MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

PEKING UNIVERSITY HEALTH SCIENCE CENTER
1912

JOINT INSTITUTE
for Translational and Clinical Research

2025 Progress Report

Table of Contents

JOINT INSTITUTE

Letter from the Co-Directors

Colleagues,

It is with great pride that we share this latest Joint Institute Annual Report, reflecting the continued vitality of the partnership between Michigan Medicine and Peking University Health Science Center.

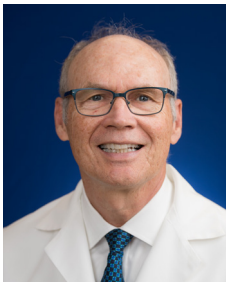
Over the past year, our collaboration has advanced in remarkable ways. We funded four new Joint Institute research projects—including three in cancer and one harnessing artificial intelligence to strengthen vaccine safety monitoring—bringing the total number of JI-supported initiatives to more than 80. Together, our teams are generating new discoveries, sharing knowledge, and translating science into better health outcomes for people around the world.

Equally important is the expansion of our training and exchange programs. The JI welcomed new cohorts of Collaboration Scholars and Leadership Fellows, providing early-career physicians the opportunity to learn, conduct research, and build enduring international collaborations. These scholars are not only advancing science today but also ensuring the future of our partnership.

This year also marked the return of in-person delegations between Ann Arbor and Beijing. Whether through scientific symposia, small-group partnership meetings, leadership workshops, or cultural exchanges, these visits reaffirm our shared commitment to strengthening the bonds between our institutions.

Like all successful collaborations, our JI built on friendship, respect, and a shared vision: to advance health through collaboration. We remain deeply grateful to each of you—our faculty, trainees, and supporters—for the dedication you bring to this work.

Xièxiè. 谢谢.



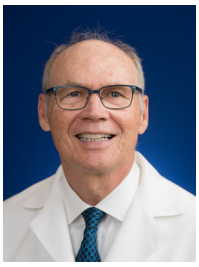
Joseph C. Kolars, MD, MACP
Co-Director, Joint Institute
Strategic Development Director for Global Collaborations
Professor of Internal Medicine
Professor of Learning Health Sciences
Medical School
Professor of Health Management and Policy
School of Public Health

Jiadong Wang, PhD
Co-Director, Joint Institute
Vice President, Peking University Health Science Center
Professor, School of Basic Medical Sciences

Leadership

Steven L. Kunkel, PhD
Executive Vice Dean for Research, Chief Scientific Officer
Peter A. Ward Distinguished University Professor
Endowed Professor of Pathology Research
University of Michigan Medical School

Jie Qiao, MD, PhD
President, Peking University Health Science Center
Executive Vice President, Peking University



Joseph C. Kolars, MD, MACP
Co-Director, Joint Institute
Strategic Development Director for Global Collaborations
Professor of Internal Medicine and Learning Health Sciences
University of Michigan Medical School

Jiadong Wang, PhD
Co-Director, Joint Institute
Vice President, Peking University Health Science Center
Professor, School of Basic Medical Sciences

Qimin Zhan, MD
Director, National Institute for Health Data Science
Peking University

Weimin Wang, MD
Vice President, Peking University Health Science Center
Professor of Surgery

Liping Duan, MD, PhD
Vice President, Peking University Health Science Center
Professor of Internal Medicine

Yangfeng Wu, MD, PhD
Executive Associate Director, Peking University Clinical Research Institute
Professor, School of Public Health, PKUHSC

About the JI

Established in 2010, the Joint Institute (JI) for Translational and Clinical Research is a partnership between Michigan Medicine and Peking University Health Science Center, in Beijing, to support meaningful health research collaboration on projects of mutual interest to both populations.

Vital Statistics To Date

JI Awards	Completed Projects	Patients Enrolled in Studies	Publications	Extramural Funding
81	57	217K	167	$86M

Research Priorities

The JI supports research primarily in one of four thematic areas: neuroscience; precision medicine; cancer; and reproductive health—areas chosen because of their potential for broad impact; mutual expertise across both partner institutions; and cross-disciplinary appeal.

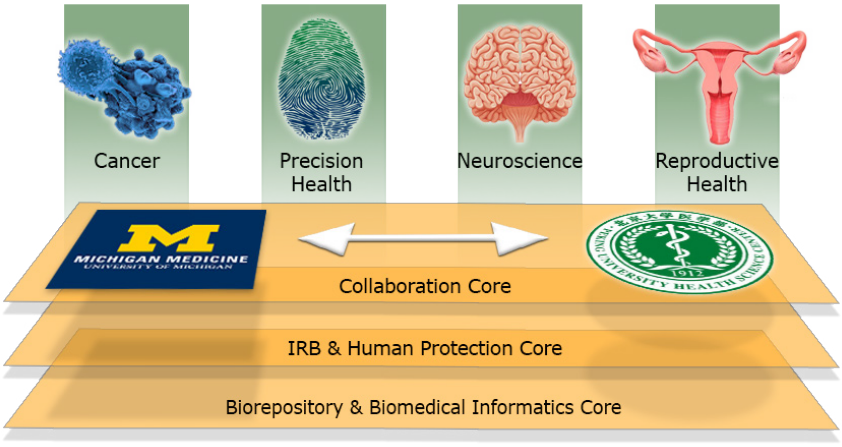
Projects in other fields are still considered, but these areas are emphasized.

Administrative Structure

Project teams are supported by three "Core" groups. With representatives from both partner institutions, these Cores provide the JI's primary administrative framework, helping the researchers overcome the challenges and obstacles associated with complex international collaborations.

