

Pathways to Excellence

URMC DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE | WWW.PATHOLOGY.URMC.EDU | FALL 2024



A recently completed second-floor addition and other renovations will allow two more Pathology teams to join their colleagues off-site at Bailey Road.

Innovation, Growth Drive Future of URMC Pathology

URMC Pathology and Laboratory Medicine, already renowned for its excellence, is on a course toward even greater accomplishments. At its helm stands Christa Whitney-Miller, MD, a visionary leader who is steering one of the nation's largest clinical laboratory operations into a future brimming with innovation and growth.

The professor of Pathology and Laboratory Medicine and the inaugural Frieda Robscheit-Robbins Professor joined the faculty in 2009. She has held the positions of director of the Gastrointestinal Pathology Service, director of Surgical Pathology, and most recently vice chair of Anatomic Pathology. She was tapped as interim department chair in 2022 and, after a nationwide search, assumed the role of department chair in December 2023.

As a first-time chair, she brings a fresh perspective to the leadership role, complemented by more than 15 years as a key member of the URMC team. Building upon the solid foundation laid by her predecessors, she is leading a three-pronged approach to advance the department's core missions: clinical service, education, and research.

"We've experienced tremendous growth over the past decade," Whitney-Miller said. "Now, it's time to catch up with that growth and push even further ahead."

CLINICAL

The department boasts one of the biggest clinical operations in the United States, with 70 faculty members, 1,100 staff members and 12 million tests performed annually. It has

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MEDICINE



Christa Whitney-Miller, M.D.

Greetings! We are appreciating our beautiful weather here in Rochester and I'm trying to make time for so many of the good things this region offers in the autumn months. I hope you are able to do the same, wherever you are, and that you are striving for – even achieving! – a healthy work-life balance.

In spite of the pace we may personally strive for, things continue to hum right along here at URMC. As

we look back on a busy stretch here in Rochester, and look forward, the list of accomplishments for our department is long. I proudly offer a few highlights:

We have welcomed many talented individuals, both faculty and trainees, to our team. New pathologists – Jim C. Lee, MD, Ka Keung (Jackie) Chan, PhD, and Chauncey Syoss, DO – joined us. This summer and fall brought Dan Lu, BMed., Ph.D, Andrew Nelson, MD, PhD, Veronica Ulici, MD, and Hiba Nabeel, MD. All will undoubtedly help further our key missions. Seven residents have come on board this year, along with seven fellows, and eight Ph.D. and MD/PhD trainees. We are happy to have them on our team.

We received glowing survey results and earned the highest status of reaccreditation (10 years!) for our Clinical/Medical Technology program. The achievement underscores the success of this homegrown initiative, which trains CMTs to meet high demands for that role in Rochester and beyond. Many thanks to Vicki L. Roberts, M.S., Director of Education

and Clinical Laboratory Technology Program Director, for shepherding this.

On the clinical side, our Flow Lab is one of three sites in the nation to research a new type of T-cell testing. A fruitful collaboration began in 2021 between a new attending and the Flow Lab team, resulting in a testing technique that was approved by New York State. It is now providing patients and their care teams at the Wilmot Cancer Institute with test results much faster – from weeks by PCR to just hours using cytometry. I am privileged to lead a department where such advances happen, ultimately making a significant difference by improving health care for our patients and their families.

Looking ahead, the biggest news may be our Central Lab expansion project. The multi-year, multi-phase project is providing space at our Bailey Road facility to house the majority of Pathology, with the exception of key teams that remain onsite at SMH to quickly support patient care. Construction crews have completed the last piece of the puzzle, erecting a 19,000-square-foot, second-floor addition that allow us to bring over our last remaining labs, Surgical Pathology and Cytopathology. The move-in happens before the end of the year, and we can't help but think about a ribbon-cutting celebration in early 2025.

And now a favor: We hope you enjoy our department's updates, but we also want to hear from you, our valued alumni who are doing so much to impact our chosen field of Pathology. Please let us know of your achievements – awards and recognition, new career opportunities, significant publications, groundbreaking initiatives and research, as well as personal accomplishments. Just as it was when you were here with us, we continue to cheer you on as you progress on your career journey! Submission information is below.

