub 2023 Nov 22

Yadava RS, Mandal M, Mahadevan MS. Studying the Effect of MBNL1 and MBNL2 Loss in Skeletal Muscle Regeneration. Int J Mol Sci. 2024 Feb 26;25(5):2687. PMID: 38473933. Epub 2024 Feb 26

Zadeh SL, Stelow EB. Nasal chondromesenchymal hamartoma in a

patient with DICER-1 predispostion syndrome. Am J Surg Pathol Case Rep;

Jash A, Pridmore T, Collins JB, Hay AM, Hudson KE, **Luckey CJ**, **Zimring JC**. Complement C3 and marginal zone B cells promote IgG-mediated enhancement of RBC alloimmunization in mice. J Clin Invest. 2024 Apr 15;134(8):e167665. PMID: 38618959. Epub 2024 Apr 15

D'Alessandro A, Lukens JR, **Zimring JC**. The role of PIMT in Alzheimer's disease pathogenesis: A novel hypothesis. Alzheimers Dement. 2023 Nov;19(11):5296-5302. PMID: 37157118. Epub 2023 May 08

Dziewulska KH, Reisz JA, Hay AM, D'Alessandro A, **Zimring JC**. Hemolysis and Metabolic Lesion of G6PD Deficient RBCs in Response to Dapsone Hydroxylamine in a Humanized Mouse Model. J Pharmacol Exp Ther. 2023 **Sep**;386(3):323-330. PMID: 37348965. Epub 2023 Jun 22

### Ph.D. Dissertations

#### Marissa Gonzales Stevens

Modulation of Mitochondrial Dynamics and T cell metabolism.

#### Karolina Dziewulska-Cronk

Mechanisms of G6PD-deficient RBC hemolysis mediated by oxidizing drugs.

#### Yi He

Islet-On-Chip and 3D Bioscaffolds for Islet Transplantation.

#### **Dionne Argyle**

Sex Differences in IgG1-Mediatied Inhibition of Choroidal Neovascularization.

### Awards



**Kristen Atkins, M.D.,** was installed as President of the American Society of Cytopathology (ASC). ASC, founded in 1951, is a national professional society of 3,000+ physicians, cytologists, and scientists who are dedicated to the cytologic method of diagnostic pathology. The ASC's membership includes representatives from other countries who share a vision of education, research, and continuous improvement in the standards and quality of patient care. The society provides a forum where physicians and cytotechnologists (cytologists) can interact and network with each other on both a personal and professional level. ASC is dedicated to education, research, and patient advocacy. Several of UVA's faculty are actively involved in the society and many of UVA's trainees have received advocacy grants and travel scholarships.

# Publications and Awards cont.



Adam Goldfarb, M.D., Ph.D., receives inaugural award of the Stacey E. Mills M.D. Professorship of Pathology, an endowed chair that commemorates the august career and service to our department of Dr. Mills, who was a long time Director of Anatomic Pathology at UVA and an internationally acclaimed diagnostician with a lifetime publication count of over 250 peer-reviewed manuscripts. Dr. Mills retired in 2019. The stated purpose of the endowment is to "provide support for a faculty member providing leadership in academic activities in the Department of Pathology". The first recipient of this professorship is Dr. Adam Goldfarb, who exemplifies the purpose of the chair. Dr. Goldfarb has served as the Chief of the Division of Experimental Pathology since 2012, overseeing the faculty, space, and resources of faculty involved in extramurally funded bench research. He is a productive clinician scientist who has provided distinguished clinical service on our hematopathology diagnostic service and was Director of the Clinical Flow Cytometry Laboratory for many years. The research in his laboratory is focused in three main areas: 1) mechanisms of platelet development and differentiation, 2) mechanisms of erythropoiesis, and 3) mechanisms involved in chronic anemia and iron metabolism. His lab has been continually funded by competitive grants from the National Institutes of Health since 1997, totaling over 13 million dollars in direct funding support. He has successfully mentored six graduate students in thesis projects for Ph.D. degrees, and he has served as the Associate Director for Admissions for the UVA Medical Scientist Training Program since 2016. The UVA Department of Pathology is pleased to both recognize Dr. Goldfarb for his career achievements and to provide support for his investigations and other academic activities moving forward. Congratulations!



