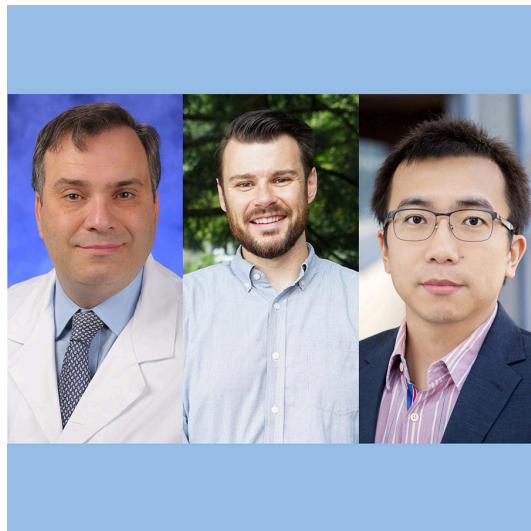

April 2024

ACHIEVEMENTS & ACCOLADES

Huck Institutes selects 2024-25 Leadership Fellows

For the 2024-25 academic year, Penn State Huck Institutes leadership has appointed, left to right, Associate Professor of Surgery Dino Ravnic, Associate Professor of Biomedical Engineering Scott Medina, and Professor of Statistics Lingzhou Xue to be Huck Leadership Fellows.

[Read more](#)



Penn State biologist receives new investigator award for aging-biology research

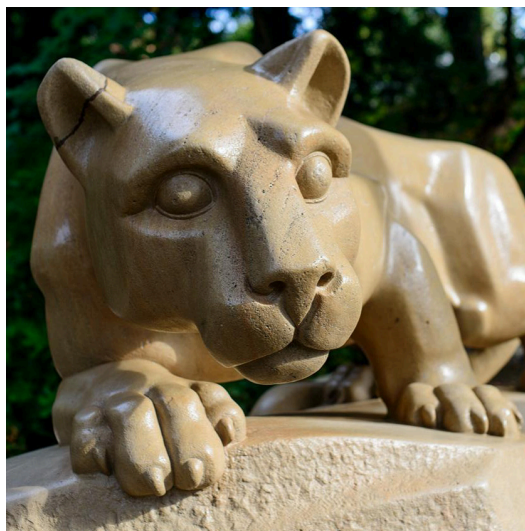
Janine Kwapis, Paul Berg Early Career Professor in the Biological Sciences, has been selected to receive a Hevolution/AFAR New Investigator Award in Aging Biology and Geroscience Research from the American Federation for Aging Research to support Kwapis's research on understanding age-related impairments in how memories are updated.

[Read more](#)

Three Penn Staters earn national Goldwater Scholarships

Penn State undergraduates Nate Carey, Bridget Reheard, and Mabel Tong have earned the 2024 Goldwater Scholarship, an award given to undergraduates who show exceptional potential as leaders to support their growth and continued research in the fields of natural science, mathematics, or engineering.

[Read more](#)

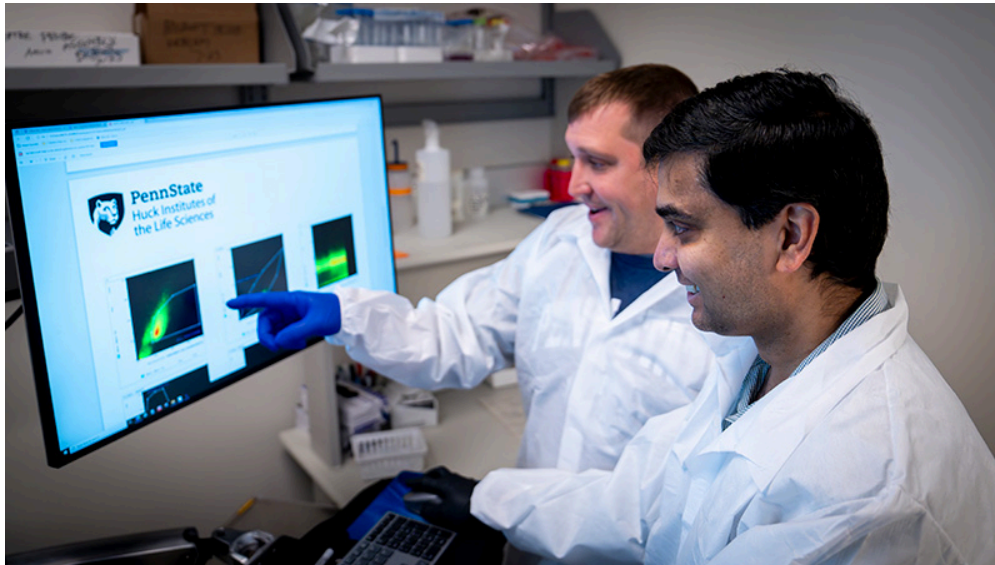


Huck trainees recognized at graduate school awards

Four Huck graduate students were recognized with distinctions at the recent 2023-24 Graduate Student Awards, hosted by the Graduate School at Penn State. Grace Buddle, Allison Carothers, Ana Leon-Apodaca, and Sarah Richards were lauded for their excellence in teaching and research.

