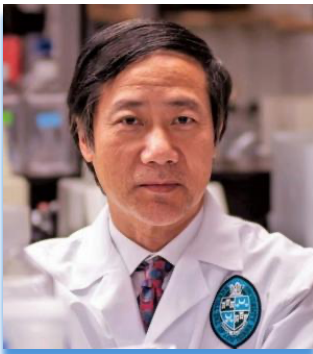


TULANE UNIVERSITY SCHOOL OF MEDICINE
DEPARTMENT OF PATHOLOGY & LABORATORY MEDICINE

PATHWAYS

NEWSLETTER

VOLUME 12, ISSUE 1 SPRING 2025



CONGRATULATIONS TO DR. YIN

Tulane University has announced the honors bestowed on two of its faculty members by the American Association for the Advancement of Science (AAAS), with one honoree being the Chair of the Pathology Department, Dr. Xiao-Ming Yin. Dr. Yin has been elected a 2024 Fellow of the American Association for the Advancement of Science (AAAS), one of the most prestigious honors in the scientific community. Dr. Yin's research is focused on the molecular mechanisms of autophagy in tissue injury, cell death, and the translational aspect of tissue repair and cancer therapy. Along with Dr. Wu-Min Deng, Dr. Yin joins a distinguished group of scientists, engineers, and innovators whose contributions have advanced science and its applications across disciplines.

Dr. Yin is the Dr. Donald R. and Donna G. Pulitzer Professor and Chair of Pathology and Laboratory Medicine. As Chair, he led the Department of Pathology and Laboratory Medicine at Tulane during the onset of the COVID-19 crisis. Under his leadership, the department launched a clinical test for COVID-19 with one-day processing. Election as an AAAS Fellow is a lifetime honor, recognizing efforts to advance science or its applications in meaningful ways. The AAAS is one of the world's largest multidisciplinary scientific societies, and its fellowship program is among the field's oldest and most respected recognitions.

SOURCE: Tulane University.

PATHOLOGY LAB DEPARTMENT MISSION PROFILE *



Dr. Suzana Savkovic (seen left), Lab Director, describes the mission of her research laboratory.

“Obesity is a global epidemic characterized by fat accumulation, inflammation, and increased cancer growth. It has become critical to comprehend how obesity-mediated changes in lipid metabolism drive cancer growth, particularly as rising obesity and overweight rates are associated with the increasing incident of colon cancer in younger adults. The United States has the record rate of adult obesity globally and our state of Louisiana ranks as one of the highest in the country. Louisiana has one of the highest rates of colon cancer incidence and deaths in the country.

Therefore, there is an excessive, unmet demand to understand the mechanisms driving colonic tumorigenesis in obese colon cancer patients and to develop effective treatment options. Our team has been studying mechanisms of metabolic and tumorigenic remodeling in obesity-facilitated colon cancer using different models and specimens obtained from local patients. Ultimately, we will determine the therapeutic potential of targeting these mechanisms to attenuate colonic tumorigenesis in obese patients.”

Her team currently consists of Dr. Patricia Snarski, with M.S. students Ariana Estela Salguiero, Alyson Fincke, and Ph.D. students Muhammad Anas Naeem and Michele Daniels, and an M.D. student, Abigail Drago. Dr. Snarski has presented the lab’s research findings at several international conferences, including *American Gastroenterological Association Digestive and Disease Week* (AGA-DDW, 2023, 2024) and the *Federation of American Societies for Experimental Biology* (FASEB, 2023). At the FASEB conference, her abstract was selected for oral presentation. Her abstract was selected for oral presentation at DDW, and she was awarded an AGA Fellow Abstract Award and a Louisiana Cancer Research Center travel award for that conference. She was likewise awarded an Unfettered Research Fellowship from the *Mistletoe Foundation* (2022-2023) that has allowed her to travel to conferences and have unique training opportunities, including training in Dr. Magness’ laboratory (University of North Carolina, Chapel Hill). She was also recently awarded loan repayment from the NIH Loan Repayment Program (2024-2026).