In addition to the technological infrastructure and administrative assistance needed for success, the Cores provide joint oversight to ensure the work adheres to established standards and practices for research involving human subjects and tissue.

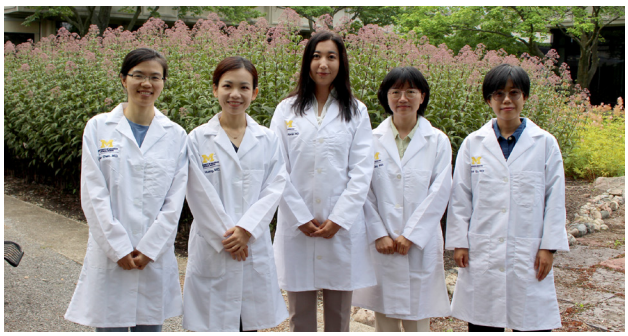
JI Programs and Cores structure



Training Programs

Recent years have seen the launch of a number of new training programs facilitated through the JI partnership, including Leadership Development programs, as well as research scholar programs that allow early-career researchers a chance to advance their skills as they strengthen collaborations between Michigan Medicine and PKUHSC.

Scholars & Fellows Training, Exchange

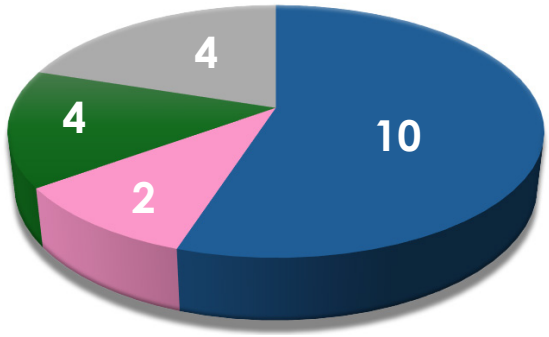


Our Projects

Active Collaborations, by project focus

Since 2020, most new collaborations have focused on cancer, data science, and reproductive health, thematic areas that align with research priorities across both partner institutions.

Some recent awards have focused on other disciplines, and a few collaborations launched prior to 2020 are still ongoing. In all, there are 17 active projects (shown here), as well as 4 new projects awarded in 2025 (detailed on the following pages).



Assessing genomic and environmental drivers of depression in training physicians across China, the US
U-M PI: Srijan Sen
PKUHSC PI: Hongqiang Sun
Theme: Exploratory *(Mental Health)*

Metabolic and epigenetic regulation in cell based heart repair
U-M PI: Zhong Wang
PKUHSC PI: Ming Cui
Theme: Cardiovascular

Role of exosome signaling in cancer cell dedifferentiation and chemo-resistance
U-M PIs: Max Wicha, Ming Luo
PKUHSC PI: Wei Wei
Theme: Cancer

Malic Enzyme Dependence is a Therapeutic Vulnerability in Pancreatic and Gastric Cancers
U-M PI: Costas Lyssiotis
PKUHSC PI: Shigang Ding
Theme: Cancer

Discover novel therapeutic targets for aortic aneurysm and dissection through data mining and experimental models
U-M PI: Jifeng Zhang
PKUHSC PIs: Lemin Zheng, Wei Li
Theme: Data Science

Decipher immune signatures and therapeutic response in Chinese and American multiple myeloma patients
U-M PI: Daniel Boyer
PKUHSC PI: XiaoJun Huang
Theme: Cancer

Physiology-informed machine learning for precision pheno-typing of heart failure with preserved ejection fraction
U-M PIs: Scott Hummel, Daniel Beard
PKUHSC PI: Yida Tang
Theme: Data Science

Mechanisms of liver metastasis from pancreatic cancer: crosstalk between tumor cells and hepatic stellate cells
U-M PI: Jiaqi Shi
PKUHSC PI: Yinmo Yang
Theme: Cancer

Single-cell and spatial analyses of male germ cell development to advance understanding of idiopathic infertility in Chinese and US populations
U-M PIs: Jun Li, Sue Hammoud
PKUHSC PIs: Jie Qiao, Peng Yuan
Theme: Reproductive Health

Evaluating Lymphangiogenic Potentiation In Cancer Immunotherapy
U-M PI: Weipign Zou
PKUHSC PI: Chao Zhong
Theme: Cancer

Gene Editing therapy for Usher Syndrome Type II
U-M PI: Dongshan Yang
PKUHSC PIs: Yang Li & Yun Feng
Theme: Data Science

Deferoxamine in the Treatment of Aneurysmal Subarachnoid Hemmorrhage (DISH)
U-M PI: Adiutya Pandey
PKUHSC PI: Yining Huang
Theme: Neurology

Clarifying mechanisms of lineage plasticity in prostate and breast cancers
U-M PI: Joshi Alumkal
PKUHSC PI: Hongquan Zhang
Theme: Cancer

New Projects for 2025

Four new Joint Institute research projects were awarded for 2025, bringing to 81 the total number of JI projects funded since the partnership's launch in 2010.

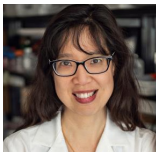
Three of the latest awards focus on cancer research—specifically breast, renal, and colorectal cancers—while a fourth project will apply artificial intelligence to help clarify whether COVID-19 vaccines are linked to serious effects.