Wishing you all health, happiness, and professional fulfillment.



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one of the largest anatomic pathology divisions in the nation, performing 180,000 cases annually.

Whitney-Miller's strategy is clear: Bolster the department's capabilities by recruiting additional faculty and support staff while investing in cutting-edge technology. Digital pathology stands at the forefront of this technological revolution, offering a versatile tool that spans diagnostics, education, and research.

"Given the size of our clinical operation, we're uniquely positioned to develop AI-based diagnostic tools," Whitney-Miller said.

This initiative dovetails with the ongoing expansion of the Molecular Diagnostics Lab, which continues to broaden its testing repertoire. "In the era of personalized medicine, expanding our molecular oncology and

inherited disease testing is crucial."

Literal expansion is taking place this fall, with completion of Phase 3 of the off-site, multi-phase expansion and consolidation project at Central Laboratory and the move of many of the remaining non-acute teams from Strong Memorial. Consolidating operations in a centralized facility allows for sustained growth as volumes continue to increase and more employees join the department.

EDUCATION

The department's educational mission also has seen significant growth, a trend Whitney-Miller intends to nurture. Her vision includes targeted expansion, particularly in department-created workforce development programs.

"Our unique training initiatives for clinical/medical technologists, histotechnologists, and phlebotomists are successfully addressing staff shortages," she said.

These innovative programs are transforming students into prepared employees, equipped with the knowledge and experiences required in high-quality labs. Staffing shortages have been experienced across the state and nation for years, then were exacerbated by the pandemic, so graduating stellar candidates improves the broader healthcare landscape. But the primary goal of the programs has been to support the department's own labor needs. That has been achieved as part of the grassroots efforts, with a large percentage of graduates choosing to stay and work at URMC. New partnerships throughout the region are expected to grow the programs and their results.

Whitney-Miller also emphasizes efforts related to attracting some of the top residents and fellows, and continued support for PhD students, recognizing their vital role in advancing the field of pathology.



Pathology's CMT graduating class of 2024.

RESEARCH

In research, Whitney-Miller aims to expand the department's translational science footprint. Plans include recruiting a vice chair of Experimental Pathology to lead new research teams, with a focus on human tissue-based investigation that complements the medical center's existing pillars of research excellence.

"We currently offer a robust infrastructure for supporting clinical and translational research," Whitney-Miller said. This includes financial, administrative, and statistical support, as well as dedicated academic time. The department already boasts multiple collaborations with other medical center teams, including the Wilmot Cancer Institute and the Center for Musculoskeletal Research, providing a strong foundation for future growth.

Yet Whitney-Miller's vision extends beyond mere expansion. She is deeply committed to fostering a welcoming and inclusive environment for learners, staff, and faculty alike.

"Equitable pay and a supportive workplace are non-negotiable," she said, underscoring her dedication to creating a department where everyone can thrive.

As Whitney-Miller charts this ambitious course, she remains mindful and appreciative of Pathology's history. "The talented and dedicated chairs before me developed and shepherded a department that is now one of the most respected in the country. It's an honor and my privilege to build upon that legacy."

Alumni Notes

We want to hear from you!

Share your good news – professional achievements and personal accomplishments – with fellow URMC Pathology alumni and faculty.

Email details to:

karin_christensen@urmc.rochester.edu



Vicki Roberts, MS

CMT PROGRAM AWARDED REACCREDITATION

Our Advanced Certificate Program in Clinical/Medical Technology (CMT) was awarded reaccreditation this spring from the National Accrediting Agency for Clinical Laboratory Science (NAACLS).

The program earned accreditation for 10 years, the highest status awarded, said Vicki Roberts, MS, Director of Education and Clinical Laboratory Technology Program Director. "Achieving and maintaining national accreditation elevates the status of the program nationally and globally."

The full-time, nine-month program was created in 2017 to increase the number of CMTs being trained and available for hire. A shortage of such talent due to a lack of training programs has been felt in Rochester and across the state. The department developed and launched its own educational program to increase the pool of eligible applicants.

Since its creation, the CMT program has graduated 106 CMT students. The eighth class begins training in August.



