

TRANSLATIONAL RESEARCH SYMPOSIUM 2017

Wednesday, October 4

**FOUND IN
TRANSLATION**

MOVING BEYOND BIOMEDICAL RESEARCH

M | **MICHR** MICHIGAN INSTITUTE FOR
CLINICAL & HEALTH RESEARCH
UNIVERSITY OF MICHIGAN

M | **RESEARCH**
UNIVERSITY OF MICHIGAN

Agenda

7:30 Registration & Networking Breakfast

8:30 Welcome

George A. Mashour // Michigan Institute for Clinical & Health Research,
University of Michigan Office of Research

Jack Hu // Vice President for Research, University of Michigan

8:45 Keynote Address – Future of Translation

Christopher P. Austin // Director, National Center for Advancing
Translational Sciences, National Institutes of Health

9:30 Transdisciplinary Translation

George A. Mashour // Michigan Institute for Clinical & Health Research,
University of Michigan Office of Research

10:00 Networking Break

10:15 Tales of Translation

Erica E. Marsh // OB/GYN

Lona Mody // Geriatric & Palliative Care

Benjamin Levi // Plastic Surgery

Parag G. Patil // Neurological Surgery

Discussion

11:15 Panel Presentations – Translational Vision

Kevin Ward // Fast Forward Medical Innovation

James T. Dalton // Pharmacy

Stephanie Rowley // Humanities

Discussion

12:15 Networking Lunch/Research Unit Displays

1:00 Performance // Translation Through the Arts

1:15 Growing Hope: Local Translational Story of Impact

Amanda M. Edmonds // Mayor, City of Ypsilanti, Michigan

2:00 Panel Presentations – Local to Global Translation

George A. Mashour // MARCH/CTSA Consortium

Joseph C. Kolars // U-M & Peking Joint Institute for Translational and Clinical Research

Vicki L. Ellingrod // Michigan Institute for Clinical & Health Research

2:45 Translational Research Survey & Next Steps

George A. Mashour // Michigan Institute for Clinical & Health Research,
University of Michigan Office of Research

3:15 Wrap-Up



Christopher P. Austin, MD

**Director, National Center for Advancing Translational Sciences,
National Institutes of Health**

Christopher Austin is director of the National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health. The mission of NCATS is to catalyze the generation of innovative methods and technologies that will enhance the development, testing and implementation of diagnostics and therapeutics across a wide range of human diseases and conditions. Before becoming NCATS director in September 2012, he was director of the NCATS Division of Preclinical Innovation, which focuses on translating basic science discoveries into new treatments, particularly for rare and neglected diseases, and developing new technologies and paradigms to improve the efficiency of therapeutic and diagnostic development. In this role, he founded and directed numerous initiatives including the NIH Chemical Genomics Center, the Therapeutics for Rare and Neglected Diseases program, and the Toxicology in the 21st Century program.

In 2016, Dr. Austin was elected chair of the International Rare Disease Research Consortium. Before joining the NIH in 2002, Dr. Austin directed research programs genomics-based target discovery, pharmacogenomics, and neuropsychiatric drug development at Merck, with a particular focus on schizophrenia.

Austin earned an AB in biology from Princeton University and an MD from Harvard Medical School. He completed clinical training in internal medicine and neurology at Massachusetts General Hospital, and a research fellowship in genetics at Harvard.



James T. Dalton, PhD
Dean and Professor, Pharmaceutical Sciences,
College of Pharmacy

James T. Dalton received his Bachelor of Science in Pharmacy from the University of Cincinnati and PhD in pharmaceutics and pharmaceutical chemistry from Ohio State University. He rose through the faculty ranks in the Department of Pharmaceutical Sciences in the College of Pharmacy at the University of Tennessee before returning to Ohio State, where he served as professor and chair in the Division of Pharmaceutics.

An entrepreneurial leave of absence from Ohio State was the stepping stone to a position as chief scientific officer at GTx, Inc. in Memphis, where he oversaw the preclinical and clinical development of selective androgen receptor modulators (a new class of drugs discovered in his labs).

He is a fellow of the American Association for the Advancement of Science and American Association of Pharmaceutical Scientists. He has co-authored over 150 original peer-reviewed scientific manuscripts and is an inventor on hundreds of US and international patent applications related to selective androgen receptor modulators, selective estrogen receptor alpha and beta ligands, tubulin antagonists, and receptor tyrosine kinase inhibitors.