Engineered Bacteroides Vulgatus with Enhanced Cysteine Uptake to Boost Immunotherapy for Colorectal Cancer

This project will study whether a specially modified gut bacteria, called Bacteroides vulgatus (BV), can boost the body's immune response against colon cancer. The team will explore how this bacteria affects the tumor microenvironment and whether it helps make tumors more sensitive to immune checkpoint inhibitor (ICI) treatments. Specifically, the focus is on a version of Bacteroides vulgatus that have been engineered to be better at taking up cysteine, a natural amino acid (building block of protein) found in the intestines. In previous research, the team found that this engineered bacteria lowers cysteine levels in the gut, slowing tumor growth without causing harmful side effects in the rest of the body.

Now, Drs. Chen and Wang want to understand exactly how these bacteria help stop tumors from growing, and if they can make cancer treatments like ICIs work better—even in types of colon cancer that usually do not respond well to these treatments. Their findings could pave the way for new treatments that use the microbiome (the collection of bacteria in our gut) to help cancer immunotherapies work better in colon cancer and possibly other types of tumors.

Co-Investigators



Grace Chen, MD, PhD
Professor of Internal Medicine
Division of Hematology and Oncology
Michigan Medicine

Pengyuan Wang, PhD
Professor Surgery
PKU First Hospital

Using Large Language Models and Biomedical Ontologies for Mobilizing the Construction and Applications of Directed Acyclic Graphs in Observational Health Data Research

This project aims to improve COVID-19 vaccine research—specifically, understanding whether vaccines are linked to rare but serious side effects—using powerful artificial intelligence (AI) to read, sort and filter information from vast amounts of research data and health records. Employing language processing AI combined with medical dictionaries ensures data input is properly labeled, defined and understood in the same way, ultimately helping to discern actual causation from mere anecdotal coincidence.

The team's ontology system will pull together and analyze evidence from different studies, creating a map (i.e., knowledge graph) showing possible cause-and-effect relationships between COVID-19 vaccines and side effects such as Guillain-Barré Syndrome, kidney problems, heart inflammation, or blood clots. It uses established scientific approaches to make clear, understandable diagrams that guide researchers on which factors to focus on. By bringing together data from many sources and keeping the results transparent and current, this work will strengthen safety monitoring for COVID-19 vaccines and help support fact-based decisions to address concerns about vaccine safety.

Co-Investigators

Oliver He, PhD
Associate Professor of Microbiology and Immunology
Michigan Medicine

Jian Du, PhD
Assistant Professor,
National Institute of Health Data Science
Peking University

New Projects for 2025

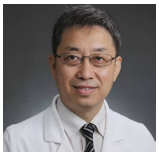
Comprehensive Spatial Profiling of the Tumor Immune Microenvironment of Metastatic Renal Cell Carcinoma

Renal cell carcinoma (RCC) is the most prevalent type of kidney cancer and is particularly dangerous because metastasis is common. New treatments called Immune Checkpoint Inhibitors (ICIs) have had success but are sometimes less effective for patients with metastatic renal cell carcinoma. By researching the Tumor Immune Microenvironment—the mix of different immune cells and other elements in and around the tumor—this team hopes to identify the mechanisms through which these cells interact with one another to promote or inhibit tumor growth, thereby improving the effectiveness of ICI treatments.

They will deploy advanced genetic analysis techniques on cancer tissue samples taken from patients at both research sites, looking carefully at both the spatial arrangement of cells and the detailed genetic makeup of the primary tumor and its metastases. Importantly, the project aims to broaden our understanding of how this cancer behaves and responds to treatments, potentially leading to better ways to predict and treat it in the future.

Co-Investigators

Simpa Salami, MD, MPH
Associate Professor of Urology
Michigan Medicine



Tao Xu, MD
Professor and Chief of Urology
PKU People's Hospital

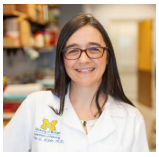
Zixiong Huang, MD
Clinical Assistant Professor of Urology
PKU People's Hospital

The Effect of pEZH2(T367) on the Tumor Microenvironment of Triple Negative Breast Cancer

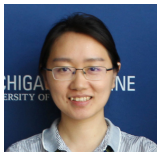
This project builds on a collaboration started when Dr. Wang visited Michigan Medicine for 12 months as a Joint Institute Collaboration Scholar, working alongside Dr. Kleer on breast cancer research. Triple negative breast cancer (TNBC) is a complex because each tumor is different and it often resists typical treatments, including chemotherapy and some immune-based therapies. In previous research, we discovered that, under certain conditions, the protein EZH2 can make TNBC more likely to spread by effectively hiding the tumor from the immune system. The team hypothesizes that a uniquely tagged version of EZH2 (pEZH2-T367) helps TNBC escape the immune system by changing the way tumor cells use energy and interact with immune cells. To investigate, they have modified TNBC cells in the lab and found that when the T367 part of EZH2 was changed, the tumors showed increased signs that the immune system could recognize and attack them.

To build on these findings, this project utilizes a special mouse model that mimics human TNBC. The work will shed light on how pEZH2-T367 alters the structure of DNA in TNBC cells and learn how these changes help the tumor avoid the immune system. Ultimately, this research could reveal new ways to predict which TNBC patients might respond to immunotherapy and discover new targets to make these treatments work better.

Co-Investigators



Celina Kleer, MD
Harold A. Oberman Collegiate Professor of Pathology
Michigan Medicine



Yuqing Wang, MD
Assistant Professor
Institute for Medical Innovation and Research
PKU Third Hospital

Delegation Visits & Exchanges

After a few years of reduced travel due to the COVID-19 pandemic, exchange between Michigan Medicine and PKUHSC picked up 2024 and 2025, with leadership teams and individual research groups traveling for face-to-face meetings that advanced the partnership.

To Michigan ...