Ph.D. student, Muhammad Anas Naeem, is supported by Fulbright Scholarship (2023-2028) for his project. Ph.D. student, Michele Daniels attended the NIH/NIDDK Clinical Methods for Nutrition and Obesity Research Course at Pennington Biomedical Research Center, training her in cutting-edge research methods for obesity and nutrition research. She has been invited to the Catalyzing Advocacy in Science and Engineering (CASE) Workshop, to be held in Washington, DC, which educates students in the role of science in policymaking and the federal policy-making process, thus encouraging them to become a voice for research. A 3rd year MD student, Abigail Drago, considering all her medical school demands, made significant progress on her project that led to a first author abstract to be presented at AGA-DDW 2025. MS students Ariana Estela Salguiero and Alyson Fincke are obtaining needed training and preparation for Tulane University School of Medicine.

According to Dr. Savkovic, her lab has consistently been fortunate to have an outstanding team as a driving force of research. She is dedicated to their scientific and academic growth, having mentored 14 predoctoral and postdoctoral trainees, and served on the committees of 15 additional predoctoral students. Her trainees have received prestigious research awards from both national and international institutions that include the Louisiana Board of Regents Fellowship; Crohn’s and Colitis Foundation; American College of Radiology; AbbVie Immunology; NIH Center for Clinical and Translational Sciences TL1 (Tulane and University of Alabama Birmingham); Fulbright Foundation (1 from the Netherlands and 2 from Pakistan), and Cultural and Educational Bureau – Egypt.

When asked to describe the focus and far-reaching effects of research performed in her lab, Dr. Savkovic reported that her research focuses on elucidating how obesity facilitates cancer growth in the colon via intracellular lipid droplets. “Our team discovered a new mechanism regulating lipid droplets dynamic via transcription factor, FOXO3,” Dr. Savkovic states. “This mechanism is exacerbated by obesity and is one of the critical drivers of colon cancer

SAVKOVIC LAB (CONTINUED)

progression in obese patients. Recently our team demonstrated that triacylglycerol synthesis mediated by Diacylglycerol O-acyltransferases 1/2 (DGAT1/2), responsible for lipid droplet biosynthesis, is significantly elevated in human colonic tumors and further augmented by obesity. Inhibiting DGAT1/2 reduces the growth of colon cancer cells in different models of obesity, with therapeutic implications for improving patient survival. Our goal is to explore novel mechanisms partnering with DGAT1/2 in facilitating tumorigenesis as well as to assess whether a combined targeting with DGAT1/2 inhibitors, alongside existing therapeutics, attenuates colon cancer progression in obese patients.”

An additional goal is to understand how accumulated fat depots promote colon cancer growth in obese individuals as several of these fat depots have been linked to obesity-related cancer. One particular depot attached to the colon, known as Epiploic fat, remains understudied due to a lack of models. The Savkovic Lab has developed a novel microphysiological system containing human Epiploic fat and demonstrated that this fat has a tumor-promoting role in the colon of obese individuals, mechanisms of which are under investigation. As a principal investigator, Dr. Savkovic’s projects have been funded by several grants from National Institute of Health and Crohn’s & Colitis Foundation, and she contributes to collaborations on other projects as co-investigator (Dr. Pursell, Dr Lu); mentor for T32 (by Drs Kolls and Brooks); mentor for COBRE (Dr Tian), and mentor for F32 (Dr Snarski). Currently, two of her NIH R01 projects are under review.

She routinely reviews manuscripts and served as permanent reviewer for Veterans Affairs and the Crohn’s and Colitis Foundation and as an ad-hoc reviewer at several NIH study sections. Dr. Savkovic likewise serves on the education board for Inflammatory Bowel Disease Louisiana and Louisiana’s Cancer Crusaders, foundations that work closely with the local, New Orleans area communities.

