

From Bali to ASU's Biodesign Institute: How this PhD grad found a home in biophysics

By Rithwik Kalale, ASU News
December 3, 2025

For Gde Bimananda Mahardika Wisna — who goes by "Bima" — a summer internship at Arizona State University's [Biodesign Institute](#) was initially meant to just be a pit stop. Fresh off earning his engineering physics degree in Indonesia, he expected to spend only a few months in a lab before heading to the University of California San Diego for graduate school.

After the pandemic cut his program in California, Bima turned to ASU to finish his PhD in physics with the help of an old connection.

During his initial time at ASU, he got hands-on experience with DNA origami and super-resolution imaging.

"I realized the work wasn't just biology; it also involved physics and chemistry," he said. "I really enjoyed that summer of 2017."

Raised in Singaraja, a port town in northern Bali, Bima didn't initially see a clear path to becoming a scientist. What he did have was a growing fascination with physics, sparked by a biography of Isaac Newton and encouragement from teachers who pushed him to compete in math and physics.

In 2020, after starting at UC San Diego, the COVID-19 pandemic halted his funding and forced him to leave with only a master's degree. Unsure of what came next, he reached out to [Rizal Fajarizal Hariadi](#), the mentor who first brought him to ASU.

"Without hesitation, he told me he had just received a new grant and offered me the chance to start a PhD in his lab," Bima said. "It wasn't easy to start over, but it became one of the most important moments of my life."

Now back at the Biodesign Institute, Bima rediscovered not only his love for science, but a new direction. He shifted from a goal of working in theoretical physics to embracing experimental biophysics, which lets him explore biological systems through physical tools and principles.

That realization has shaped the kind of scientist he hopes to become. After graduating this December, he will begin a postdoctoral position at the University of Washington focused on de novo protein design.

Read more about Bima's journey and experience at ASU below.

Note: Answers have been edited for length and clarity.

Question: What is it about the Biodesign Institute that interested you?

Answer: My current PI, Rizal Hariadi, introduced me to ASU. He invited me to do a post-bachelor summer internship in his newly opened lab at the [Biodesign Center for Molecular Design and Biomimetics](#) in the spring through summer of 2017.

At first, I doubted whether Biodesign would be a good fit. But that doubt disappeared once I started working in the lab on DNA origami and the super-resolution imaging technique DNA-PAINT. I realized that the work was not just biology; it also involved physics and chemistry.

Q: What's something you learned here that surprised you or changed your perspective?

A: I used to dream of becoming a hardcore physicist, developing theories about the physical world and doing pen-and-paper research. But my perspective shifted after joining Biodesign. Being here showed me that there is so much to explore by combining physics, biology and chemistry. This experience helped me appreciate biology at the molecular level and its relevance to diseases, diagnostics and therapeutics. It has been truly transformative in shaping what I want to pursue as a scientist.

Q: What is an important lesson your mentor at Biodesign Institute has taught you?

A: In (Hariadi's) lab, I rediscovered my joy for science and found a place where I could explore ideas safely with trust and support. He always reminded me not to sell myself short. He often says that most experiments fail, and that this is part of creating a safe environment for learning, and what matters is using those failures to improve the next iteration. He also encouraged me to apply for fellowships, and with his guidance, I received a two-year predoctoral fellowship from the American Heart Association.

Q: What's the best piece of advice you'd give to those still in school?

A: Being able to go to school, especially to pursue higher education, is a privilege. I know that one major goal of school is to prepare for a better job, but another important goal is to develop creativity and problem-solving skills. Do not abandon that process.

Pursue what you truly love, and if you cannot reach your goal right away, do not give up.

Q: What are your plans after graduation?

