



Biology major's summer research could improve meds for pancreatic cancer patients

Not only did Junior Ivan Yuan Chu get offered an REU last summer—a Research Experiences for Undergraduates from the National Science Foundation—he got six offers.

The biology major from Hazelhurst, Georgia, chose the 2024 Bio REU Summer Undergraduate Research Program at the University of Notre Dame in Indiana to work on possible pancreatic cancer treatments.

He chose Notre Dame, because the atmosphere there was much like his experience at Georgia College & State University—rigorous but friendly, collaborative not competitive.

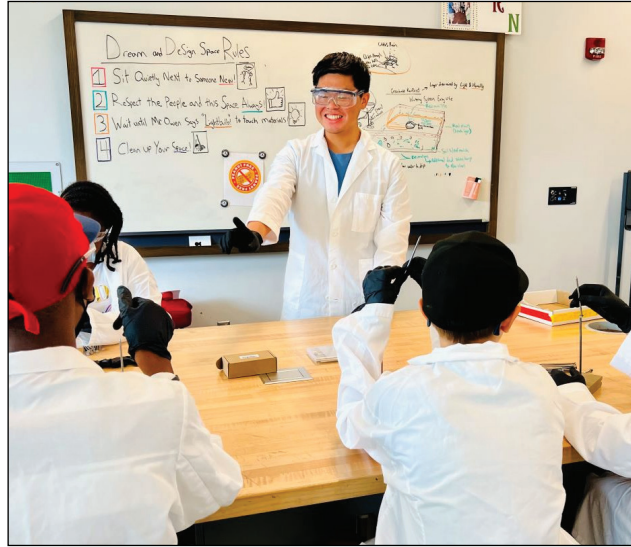
“Learning I was accepted at over 60% of the REU programs I applied for was exhilarating,” Chu said. “The programs I applied for were all considered highly competitive with anywhere from 700 to 800 students applying from over the country. Never in a million years did I think I’d ever be applying for a research internship. So, I was extremely surprised, honored and humbled to be selected.”

Chu was won over by Georgia College’s “outstanding academic reputation,” small class sizes and “devotion to student success.”

This spring was Chu’s first time seeking a REU. He applied to nine and was accepted into six: Augusta University’s Summer STAR program, Cornell University, Ohio State University, Texas A&M and the University of Florida, as well as Notre Dame.

“He has the highest number of acceptance out of all the students I’ve mentored for the National Science Foundation programs or Research for Undergraduates,” said Dr. Ellen France, biology professor at Georgia College. “The acceptance rate for REU competitions varies greatly depending on the program. However, it’s generally known to be around 10 to 20%.”

Chu’s studied at Notre Dame 10 weeks. The REU came with a \$10,000 stipend that paid for housing, meals, travel and research supplies. His research interests include cell signaling and diseases. Working in Notre Dame’s Department of Biological Sci-



Junior Ivan Yuan Chu in a lab at Notre Dame University last summer.

ences, his team investigated cGAS-STING signaling pathways—a key inflammatory mediator in infection, cellular stress and tissue damage. Chu attended weekly seminars to learn about neurodegenerative disease, prostate cancer and hospital catheters that could prevent urinary tract infections.

“I learned new skills, like flow cytometry and immunofluorescence,” Chu said. “It’s been fun seeing a lot of stuff I learned in Dr. France’s cell signaling class being applied to real-life applications.”

“Being at Notre Dame helped me realize how well GCSU set me up for the future,” he added. “Many techniques I performed there, including tissue and bacterial culture and bacterial transformations, are procedures I perform at Georgia College. I even helped other students troubleshoot.”

Chu’s project focused on a kinase, an enzyme that attaches a phosphate group to a protein called VRK1. This specific kinase is a potential novel therapeutic for pancreatic cancer in its most aggressive form. Current medications have low survival rates and are often extremely toxic to patients, creating a low quality of life, Chu said.

The process leads to a signaling pathway called STING which triggers activation of cellular senescence, a state where cells age and permanently stop dividing but don’t die.

“This is compelling to us,” Chu said, “because often when patients are diagnosed, the cancer has already metastasized or spread to other parts of the body. Medications that stimulate cellular senescence have less severe side effects, since the cells are not undergoing cell death.”

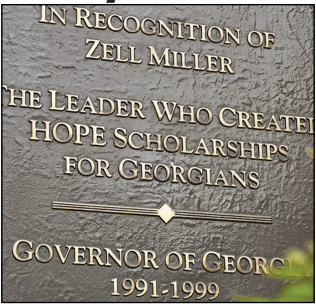
Outside the lab, Chu enjoyed seeing the wildlife around Notre Dame’s beautiful campus. He used the gym and rock-climbing wall and went on group trips to the Team USA Olympic swimming trials, and city of Chicago.

At Georgia College, Chu is an honor student and member of the Tri-Beta Biological Honors Society. He’s involved with the Science Education Center and tutors peers in biology and chemistry at the Learning Center. He co-founded the university’s Asian Student Union and serves as coordinator of Diversity Initiatives for the Council of Student Ambassadors. He also works in France’s lab, researching pathways in a budding yeast.