June 2024

Consortium of Elite Teaching Hospitals

Leaders from PKUHSC including PKU Third Hospital Vice President Ning Shen visited UMMS as part of a delegation representing the Chinese Consortium of Elite Teaching Hospitals.

August 2024

Cardiovascular Medicine Visit

PKUHSC Cardiology researchers traveled to Ann Arbor to meet with counterparts including Professor of Cardiology Eugene Chen and heart failure specialist Scott Hummel.

March 2024: Physical Medicine & Rehabilitation

Physical Medicine and Rehabilitation faculty from PKU-affiliated hospitals, including Rehabilitation Department Chief Mouwang Zhou, visited Ann Arbor to meet with PM&R counterparts, tour clinics and explore potential areas of future collaboration.

November 2024: Psychiatry

Hongqiang Sun, Associate Director of the Institute of Mental Health at Peking University Sixth Hospital, visited collaborators at UMMS to advance a study of depression incidents and factors among physicians in training.

April 2025

JI Core Discussions

PKUHSC leaders including Qiudan Sun, Director of International Cooperation, Xie Gaoqiang, Director of Data Management, and Zhao Liyan, Associate Professor and member of the PKU Institutional Review Board, visited Ann Arbor to discuss infrastructure and resources supporting IRB approval and data sharing within JI-funded projects.

Delegation Visits & Exchanges

To China ...

June 2024

Leadership Visit

JI Co-Director Joseph Kolars led a UMMS delegation including Chief Scientific Officer, Steve Kunkel and Professor Cardiology Eugene Chen to meet with leaders at PKUHSC and its affiliated hospitals.

September 2024

China Medical Board Visit

UMMS leaders and representatives from the China Medical Board visited PKUHSC to discuss collaborations including the CMB Women's Leadership Program.

September 2024

U-M Alumni Forum

Dozens of U-M faculty traveled to China to the 7th annual U-M Biomedical Science Alumni Forum. Held in Suzhou, the conference attracted attendees from across China, including many Peking University faculty.

Collaboration Scholars

Visiting Scholars Advance Global Health Collaborations at Michigan Medicine

Vascular surgeon Yanqing Zhao (left) and urologist Zixiong Huang represented the second JI Collaboration Scholars cohort.

Scholar Xujie Zhou with UMMS mentors Matthias Kretzler (left) and Wenjun Ju.

Three visiting Joint Institute Scholars completed fellowships at Michigan Medicine in 2024-25.

Xujie Zhou, an Associate Chief Physician in the Renal Division at Peking University First Hospital, helped advance a collaboration focused on chronic kidney disease. Zixiong Huang, a urologist from PKU People's Hospital, studied renal cancer. Yanqing Zhao, a vascular surgeon from PKU Third Hospital, focused his research on aspects of deep vein thrombosis.

All three left Ann Arbor with new skills, expanded research interests, and unique perceptions that can improve the lives of their patients in China.

"This was a great opportunity to go outside of my institution and see a different system," said Huang, MD. "The experience increased my confidence to be a well-rounded urologist, good at both clinical practice and research work."

Yanqing Zhao, the vascular surgeon, worked in the lab of UMMS Assistant Professor of Radiology Minhajuddin Khaja, exploring why and how some blood clots—the cause of thrombosis—recur following treatment, and how those recurrences are best treated. He was struck by the emphasis at Michigan Medicine on encouraging patients to follow up at regular intervals after procedures.

"In China, we often do not have patients adhere to close follow-up. Modifying our strategy to tell the patients to come back to clinic more often to check in would be helpful," he said.

Working alongside UMMS Associate Professor of Urology Simpa Salami, Huang's project compared kidney tumor microenvironments to better understand why some are more susceptible to treatment than others.

Xujie Zhou worked in the lab of Professors of Internal Medicine Matthias Kretzler and Wenjun Ju on a project exploring IgA nephropathy. They compared U.S. and Chinese patient datasets to understand how ethnicity plays a role in disease progression and the effectiveness of treatments. The study is helping Kretzler's team to develop drug candidates targeting kidney disease and international precision clinical trials that include large cohorts of Asian patients.

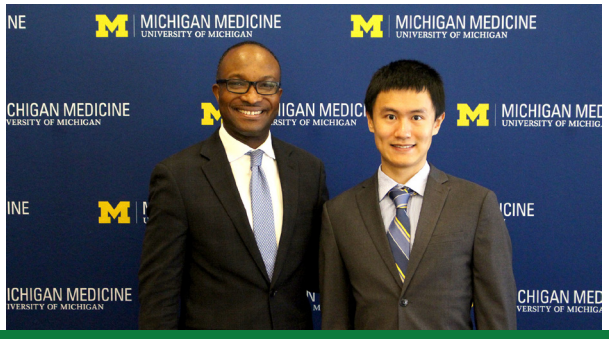
"It is important to understand and recognize how differently the disease is presenting itself around the world," said Kretzler. "The drugs work differently in China than they do elsewhere. Focusing on the genetic reasons for that is very important."

During his program, Xujie Zhou was also able to attend and showcase his work at prominent nephrology conference in San Diego and human genetics conference in Denver, and he has been invited to participate in an international IgAN symposium in Europe next year.

"All of the people I met were so full of passion. They inspired and encouraged me greatly," Zhou said. "Having this time to focus on research was very refreshing."

Collaboration Scholars

Program Yields New Research Projects



Collaboration Scholar teams-turned JI research collaborators: Simpa Salami and Zixiong Huang (left) and Yuqing Wang and Celina Kleer.

More than just a research training initiative, the Collaboration Scholars program was created to advance ongoing and future partnerships between Michigan Medicine and Peking University Health Science Center.