**This entry is the first in a series featuring department laboratories; in future issues of Pathways, other labs will be featured.*

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RESIDENT’S CORNER

Dr. Annette Hebert (left)
Dr. Sarah Lewis (right)
Co-Chief Residents 2025--2026

Resident Conference Presentations for 2024-2025:

American Society of Clinical Pathology Annual Meeting – September 3-6, 2024, Chicago, IL

Cervical Spinal metastasis of unsuspected hepatocellular carcinoma on initial presentation

Farhanaz Panjshiri M.D., Carlos Lopez M.D., Krzysztof Moroz, M.D.
Tulane School of Medicine, East Jefferson General Hospital

Alk-positive anaplastic large cell lymphoma involving the spinal cord

Phoenix Hwaung, M.D., Di Tian, M.D., Ph.D.
Tulane University School of Medicine, New Orleans, LA

African American Females are More Vulnerable to Develop Biliary Injury in NAFLD (Nonalcoholic fatty liver disease) Patients – A Single Institute Experience

Yuhua Xue, M.D., Konrad Bach, M.D., Shengmin Yan, Ph.D., Xiao-Ming Yin, M.D., Ph.D.
Department of Pathology & Laboratory Medicine, New Orleans, LA

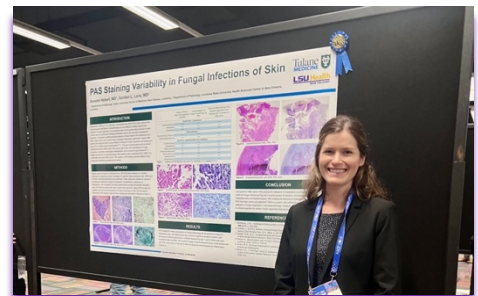
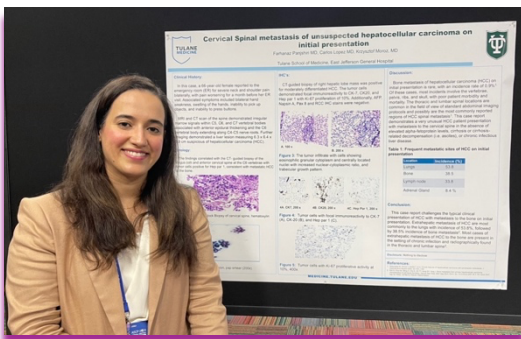
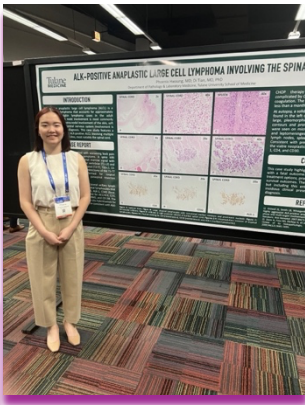
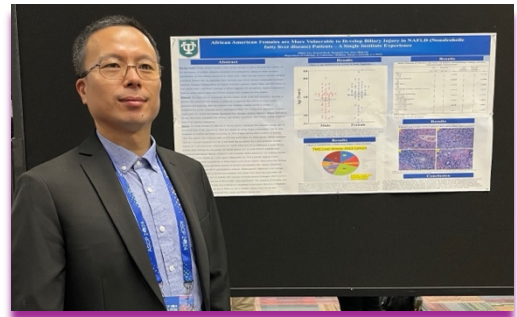
PAS staining variability in Fungal Infections of Skin

Annette Hebert, M.D.¹ and Gordon Love, M.D.

¹Tulane University School of Medicine and

²LSU Health, New Orleans, LA

Award: Blue Ribbon Finalist in Clinical Practice category.



Clockwise from left:

**Drs. Farhanaz Panjshiri;
Phoenix Hwaung;
Yuhua Xue, and
Annette Hebert**

Resident Conference Presentations for 2024-2025 (continued)

American Society of Dermatopathology 61st Annual Meeting - November 7-10, 2024, Chicago, IL

Fungal degeneration showing no major effects on PAS or GMS staining of *Aspergillus Trichopyton* and *Rhizopus*
Annette Hebert, M.D.¹, Abida Kadi, M.D.¹, Gordon L. Love, M.D.², Hillary Reed, MLS(ASCP)CM,³ Janine Nguyen MT(ASCP)³, Alun Wang, M.D., Ph.D.¹¹ Department of Pathology, Tulane University School of Medicine,² Department of Pathology, Louisiana State University Health Sciences Center,³LCMC University Medical Center, New Orleans, Louisiana

Award: Physician-in-Training Award for the Best Resident/Fellow Poster Presentation

A potential diagnostic pitfall for primary cutaneous follicle center lymphoma – large cell variant
Phoenix Hwaung, M.D., Alun Wang, M.D., Ph.D. and Abida Kadi, M.D.
Tulane University School of Medicine, New Orleans, LA