James H. Harrison, Jr., M.D., Ph.D., a professor in the UVA Department of Pathology, was presented the Outstanding Service Award at the 2024 annual meeting of the College of American Pathologists (CAP).

The award recognizes Dr. Harrison for being a thought leader in the application of artificial intelligence (AI) in the field of laboratory and pathology diagnostics. Dr. Harrison established and chaired the CAP's first project team for AI and machine learning, and he led the publication of an overview of AI and machine learning for pathology in *Archives of Pathology & Laboratory Medicine*. The project's success sparked the formation of the AI Committee at the CAP.

Additionally, Dr. Harrison was commended for his excellence in serving as chair of the CAP Informatics Committee for the past four years, where he helped author the CAP's interoperability and AI strategies and contributed to the CAP's participation in national policy development on interoperability and the use of artificial intelligence in healthcare. Dr. Harrison's passion for excellence and for the CAP and its mission are evident through his involvement in more than 30 CAP committees, councils, project teams, and workgroups, as well as his continued involvement in several other pathology organizations and entities.



**Robin LeGallo, M.D.,** received the 2024 **Michele Raible Distinguished Achievement Award**. The Association for Academic Pathology (formerly the Association of Pathology Chairs) gives this annual UME Distinguished Achievement Award to honor a pathology educator who demonstrates a range of contributions at local, regional, and national levels in undergraduate medical education. Anyone who was a UVA medical student or who worked in pathology over the last 10 years will not be surprised by this recognition. However, people may not know the wide extent of her outreach.

In the last six years, Dr. LeGallo has received teaching awards from the graduating medical school classes every year. Four times, she won the Robert Bennett Bean Award (which is awarded to one faculty for excellence in teaching in the preclerkship curriculum). Even more impressive is that twice she was named as the Robley Duglinson Award recipient, which is given to a <u>single</u> faculty from the graduating class for teaching efforts and personal contributions that "arouse interest and inspire the endeavors of students".

Dr. LeGallo has been involved in evening the application process and healthcare access for historically marginalized populations. She collaborates with the SNMA to do outreach and mentoring to high school and undergraduate students. She was part of the working group for the formation of a transgender clinic, provides physician support on Pride Day, and recently participated in a panel discussion on transgender pathology at the USCAP national meeting.

After serving as an active member of the Undergraduate Medical Educators (UMEDS), she served as their president for two years. Additionally, she has been a writer for the NBME/USMLE pathology material development committee.

Dr. LeGallo is beloved for her teaching, accessibility, and interest in the well-being of the students. Concisely, Dr. LeGallo is a rock star medical student educator.

### Publications and Awards cont.



**Nick Larkey, Ph.D.,** was elected as Chair-Elect for the Capital Section of the Association for Diagnostics & Laboratory Medicine (ADLM, formally AACC). The position has a three-year term, with Nick serving as Chair and Past-Chair in 2025, and 2026, respectively. The section was founded in 1951 as the Washington-Baltimore-Richmond Section of AACC, but changed its name to the Capital Section in 1961 as its member base was spread wider than just those three cities. The section serves ADLM members in DC, Maryland, and Virginia.



John Luckey, M.D., Ph.D., was inducted into the Association for the Advancement of Blood and Biotherapies (AABB) Hall of Fame at the Annual Meeting. The AABB Foundation introduced the Hall of Fame in 2007, recognizing

a prestigious and select group of Foundation grant recipients who leverage their early-career grant funding into successful careers in transfusion medicine of biotherapies and who demonstrated exemplary leadership within the field.