By engaging early-career physician-scientists from China and connecting them with UMMS mentors, the program aims not only to strengthen individual research skills, but also to cultivate long-term international collaborations.

"We are not just training scholars, but developing lifelong collaborators that strengthen the partnership between our two institutions," said JI Co-Director Joseph Kolars, who is also UMMS Strategic Development Director for Global Collaborations.

In the most recent round of JI funding, two of the four new projects trace their origins to the Collaboration Scholars program: a breast cancer research partnership between UMMS Professor of Pathology Celina Kleer and her former mentee Yuqing Wang, and a renal cancer study led by UMMS Associate Professor of Urology Simpa Salami and his mentee Zixiong Huang, one of the program's most recent graduates.

"Just as he learned something from us, there is a lot we can learn from Dr. Huang and his colleagues in China," Salami said. "Cancer research is a team effort—not just locally, but internationally. That is the best way to truly advance cancer research."

JOINT INSTITUTE Collaboration Scholars

Meet the Scholars

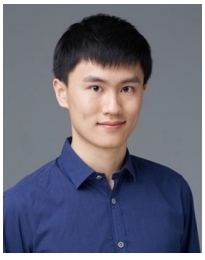
Cohort 1: 2024

Yuqing Wang, MD, PhD
Assistant Professor, Center of Basic Medical Research
PKU Third Hospital
UMMS Mentor: Celina Kleer

Yuzhou Gan, MD
Attending Physician Rheumatology
PKU People's Hospital
UMMS Mentor: Jason Knight

Xujie Zhou, MD
Associate Professor Renal Division
PKU First Hospital
UMMS Mentors: Matthias Kretzler Wenjun Ju

Cohort 2: 2025



Zixiong Huang, MD
Attending Physician, Urology
PKU People's Hospital
UMMS Mentor: Simpa Salami

Yanqing Zhao, MD
Attending Physician, Interventional Radiology and Vascular Surgery
PKU Third Hospital
UMMS Mentor: Minhajuddin Khaja

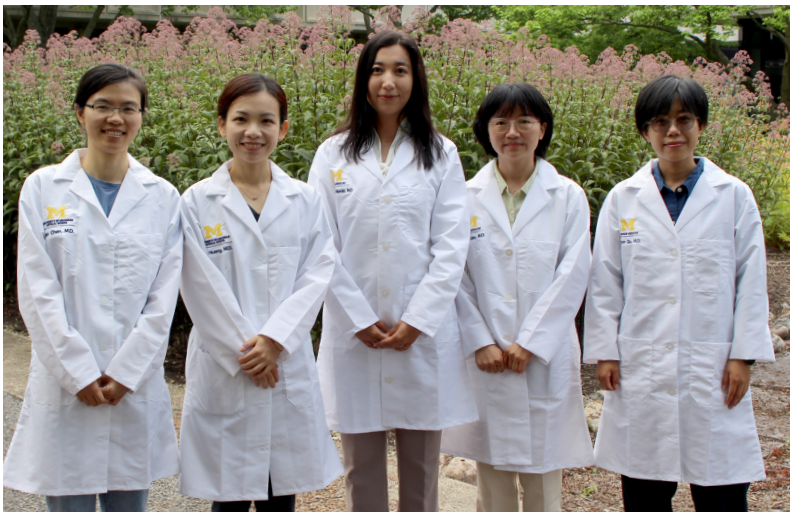
CMB Leadership Training

Fostering the next generation of leaders

Among the newest Joint Institute collaborations is a program to develop new leaders at Peking University-affiliated hospitals and deepen the partnership between PKUHSC and Michigan Medicine.

The Program to Advance Leadership in Health Science brings participants to Michigan Medicine for immersive, 12-month training experiences. Since the first cohort arrived in the fall of 2023, Michigan Medicine has welcomed two additional groups—nine participants in all—for a unique experience that combines executive coaching, leadership workshops, clinical immersion and dedicated research time.

PALHS is facilitated by Michigan Medicine and funded by the China Medical Board, a US-based foundation that supports health advancement across Asia.



Meet the Fellows

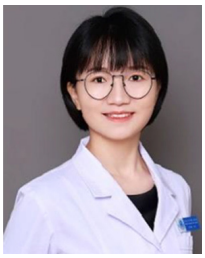
Cohort 1: 2023

He Huang, MD
Attending Doctor, Ob-Gyn
PKU First Hospital
UMMS Mentors: Monica Rosen & Melina Dendrinos

Lian Chen, MD
Associate Chief Physician, Ob-Gyn
PKU Third Hospital
UMMS Mentor: Tim Johnson

Rongxin Xiao, MD
Attending Surgeon, Thoracic Surgery
PKU People's Hospital
UMMS Mentor: Weiping Zou

Cohort 2: 2024



Jinmin Liao, MD
Attending Physician, Psychiatry
PKU Sixth Hospital
UMMS Mentor: Stephan Taylor

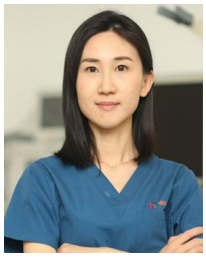
Mohetaboer Momin, MD
Attending Physician, Cardiovascular Medicine
PKU First Hospital
UMMS Mentors: Eugene Chen & Claire Duvernoy

Yinyin Qu, MD
Associate Chief Physician, Anesthesiology
PKU Third Hospital
UMMS Mentor: George Mashour

Cohort 3: 2025

Yao Ying, MD
Associate Chief Physician, Ob-Gyn
PKU Third Hospital
UMMS Mentor: John DeLancey

