



PennState

Huck Institutes of the Life Sciences



VISION

We catalyze deep collaboration across disciplines to generate new and profoundly integrative approaches to life sciences research.

MISSION

We foster excellence in life sciences research and graduate training through focused investment in outstanding faculty, interdisciplinary programs, and state-of-the-art facilities.

CULTURE

We approach the vast Penn State resources available to us with a nimble mindset. Ever flexible, we leverage these resources in creative ways that extend our reach across the entire university system. As a truly diverse team of faculty, staff members and trainees, we inspire one another to reach higher than any of us could on our own.

Collaborative Research

- 110 co-hired faculty researchers
- 9 participating Penn State Colleges
- 6-8-fold ROI
- Impacting \$290M annual research portfolio

Graduate Education

- 250 PhD students advised by 330 faculty
- Inter-College thesis committees
- Unique lab rotation system
- Robust training grant program

Translational Impact

- Advancing biotechnology
- Improving global health
- Building the STEM economy
- Launching distinguished careers

STRATEGIC GOALS (2021-25)

* Attract and retain a diverse community of the best and brightest faculty, staff, graduate students, and postdocs by providing an inspiring, inclusive working environment equipped with best-in-class facilities and instrumentation

* Fund bold and transformative research in the life sciences at Penn State through internal seed grant programs that spur new and promising innovations

* Contribute to the growth of the high-tech STEM economy by facilitating discoveries in biotechnology and training the next generation of research scientists and technologists

* Build upon Penn State's reputation as a global leader in infectious diseases; food and biosecurity; and global health

* Advance Penn State's capacities to comprehensively map and assess factors that interactively affect the health of plants, animals and people across natural ecosystems and the built environment

* Expand Penn State's capacities in biomedical research through strategic internal partnerships with Engineering, Social Sciences and Data Sciences, as well as external partners in the field

* Continually improve administrative processes to foster healthy levels of innovation and risk-taking while maintaining security and stability across departments



Christina Grozinger

Director of the Center for Pollinator Research; Director of the Insect Biodiversity Center; Publius Vergilius Maro Professor and Huck Scholar of Entomology

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We immerse students in an environment built on interdisciplinary collaboration—with unparalleled access to state-of-the-art facilities. That is why we consistently recruit outstanding people from across the globe. Programs include: Bioinformatics and Genomics; Ecology; Integrative and Biomedical Physiology; Master of Biotechnology; Molecular, Cellular and Integrative Biosciences; Neuroscience; and Plant Biology.

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Intercollege
Programs



Graduate Programs



With more than \$25 million of direct investment into core facilities since 2010, we provide services to over 300 research groups each year. Cores include: Automated Calorimetry; Cryo-Electron Microscopy; Fermentation; Flow Cytometry; Genomics; High-Field MRI; Metabolomics; Microscopy; Proteomics and Mass Spectrometry; Cell Culture; X-Ray Crystallography.



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Cores

Our academic teams cut across dozens of departments at Penn State, engaging an unsurpassed variety of disciplines in life sciences research. Key topics include bio-renewables; infectious disease dynamics; human evolution and diversity; structural biology and oncology; industrial biotechnology; ecology; genome sciences; insect biodiversity; microbiomes; neuroscience; human health; and a unique variety of plant science initiatives.

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Research
Units



Institutes & Centers





The deeply complex and interconnected challenges we collectively face today can only be addressed by teams that bring in expertise from a variety of fields and backgrounds. At the Huck, we believe in bringing together scientists and stakeholders to collaborate in the face of threats as local as the aging population of Pennsylvania and as global as climate change and pandemics.



Key Collaborations

- PlantVillage
- Communication, Science and Society Initiative (CSSI)
- Geroscience and Dementia Prevention Consortium
- Program for Enhancing the Health and Productivity of Livestock (PEHPL)

We believe it's essential to take big risks in science – to think outside the box, “swing for the fences” and pursue ideas that might never yield success, but which could change the world if they do. That’s why we have implemented internal funding mechanisms at Penn State that empower bold, innovative researchers to fearlessly test out their most novel, unproven and exciting ideas, with room to fail. Because sometimes they don’t.



Disruptive Funding

Key Programs

- Huck Innovative and Transformational Seed (HITS) Fund
- Patricia and Steven Benkovic Research Initiative
- Seed-Funded Interdisciplinary COVID-19 Projects



With hundreds of scientists working at Huck, translating the innumerable insights yielded by their research requires constant creativity. It also requires clear, engaging methods of communication. From our SciArt initiatives to our videos, podcasts, and eNews updates, we’re proud to produce media that tells the stories of the science done here, the people who do it, and the impacts our science has on communities around the world.



Key Outlets

- The Symbiotic Podcast
- SciArt Initiatives
- Life From All Angles videos
- The Pulse Newsletter

