



CMP | Cellular & Molecular
Pathology Graduate Program

NEWSLETTER

CONGRATULATIONS

Zsuzsanna Fabry, PhD!



Congratulations to Dr. Zsuzsa Fabry, 2026 Distinguished Fellow of the American Association of Immunologists!

Zsuzsanna Fabry, PhD, CMP Director, has been named a Distinguished Fellow by the American Association of Immunologists (AAI). This award is among the highest honors bestowed by AAI and recognizes Dr. Fabry's extraordinary scientific contributions in neuroimmunology, as well as service to AAI and the immunology community. Dr. Fabry is a global expert in seeking to understand immune disorders impacting the brain such as multiple sclerosis as well as the complicated drainage of lymphatics and cerebrospinal fluid in the nervous system. Distinguished Fellows will be recognized at the AAI annual meeting held in Boston, April 15-19, 2026.

More information [HERE](#).



Faculty Trainers in the News

CMP Trainer news as published in the UW-Madison School of Medicine and Public Health News

FUNDS, GRANTS, HONORS & AWARDS

Top recognition awarded to 11 stroke researchers for science, brain health contributions [↗](#)

February 3, 2026

Raghu Vemuganti, PhD

Raghu Vemuganti, Ph.D., to receive the Thomas Willis Lecture Award at the International Stroke Conference in New Orleans. He will lecture on "Role of RNAs in post-stroke brain damage".

44 faculty honored with Vilas professorships and awards [↗](#)

May 1, 2025

Jiaoyang Jiang, PhD, Muhammed Murtaza, MBBS, PhD, Wei Xu, PhD, & Xinyu Zhao, PhD

Jiaoyang Jiang is a recipient of the Vilas Mid-Career Investigator Award, which recognizes research and teaching excellence. The award provides flexible research funding for three years.

Muhammed Murtaza is a recipient of the Vilas Mid-Career Investigator Award, which recognizes research and teaching excellence. The award provides flexible research funding for three years.

Wei Xu is a recipient of the Vilas Mid-Career Investigator Award, which recognizes research and teaching excellence. The award provides flexible research funding for three years.

Xinyu Zhao is a recipient of the Vilas Distinguished Achievement Professorship, which recognizes distinguished scholarship as well as standout efforts in teaching and service. The professorship provides five years of flexible funding – two-thirds of which is provided by the Office of Provost through the generosity of the Vilas trustees and one-third provided by the school or college whose dean dominated the winner.

RESEARCH

UW researchers find previously unknown links between microbial bile acids and the risk of colon cancer [↗](#)

December 13, 2024

Dustin Deming, MD & Ting Fu, PhD

A research team co-led by Ting Fu, PhD and Dustin Deming, MD has discovered that two bile acids modified by gut microbes have opposing effects on colon cancer development. The study, recently published in Proceedings of the National Academy of Sciences, found that one microbial bile acid supports the activity of the



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farnesoid X receptor (FXR)—a protein that helps maintain gut health—thereby slowing tumor growth, while another bile acid inhibits FXR and promotes cancer progression. Using both mouse models and human organoids, Deming and colleagues demonstrated that these opposing effects highlight the complex role of gut microbes in influencing cancer risk and point toward new strategies for early detection and targeted colorectal cancer therapies.

Parkinson's treatment tested at UW showing promise in first clinical trial [↗](#)

October 14, 2025

Marina Emborg, MD, PhD

Marina Emborg, a professor of medical physics, played a pivotal role in developing and validating a promising new cell therapy for Parkinson's disease now being tested in humans. Her team at the Wisconsin National Primate Research Center demonstrated the safety and precision of grafting dopamine-producing neurons—grown from a patient's own cells—into the brains of monkeys, paving the way for Aspen Neuroscience's ongoing ASPIRO clinical trial. The research refined surgical delivery methods and confirmed that using autologous cells

avoids immune rejection, offering a safer, personalized treatment approach. Emborg's collaborative work with Aspen scientists provided key data that enabled the first human trials, marking a major step toward regenerative therapies that could restore motor function and improve quality of life for people with Parkinson's.