Jennifer Findeis-Hosey, MD

FINDEIS-HOSEY NAMED INTERIM DIRECTOR OF SURGICAL PATHOLOGY

Jennifer Findeis-Hosey, MD, Associate Professor of Pathology, has been named Acting Director of Surgical Pathology. A long-standing member of the department, Findeis-Hosey's clinical focus is Gastrointestinal Pathology and she devotes time to research, primarily studying Lynch Syndrome. She will remain in her role as Vice Chair of Educational Programs while a search is conducted for a permanent Surgical Pathology director.



Norah DeMayo

STUDENT QUALIFIES FOR REMS PROGRAM

Norah DeMayo, a 2023 Explorations in Pathology (EIP) attendee, has been admitted into the Rochester Early Medical Scholars program (REMS). Owen Tolbert was the first and is a current medical student through the program.

"It's nice to be able to see our department supporting the undergrad system, and realizing the benefit of a REMS student who comes into medical school with a significant knowledge base in pathology," said Jennifer Findeis-Hosey, director of EIP.

REMS is an eight-year BA/BS + MD program for outstanding undergraduates who are committed to pursuing a medical career. As a REMS student, you're admitted to the University's School of Medicine and Dentistry once you successfully complete a bachelor's degree and pre-med courses. Students work closely with highly respected faculty members, attend special events, and gain hands-on experience in clinics and labs.

OUR NEW LEARNERS

We have welcomed many new trainees this year.

PGY-1s

- Heong Jin Christian Ahn, DO
- Hannah Bell, MD, PhD
- Nosaibah Hariri, MBBS
- Alex Schmidli, MD
- Jordan Schneider, MD
- Hangchuan Shi, MD, PhD
- Virginia Venta Pacheco, MD

Fellows

- Natalia Yanchenko, MD, PhD
 - Breast/GYN
- Aijan Ukudeeva, MD
 - Breast/GYN
- Sanket Choksi, MBBS
 - Hematopathology
- Irina Lerman MD, PhD
 - Dermatopath
- Wilrama Lima, MD, DDS
 - Surgical Pathology
- Buket Bagci, MD
 - GI
- Nicholas Tong, MD
 - Blood Bank/Transfusion Medicine

PhD and MD/PhD trainees

- Daniel Han, MD/PhD trainee
- Amal Khan, PhD trainee
- Nidhi Shah, PhD trainee
- Levy Sominsky, MD/PhD trainee
- Amanda Streeter, PhD trainee
- Usman Syed, MD/PhD trainee
- Emma Ushchak, PhD trainee
- Yuxi Zhu, PhD trainee

REMEMBERING DR. LEON LUM WHEELLESS

Leon Lum Wheelless Jr., PhD, Professor Emeritus of Pathology & Laboratory Medicine with a joint appointment in Urology, died April 12 in Charlottesville, Virginia. He was 88.



Dr. Wheelless' background was in optics. He built and had patents for a slit scan flow cytometer that took up nearly an entire room on the third floor at URM. He worked

closely with his Urology colleagues, with research focused on bladder cancer, sickle cell anemia, and early detection of cervical cancer.

Dr. Wheelless will be remembered as a talented pathologist researcher, teacher and friend.

Mary O'Connell, now a Senior Research Specialist in the Department of Medicine AIR, was Dr. Wheelless' research technician from 1987 until he retired in 2005. "He incorporated new technologies to apply to his research and he truly valued every team member's ideas." O'Connell recalled his love for sailing on Lake Ontario and how he traveled the world with his wife, Waldine.



Dr. Wheelless and Neil Blumberg, MD, Director of the Transfusion Medicine Unit, Blood Bank, and Stem Cell Storage, were colleagues for a quarter of a century. "He was a kind, thoughtful, and brilliant man. Hail and farewell."

"I had the pleasure of working with Leon from 1977 to 1982 in his laboratory at Strong Memorial Hospital," said Peter Lopez of Comprehensive Cell Solutions. "He was a visionary and inventor of flow cytometric instrumentation well ahead of its time. I was lucky to have had the opportunity to work with such a kind and generous individual."