Amanda Edmonds
Mayor, Ypsilanti, Michigan
Executive Director, Growing Hope

For more than 20 years, Amanda Edmonds has served as a leader in many capacities, through board service from the local to national level (beginning at age 16 on her local school board) and leadership roles in organizations of all types. She received her BS and MS from the University of Michigan's School of Natural Resources & Environment. She is the founder and executive director (since 2003) of nonprofit Growing Hope, dedicated to helping people grow and access healthy food. She has served as a policy leader both as a gubernatorial appointee to the Michigan Food Policy Council and as vice chair of the Washtenaw Food Policy Council. In November 2014 she was elected Mayor of the City of Ypsilanti, a diverse and historic urban community of 20,000 residents in southeast Michigan. She continues to serve as the executive director of Growing Hope, while she also serves her part-time role as mayor.



Vicki L. Ellingrod, PharmD, FCCP
Professor, Department of Psychiatry,
Medical School; Professor, Department of
Psychology, College of Literature, Science,
and the Arts; John Gideon Searle Professor
of Clinical and Translational Psychiatry, Clinical
Pharmacy Department, College of Pharmacy;
Associate Director, Michigan Institute for
Clinical & Health Research (MICHR)

Dr. Ellingrod obtained her BS and PharmD from the University of Minnesota and then completed a postdoctoral fellowship in psychopharmacology/pharmacogenetics at the University of Iowa, followed by joining the faculty there as an assistant professor. There, she completed a K08 training grant funded by NIMH (National Institute of Mental Health). In 2006, she joined the faculty at the University of Michigan.

For the past 10 years, she has served as director of the Clinical Pharmacogenomics Laboratory at the University of Michigan. Her research has primarily been funded by the NIMH, FDA, and industry sources and her work focuses on the pharmacogenomics of mental health treatments. Dr. Ellingrod is a founding member of CPNP and a full member of the American College of Neuropsychopharmacology as well as serving as a scientific editor for *Pharmacotherapy*. She is also an editor on the DiPiro text book *Pharmacotherapy, a pathophysiologic approach*.



S. Jack Hu, PhD, MS
Vice President for Research; J. Reid and Polly
Anderson Professor of Manufacturing Technology

Dr. Hu received his BS from Tianjin University, China and his MS and PhD from the University of Michigan.

As Vice President for Research (since 2014), Dr. Hu has responsibility for nurturing the excellence and integrity of research across the entire campus. He oversees the U-M Office of Research (UMOR), which promotes interdisciplinary research, develops and implements research policy, provides central administrative services in support of faculty research, innovation, and economic outreach, and manages activities related to compliance and the responsible conduct of research.

Dr. Hu served as Associate Dean for Academic Affairs (2009–2013) and Associate Dean for Research and Graduate Education (2007–2009), both in the College of Engineering at U-M. Dr. Hu's interests include manufacturing systems design and operations, assembly modeling, and statistical quality methods.

He is the recipient of various awards, including the SME Outstanding Young Manufacturing Engineer Award, National Science Foundation CAREER Award, ASME William T. Ennor Manufacturing Technology Award, the College of Engineering Research Excellence Award, and several best paper awards. He is a fellow of the American Society of Mechanical Engineers and a fellow of the International Academy for Production Engineering (CIRP). He served as the editor in chief of *Journal of Manufacturing Systems* from 2008 to 2013.



Joseph C. Kolars, MD
Josiah Macy, Jr., Professor of Health Professions
Education and Senior Associate Dean for
Education and Global Initiatives, Medical School

Dr. Kolars obtained his MD from the University of Minnesota Medical School, pursued internal medicine training in Minneapolis, and completed his post-graduate training in gastroenterology at the University of Michigan. After serving as associate chair for Medicine and Residency Program Director, Dr. Kolars left U-M to establish a western-based health care system in China in conjunction with Shanghai Second Medical University.

In 1999, he joined the faculty at Mayo Clinic in Rochester, Minnesota and served as internal medicine residency program director for five years. In 2009, he returned to U-M, where he oversees the associate deans responsible for the education programs as well as global health initiatives for the medical school. Between 2007-11, he worked closely with the Bill and Melinda Gates Foundation to partner medical schools in the US with those in sub-Saharan Africa.

He serves as co-director for the U-M Medical School - Peking University Health Science Center Joint Institute for Clinical and Translational Research. His interests in medical education focus on innovations and the transformation of learning systems to more explicitly align with better health.