**Katia Sol-Church, Ph.D.,** received, along with her colleagues from the Committee on Core Rigor and Reproducibility (CCoRRe) of the Association of Biomolecular Resources Facilities (ABRF), the National Institute of Neurological Disorders and Stroke (NINDS) Rigor Champions Prize. The NINDS Rigor Champion Prize is being run by the Office of Research Quality at NINDS and is aimed to identify individuals or small teams who are exemplars of promoting enhanced research rigor and transparency practices (i.e., rigor champions), and to lead activities that have or are changing the culture of science on a local (e.g., laboratory, departmental) or broader (e.g., institution-wide, national, field-wide) level. As a co-founder of the ABRF CCoRRe, Dr. Sol-Church has been raising awareness and promoting the adoption of rigorous and transparent practices within the core facility community.

The team has been invited by the NINDS to make a presentations of their work in April 2025. The event will be dedicated to showcasing NINDS programs and activities to their diverse neuroscience community and is meant to be a celebration of the Rigor Champions Prize and of the winners' efforts in this space.





**Jim Zimring, M.D., Ph.D.,** received the **Tibor Greenwalt Memorial Award** for contributions to transfusion medicine. The Association for the Advancement of Blood and Biotherapies (AABB) has selected James Zimring, MD, PhD, as the recipient of the 2024 Tibor Greenwalt Memorial Award and Lectureship. Dr. Zimring is the Thomas W. Tillack Professor of Experimental Pathology in the Department of Pathology. Established in 2006 through a grant from Peter Greenwalt, MD, this award recognizes an individual who has made major scientific or clinical contributions to hematology, transfusion medicine or biotherapies, and succinctly communicated these advances.

Dr. Zimring's contributions to the field of pathology and transfusion medicine and his scientific achievements are commendable. He was among the first to use murine models extensively to study transfusion-based alloimmunization to red blood cells, hemolytic transfusion reactions and mechanisms of immunoprophylaxis of anti-D. These models have since been used throughout the field and have been indispensable in spurring further developments and leading to improvements in blood safety worldwide.

Dr. Zimring was recognized at the AABB Annual Meeting in Houston, Texas on October 19-22, 2024, and also present a lecture.

The <u>AABB</u> is a top international transfusion society with representation in more than 80 countries. The Association fosters advancements in the field of transfusion medicine through the delivery of standards, accreditation, and educational programs that focus on optimizing patient and donor care and safety.

# **National Presentations**

### 2024 CAP Meeting Report

by: Anne Mills

This October, members of UVA Pathology had a stellar time at the 2024 Annual Meeting of the College of American Pathologists (CAP) in Las Vegas, NV.

Several trainees were in attendance to present their research, with fellow Jenny Zhang, resident Manda Gibbs, and medical student Briana Wilson showcasing posters on hematopathology and fetal autopsy, HER2 in BRG-deficient gastrointestinal tumors, and PD-L1 antibody clone variability in cervical carcinomas. Resident Andrew Biesemier represented our department during the combined House of Delegates and Residents Forum, which focused on topics ranging from advocacy on laboratory-developed testing (LDT)-related legislation to successfully integrating digital pathology into practice.

At the faculty level, Dr. Jeffery Craig led a session on the diagnosis of peripheral T-cell lymphomas for the general pathologist while Dr. Ifey Obiorah presented her work on hemoglobinopathy proficiency testing with recommendations by the Hematology and Clinical Microscopy CAP Committees. Dr. Anne Mills carried on Dr. Mark Stoler's legacy as Co-Chair for the Lower Anogenital Squamous Terminology (LAST) Project, which provides diagnostic best-practices for HPV-associated intraepithelial lesions from across the anogenital tract. She also continued her service on the House of Delegates and delivered a talk on molecular updates in endometrial carcinoma.

The biggest highlight of the meeting, however, was Professor Jim Harrison's receipt of the 2024 CAP Outstanding Service Award. Dr. Harrison was recognized for his years of service on more than 30 CAP committees, councils, project teams, and workgroups. Most recently, he served as the Informatics Committee Chair and spearheaded the organization's strategies on interoperability and artificial intelligence. His efforts have been instrumental in informing the FDA's Standardization of Lab Data to Enhance Patient-Centered Outcomes Research and Value-Based Care (SHEILD) initiative. We here at UVA Pathology are of course well-aware of Dr. Harrison's indelible contributions, so it quite gratifying to see that the rest of the world is too: Congratulations, Jim!

