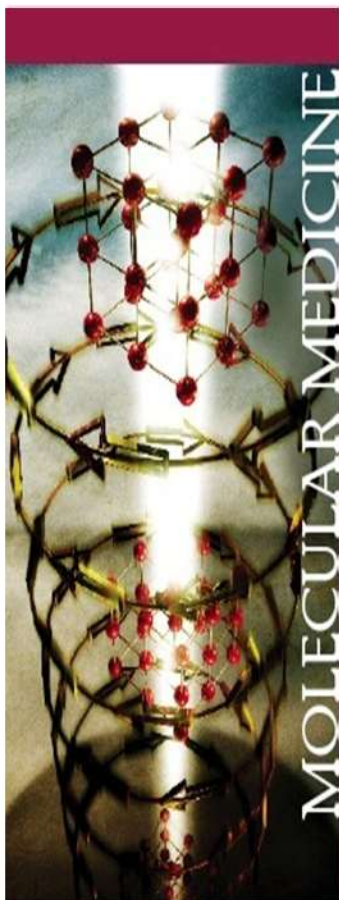


CENTER FOR
**MOLECULAR MEDICINE
 AND GENETICS**



Advancing Discovery in Metabolism and Diabetes: the 2026 Brasza Diabetes Lecturer



The 2026 Brasza Diabetes Lecturer is Dr. Tobias Walther, a distinguished leader in the study of lipid and energy metabolism. The lecture

will take place on **Wednesday, April 22, 2026, at 12:30 p.m. in Room 3125 Scott Hall.**

The **Annual Henry L. Brasza Diabetes Lecture** is part of a CMMG focus on metabolism and diabetes, bringing leading scientists in diabetes and metabolism to Wayne State University to share leading-edge insights that inspire discovery and collaboration.

Dr. Walther is Chair of the Cell Biology Program at the Sloan Kettering Institute in New York City and a Professor at Weill Cornell School of Medicine, where he co-directs the Farese and Walther Laboratory. Since 2015, he has been an Investigator with the Howard Hughes Medical Institute. His research focuses on cellular lipid and energy metabolism, particularly the mechanisms and physiology of neutral lipid synthesis and storage. His team investigates how cells regulate lipid abundance, buffer fluctuations in lipid availability, and how these processes influence membrane biology and overall cell physiology. The lab also explores the role of lipid metabolism in human diseases such as cancer and neurodegeneration,

continued on page 2

Inside this issue:

Brasza Lecture	1
Samavati	1
Trainee Presentations	2
Faculty Awards	3
Graduate Student Profile - Pham	4
Faculty	5



**Faculty Spotlight—Lobelia Samavati:
 Delving into sarcoidosis and the nature of autoimmune disease**

Lobelia Samavati (Professor of Internal Medicine and of Molecular Medicine and Genetics) has spent 25 years advancing the understanding of sarcoidosis and challenging long-held assumptions about autoimmune disease. She also directs the Center for Sarcoidosis and Interstitial Lung Disease at Wayne State University (WSU).

Sarcoidosis is a chronic inflammatory disease marked by granulomas, which are clusters of immune cells in the lungs or other organs including the skin, eyes, heart, and nervous system. Despite being first described in 1877, its cause remains unknown and treatment options are limited. “Most existing therapies suppress the immune system,” explains Dr. Samavati. “As a result, patients often develop side effects

because their immune function becomes dysregulated.”

Her decades as a pulmonary critical care physician shaped both her research priorities and the establishment of the Sarcoidosis Center here, where improving patient outcomes remains central. The disease disproportionately affects Black Americans in the United States and often begins in young adulthood, making it especially relevant to the Detroit area communities she serves.

A key scientific question has driven her work: what triggers granuloma formation? Immune responses typically require an antigen, yet the sarcoidosis antigen has

continued on page 4



Brasza lecture – continued from page 1

connecting fundamental biochemistry to major clinical challenges.

Honoring a Legacy of Vision and Support. The Annual Brasza Diabetes Lecture was founded to honor **Henry L. Brasza**, a Detroit industrialist and patient of **George Grunberger, M.D., FACP, FACE**, a former Director of CMMG. Born in 1923, Mr. Brasza was a World War II veteran who built his firm, the H&L Tool Company in Madison Heights, Michigan, starting with his \$250 “muster out” check, into a major supplier for the automotive industry. His enduring generosity and belief in scientific progress left a lasting impact on Wayne State University and the CMMG community before his passing in October 1998.