Benjamin Levi, MD
Assistant Professor, Plastic Surgery Director, Burn,
Wound and Regenerative Medicine Laboratory

Dr. Levi has been involved in burn research since high school, when he was given the opportunity to work in a burn laboratory for the surgeon who had treated him as a child. He worked in the laboratory for three summers and, inspired by this experience, remained active in research throughout medical school and residency.

Dr. Levi completed his undergraduate education at Washington University, medical school at Northwestern University, and plastic and reconstructive surgery residency at the University of Michigan. He completed a basic science research fellowship in stem cell biology and bone tissue engineering at Stanford University. He recently completed a fellowship in burn and surgical critical care at Massachusetts General Hospital.

Since returning to U-M, Dr. Levi has founded the Burn/Wound and Regenerative Medicine Laboratory with Dr. Wang. This lab focuses on the significant clinical problem of heterotopic ossification. Dr. Levi has developed new animal models to study this complex process and is working to improve early diagnostic and treatment modalities.



Erica E. Marsh, MD, MSCI, FACOG
Associate Professor of Obstetrics and Gynecology,
Medical School; Chief of the Division of
Reproductive Endocrinology and Infertility

Dr. Erica E. Marsh attended Harvard College and Harvard Medical School. She completed her residency at the Integrated OBGYN Residency at the Brigham and Women's Hospital and Massachusetts General Hospital, and a Reproductive Endocrinology and Infertility fellowship at Northwestern University. She then joined the Feinberg School of Medicine – Northwestern University faculty. She joined U-M in 2016.

She has published significantly in the area of fibroids and health disparities in women's health. Her work is funded by the NICHD, NIMHD, OWH, PCORI, and several foundations, and she was named the 2015 Ira and Ester Rosenwaks New Investigator of the Year by the American Society of Reproductive Medicine.

Dr. Marsh's research area of interest is comparative reproductive health across populations. She seeks to understand the challenges of fibroids from 360° — addressing their pathophysiology, epidemiology, and clinical impact, and understanding the patient experience from symptoms and diagnosis to treatment.

Dr. Marsh is also a committed community advocate, building bridges between community organizations and academia with community-based participatory research initiatives that have led to funding, publications, and awards.



George A. Mashour, MD, PhD
Bert N. La Du Professor and Senior Associate Chair
for Anesthesiology Research, Associate Dean for
Clinical & Translational Research, Medical School;
Director, Michigan Institute for Clinical & Health
Research; Director of Translational Research,
University of Michigan Office of Research

After studying philosophy and classics as an undergraduate, Dr. Mashour received his medical and scientific training at Georgetown University and Harvard Medical School, and was a two-time Fulbright Scholar in the neurosciences. He is internationally recognized for his work on consciousness, mechanisms of anesthetic-induced unconsciousness, and intraoperative awareness. Dr. Mashour has authored >150 publications, with key articles appearing in the *New England Journal of Medicine*, *Lancet*, and the *Proceedings of the National Academy of Sciences*. He has also edited four textbooks on anesthesiology and the neurosciences.

Dr. Mashour plays a number of leadership roles at U-M. He is the Bert N. La Du Professor and Senior Associate Chair for Anesthesiology Research. At the Medical School level, he serves as the Associate Dean for Clinical & Translational Research and is the founding director of the Center for Consciousness Science.

At the institutional level, he serves as director of the Michigan Institute for Clinical & Health Research, an NIH-funded institute dedicated to advancing translational research. He is also Director of Translational Research in the central Office of Research. Nationally, Dr. Mashour serves on the NIH Surgery/Anesthesiology/Trauma study section, as a member of the NIH Clinical & Translational Science Awards Program Steering Committee, as vice chair of the board of the Foundation for Anesthesia Education and Research, and as president of the Society for Neuroscience in Anesthesiology & Critical Care.



Lona Mody, MD, MSc
**Amanda Sanford Hickey Professor of Internal
 Medicine, Medical School**

Dr. Mody is PI of the Infection Prevention in Aging Research Program and Associate Director, Translational Research for the Geriatrics Center. She is one of very few geriatricians in this country with an expertise in aging populations, epidemiology, an active wet research laboratory in microbiology, and a translational research agenda focused on vulnerable aging population. Results from her laboratory and patient-oriented research are now being disseminated nationwide to enhance safety and quality of an aging population.