After all our hard work, faculty, trainees, and program alumni convened with several UVA Pathology alumni for a delicious Mediterranean meal at Safta 1964 at the Wynn Hotel. What happens in Vegas it alleged to stay in Vegas, but rumor has it there was also plenty of extracurricular revelry including wax celebrity sightings at Madam Tussauds Museum for the CAP Foundation Benefit Gala, Cirque de Soleil showings, and hiking in Red Rocks Canyon. If anyone gave in to the siren song of the slot machines, they managed to keep their bank accounts well enough intact to make it back safely to Charlottesville to return to patient care, teaching, and research with renewed enthusiasm.



Clockwise from Right: The UVA Pathology crew (L to R: Andrew Biesemier, Manda Gibbs, Jenny Zhang, Briana Wilson, Anne Mills, Laurie Griesinger, Jeffery Craig, Meg Dibbern, Ifey Obiorah) after dinner at Safta 1964; Dr. Jim Harrison, winner of the CAP 2024 Outstanding Service Award; the famous Vegas Sphere; Dr. Anne Mills with colleagues from the LAST Project; residents Dr. Manda Gibbs and Andrew Biesemier; Dr. Gibbs with her research poster).

# Philanthropy

### **Innes Fellowship**

In memory of Dr. Don Innes, the Department of Pathology established the "Innes Fellowship". This initiative, now in its 9th year, commemorates Dr. Innes's legacy by sponsoring two rising second-year students in our 7-week summer program, which is designed to provide students with clinical skills, education, and research opportunities spanning all areas of anatomic and clinical pathology.

The Innes Fellowship has proven to be an instrumental tool for pathology recruitment. The first ten participants have either entered the field of pathology or are presently in the interview process. Five out of the initial eight participants have chosen to continue their training at UVA for residency, subsequently assuming roles as chief residents and fellows.

Beyond its impact on recruitment, the Fellowship extends its influence through the leadership provided by former participants. These individuals lead our student pathology interest group, have won travel grants and have served on committees in national organizations and advocate for the subspecialty among their peers.



Former Innes Fellows recently presenting the program as poster at the 2023 College of American Pathologists annual meeting in hopes to spark other insti-

The Innes Fellows receive a stipend in alignment with the Medical School

Summer Research Program. The financial support for the Fellowship is generously provided by pathology alumni donations, underscoring the commitment and generosity of our alumni community.

### **Cytogenetics and Molecular Genetics Fellowship**

A major missing piece to our training programs has been specialized training in molecular diagnostics. Eli Williams, PhD has taken on the task of creating this two-year fellowship program and the department has decided to self-fund this program without institutional support. We could use your help in supporting this fellowship to enhance UVA's role in shaping the burgeoning fields of molecular diagnostics and clinical genomics.

### Sponsor a Pathology Summer Fellowship

The eight-week summer enrichment program in pathology provides second-year medical students with hands-on experience in disease diagnosis. Each intern rotates through all AP and laboratory medicine services. Please consider supporting our profession by contributing a

donation to support a medical student in this program. The cost of hosting each student is \$2,500. With your support, we hope to provide two student stipends in 2025.

### **Global Outreach**

We are pleased to announce several global outreach initiatives in pathology. Please consider a generous donation to assist us in providing these pathology outreach opportunities to our faculty and trainees. Professor of Pathology Henry Frierson, M.D. and pathology residents are spearheading pathology clinical outreach and cervical screening campaigns in Guatemala.

Donations can be made online by clicking on the "Make a Gift" button on the UVA Pathology website at med.virginia.edu/pathology.

### **WVAHealth**

### UVA Health

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Winning image, titled "Building Blocks," by Margaret Cocks, MD, PhD, one of our dermatopathology fellows for 2018-2019.