

The Michigan Daily

RESEARCH

3 'U' faculty elected to National Academy of Medicine

by Michal Ruprecht

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The National Academy of Medicine announced the election of 100 members at its annual meeting last Monday. Three University of Michigan faculty members are among the new class of members, including Rebecca Cunningham, James Dalton and Gabriel Nuñez. They join 53 other current and emeritus University of Michigan faculty, and living former faculty, in the prestigious society.

According to the [NAM website](#), election to NAM is one of the most prestigious recognitions in the health and medicine fields, and recognizes those who have excelled in their professions.

The Daily spoke to Cunningham, Dalton and Nuñez about their research in medicine and health.



Rebecca Cunningham

Cunningham is the Interim Vice President of Research, Director of the Injury Prevention Center and a professor of emergency medicine. She also holds a joint appointment in the School of Public Health's Department of Health Behavior and Health Education and is a member of the Institute for Healthcare Policy and Innovation.

Cunningham said she is thankful for the nomination and hopes this award shows others the importance of injury and violence prevention research.

"It is a tremendous honor," Cunningham said. "I am thrilled to be able to participate with such esteemed colleagues and to represent the University, as well as be a voice for injury and violence prevention research including firearm injury prevention research at the national level."

She also touched on the gender discrepancies in NAM when she was younger.

"For many of my early faculty years, most of the walls of photos of awards or announcements of awards were walls of grey-haired white men," Cunningham said. "And while they had amazing contributions to science, I did not always see that it was possible for young women faculty to rise to. There are now many women in the National Academy of Medicine and many women faculty here on campus who have achieved this, and collectively this helps our junior faculty see that they too have a critical place in our halls of science."

Cunningham said she has created programs to decrease violent injury among youths, adding her team has created the first effective prevention program for youth who come to the hospital emergency department in Flint and are at risk for violence from friends and partners after they leave. Cunningham serves as a principal investigator of the national Firearm Safety Among Children & Teens Consortium, which is funded by the National Institutes of Health to reduce firearm injury. She said this field of research is important because gun injury is the second cause of death for kids aged 1-17 and the leading cause of death among high school teens in the U.S.

"Injury and violence prevention is a science," Cunningham said. "This field of research is still relatively new, and this honor aids in showing young faculty that these areas are indeed legitimate fields of scientific study, which helps encourage more to join in making careers in these fields."

Cunningham has also clinically served in the emergency departments at Michigan Medicine and Hurley Hospital in Flint for 20 years. She received the Society for Academic Emergency Medicine's Excellence in Research Award earlier this year.

Cunningham also provided guidance to the State of Michigan while she served on the Michigan Prescription Drug and Opioid Abuse Commission.





Gabriel Nuñez

Nuñez is a professor of pathology at the medical school and a member of the Rogel Cancer Center. Nuñez joined the University faculty in 1991. He is an expert in gastrointestinal and systemic inflammation, host-microbial interactions and mucosal immunology.

Nuñez emphasized that the recognition he received should also be attributed to his team members.

"I think that I am honored and humbled by this recognition," Nuñez said. "This is also recognition for my team. We don't work in isolation... so this is part of the recognition of all the team members here at the University of Michigan who over many years worked very hard to make great discoveries."

Early in his career, Nuñez's lab made contributions to the field of apoptosis (cell death), including the identification of multiple components of the cell death machinery and key regulatory steps in the apoptotic pathway.

His lab also identified protein receptors NOD1 and NOD2, which are important elements in the intracellular Nod-like receptor family. This discovery lead them to demonstrate that genetic variation in NOD2 is associated with development of Crohn's disease.

"This was very exciting as a physician scientist, so we decided to change fields and devote ourselves to this area," Nuñez said. "It's a dream for any physician scientist to find something in the laboratory through very basic research that eventually may contribute to something to improve the quality of life for patients ... Hopefully one day this will improve peoples' lives."

Nuñez said the lab has recently focused on mechanisms that involve the regulation of pathogen colonization and activation of immune responses by the intestinal microbiome.

He has published more than 350 articles and has been cited more than 100,000 times. Nuñez added he has mentored over 100 young scientists. He called his mentorship "passing the torch of science" to others.

"If you work hard and work with other individuals in your laboratory, one day you can make important discoveries and this, hopefully, will one day help to improve the lives of some people," Nuñez said. "I think

anyone could do this and that you just need to work hard and work with talented people.”

Nuñez was recognized for his work by the American Society of Investigative Pathology with its Rous-Whipple Award in 2019.



James Dalton

Dalton has been the dean of the College of Pharmacy since 2014. Before joining the University, he was an associate professor at the University of Tennessee from 1992-2000 and professor and chair in the Division of Pharmaceutics at The Ohio State University from 2000-2007.

Dalton said his teammates and his family have provided him with vital tools for his success.

“(I feel) excited and honored,” Dalton said. “I have been lucky to work with some great mentors, peers, graduate students and postdoctoral fellows over the years that drove the science and me. Those collaborators, and the constant support of my wife and kids were what made it possible.”

Dalton said he's a first-generation college graduate — he wasn't initially sure where his degree would lead him. He hopes the award demonstrates future opportunities students may receive.

"I hope that it conveys that science and education can take you to places that you love but never knew existed," Dalton said. "I certainly never imagined that I'd end up here and I encourage students to work hard and see where their degree takes them."

Dalton's research is focused on selective androgen receptor modulators, or SARMs. Dalton's discovery of SARMs in 1997 with his group at the University of Tennessee led to a new class of potential drugs to selectively treat muscle wasting.

"This selectivity opens the door to the potential use of SARMs to treat a variety of acute and chronic muscle wasting conditions in both men and women," Dalton said. "Our research... will hopefully provide the foundation for the approval and use of such drugs in patients suffering from muscle wasting."

In 2005, Dalton joined the pharmaceutical company GTx, Inc. as vice president of preclinical research and development and chief scientific officer. He advanced the clinical development of SARMs during his time at the company.

Dalton said his current research on enobosarm, the first SARM to reach phase three clinical trials, could help patients with age and disease-related muscle loss. He chairs the scientific advisory board for the Partnership for Clean Competition, a non-profit organization funded by multiple sports organizations and focused on research to protect the integrity of sport and public health.

Throughout his research career, he's co-authored more than 300 abstracts and is an inventor on more than 400 SARMs-related patent applications. He is also a fellow of the American Association for the Advancement of Science and the American Association of Pharmaceutical Scientists.

Dalton said awards of this kind make his scientific career, which he described as having scary, unexpected turns, worth it.

"It's great when your contributions and those of your team are recognized on the national and international scale," Dalton said. "A career in science is loaded with setbacks and unexpected findings, which can make the roller coaster ride scary. That being said, a novel discovery, paper published in a great journal, notice of a grant award, a student earning their degree or an award like this one are what make you want to ride the roller coaster again and again."

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