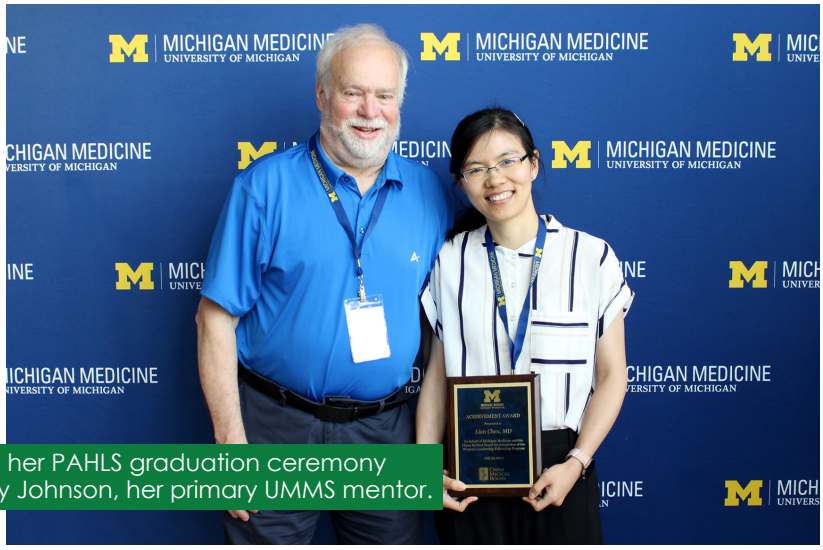
Lei Chen, MD
Associate Professor, Ultrasound
PKU First Hospital
UMMS Mentor: Brian Fowlkes



Yan Yan, MD
Associate Professor and Chief Physician, Endoscopy Center
PKU Cancer Hospital
UMMS Mentor: Thomas Wang

CMB Leadership Training

Following time at UMMS, visiting scholar publishes call for more leadership training in China



Dr. Chen at her PAHLS graduation ceremony with Timothy Johnson, her primary UMMS mentor.

After completing a UMMS leadership program, a visiting doctor from China is encouraging healthcare leaders in her home country to launch similar training initiatives.

One of the first participants in Michigan Medicine's Program to Advance Leadership in the Health Sciences (PALHS) has documented her experience in a recent publication.

"In China, there is a lack of systematic and intentional leadership training programs or courses specifically for maternal-fetal medicine doctors. PALHS strives to create a network of leaders who recognize this need and cultivate relationships with existing leaders," writes Lian Chen, an Associate Professor of Obstetrics and Gynecology at Peking University Third Hospital and a member of the inaugural 2023–24 PALHS cohort.

Her commentary was published in a summer 2025 issue of *Maternal Fetal Medicine*, a peer-reviewed journal of the Chinese Medical Association.

"As a young department leader, I have many doubts and uncertainties about becoming a good leader. In academic medical institutions like ours, leadership roles often develop without clear planning or preparation," she writes. "With these questions in mind, I came to the University of Michigan for a one-year leadership training program."

Chen describes learning about the U-M Michigan Expectations Model for leadership development, as well as Lean project management principles and quality improvement methodologies. She also emphasizes the need for more such programs across China.

"PALHS seeks to sow the seeds of broader transformation, aiming to shift the very culture of academic medicine. Given the current lack of leadership education in Chinese academic medical institutions, the program serves as a strategic starting point to support leadership development," she writes. "While initiatives like PALHS have made significant progress, localized leadership training programs tailored to China's unique context are essential to meet growing demands."

In their own words

He Huang, MD
2023 PALHS Fellow

"Taking part in this program is one of the best decisions I've ever made. I feel ready to put what I've learned into practice."

Mohetaboer Momin, MD
2024 PALHS Fellow

"Now, my goal is clear: I want to be a leader in preventing cardiovascular disease in China. I plan to apply everything I've learned in Michigan back home."

Yao Ying, MD
2025 PALHS Fellow

"This experience has changed the way I think and work, giving me the skills to make meaningful change. I hope to bring this momentum home and strengthen both clinical care and medical education."

Global Executive Education

UMMS welcomes two PKUHSC groups for leadership training in 2024

Two groups from Peking University-affiliated hospitals visited Ann Arbor over the course of the year to participate in Michigan Medicine's unique Global Executive Education Program.

The first group, representing Peking University First and Second hospitals, visited in June 2024 for a session focused on health administration. A second group, from Peking University Third Hospital, arrived in November for a session about medical education. Peking University has been an instrumental partner since the launch of the unique program, which offers a combination of classroom lectures, institutional tours, and team-building and leadership workshops.

"Through this training, I was introduced to many areas I have never explored before. It made me think about the reasons behind the differences between China and the United States," said Chutong Lin, MD, a Thoracic Surgeon at Peking University Third Hospital. "I am confident that I can effectively adapt the experiences here to my work in China."

The curriculum spans more than 90 course hours covering pertinent topics, from health system finance to accreditation processes for curricula at the medical student and graduate levels.

In addition to talks by UMMS leaders, participants were given behind-the-scenes looks at clinical spaces and other areas, touring Survival Flight, MM Command Center, the Clinical Simulation Center, the Center for Japanese Family Medicine, the Kellogg Eye Center, the Frankel Cardiovascular Center, and more.