Chu hopes to pursue a Ph.D. in cellular and molecular biology, then continue his interests in cancer research. The REU strengthened his understanding of what’s necessary for this career.

“I’ve had the opportunity to immerse myself in cutting-edge research, to collaborate with experienced professionals and develop a range of valuable skills,” Chu said. “This internship provided me with elevated hands-on research experience from designing experiments to analyzing data.”

Nearly half a billion dollars in HOPE earned



Students attending Georgia College & State University have received more than \$481 million in scholarships and grants from HOPE since its inception in 1993, according to the Georgia Lottery Corporation.

Over 40,000 Georgia College & State University students received 208,000 separate awards from programs like the HOPE Scholarship, HOPE Grant and Zell Miller Scholarship.

“The HOPE scholarship has transformed higher education in Georgia in every way that the late Gov. Zell Miller envisioned, and beyond,” said Georgia College president Cathy Cox. “HOPE is also vital partner in helping Georgia College drive economic impact and workforce development in Milledgeville and beyond.”

Last summer, Gov. Brian Kemp announced more than \$15 billion in HOPE Scholarship awards were dispensed to more than 2.1 million Georgia students since 1993. In Baldwin County specifically, more than 12,700 students received nearly \$86 million in HOPE lottery dollars for higher education tuition since the program began.

“Georgians have more opportunity than ever before,” said Gov. Kemp. “The HOPE Scholarship has been essential to that growth by preparing a generation of students for success. This milestone reminds us of that incredible impact and the lasting legacy of former Governor Zell Miller.”

HOPE stands for Helping Outstanding Pupils Educationally. The scholarship program is funded by the Georgia Lottery for Education and administered by the Georgia Student Finance Commission.

“I have so many great things to say about the HOPE Scholarship,” said Karlie Lucas, a Georgia College alumna who earned her B.A. in Mass Communication in 2021. Lucas said HOPE covered at least half of the tuition for her undergraduate degree.

“HOPE really pushed me to stay on top of my grades. So it helps in more ways than just financial,” Lucas said. “It really gave me motivation.”

Did you know?

On Wednesday, Oct. 23, from 5 to 7 p.m. on Front Campus, the Georgia College & State University International Club is sponsoring its annual International Fest in collaboration with the Student Government Association.

Many student organizations and GCSU departments will participate, including Delta Gamma, the French Club, Geography Club, GC Hillel, Study Abroad, Phi Kappa Phi, Student Engagement, Office of Sustainability and more.

Globally themed exhibits will be a central feature, along with tables hosted by our international students sharing their countries and cultures. There will be entertainment, games, snacks, coffee and hot chocolate.

For more information, please call (478) 445-4789.

Student committee manages \$100k in investment funds

Economics, finance and other majors in the Student Managed Investments Committee at Georgia College & State University have officially invested their first \$100,000 in funds.

The new student organization is made up of an executive leadership board and 10 managing directors who oversee groups of 3-4 student analysts. To become a member, each student had to interview with leadership and complete a test of their financial knowledge.

“I’ve learned a lot about financial modeling, which has allowed me to teach other students in the club,” said Jeff DiBenedetto, junior finance major, co-founder and president of SMIC. “It’s been a great experience, and I love helping other students. I’ve also learned a lot more about companies from hearing all the pitches every Tuesday.”

Their executive leadership board is made up of five students who listen to the pitches of each group that represent the S&P 500’s sectors, except for a combination of materials and utilities.

Executive leadership comprises senior economics and finance double major Joseph Dubsy, co-founder of SMIC and VP of portfolio management; Whitman Kessinger, junior finance major and VP of membership; Lila Slay, senior mass communication major and VP of public relations; and Josh Johnson, senior economics-finance double major and VP of investment strategy.

The group reports progress on their LinkedIn page, and their first pitch of the semester has been approved. With an approval rating of 94.29%, SMIC has pitched Amazon stock as their next investment.

“People tend to undersell themselves and their abilities,” Johnson said. “I never thought I could handle the difficulties of being involved in this and juggle being a double major, yet when faced with it, I ended up adjusting and doing well.”

“I hope people who want to join this organization, but are afraid of failing, will challenge themselves and trust that they will step up to the plate,” he said.

Each member on the board has lofty aspirations, and they think leading SMIC will help get them there. Johnson already has plans lined up with a financial planner in St. Simons Island, Georgia, after he graduates in December.

Dubsy wants to attend graduate studies and work in research with the Federal Reserve, Jeff wants to open a business with his brothers, Whitman will pursue banking or consulting and Slay wants to become a writer—and maybe, she said, Wall Street too.

“Joining SMIC truly was one of the greatest decisions I could have made for myself,” Kessinger said. “There are so many great organizations on campus, but I know this committee will help create a better future for myself.”

“It is a great opportunity to learn more about finance with real world applications that I hope to use in my career,” he said.



Left to right: Dubsy, Johnson, DiBenedetto, Slay and Kessinger.

What’s going on in Bobcat Territory?

Visit frontpage.gcsu.edu/events

Table with 5 columns (Tuesday to Saturday) and 2 rows (22 to 26) listing events such as International Fest, Health & Social Issues annual Breast Cancer Awareness Walk, and Music Senior Recital.