She has mentored several junior faculty, fellows, post-doctoral students, and residents in conducting clinical, epidemiologic, and laboratory-based research projects. Since 2003, her work is funded by the NIH, the Agency for Healthcare Research and Quality, Veteran Affairs, and various foundations.



Parag Patil, MD, PhD
**Associate Chair for Clinical & Translational
 Research, Department of Neurosurgery,
 Medical School**

Dr. Patil's educational background includes a BS in Electrical Engineering from MIT, an MA in Philosophy and Economics from Oxford University, and an MD and PhD in Biomedical Engineering from Johns Hopkins University. He joined the full-time U-M faculty in 2005.

His clinical focus is functional neurosurgery, with an emphasis on neuromodulation therapies for movement disorders and pain, in addition to surgical therapies for facial pain, cancer pain, and eloquent cortex brain tumors. His NIH-funded translational research focuses on deep brain stimulation, pain neuromodulation, and intuitive brain-machine interface neuroprosthetics. His clinical research includes sponsored trials developing novel indications in psychiatric and pain neuromodulation. Research in the laboratory spans human intraoperative electrophysiology, image processing, finite-element modeling of electrical fields, clinical trials in neuromodulation and stem-cell therapies, and clinical outcomes research.



Stephanie Rowley, PhD
Chair, Combined Program in Education & Psychology, Psychology Department and School of Education; Associate Vice President for Research

Stephanie Rowley received a PhD in Developmental Psychology from the University of Virginia and then joined the faculty at the University of North Carolina. In 2000, she moved to the University of Michigan's Department of Psychology. In 2008, she added an appointment in the School of Education. She is currently chair of the Combined Program in Education and Psychology, an interdisciplinary program that spans the Psychology Department and School of Education.

Her research focuses on the influence of race- and gender-related attitudes and beliefs on the development of children's academic self-concept with a strong emphasis on parents' roles in the development of these attitudes. Her most recent project is an NSF-funded longitudinal study of African American parents' beliefs about Science, Technology, Engineering, and Math (STEM) and the relation of those beliefs to the socialization of their middle school youth. Dr. Rowley serves as one of six principal investigators at the U-M Center for the Study of Black Youth in Context.



Kevin Ward, MD
Professor, Department of Emergency Medicine and Department of Biomedical Engineering; Executive Director, Fast Forward Medical Innovation; Executive Director, Michigan Center for Integrative Research in Critical Care

Dr. Ward received his medical degree from Tulane University and completed his emergency medicine training at the University of Pittsburgh. He serves as executive director of Michigan Medicine's Fast Forward Medical Innovation program, dedicated to making innovation and entrepreneurship a natural and expected academic behavior by offering strategic resources and support to biomedical researchers.

Dr. Ward's research encompasses the development of platform technologies that span the spectrum of critical illness and injury ranging from the critically ill neonate to the critically injured warfighter. His research has been funded by the NIH, Department of Defense and National Science Foundation and he has authored more than 200 peer-reviewed publications. He is an innovator and entrepreneur in the field of critical care with over 50 issued and pending patents, 10 products licensed to industry, and 4 companies launched. Dr. Ward's passion is in developing programs that encourage strategic, integrative, and disciplined collaborations across medicine, engineering, information sciences, and industry that promote true solutions.

FEATURED TRANSLATIONAL RESEARCH UNITS

INSTITUTE FOR SOCIAL RESEARCH UNIVERSITY OF MICHIGAN

The University of Michigan Institute for Social Research (ISR) is the world's largest academic social science survey and research organization. Founded in 1949, ISR is a leader in developing and applying new social science methods, and is committed to educating the next generation of social scientists. ISR supports over 300 research projects funded by over \$110 million in external grants, including over \$80 million from the National Institutes of Health. These grants support the research of more than 310 scientists from 25 disciplines, including joint projects with 16 U-M units.

ISR is best known for large survey studies and has had a longstanding commitment to public release of data. Many ISR surveys collect biomarker data, including DNA. ISR has also been an innovator in linking survey data with administrative records and in developing physical and virtual data enclaves to give researchers access to linked data while preserving confidentiality.

OFFICE OF RESEARCH MEDICAL SCHOOL

Across the investigative spectrum, the primary mission of the Medical School Office of Research is to support a culture of innovation and efficiency that serves the Medical School research community and, ultimately, contributes to positive patient impact.

