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THE UNIVERSITY OF ARIZONA



## November 2024

New art and collaborative research



### Hello Caroline,

We are honored to welcome new artwork that, in our director Jennifer Barton's words, "truly embodies the spirit of 'beauty and brains' that we aim to cultivate here at BIO5." [Learn about the more than 20 pieces of artwork donated by the family of the late Marvin Lowe now on display.](#)

Collaborative research is fundamental part of BIO5, and we are excited to see so many projects, from engineering and nutrition, to agriculture and neuroscience, in the news. We are also celebrating how one our of [BIO5 Postdoctoral Fellows secured a grant to establish his career in virology and oral cancer](#), demonstrating the importance of providing financial support and professional development for early career researchers.

In this newsletter, read a recap of our event around commercialization with Tech Launch Arizona, see how spirulina could be key to food insecurity, and heads up that our [2025 KEYS Research Internship application](#) is now open for Arizona high school students!

## Featured Stories



### Viruses, cancer, and the road to research independence

2021 BIO5 Postdoctoral Fellow Rob Jackson at the University of Arizona College of Medicine - Tucson secured a pivotal National Institutes of Health grant to establish his career in virology and oral cancer.

[READ MORE](#)



## BIO5 Institute celebrates generous art donation from Melissa Lowe and Jory Hancock, honoring Marvin Lowe's legacy

A large and generous collection of artwork donated by the family of the late Marvin Lowe was added to buildings of BIO5 Institute earlier this year.

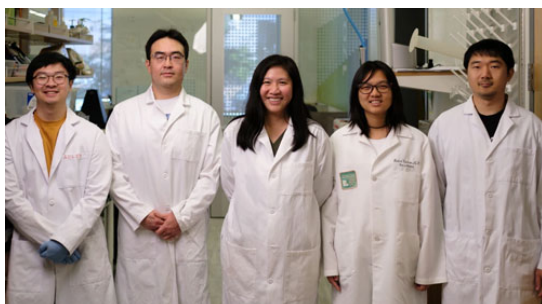
[READ MORE](#)



## Photo Gallery: Jennifer Barton and Tech Launch Arizona collaborate to inspire U of A researchers

Over 20 researchers and innovators gathered in late October to learn about IP, patents, and start-ups.

[READ MORE](#)



### \$2.1M aids U of A researchers in building chemical sensors to safeguard troops

The U.S. Army has awarded \$2.1 million to a team of researchers led by BIO5 member **Judith Su** and fellow BIO5 member and collaborator **Euan McLeod** to build a handheld version of her record-breaking FLOWER sensing device for active military personnel.

[Read in U of A News](#)



### Exploring a microbial solution to food insecurity

BIO5 members **Floyd "Ski" Chilton** and **Joel Cuello** are collaborating on a project focused on blue-green algae-like microorganisms known as spirulina that aims at providing nutrition to people in areas of food insecurity while addressing challenges posed by climate change.

[Read in U of A Health Sciences](#)

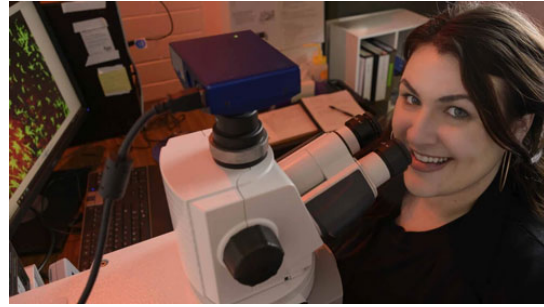




### Not the usual suspects: Novel genetic basis of pest resistance to biotech crops

BIO5 members **Bruce Tabashnik**, senior study author, and **Luciano Matzkin**, study co-author, in the College of Agriculture, Life & Environmental Sciences discovered a novel genetic basis for resistance to genetically engineered crops in the corn earworm.

[Read in U of A News](#)



### Study identifies potential new drug for Parkinson's-related cognitive decline, dementia

Postdoctoral researcher **Kelsey Bernard** in the lab of BIO5 member **Lalitha Madhavan** was the first author on a paper that found a tiny protein called PNA5 appears to have a protective effect on brain cells, which could lead to treatments for the cognitive symptoms of Parkinson's disease.

[Read in U of A Health Sciences](#)

## In The News

### ASU, UA are collaborating on a 'dash cam' for bikes to keep cyclists safer on the roads

BIO5 member **Daniel Latt** describes how a new device replaces the bicycle handlebar plugs with an array of sensors that detect when a vehicle passes within three feet of the rider.

[Listen on KJZZ](#)

### 'You can be at risk as long as you're breathing': Valley Fever cases are up from last year

BIO5 member **John Galgiani** and experts discuss the hope for both a canine and human vaccine within the next decade.

[Read in 12News](#)

## **Cannabis use during pregnancy more likely in states with legal medical marijuana, study finds**

BIO5 member Alicia Allen weighs in on how difficult it is to determine the effects of cannabis on a fetus during pregnancy.

[Listen on KJZZ](#)

## Upcoming



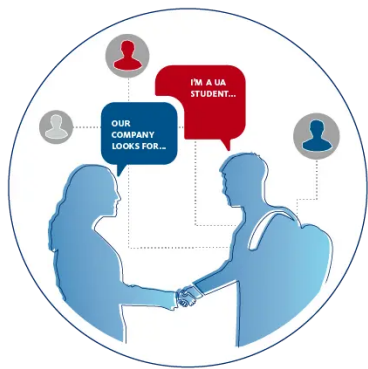
### **Tucson Plant Breeding Institute 2025**

**January 6 - 10, 8:00 a.m. to 5:00 p.m.**

**Thomas W. Keating Building Room 103**

From commercial breeders in industry to faculty and students at the U of A, this event is meant to transfer current technologies and state-of-the-art training in plant breeding.

[More Information & Registration](#)



### **Student Industry Networking Event 2025**

**February 11, 1:00 p.m. to 6:30 p.m.**

**Thomas W. Keating Building Lobby & Room 103**

University of Arizona students are invited to meet representatives from the Arizona biosciences industry to learn more about internships and careers in this virtual and in-person event.

[More Information](#)

## Behind-the-Scenes



## KEYS Research Internship 2025

*High school students:* We encourage Arizona high students to apply for this incredible opportunity through the BIO5 Institute to gain professional skills and experience research at the University of Arizona. Applications close on December 13 and the program will run from June 2 - July 18, 2025.

Find the application on the website: <https://keys.arizona.edu/>

*University of Arizona faculty:* We are always looking for mentors and labs across campus to host these amazing high schoolers, either in-person or virtually.

If you are interested in KEYS mentorship, please reach out to the KEYS staff at [keys@bio5.org](mailto:keys@bio5.org).

## Share with a friend!

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### **Land Acknowledgment**

*We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. The university strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.*