

## 3 GDCB faculty receive promotions

What do a National Science Foundation (NSF) Faculty Early Career Development (CAREER) Award recipient, a Pew Fellow, and an Iowa State University (ISU) Early Achievement in Teaching Award recipient have in common?

Not only are these three researchers faculty members in the Department of Genetics, Development and Cell Biology (GDCB), Mohan Gupta, Geetu Tuteja and Marna Yandeu-Nelson received promotions in 2020 from assistant professor to associate professor after the Iowa Board of Regents gave its final approval.

“We are very proud of the accomplishments these three outstanding faculty members have made in the past, and we look forward to their future successes in contributing to our land-grant mission in research, teaching and outreach,” GDCB Chair Yanhai Yin said.

### Mohan Gupta

A 2019 recipient of the \$1.1-plus million NSF CAREER award, Gupta's research program investigates microtubule dynamics. His area of expertise is microtubule dynamics and function, along with kinesin motor proteins. The funds received from the NSF award will support basic research, as well as the cost of education and outreach efforts that target high school and college students. About his promotion, Gupta said, “Getting promoted this year has undoubtedly been a bit unusual with COVID-19. It seems like the feelings typically associated with receiving tenure have been on more of a slow burn. But that's OK, there will be time to celebrate later. There are a lot of more pressing issues to deal with now.”

Prior to joining the department in August 2015, Gupta served on the faculty of the Department of Molecular Genetics and Cell Biology at the University of Chicago. He received his bachelor of science and Ph.D. in biochemistry (molecular biosciences) from the University of Kansas in Lawrence, Kan. He trained as a postdoctoral fellow at the Dana-Farber Cancer Institute and Harvard Medical School in Boston.

Gupta discussed his lab's research. “For cells to remain healthy, they must be able to maintain proper shape and internal organization. Long, dynamic filaments called microtubules perform a wide array of important cellular processes including pushing or pulling objects such as DNA, allowing nerve cells to extend over long distances, transporting material within cells, and the migration of cells within tissues. My lab works to determine the molecular mechanisms that direct microtubules to perform such diverse tasks, which is critical to understanding the events required for healthy cells. This knowledge then allows us to comprehend how disruption of these processes causes disease, and can be used to reveal potential therapeutic strategies.”

### Geetu Tuteja

Tuteja was selected to join the Pew Scholars Program in the Biomedical Sciences in 2019, and thus became the first ISU researcher to receive this honor. Her area of expertise is transcriptional regulation and reproductive biology.



Genetics, Development and Cell Biology Associate Professor Mohan Gupta (Photo by Christopher Gannon, ISU photographer)

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# Promotions, *continued from page 1*



*Genetics, Development and Cell Biology Associate Professor Geetu Tuteja (Photo by Christopher Gannon, ISU photographer)*

“I was very pleased to have been promoted to associate professor in GDCB,” Tuteja said.

Tuteja joined GDCB in July 2015 as an assistant professor and as a Gregory L. and Kathleen C. Geoffroy Faculty Fellow. Prior to joining GDCB, she served as a postdoctoral research fellow with Professor Gill Bejerano of Stanford University’s Beckman Center, within the Department of Developmental Biology, in Stanford, Calif. She received her bachelor of science in computer science with a minor in chemistry from Boston University, while she earned her Ph.D. in genomics and computational biology from the University of Pennsylvania.

Through their research, Tuteja and her lab members hope their “findings will translate to early detection and prevention of common and serious placental disorders.”

“Defective placental development can lead to pregnancy disorders that negatively impact the mother and fetus,” Tuteja said. “My lab uses genomics, computational biology

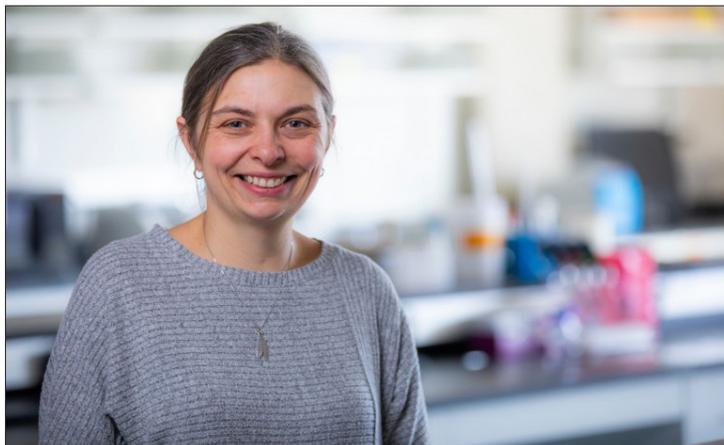
and molecular biology to understand the mechanisms underlying early placental development, to gain insight into the genetic abnormalities that could lead to these pregnancy disorders.”

## **Marna Yandeau-Nelson**

Not long after learning she was a recipient of the 2020 College of Agriculture and Life Sciences’ Early Achievement in Teaching Award, Yandeau-Nelson received an “unexpected surprise” when she found out she was an Iowa State University (ISU) Early Achievement in Teaching Award recipient.

Yandeau-Nelson was also excited to learn about her promotion and tenure. “I was very excited to learn that I had achieved tenure. I very much look forward to working with my team and collaborators to expand our research and outreach directions in the future.”

Yandeau-Nelson, whose area of expertise is biosynthetic and regulatory genetic networks of metabolic traits, said, “My team strives to increase the fundamental knowledge of cellular metabolism and to use that knowledge for downstream practical applications in such areas as plant breeding for resistance to environmental stress and for the development of chemicals and fuels via renewable, biological processes.” The Yandeau-Nelson team focuses its work on corn and understanding how the plant cuticle, the outermost barrier between the plant and the environment, is synthesized and how it protects it from environmental stresses such as drought or insect herbivory.



*Genetics, Development and Cell Biology Associate Professor Marna Yandeau-Nelson (Photo by Christopher Gannon, ISU photographer)*

Prior to joining the GDCB faculty in 2014, Yandeau-Nelson received her bachelor of science in biology from Drake University and her Ph.D. in genetics from Iowa State University. She served as a postdoctoral scholar at Pennsylvania State University, and she returned to ISU as an associate scientist and graduate faculty in 2009 in the Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology, and the NSF-Engineering Research Center for Biorenewable Chemicals.

## **GDCB Department**

The three researchers spoke highly about the university and their GDCB family.

Yandeau-Nelson said, “GDCB is a great department – very collegial and all of the members of the department (students, staff and faculty) bring such diversity and breadth of experience, knowledge and energy to research, teaching and learning.”

Gupta said, “It is an honor to be considered a colleague of all the great people in GDCB.”

Tuteja echoed Yandeau-Nelson and Gupta when she said, “All of the faculty and staff in the department, as well as university administration, have been incredibly supportive of my research program, and have contributed to its success.”

Congratulations to all three faculty members on their recent promotions and tenure.