A patient with multiple neutrophilic dematoeses
Ghaidaa Majari, M.D., Abida Kadi, M.D. and Alun Wang, M.D., Ph.D.
Tulane University School of Medicine, New Orleans, LA

Pitfall in syphilis diagnosis: Case series of nodular secondary syphilis
Ghaidaa Majari, M.D., Phoenix Hwaung, M.D., Nguyen Lina, Alun Wang, M.D., Abida Kadi, M.D. and Carol Bitar, M.D.
Tulane University School of Medicine

Tezepelumab induced Grover's disease-like eruption
Ghaidaa Majari, M.D., Carol Bitar, M.D. and Alun Wang, M.D., Ph.D.
Tulane University School of Medicine

Awards: ASCP 2025 Forensic Pathology Resident Rotation Scholarship: Farhanaz Pansjshiri, M.D.
2025 CAP Foundation Leadership Development Award: Carlos Lopez, M.D.



The Doctor and Mrs. Michael A. Gerber

Pathology Research Lecture



Dr. Xin Wei Wang

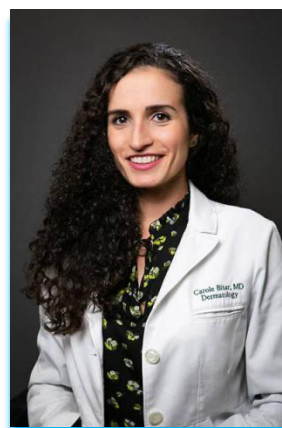
The Annual Doctor and Mrs. Michael A. Gerber Pathology Research Lecture took place on September 6, 2024. In keeping with Dr. Gerber's dedication and excellence in liver research, this year's esteemed guest speaker was Dr. Xin Wei Wang (seen above) who spoke on, *The Molecular Landscape of Liver Cancer: Defining Challenges and Clinical Relevance*.

Dr. Wang serves as Deputy Director of the Center for Cancer Research (CCR) at the National Cancer Institute (NCI), NIH; Co-Director of the CCR Liver Cancer Program, and Acting Co-Chief of the CCR Laboratory of Human Carcinogenesis.

As a senior investigator, Dr. Wang's research centers on the functional genomics of liver cancer, utilizing genome-wide technologies in conjunction with national and international collaborations and clinical studies. As the Head of the Liver Carcinogenesis Section, he leads a basic and translational research laboratory focused on using molecular techniques to classify tumor subtypes, identify biomarkers for early detection, diagnosis, prognosis, and treatment response, and uncover the molecular mechanisms driving liver cancer, with the goal of advancing precision medicine to improve the lives of patients with liver cancer. He received his Ph.D. from New York University and completed postdoctoral training at RIMB and the NCI.

The Pathology Department was once again honored to have Ms. Elisa Gerber, daughter of Dr. and Mrs. Gerber, attend the lecture in person.

WELCOME NEW FACULTY MEMBERS



Dr. Akannsha Singh, Instructor (left).

Dr. Michael Sinnott, Adjunct Assistant Professor (center).

**Dr. Carole Bitar, Pathology Adjunct Associate Professor,
Associate Professor of Dermatology (right)**

PATHOLOGISTS' ASSISTANTS PROGRAM GRADUATION

The ceremony for the graduating class of the Pathologists' Assistants program was held in December 2024. Students who received their M.S. P.A. degrees were :Eric Brooks, who accepted a position at Ochsner Medical Center in New Orleans; Molly Desrochers who will join the Anatomic Department at the Mayo Clinic in Rochester, Minnesota; Hayden Harris who will return to New York City; Tuesday Jensen, who will work at Ochsner Medical Center, New Orleans; Elisabeth Lehto, who will join a private practice pathology group in Lenexa, near Kansas City, Kansas; Madeleine Maxwell, joining Delta Pathology in Shreveport, LA; Mason Moore, who accepted a position at Vanderbilt University Medical Center in Nashville, TN; Erica Mountain, working for Pathology Services Laboratory in Arkansas; John Naughton, relocating to Atlanta, GA; Natalie Terhune, working in surgical pathology for Cedars-Sinai Medical Center in Los Angeles, CA; Kristen Thomas, joins a surgical pathology team at a community hospital in Maryland, and Jordan Wojciekofsky, joining the pathology team at Memorial Sloan Kettering Cancer Center in Manhattan, NY.