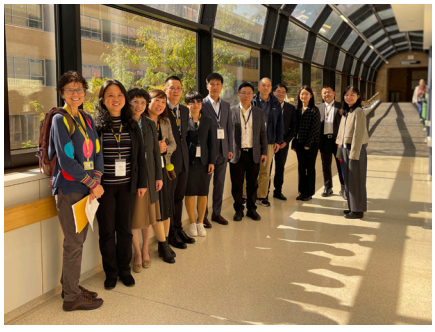
Visiting scholars to Michigan Medicine from China were also invited to present on their work and experiences in Ann Arbor, and U-M medical students participated in a panel discussion about their perspectives of the US medical education system.

"I learned new ways to educate students and junior residents through improved communications and establishing a reasonable structure," said Yang Chen, an Associate Chief Physician in the Obstetrics Department at Peking University Third Hospital.










Clockwise, from top left: Touring Central campus; in the clinical simulation center; participating in a Lean Thinking workshop; a Challenge Program leadership activity; posing with the Survival Flight crew; touring the U-M Medical School; in the classroom with Director of Strategic Development for Global Collaboration Joseph Kolars; at Mott Children's Hospital.

Research Publications

JI collaborations resulted in 15 new publications during the 2025 academic year, including several papers authored by JI Collaboration Scholars with their respective UMMS mentors.

Differential regulation of FADS2 by EZH2 reveals a metabolic vulnerability in ovarian cancer treatment

PIs: Celina Kleer (UMMS), Yuqing Wang (PKUHSC)

JI Scholar Publication

Guo, Z., Wang, Y., Song, J., Song, Y., Bai, Y., Li, Y., Yang, J., Liu, T., Ma, L., Kleer, C. G., Huo, X., & Xue, L. (2025). Differential regulation of FADS2 by EZH2 reveals a metabolic vulnerability in ovarian cancer treatment. *EBioMedicine*, 119, 105879.

Mechanical Thrombectomy for Superior Vena Cava Syndrome Due to Subacute Thrombosis: Treatment Using Multiple Complementary Devices

PIs: Yanqing Zhao (PKUHSC), Minhaj Khaja (UMMS)

JI Scholar Publication

Bautista, C. J., Zhao, Y., Liles, A., Ebadi-Tehrani, M., & Khaja, M. S. (2025). Mechanical Thrombectomy for Superior Vena Cava Syndrome Due to Subacute Thrombosis: Treatment Using Multiple Complementary Devices. *Cardiovascular and Interventional Radiology, 48*(8), 1235–1238.

EZH2 in Non-cancerous Diseases: Expanding Horizons

PIs: Celina Kleer (UMMS), Yuqing Wang (PKUHSC)

JI Scholar Publication

Jin, R., Zhang, J., Wang, Y., Chen, Z., He, X., Zhang, X., Tan, Z., Kleer, C. G., Li, Y., Wang, D., & Xue, L. (2025). EZH2 in non-cancerous diseases: Expanding horizons. *Protein & Cell*, pwaf032.

Palmitoylation prevents B7-H4 lysosomal degradation sustaining tumor immune evasion

PIs: Weiping Zhou (UMMS), Rongxin Xiao (PKUHSC)

JI Scholar Publication

Yan, Y., Yu, J., Wang, W., Xu, Y., Tison, K., Xiao, R., Grove, S., Wei, S., Vatan, L., Wicha, M., Kryczek, I., & Zou, W. (2025). Palmitoylation prevents B7-H4 lysosomal degradation sustaining tumor immune evasion. *Nature Communications, 16*(1), 4254.

Associations of Glycemic Status with Dynamic Disease Trajectories of Atrial Fibrillation and Dementia

PIs: Rodica Pop-Busui (UMMS), Luxia Zhang (PKUHSC)

JI Program: Renal

Li, C., He, D., Liu, Y., Yang, C., Zhang, L., & Pop-Busui, R. (2025). Associations of glycemic status with dynamic disease trajectories of atrial fibrillation and dementia. *The Journal of Prevention of Alzheimer's Disease, 12*(3), 100047.

Research Publications

Identification of Digital Twins to Guide Interpretable AI for Diagnosis and Prognosis in Heart Failure

PIs: Dan Beard & Scott Hummel (UMMS), Yida Tang (PKUHSC)

JI Program: Data Science

Gu, F., Meyer, A. J., Ježek, F., Zhang, S., Catalan, T., Miller, A., Schenk, N. A., Sturgess, V. E., Uceda, D., Li, R., Wittrup, E., Hua, X., Carlson, B. E., Tang, Y. D., Raza, F., Najarian, K., Hummel, S. L., & Beard, D. A. (2025). Identification of digital twins to guide interpretable AI for diagnosis and prognosis in heart failure. *NPJ Digital Medicine, 8*(1), 110.

MRI-Based Structural Failure Comparison between Chinese and American White Women with Prolapse: A Case-Control Study

PIs: John DeLancey (UMMS), Jianliu Wang (PKUHSC)

JI Program: Reproductive Health

Xie, B., Nandikanti, L., Swenson, C. W., Wu, J., Liu, T., Yang, X., Li, Y., Sun, X., DeLancey, J. O., Chen, L., & Wang, J. (2025). MRI-Based Structural Failure Comparison between Chinese and American White Women with Prolapse: A Case-Control Study. *International Urogynecology Journal, 36*(2), 363–371.

Editorial: Community series in towards precision medicine for immune-mediated disorders: advances in using big data and artificial intelligence to understand heterogeneity in inflammatory responses, volume II

PIs: Xujie Zhao (UMMS), Alex Tsoi (UMMS)

JI Scholar Publication

Zhou, X. J., Laouar, Y., & Tsoi, L. C. (2025). Editorial: Community series in towards precision medicine for immune-mediated disorders: advances in using big data and artificial intelligence to understand heterogeneity in inflammatory responses, volume II. *Frontiers in Immunology, 16*, 1553004.