Human stem cell-derived heart cells are safe in monkeys, could treat congenital heart disease [↗](#)

November 13, 2024

Marina Emborg, MD, PhD

Professor Marina Emborg led a study showing that human stem-cell-derived heart cells can safely integrate into monkey hearts, offering new promise for treating congenital heart disease. Her team used rhesus macaques with surgically induced right-ventricular defects and transplanted human iPSC-derived cardiomyocytes into their hearts. The cells survived, matured, and connected with native tissue, improving function without lasting complications—a major step toward safe, regenerative heart therapies for children with congenital defects.



Faculty Trainers in the News

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A UW biochemistry researcher is studying effective treatments for the next pandemic. Federal funding changes are slowing the work [↗](#)

May 13, 2025

Robert Kirchdoerfer, PhD

Robert Kirchdoerfer, assistant professor of biochemistry, studies how coronaviruses replicate and evolve to develop treatments that could combat future outbreaks. His lab uses cryo-electron microscopy to visualize viral enzymes involved in RNA proofreading, a process that makes coronaviruses unusually resistant to many antiviral drugs. By understanding this mechanism, Kirchdoerfer aims to guide the design of more effective therapeutics. However, recent changes in federal research funding have forced his lab to scale back collaborative projects and pause new student recruitment, threatening both scientific progress and training opportunities for emerging researchers. Kirchdoerfer emphasizes that long-term investment in research and education is essential to prepare for the next pandemic.

UW researchers uncover possible new treatment to target a devastating childhood brain cancer [↗](#)

October 15, 2025

Peter Lewis, PhD

Assistant Professor Peter Lewis, Department of Biomolecular Chemistry, together with collaborators including Melissa Harrison, has developed a fruit-fly model to study the deadly childhood brain tumor called Pediatric Diffuse Midline Glioma. They engineered flies to express human oncoproteins disrupting a gene-control system, then screened hundreds of fly genes to identify pathways that could worsen or rescue the resulting developmental defects. Their work not only uncovers potential therapeutic targets for this currently untreatable tumor, but also suggests the same gene-control system may play a role in more common adult cancers.

UW–Madison researchers find hidden genetic clues upping cardiovascular disease risk [↗](#)

June 4, 2025

Valentina Lo Sardo, PhD

Assistant Professor Valentina Lo Sardo and her team have cracked part of a decades old genetic mystery by showing how a region of the human genome known as the 9p21.3 locus boosts risk for coronary artery disease (CAD). Using induced pluripotent stem cells (iPSCs) from donors with the “risk” or “non risk” version of 9p21.3, her lab differentiated these into vascular smooth muscle cells and found that the risk cells shift toward a bone or cartilage like state, becoming more prone to calcification and less capable of healthy vascular remodeling. By editing out the risk variant, they restored a “normal” cell state—pointing to a potential pathway for future therapies and earlier detection of CAD risk.

With milk testing and new tools, UW scientists are helping prevent bird flu outbreaks in Wisconsin and beyond [↗](#)

October 15, 2025

Marulasiddappa Suresh, DVM, MVSc, PhD

Marulasiddappa Suresh, Associate Dean for Research and Graduate Training at the School of Veterinary Medicine, is leading a dual strategy response to the emergence of the bird flu virus H5N1 avian influenza in U.S. dairy cattle. His team is developing a “two pronged immunity” vaccine for cows that protects both against the traditional respiratory route and the newly identified mammary gland route of infection. Simultaneously, the lab supports large scale milk surveillance efforts—testing about 5,000 dairy samples per month in Wisconsin—to detect viral spread and emerging strains early. This work not only safeguards dairy herd health and food security but also bolsters pandemic preparedness efforts.

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Tackling treatment-resistant prostate cancer [↗](#)

November 13, 2024

Josh Lang, MD, MS

A five-year, \$12.5 million grant has been awarded to researchers at UW-Madison to investigate metastatic, or advanced stage, prostate cancer, the second most common cause of cancer death in men.