While being treated for diabetes at Harper Hospital, Mr. Brasza offered to support Dr. Grunberger’s work at Wayne State University. This partnership led to the establishment of the Brasza Endowed Professorship and Directorship of CMMG. As Dr. Grunberger reflected on him, “His attitude, boundless optimism, zest for life with the glass always being half full, the bright lining of whatever subject was brought up, were truly unique.” Initially funding a Brasza Diabetes Fellowship for the training of future diabetes researchers, Mr. Brasza and his family later agreed that endowing the CMMG Directorship would ensure lasting benefit for generations of researchers.

Oversight of the Brasza Lecture is led by **James Granneman** (Professor of Molecular Medicine and Genetics and of Internal Medicine, and Director of the Center for Integrative Metabolic and Endocrine Research). He collaborates on choosing annual lecturers with Todd Leff (Associate Professor Emeritus of Pathology), and Berhane Seyoum (Professor of Internal Medicine). Together, they have sustained a tradition of excellence, inviting lecturers whose work defines the forefront of diabetes and metabolic research.

Since its founding, the Brasza Diabetes Lecture has celebrated distinguished leaders in metabolic research, reflecting the Center’s mission to bridge fundamental science and human health and carrying on the vision of Henry L. Brasza and Dr. George Grunberger. Each year’s lecture builds upon this legacy and the table of past lecturers (next page) shows the evolving future of biomedical discovery. As a central CMMG mission is integrating molecular biology with translational medicine through interdisciplinary collaboration among basic scientists, clinicians, and educators, the Brasza lectures fit this mission by focusing on the mechanisms underlying metabolic disorders and their broader impact on human health.

continued on page 3

Empowering Emerging Scientists

Presenting research at regional and national scientific meetings is a cornerstone of graduate education, offering students the opportunity to refine communication skills, gain critical feedback, and build networks that shape future careers. The Center for Molecular Medicine and Genetics is proud to support students in the Molecular Genetics and Genomics (MGG) graduate program. These formative experiences, made possible through the CMMG Student Travel Awards, represent an investment that strengthens both our trainees and the broader scientific community.

This year, several outstanding CMMG students used travel award support to share their work with broader audiences. Ashley Keesling, MS, a third-year MGG graduate student in the laboratory of James Granneman (Professor of Molecular Medicine and Genetics and of Internal Medicine), presented her poster, “Spatial Transcriptomic Analysis of Adipogenic Niche Formation,” at the Michigan Physiological Society Annual Meeting in June 2025. Her study used spatial transcriptomics to map how stem and immune cells interact during brown adipose tissue expansion, focusing on work that may inform new strategies to improve cardiometabolic health.

Ali Ranjbaran, a fourth-year MGG PhD student in the laboratory of Roger Pique-Regi (Professor of Molecular Medicine and Genetics and of Obstetrics and Gynecology), who is also part of the WSU SOM MD-PhD program, presented his poster, “Psychological Stress and Social Support Are Associated with Opposing Single-Cell Pro-Inflammatory Gene Regulatory Mechanisms in Adults,” at the American Society of Human Genetics 2025 Annual Meeting in Boston, MA. His work was recognized with a Reviewers’ Choice Abstract, underscoring its significance in revealing how psychosocial factors shape immune regulation at the single-cell level.

These accomplishments highlight the critical role of travel support in preparing students for competitive scientific careers. By enabling professional engagement early in training, the CMMG Student Travel Awards help students strengthen their communication skills, build meaningful professional connections, and advance our mission of Discovery. For Life.