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CORE TOPICS



Flow Cytometry Facility

Quantifying and characterizing cells and proteins through the use of state-of-the-art flow cytometry and cell sorting instruments

Quantification of multiple fluorescence signals on single cell basis can be achieved in rapid fashion in matter of seconds using flow cytometry. The [Huck Flow Cytometry Facility](#) trains and supports users on characterization of cells using flow cytometers which use fluorescent and scattered lights from single cell suspension hydrodynamically focused for intersecting laser interrogation points.

The facility, directed by [Rajeswaran Mani](#), helps with experiment and multi-color panel design for immunophenotyping of biological specimens, viability assessment, and quantifying proportion of fluorescently labelled cells. High resolution separation of poly chromatic staining of greater than 20 colors in single tube, additional flexibility in stain choices and higher dimensionality using full spectrum technology are now possible at the facility. Further, cell sorting service for single cell deposition onto culture plates and bulk sorting of desired cell types, using high speed droplet cell sorter, is available for purifying or enriching sub populations or rare events from the heterogenous sample.

“Rajeswaran has worked tirelessly with my graduate students,” said Robert F. Paulson, Professor of Veterinary and Biomedical Sciences. “He teaches ways to make their flow cytometry experiments more consistent. He works with them to develop protocols and flow panels. Recently we have been labeling cells ethynyl-uridine (EU), which allows to follow nascent transcription in stress erythroid progenitors. However, the EU protocol interferes with the other flow reagents, so Rajeswaran worked with us to develop a new flow panel that we could use with EU. I am happy to say it is working really well. He is an expert and has been a tremendous resource for us.”

Penn State researchers who are interested in using the Huck Flow Cytometry Facility for their research can contact Rajeswaran Mani at rpm5900@psu.edu.



\$20M NSF grant to support center to study how complex biological processes arise

A \$20M grant from the U.S. National Science Foundation will support the establishment and operation of the National Synthesis Center for Emergence in the Molecular and Cellular Sciences (NCEMS) at Penn State. The center will enable research that uses existing, publicly available data to glean new insights about how complex biological systems, such as cells, emerge from simpler molecules.

[Read more](#)

Kissing bugs, vector for Chagas disease, successfully gene edited for first time

Kissing bugs, or triatomine bugs, are the primary vector for Chagas disease, a major public health concern in Latin America. Treatments options are scarce, so it's essential to control the organisms that carry the parasite. New research from an international team, including a Penn State researcher, demonstrates — for the first time — the use of CRISPR-Cas9 gene editing in kissing bugs and opens the door to research on applied strategies for Chagas disease control.



[Read more](#)



New sunflower family tree reveals multiple origins of flower symmetry

The sunflower family tree revealed that flower symmetry evolved multiple times independently among the members of this large plant family, according to a new analysis. The research team, led by a Penn State biologist, resolved more of the finer branches of the family tree, providing insight into how the sunflower family, which includes asters, daisies and food crops like lettuce and artichoke, evolved.

[Read more](#)

Yellow-eyed grasses may have more insect visitors than previously thought

Scientists previously believed that a family of flowering plants called yellow-eyed grasses didn't attract many insect visitors, but the recent discovery of a fungus that hijacks the plant and forms fungal "pseudoflowers" has researchers rethinking this assumption.

[Read more](#)



NEW MEDIA



Tracking Traits

Podcast sheds light on the evolution of disease-causing pathogens

In the latest episode of the *Tracking Traits* podcast, Penn State undergrad Emma Sieminski interviews Biology and Entomology professor, former Director of the Huck Institutes of the Life Sciences, and current Senior VP of Research, Andrew Read about his research on the ecology and evolution of infectious disease.

[Listen now](#)

UPCOMING EVENTS



2024 One Health Microbiome Symposium

The One Health Microbiome Symposium is the second biennial symposium hosted by the One Health Microbiome Center, one of the largest and most active interdisciplinary microbiome centers. Join us May 30-31, 2024 at the University Park Campus of The Pennsylvania State University.

[Read more](#)

Navigating STEM Careers as a PhD: From Global Trends and U.S. Pathways to Networking and Personal Branding

Graduate students, postdoctoral researchers, and early career research faculty are invited to attend this 90-minute seminar offered at four different times on May 22, 2024. Participants will gain firsthand expertise and benefit from focused discussion in small groups with Dr. Camelia-Maria Kantor of the Huck Institutes of the Life Sciences.



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