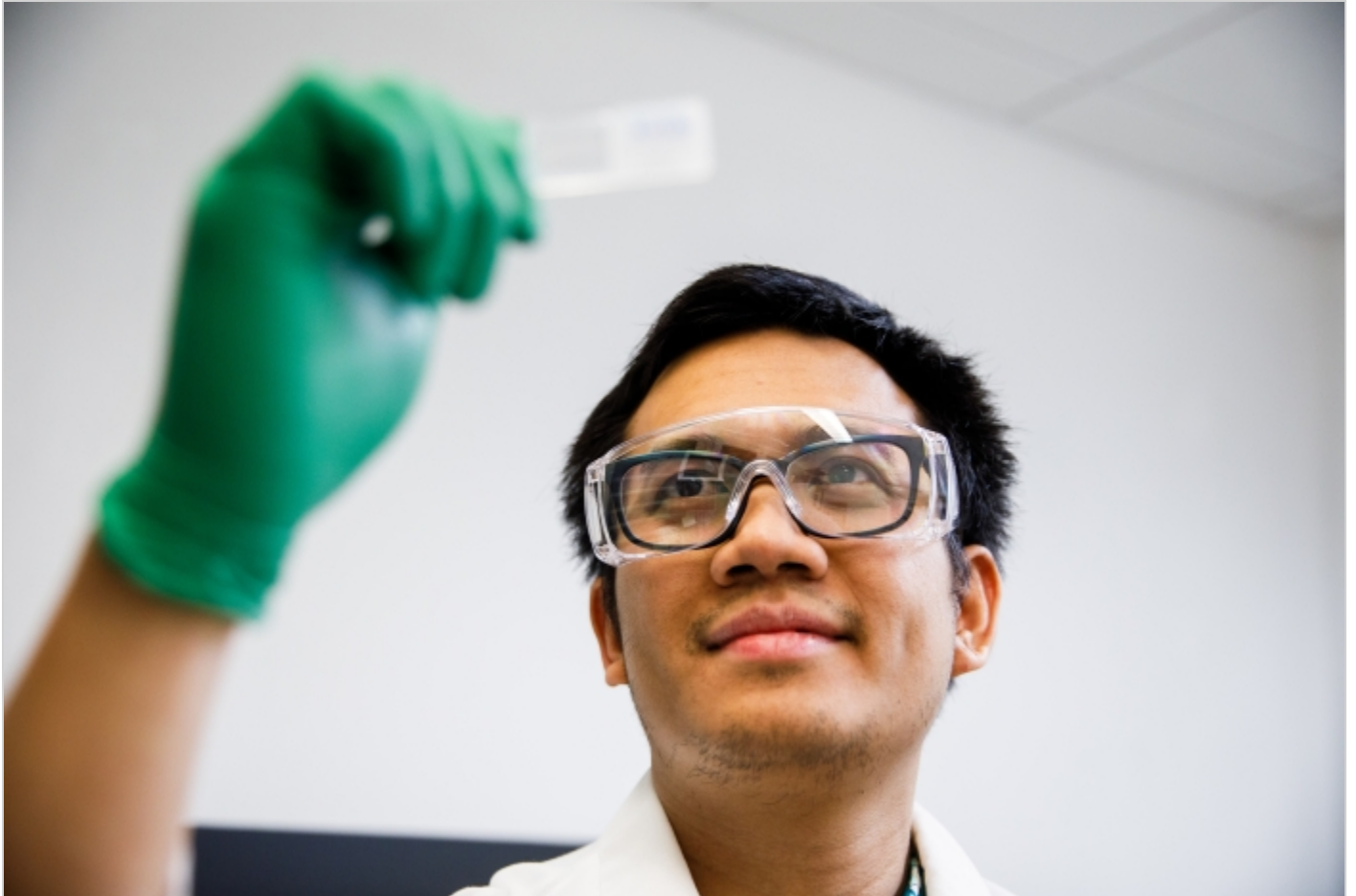
A: I will be doing my postdoctoral research at the University of Washington in Seattle. My future goal is to combine what I have learned and will continue to learn in biophysics, DNA nanotechnology, protein design, nanofabrication and AI to help solve complex problems related to human diseases and therapeutic strategies.

Q: If you were awarded a \$50 million grant for scientific research, what major world issue would you tackle?

A: I would use the grant money to fund research related to cardiovascular diseases and cancer therapeutics.

This story originally appeared on [ASU News](#).

Main image



Gde Bimananda Mahardika Wisna. Photo credit: Andy DeLisle

Text image(s)



Gde Bimananda Mahardika Wisna. Courtesy photo