Timothy Bushnell, PhD, MBA, Director of the URM Center for Advanced Research Technologies (CART), met Dr. Wheelless after he retired and knew him as "a true scholar and gentleman," always interested in what was going on in Bushnell's lab. "For many years I ran an annual meeting – Western NY Flow Cytometry Users Group – and we gave out an annual award for about 10 years named in honor of Leon."

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and training new technologists strengthens the pathology pipeline and helps staff our labs with skilled personnel.

CURRENT RESEARCH AND WHY IT IS IMPORTANT:

A major research focus is understanding the molecular basis of hematologic conditions, ranging from age-related clonal hematopoiesis to overt blood cancers. I am interested in how both germline (inherited) and somatic (acquired) variants influence cancer predisposition, anti-tumor immunity, and autoimmune/autoinflammatory conditions. During routine clinical practice, I have uncovered several incidental germline findings – linked to POT1 Tumor Predisposition, RUNX1-Familial Platelet Disorder, Weaver Syndrome, and MyD88 deficiency -- in patients with unusual presentations. These findings enabled affected patients and families to benefit from genetic counseling and/or early cancer screening. More broadly, understanding the genetic basis of cancer and immune disorders can help us develop more effective therapies.

WHO OR WHAT HAS IMPACTED YOU AND YOUR CAREER AS YOU'VE MADE THE JOURNEY THIS FAR?

I learned the science, art, and joy of practicing medicine from exceptional mentors, educators, and patients. Early experiences at science fairs and summer medical enrichment programs inspired me to pursue MD/PhD training. While I was conducting cancer research, my mother was diagnosed with three cancers. Genetic testing reassured us she had no inherited predisposition to cancer. Fortunately, my mom fully recovered, largely due to advances in genomic medicine. Becoming a molecular pathologist felt like a fitting way to advance this blossoming field.

WHAT ABOUT YOUR SPECIALTY EXCITES YOU?

I am inspired by the incredible promise of genomic medicine. Molecular discoveries are informing new targeted therapies for cancer and inherited conditions, immunotherapies, tumor-agnostic drugs, and "n-of-1" treatments for rare diseases. The clinical use of breakthrough technologies like CRISPR as a precise gene-editing tool will enable us to treat diseases once believed to be incurable. I feel grateful to work in this innovative field.

WHAT PREPARED YOU MOST FOR YOUR CAREER?

My academic journey includes studying medicine, cancer cell biology, molecular pathology, healthcare management and mindfulness at eight universities after college. Training in both the sciences and humanities equipped me not only with a solid technical and research background, but also an appreciation for the art of leadership. I feel especially indebted to the uplifting summer enrichment programs I participated in during high school and college for fostering my love of science and medicine.

Focus on Faculty



NAME

Audrey Jajosky, MD, PhD

HOMETOWN

Grew up in five different states: CT, NJ, MD, WV, GA.

FAMILY

Brother is a pathologist and sister is an anesthesiologist/internist.

OCCUPATION

Molecular genetic pathologist; Assistant Professor, Pathology and Laboratory Medicine

EDUCATION

MD and PhD in Cancer Cell Biology from West Virginia University; clinical pathology residency at Case Western Reserve University, Cleveland; molecular genetic pathology fellowship at the University of Michigan, Ann Arbor.

WHAT BROUGHT YOU TO ROCHESTER?

URMC's friendly faculty, well-designed lab facilities at Bailey Road, location near the scenic Finger Lakes, and affiliation with a top research university made URMC an ideal choice. Given that I enjoy outdoor activities, the natural beauty of the Great Lakes Region was very attractive.

PLEASE DESCRIBE YOUR CURRENT ROLE.

My clinical practice entails sequencing tumor DNA to identify targeted therapies for cancer patients. I work closely with oncologists to characterize the unique biology of each patient's disease. Together we leverage molecular data to make accurate diagnoses, optimize treatment plans, and recommend follow-up, such as genetic counseling and/or ways to monitor therapeutic response. Despite the daily routine, I am still awed by the scientific advancements that promote precision medicine -- like completion of the Human Genome Project and improved understanding of cancer's genetic architecture.

Beyond clinical care, I help lead URMC's molecular diagnostics lab, medical-technologist training program, and "Explorations in Pathology" summer camp for high school students. Getting others excited about lab medicine
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