If you are interested in helping to support future student travel, please visit <https://genetics.wayne.edu/about/giving>

Date	Lecturer	Affiliation	Title
04/01/09	Jose Florez, MD, PhD	Joslin Diabetes Center, Harvard Medical School	The Genetics of Type 2 Diabetes: A Realistic Appraisal in 2009
04/06/10	Liangyou Rui, PhD	University of Michigan	SH2B1 Regulation of Body Weight and Glucose Metabolism
04/06/11	Gerald Karsenty, MD, PhD	Columbia University Medical Center	The Novel Endocrinology of Bone
04/05/12	David Ron, MD	Institute of Metabolic Sciences, University of Cambridge, UK	Protein Folding: Homeostasis and Metabolic Control
04/10/13	Morris White, MD, PhD	Harvard Medical School	Hepatic Insulin Resistance and Metabolic Disease
04/09/14	Bradford Lowell, MD, PhD	Harvard Medical School	The Neural Wiring Diagram for Hunger: Using Cre/Lox Tools to Discover its Basis
04/01/15	Karen Reue, PhD	University of California, Los Angeles	Lipin-1 at the Intersection of Lipids, Autophagy, and Metabolic Homeostasis
04/20/16	Evan D. Rosen, MD, PhD	Harvard Medical School	Transcriptional and Epigenomic Approaches to Adipose Tissue Biology
04/05/17	Nada A. Abumrad, PhD	Washington University in St. Louis	A Master Regulator in Homeostasis and Metabolic Disease
04/04/18	Mitchell A. Lazar, MD, PhD	University of Pennsylvania	The CD36 Story: Ups and Downs of Gene Transcription and Metabolism
04/03/19	Gerald I. Shulman, MD, PhD	Yale University	The New Biology of Type II Diabetes
04/07/21	Dominic Accelli, MD	Columbia University	The New Biology of Diabetes
04/13/22	E. Dale Abel, MBBS, PhD	University of California, Los Angeles	Cardiac Glucose Metabolism in Diabetes and Heart Failure
04/12/23	Sylvia Corvera, MD, MS	University of Massachusetts	Mechanisms of Human Adipose Tissue Development Impacting Diabetes
04/10/24	Susanne Mandrup, PhD	University of Southern Denmark	Regulating the Master Switch of Adipogenesis

Faculty Awards and Recognition



Angela Trepanier, MS, CGC has been selected for a President's Award for Excellence in Teaching, recognizing her extraordinary dedication to student learning and mentorship.



Adi Tarca, PhD, has received one of only five Wayne State University Board of Governors Faculty Recognition Awards, honoring exceptional scholarly achievement and impact.



Kezhong Zhang, PhD, has been awarded a Distinguished Faculty Fellowship, acknowledging his sustained record of scientific excellence and leadership in biomedical research.

remained unidentified. Rather than focusing on suspected infectious or immune-mediated triggers, Dr. Samavati pursued a different approach.

Beginning in 2005–2006, her team developed an approach that could uncover proteins uniquely associated with sarcoidosis. They did so by constructing a T7 phage display library using lung immune cells from patients with sarcoidosis. To do that they performed bronchoalveolar lavage, isolated RNA, synthesized DNA through random priming, and inserted it into a phage system. Through selective biopanning, first removing nonspecific binders using control sera and then isolating disease-specific clones, they were able to identify T7 phages expressing unique sarcoidosis proteins.

Extensive immunoscreening led them to four sarcoidosis-specific phages and the development of a blood-based diagnostic test. The assay is now under FDA review, and their findings were published in *The American Journal of Respiratory and Critical Care Medicine* in 2024. If approved, the test could enable earlier and more accurate diagnosis, helping to reduce delays that currently contribute to organ damage and prolonged treatment.

Dr. Samavati believes the implications go beyond diagnostics. “We think these are true antigens of sarcoidosis, potential drivers of granuloma formation and symptoms,” she says. Her team hypothesizes that macrophages and dendritic cells harbor these antigens and transport them to other organs, thereby explaining disease spread.

This idea challenges the traditional autoimmune model. “I can be provocative and say that I don’t believe this theory,” she notes. Autoimmune diseases often cycle through flares and remission. She proposes that an unidentified antigen—possibly mimicking human proteins—is released under certain conditions, such as stress, triggering inflammation. This framework could have broader relevance across immune-mediated diseases.

At the center of the discovery are two novel amino acid sequences — immunoepitopes not found in mammalian or microbial databases. “These sequences appear to be hybrids of mammalian and microbial proteins, likely developing during phagocytosis and intracellular processing,” she explains.