MASTERS' STUDENTS CLASS MEMBERS 2024-2025

Isabelle Berthelot; Takiyah Caldwell; Alyson Fincke; Leah Kennedy; Mahfuza Mannan; Jo-Ann (Thompson) Marshall; John O'Brien; Melak Ottallah; Ramsey Rohner; Ariana Salguiero.

DEPARTMENT OF PATHOLOGY PUBLICATIONS JUNE—DECEMBER 2024

Srinivas Chava, Nergiz Ekmen, Pauline Ferraris, Yucel Aydin, Krzysztof Moroz, Tong Wu, Swan N Thung and Srikanta Dash. Mechanisms of sorafenib resistance in HCC culture relate to the impaired membrane expression of organic cation transporter-1 (OCT1). *Journal of Hepatocellular Carcinoma*, 2024;11:1-17.

Ting PS, Lin WT, Liangpunsakul S, Novack M, Huang CK, Lin HY, Tseng TS, Chen PH. Convergence of Alcohol Consumption and Dietary Quality in US Adults Who Currently Drink Alcohol: An Analysis of Two Core Risk Factors of Liver Disease. *Nutrients*. 2024 Nov 13;16(22):3866. doi: 10.3390/nu16223866.

Magrath, J.W., Espinosa-Cotton, M., Flinchum, D.A., Sampath, S.S., Cheung, N.-K. and Lee, S.B. Desmoplastic small round cell tumor: from genomics to targets, potential paths to future therapeutics. (2024) *Frontiers in Cell and Developmental Biology*,12:1442488. doi: 10.3389/fcell.2024.1442488. PMID: 39139449.

Liu M, Xie XJ, Li X, Ren X, Sun J, Lin Z, Hemba-Waduge R, Ji JY. Transcriptional coupling of telomeric retrotransposons with the cell cycle. *Science Advances*. 2024. In press.

Hua F, Hao W, Wang L, Song K, Hasan A, Wu Y, Lin Z, Sun Y, Li S. Linear ubiquitination mediates coronavirus NSP14-induced NF- κ B activation. *Cell Communication and Signaling*. 2024. In press.

Yan, Shengmin; Lin, Zhen; Ma, Michelle; Arasteh, Ailar; Yin, Xiao-Ming. Cholestatic insult triggers alcohol-associated hepatitis in mice. *Hepatology Communications* 8(11):e0566, November 2024. | DOI: 10.1097/HC9.0000000000000566

Mukhopadhyay, S. S., Swan, K. F., Pridjian, G., Kolls, J. K., Zhuang, Y., Yin, Q., Lasky, J. A., Flemington, E., Morris, C. A., Lin, Z., & Morris, G. F. (2024). Gammaherpesvirus Infection Stimulates Lung Tumor-Promoting Inflammation. *Pathogens*, 13(9), 747. <https://doi.org/10.3390/pathogens13090747>

Teng Z, Yang L, Zhang Q, Chen Y, Wang X, Zheng Y, Tian A, Tian D, Lin Z, Deng WM, Liu H. Topoisomerase I is an Evolutionarily Conserved Key Regulator for Satellite DNA Transcription. *Nature Communications*. 2024;15(1):5151. doi: 10.1038/s41467-024-49567-5. PMID: 38746280; PMCID: PMC11092777.

Obesity-Facilitated Colon Cancer Progression Is Mediated by Increased Diacylglycerol O-Acyltransferases 1 and 2 Levels. Ghimire J, Collins ME, Snarski P, King AN, Ruiz E, Iftikhar R, Penrose HM, Moroz K, Rorison T, Baddoo M, Naeem MA, Zea AH, Magness ST, Flemington EF, Crawford SE, Savkovic SD. *Gastroenterology*. 2024 Sep 18:S0016-5085(24)05464-7. doi: 10.1053/j.gastro.2024.09.011. Online ahead of print. PMID: 39299402

Chunbao Sun, Fanwei Guo, Sreenivasulu Basha, Tian Tian, Brady Jin-Smith, Joshua Barkin, Hanhui Xie, Junmei Zhou, Xiao-Ming Yin, Cheng Ling, Bing Sun, Bryon Petersen, **Liya Pi**. Extracellular Matrix Protein 1 Binds to Connective Tissue Growth Factor Against Liver Fibrosis and Ductular Reaction *Hepatology Communication*. 2024 Oct 30;8(11):e0564.

