Faculty Members Elected to the Academy of Science, Engineering and Medicine of Florida

Three faculty members from the University of Miami Miller School of Medicine were recently elected to the Academy of Science, Engineering and Medicine of Florida (ASEMFL). These additions build upon the Miller School’s statewide presence and current cohort of members in the ASEMFL.

Established in 2018, the ASEMFL has focused on uplifting leaders in STEM as the organization works to address problems, recognize success and further excellence in Florida.

This year’s elected members from the Miller School include Alessia Fornoni, M.D., Ph.D., FASN, Katz Professor of Medicine and chief of the Katz Family Division of Nephrology and Hypertension; Girardin Jean-Louis, Ph.D., director of the Center for Translational Sleep and Circadian Sciences; and Xue Zhong Liu, M.D., Ph.D., the Marian and Walter Hotchkiss Endowed Chair in Otolaryngology and vice chair of otolaryngology.

Election into the ASEMFL is based upon being a current member of the National Academy of Science, Engineering and Medicine while residing in Florida or having an outstanding record of accomplishments, national and international recognition in the
field while living in the state.

Key Discoveries in Kidney Disease

Alessia Fornoni, M.D., Ph.D., FASN

An innovator at heart, Dr. Fornoni was elected into the ASEMFL because of her discovery of renal fat as a key contributor to chronic kidney disease (CKD) and the clinical development of drugs to halt CKD. Her NIH-funded laboratory at the Miller School is the first to report and discover the mechanisms linking renal fat accumulation to CKD progression. Her findings at the Peggy and Harold Katz Family Drug Discovery Center, published in several high-impact journals, have led to the discovery of new drugs currently being tested globally in phase 2 clinical trials, and to the development of several start-up companies.

“It is humbling to be recognized by the academy for being able to bring back the results of my 25 years of drug discovery research at UM to the diverse community of patients I serve,” Dr. Fornoni said.

An exemplary physician-scientist and one of the few Florida-based members of the American Society of Clinical Investigation and of the Association of American Physician, Dr. Fornoni serves as a role model for physician scientists around the globe. “It is currently the highest honor to serve as co-director of the MSTP program and of the CTSI KL2 program at UM, where I can mentor the next generation of physician-scientists,” she said.
Health Disparities and Sleep Medicine

Girardin Jean-Louis, Ph.D.

For the past 20 years, Dr. Jean-Louis and his team have studied U.S. minoritized communities that have been disproportionately burdened by cardio-metabolic diseases. This vital work has led to his election into this year’s ASEMFL cohort as he unravels the mechanisms of race-based health disparities in sleep disorders and designs effective interventions to address this issue.

His findings are seen in 215 scientific conference proceedings and book chapters and 250 peer-reviewed scientific journals. Dr. Jean-Louis's current research portfolio consists of five R01 projects and three training-related awards to support the next generation of clinicians and scientists. These projects will address specific health disparity issues in sleep and circadian sciences; develop and implement innovative strategies to acquire patient-centered data using decentralized approaches; and provide solution-focused interventions to achieve health equity.

“Being part of the academy is the highest honor and an indication that my work has been recognized and celebrated,” Dr. Jean-Louis said. “Such honor gives me the impetus to continue the excellent stakeholder-engaged work that we have been doing in minoritized communities, and to expand the training/mentoring pipeline to foster sustainable careers of underrepresented scientists, anchored by an academic environment of inclusive excellence.”
Advancing Hearing-Loss Therapies with Future Physician-Scientists

Xue Zhong Liu, M.D., Ph.D.

Dr. Liu’s career work as a leading surgeon-scientist in ENT research and disposition for mentorship were all qualities merited by the ASEMFL for election. His global reputation is seen in his efforts to understand genetic and environmental drivers of hearing loss. For the past decade, Dr. Liu has ranked in the top 5% of National Institutes of Health-funded physician-scientists in the ENT field, and for the past 30 years with over 260 peer-reviewed journals, he has made important discoveries in hearing therapies with his team.

“Being inducted into the ASEMFL will help me to reach out beyond specialty and education disciplines to address one of the biggest inequities in today’s ENT sensory disorder care landscape,” Dr. Liu said. “Aside from more than $10 million in recent federal funding and recently published research, I am very excited about our development of multidisciplinary approaches to help the school cross disciplines and academic boundaries to collaborate for change.”

Aside from his work in the field, Dr. Liu has also taken on the responsibility of training the next generation of physician-scientists in ENT. He understands the current need for more specialists who will advance scientific discovery and provide dedicated patient care. Dr. Liu and his colleagues have established a pipeline for physician-scientists at the Miller School with NIH-supported training/mentoring and
opportunities for their own research work.

The 2023 ASEMFL induction will take place during the annual meeting held in Orlando on Friday and Saturday, November 3 and 4, 2023.