MICHIR MICHIGAN INSTITUTE FOR CLINICAL & HEALTH RESEARCH UNIVERSITY OF MICHIGAN

The Michigan Institute for Clinical & Health Research (MICHIR) is here to enable & enhance clinical & translational research at U-M. We do this by being a catalytic partner that educates, funds, connects & supports research teams here and beyond. Think of our helpful and knowledgeable staff and faculty as your extended research team.

LIFE SCIENCES INSTITUTE CENTER FOR STRUCTURAL BIOLOGY UNIVERSITY OF MICHIGAN

The Center for Structural Biology (CSB) is a comprehensive structural biology resource for researchers at the University of Michigan and surrounding areas. The center includes:

- High-Throughput Protein Laboratory for protein engineering
- Protein Purification Facilities for small- and large-scale protein production
- Macromolecular Crystallization & Crystallography Laboratories for solving crystal structures of biological molecules
- X-ray facility with access to high energy synchrotron radiation

LIFE SCIENCES INSTITUTE CENTER FOR CHEMICAL GENOMICS UNIVERSITY OF MICHIGAN

The Center for Chemical Genomics (CCG) provides expertise and resources for U-M researchers and others to use modern high-throughput screening (HTS) approaches in tackling basic biology or novel drug discovery projects. Dedicated staff with years of pharmaceutical industry experience guide researchers in assay development, compound or RNAi screening, as well as chemoinformatic analysis of results. A wide range of methodologies are available including optical plate readers, high-content microscopic screening, HT-Flow cytometry, and protein thermal stability. Both targeted and diverse compound libraries have yielded new chemical probes and drug leads, many with in vivo activity.

CENTER FOR THE DISCOVERY OF NEW MEDICINES UNIVERSITY OF MICHIGAN

The Center for Discovery of New Medicines (CDNM) is the translational research/drug discovery center at the University of Michigan. Founded in 2012, it brings together the expertise required to advance projects from idea to clinical proof-of-concept. CDNM provides both financial support and project-specific mentorship and consulting for researchers with projects that have therapeutic potential.



With almost \$1.4 billion in research expenditures annually, the University of Michigan is one of the world's leading research universities. The U-M Office of Research (UMOR) supports this enterprise by cultivating interdisciplinary research and providing a range of services across all three campuses.

Our activities include fostering new research; providing central research administration; building partnerships with industry, government and academia; managing knowledge transfer and economic development; supporting a culture of ethical research and compliance by providing guidance and oversight; overseeing research policy; and advocating for university research among such key constituencies as federal and state government, industry, and the media.

Under the direction of the Office of the Vice President for Research, UMOR's diverse units serve to coordinate, support, and strengthen U-M's research enterprise. UMOR includes 11 service units in addition to nine interdisciplinary academic units and initiatives.



Founded in 2011 with the mission of enhancing the health and well-being of local, national, and global populations, the University of Michigan's Institute for Healthcare Policy and Innovation (IHPI) is one of the nation's leading academic institutes devoted to improving the quality, safety, equity, and affordability of healthcare. IHPI includes 500+ health services researchers from 17 U-M schools and colleges, including medicine, public health, engineering, public policy, business, nursing, law, social work, dentistry, and pharmacy.

The Institute's priorities include: evaluating the impact of healthcare reform, promoting greater value in healthcare, improving the health of communities, and creating innovations in healthcare information technology and processes of care. The Institute represents a convergence of intellectual energy and passion for improving public health and wellbeing, and offers a unique collaborative environment for generating ideas leading to innovations in thinking, practice, and policy.



The A. Alfred Taubman Medical Research Institute at the University of Michigan was created expressly to support medical doctors who also perform laboratory research in the quest for new treatments and cures.

Alfred Taubman's vision was to advance the "high-risk, high-reward" ideas of the most brilliant medical minds, allowing them to pursue novel avenues not supported by traditional government and foundation funding. Thanks to these unrestricted grants, Taubman Scholars have initiated dozens of human clinical trials of new drugs, surgeries and other potential therapies. Taubman Scholars have started more than a dozen biomedical firms, earned more than 100 patents and initiated collaborations with institutions across the United States and around the globe.

The institute has created a community of scholars whose scientists are working collaboratively to advance discovery in many medical fields, creating innovative partnerships with leaders in other disciplines to create new diagnostic and treatment models.

Contact the University of Michigan Office of Research

Call 734.764.1185

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