Zhou C, Sun C, Huang M, Tang X, **Pi L**, Li C. Exploring Degradation of Intrinsically Disordered Protein Yes-Associated Protein Induced by Proteolysis TArgeting Chimeras. *J Med Chem*. 2024 12;67(17):15168-15198.

Zhou C, Sun C, Zhou W, Tian T, Schultz DC, Wu T, Yu M, Wu L, **Pi L**, Li C. Development of Novel Indole-Based Covalent Inhibitors of TEAD as Potential Antiliver Cancer Agents.. *J Med Chem*. 2024 Sep 26;67(18):16270-16295.

Yang Yang, Natacha Jn-Simon, Yonghan He, Chunbao Sun, Peiyi Zhang, Wanyi Hu, Huadong Zeng, Sreenivasulu Basha, Guangrong Zheng, Liya Pi, Daohong Zhou. A BCL-xL/BCL-2 PROTAC effectively clears senescent hepatocytes and prevents NASH-driven hepatocellular carcinoma in mice. *Nature Ageing*, Provisionally accepted.

Wei Ni, Mu Yu, Rongqiang Yang, Jennifer W. Li, Xin Zhou, Ozlem Calbay, Liya Pi, Jianrong Lu, Shuang Huang, Lizi Wu. The YAP1-MAML2 fusion drives tumorigenesis and sustains tumor growth. *Molecular Therapy Oncology*, Provisional accepted.

Ma W, Zhang J, Chen W, Liu N, and Wu T. Notch-Driven Cholangiocarcinogenesis Involves the Hippo Pathway Effector TAZ via METTL3-m6A-YTHDF1. *Cell Mol Gastroenterol Hepatol*. 2024 Oct 5;19(1):101417. PMID: 39369960

Liu N, Zhang J, Chen W, Ma W, Wu T. RBM39 enhances cholangiocarcinoma growth through EZH2-mediated WNT7B/ β -catenin pathway. *Cell Mol Gastroenterol Hepatol*. 2024 Sep 14;19(1):101404. PMID: 39278404

Zhang J, Chen W, Song K, Song K, Kolls J, Wu T. YAP activation in liver macrophages via depletion of MST1/MST2 enhances liver inflammation and fibrosis in MASLD. *FASEB J*. 2024, 38(17):e70026. PMID: 39215627

Ma W, Zhang J, Chen W, Liu N, and Wu T. The histone lysine acetyltransferase KAT2B inhibits cholangiocarcinoma growth: evidence for interaction with SP1 to regulate NF2-YAP signaling. *J Exp Clin Cancer Res*. 2024, 43(1):117. PMID: 38641672

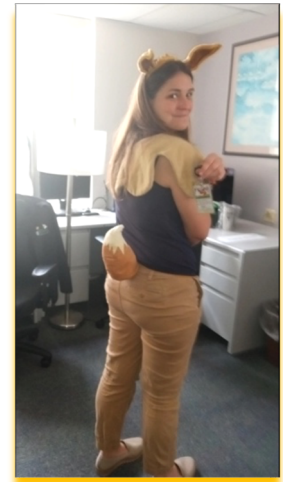
Yan, S.*, Z. Lin, M. Ma, A. Arasteh, and X.-M. Yin* (2024). "Cholestatic insult triggers alcohol-associated hepatitis in mice." *Hepatol Commun* 8(11): e0566. PMID: 39445893. (*co-corresponding author)

NEW GRANTS AWARDED in 2025

Dr. Tong Wu and Dr. JianQiang Zhang received new R01 Grants from the NIH, NCI in January and March 2025, respectively.

DEPARTMENT NEWS

The Pathology Department celebrates the holidays.



Season's Greetings!!!



***PATHWAYS NEWSLETTER
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MEDICINE***

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