Dr. Samavati and her collaborators are now focused on translating these findings to realize improved patient care. In partnership with Kephera Diagnostics LLC and supported by a newly awarded Small Business Innovation Research grant from the National Institutes of Health, her team will validate the assay in larger patient populations and investigate its relevance across disease states. “We hope to improve the ELISA platform, identify high-affinity immunoglobulins, and examine whether specific clonal expansions correlate with particular disease patterns,” she says. “And we are very interested in distinguishing sarcoidosis from other immune-mediated diseases.” Her goal remains focused on moving from uncertainty toward precision to facilitate earlier diagnosis, better disease classification, and, ultimately, improved outcomes for patients.

Student Spotlight — Lucynda Pham, MS (PhD Student) Focused on Damaged Mitochondria



Lucynda Pham, a 4th year PhD student in Molecular Genetics and Genomics (MGG), studies mitophagy, “the selective removal and degradation of damaged mitochondria.” Because mitochondria play essential roles in energy production and cellular health, dysfunction contributes to a wide range of diseases, including aging-related conditions, diabetes, and cancer.

Pham conducts her research in the laboratory of Maik Hüttemann (Professor of Molecular Medicine and Genetics and of Biochemistry, Microbiology, and Immunology). The Hüttemann lab focuses on cytochrome *c* oxidase (COX) and cytochrome *c*. “My research primarily focuses on the use of infrared light (IRL) to photo-biomodulate COX and its therapeutic potential to treat disease conditions involving mitochondrial dysfunction,” she explains.

During aging and disease, damaged mitochondria accumulate, leading to reduced function and increased production of reactive oxygen species (ROS). Pham’s work has shown that IRL treatment stimulates mitophagy. “By selecting only the healthy, high-functioning mitochondria, we can improve overall function”, she says.

Pham earned her BS in Biomedical Sciences from Central Michigan University and her MS in MGG from Wayne State University. She was recently awarded the prestigious Corrine F. Resta Endowed Doctoral Support Award from the Wayne State University School of Medicine in recognition of her outstanding graduate research and dissertation work.

She has been involved in research since early in her undergraduate studies and was drawn to the Hüttemann lab for its infrared light work and her interest in mitochondrial biology. Through her training, she has developed strong expertise in mitochondrial function and the methods used to study it.

She adds that her experience here has been formative both scientifically and personally. “I’m glad I stayed after my MS to pursue my PhD. Dr. Hüttemann is a great mentor and, along with my lab members, has taught me valuable skills that have helped me become the scientist I am today.”

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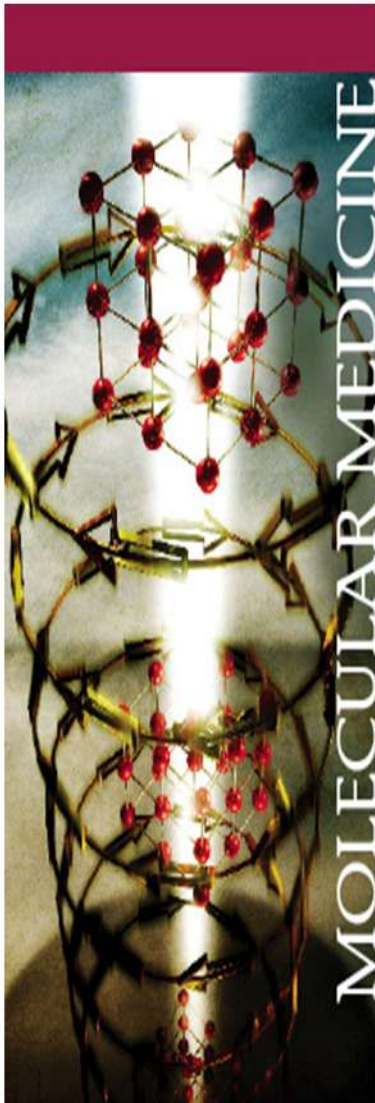
Yolanda Hand

Suzanne Shaw, ALA

Pam Sims, MBA

Newsletter Written and Edited by:

Mark Terry



Wayne State University
School of Medicine
3127 Scott Hall
540 East Canfield Ave.
Detroit, Michigan 48201
<http://genetics.wayne.edu>

Phone: 313.577.5323

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