# @UIowaNeuro Notes

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Each January the Office of the Vice President for Research launches its Dare to Discover campaign highlighting research by undergraduates, graduate students, and postdoctoral scholars. I am always inspired by the creativity and innovation featured in this university-wide celebration. And of course, I love to see our neuroscience trainees in the mix—six of them this year!

You can follow the link above to read all 40 profiles. These are the highlighted trainees mentored by INI faculty members:

An undergraduate mentored by Juliana de Souza Talarico in the College of Nursing, **Ahava Atar**'s research explores how communication and cultural barriers shape healthcare for Deaf patients, who often experience disparities in care. She focuses on educating nurses to help close these gaps in care and improve health outcomes for Deaf patients. Her work bridges academic inquiry with real-world impact, enhancing nurses' skill sets and improving patient care. I am glad to know she will bring her skill and empathy to a career as an ICU nurse following her graduation this spring.

**Mia Dukle**, an undergraduate mentored by Hanna Stevens, investigates how different models of prenatal stress influence fetal brain development, potentially contributing to neurodevelopmental disorders such as attention-deficit/hyperactivity disorder (ADHD) and autism. Understanding the effects of stress during pregnancy can highlight the role of the placenta and the mother's active immune system and better inform early prenatal care. Following graduation this spring, Mia plans to attend medical school.

Another student mentored by Juliana de Souza Talarico, **Max Hansen**, studies how mobile health clinics can help lower dementia risk and improve health in underserved communities. His research identifies what helps or hinders mobile clinic implementation and how lifestyle behaviors, such as sleep and daily activity, affect cognitive health. Max is seeking to develop strategies that promote brain health and reduce dementia risk across Iowa. He will receive his MS in epidemiology this spring.

Sarah Ferri and I jointly mentor **Pravda Quiñones-Labernik**, a PhD student in pharmacology who is researching why certain brain disorders develop differently in males and females. Her work looks at how changes in hormone levels early in life can affect the way the brain grows and functions. By uncovering the molecular mechanisms behind these changes, she aims to pave the way for personalized therapies that address social

and cognitive challenges. Pravda is the first UI student ever awarded the prestigious Howard Hughes Medical Institute Gilliam Fellowship and has already published groundbreaking work in neuroscience. I am eager to see her advance this work through postdoctoral fellowship and in her own lab one day.

**Emma Simpson-Wade**, a PhD student in molecular medicine mentored by Marie Gaine, is studying the biological basis of mental health disorders in new mothers. Suicide is a leading cause of death for perinatal individuals, yet they remain underrepresented in research. Emma's work aims to identify biomarkers and guide interventions that reduce these risks. She plans to pursue postdoctoral research in women's health and psychiatric epigenetics, driving translational discoveries that improve care for mothers worldwide.

**Maddie Mocchi, PhD,** a postdoctoral fellow mentored by Nick Trapp, studies how fluctuations in pupil size reflect activity in the emotion-processing regions of the brain. She aims to uncover measurable indicators to personalize treatment for mood disorders like depression. Her work bridges innovative neuroscience and clinical care, offering tools to track treatment progress and reduce trial-and-error in therapies. Her long-term goal is to lead a lab focused on researching how alertness and emotional regulation shift in depression and related conditions.

I am proud of our faculty for their excellent mentorship and commitment to recognizing excellence on their teams. Thanks to the VP for Research team for coordinating this university-wide celebration of student and postdoc research each year. We depend on our creative students and postdocs to collaborate in our efforts to make fundamental advances in neuroscience. I am confident that they will all make an impact in the future.

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