CMP Welcomes New Trainers

2025-2026 NEW TRAINERS:



Ksenija Bernau, PhD

*Assistant Professor
Pulmonary and Critical Care
Medicine
Dept. of Medicine*



**Amali Samarasinghe,
PhD, MS**

*Associate Professor
Allergy and Immunology
Dept. of Medicine*



Bryce LaFoya, PhD

*Assistant Professor
Dept. of Biochemistry*



John Williams, MD

*Professor
Department Chair
Dept. of Pediatrics*



*CMP student, Xiaoyue (Luna) Gao selected for the **2025 ASH Graduate Hematology Award!***

CMP is proud to announce that Xiaoyue (Luna) Gao has been selected by the American Society of Hematology (ASH) to participate in the 2025 ASH Graduate Hematology Award, part of ASH's investment in hematology research and the next generation of hematology physicians and scientists.

More info [HERE](#):

INTRODUCING NEW COURSE

Pathology 980: Clinical Experiences for Researchers:

Structured observation experiences across various medical clinics, including hematology, oncology, infectious diseases, and surgical pathology settings. Bridge the gap between laboratory research and clinical practice; enhanced understanding of disease diagnosis, treatment planning, and patient care. Supplemental discussions and reflective assignments encourage critical thinking about how research can directly impact patient care, offered Spring semester by Jessica Lang, PhD and April Hall, PhD.



Congratulations to CMP Graduates & Welcome New Students!

Congratulations to our 2025 Graduates as their graduate careers come to a successful conclusion. You will be missed!

Congrats Grads!

Spring 2025:

- Qianfan Yang, MS
- Mayra Betancourt Ponce, PhD
- Kim Edwards, PhD
- Mallorie Mitchem, MS

Summer 2025:

- Athena Golfinos, PhD
- Szu-tsen Yeh, MS
- Jenna Nagy, PhD
- Chris Lee, MS
- Marienela Heredia, PhD
- Josh Brand, PhD
- Billy Erazo, PhD
- Sasha Celada, MS
- Sara Maloney, PhD
- Hunter Ries, PhD
- Jennifer Anderson, PhD

Welcome to Our New 2025 Students!

- Alice Alhaj Kadour
- Andrea Alfonso
- Tessa Byrum
- Matthew Chrostek
- Marcos Lares
- Tim Locksmith
- Kate Loidolt
- Erick Nilsen
- Hailee Porter
- Maggie Sleeth
- Kate Stack



Student Awards & Accomplishments:

- **Dawson Stroik** (T32 Award)
- **Julia Colwell** (NIH F31 & Publication in Frontiers in Aging Neuroscience)
- **Thomas Harr** (CMP Travel Award, Department of Medicine Research Day Best Poster Award, Selected for flash talk at UW Carbone Initiative for Theranostics and Particle Therapy Symposium, CMP T32)
 - [The fibronectin-targeting PEG-FUD imaging probe shows enhanced uptake during fibrogenesis in experimental lung fibrosis](#)
- **Sophie Vrba** (Poster Presentation: *Amyloid-beta aggregates at the cribriform plate in mouse models of Alzheimer's disease*. Poster Presentation.- Gordon Research Conference: Neuroimmune Communication in Health and Disease)
 - [Amyloid-beta deposition and reduced drainage at the cribriform plate lymphatics in APP/PS1 mouse model of Alzheimer's Disease](#)
 - [Perineural immune environment of olfactory nerves is reshaped by neuroinflammatory drainage and connects to ethmoid bone marrow](#)
- **Soniya Tamhankar** (Conference: 19th Wisconsin Stem Cell Symposium (2025), Award: Received 1st place for flash talk/poster presentation, Poster Title: *Forward programming identifies inducers of blood-brain barrier properties in hPSC-derived endothelial cells*)



- **Jenna Port**
 - [Perineural immune environment of olfactory nerves is reshaped by neuroinflammatory drainage and connects to ethmoid bone marrow](#)
- **Tessa Byrum** (Computation and Informatics in Biology and Medicine Traineeship)
- **Mireya Pimental** (2025 GEM Fellowship)
- **Regan Harmon** (NIH AACR Scholar-In-Training Award)
- **Amanda Schussman** (F31)
- **Brendan Rattin** (BTP T32)