Controversies in Chronic Aortic Dissection

PIs: Yanqing Zhao (PKUHSC), Minhaj Khaja (UMMS)

JI Scholar Publication

Zhao, Y., Fukuhara, S., & Khaja, M. S. (2024). Controversies in Chronic Aortic Dissection. *Seminars in Interventional Radiology, 41*(6), 588–594.

Genetic Variation in CCDC93 is Associated with Elevated Central Cystolic Blood Pressure, Impaired Arterial Relaxation, and Mitochondrial Dysfunction

PIs: Santhi Ganesh (UMMS), Yan Zhang (PKUHSC)

JI Program: Cardiovascular

Kumar, N., Yang, M. L., Sun, P., Hunker, K. L., Li, J., Jia, J., Fan, F., Wang, J., Ning, X., Gao, W., Xu, M., Zhang, J., Chang, L., Chen, Y. E., Huo, Y., Zhang, Y., & Ganesh, S. K. (2024). Genetic variation in CCDC93 is associated with elevated central systolic blood pressure, impaired arterial relaxation, and mitochondrial dysfunction. *PLoS Genetics, 20*(9), e1011151.

Research Publications

Simultaneous Targeting of NQO1 and SOD1 Eradicates Breast Cancer Stem Cells via Mitochondrial Futile Redox Cycling

PIs: Max Wicha (UMMS), Wei Wei (PKUHSC)

JI Program: Cancer

Luo, M., Shen, N., Shang, L., Fang, Z., Xin, Y., Ma, Y., Du, M., Yuan, Y., Hu, C., Tang, Y., Huang, J., Wei, W., Lee, M. R., Hergenrother, P. J., & Wicha, M. S. (2024). Simultaneous Targeting of NQO1 and SOD1 Eradicates Breast Cancer Stem Cells via Mitochondrial Futile Redox Cycling. *Cancer Research, 84*(24), 4264–4282.

A Cluster of Type I interferon-regulated Genes Associates with Disease Activity and Prognosis in Patients with IgA Nephropathy

PIs: Celine Berthier (UMMS), Hong Zhang & Xujie Zhao (PKUHSC)

JI Program: Renal

Qu, S., Gan, T., Wang, Y. N., Qi, Y. Y., Zhang, Y. M., Berthier, C. C., Liu, L. J., Shi, S. F., Lv, J. C., Zhang, H., & Zhou, X. J. (2024). A cluster of type I interferon-regulated genes associates with disease activity and prognosis in patients with IgA nephropathy. *International Immunopharmacology, 131*, 111920.

Functional Anatomy of Urogenital Hiatus Closure: The Perineal Complex Triad Hypothesis

PIs: John DeLancey (UMMS), Bing Xie (PKUHSC)

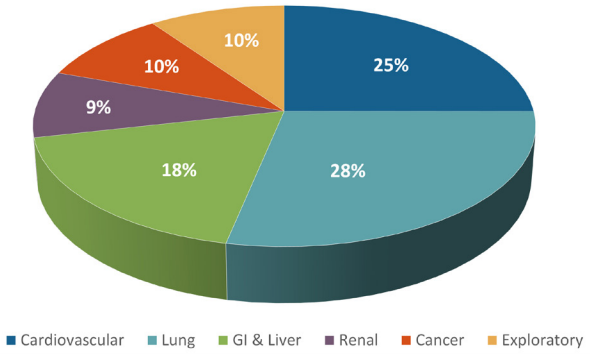
JI Program: Reproductive Health

DeLancey, J. O., Pipitone, F., Masteling, M., Xie, B., Ashton-Miller, J. A., & Chen, L. (2024). Functional Anatomy of Urogenital Hiatus Closure: The Perineal Complex Triad Hypothesis. *International Urogynecology Journal, 35*(2), 441–449

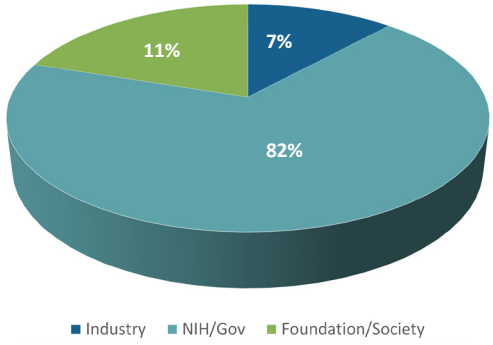
Extramural Funding

SInce the collaboration's launch, the JI collaborations have helped garner more than **$85 million** in funding for UMMS faculty to continue work started and supported through the partnership.

Funding by Thematic Category



Funding by Source



Other Events

Celebrating the Chinese New Year in Ann Arbor

JI faculty and leaders at Michigan Medicine gathered in January to celebrate the Chinese New Year.

The event was a chance to socialize and welcome the year of the snake but also an opportunity to hear updates from leaders include Richard Rogel, a U-M alumni whose support helped launch the JI in 2009.

"I am excited about the research that is being done, both here in Michigan and in China. I've seen how the MD-PhDs have progressed here, and how impactful the leadership program has been for the people who have visited Michigan. I think this is all critically important. It is a testament to your efforts and a reminder that we need to work hard to keep this partnership vibrant," said Mr. Rogel.

Dr. Kolars addresses attendees at a JI social event marking the 2025 Chinese New Year.

M GLOBAL REACH
Research, Education, and Collaboration in Health

JOINT INSTITUTE

for Translational and Clinical Research

GLOBAL REACH

Research, Education, and Collaboration in Health