

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.

Graduate Education

• 250 PhD students advised by 330 faculty

Collaborative Research

- 110 co-hired faculty researchers
- 9 participating Penn State Colleges
- 6-8-fold ROI
- Impacting \$290M annual research portfolio
- Inter-College thesis committees Unique lab rotation system
- Robust training grant program

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

Translational Impact

Building the STEM economy

Launching distinguished careers

Advancing biotechnology

Improving global health

* 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.









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.





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.









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

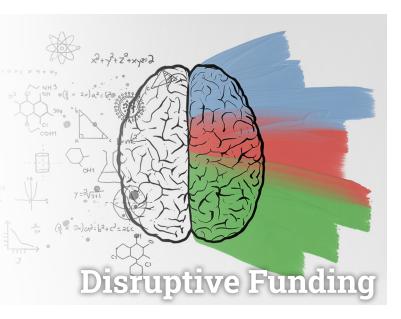
- PlantVillageCommunication, Science and Society
- Initiative (CSSI) • Geroscience and Dementia Prevention
- Consortium
- Program for Enhancing the Health and Productivity of Livestock (PEHPL)

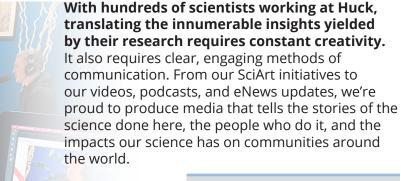
We believe it's essential to take big risks in science – to think outside the box, "swing for the fences" and pursue ideas that might never yield success, but which could change the world if they do. That's why we have implemented internal funding mechanisms at Penn State that empower bold, innovative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

Key Programs

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









Key Outlets

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



Huck Executive Team

Associate Director of Operations Jim Marden

Associate Director of Strategic Initiatives Camelia Kantor

> Associate Director Vivek Kapur

Managing Director Emily Martell

Graduate Degree Program Leadership

Director of Graduate Training Initiatives Donna Korzick

> Bioinformatics and Genomics David Koslicki

> > Ecology Jason Kaye

Integrative and Biomedical Physiology Greg Shearer

> Master of Biotechnology Natasha Tirko

Molecular, Cellular, and Integrative Biosciences Melissa Rolls

> Neuroscience Sonia Cavigelli

Plant Biology Teh-hui Kao

Center for Biorenewables Charles Anderson & Daniel Ciolkosz

Center for Brain, Behavior, and Cognition Sonia Cavigelli

> Center for Cellular Dynamics Melissa Rolls

> Center for Chemical Ecology Jared Ali

Center for Computational Biology and Bioinformatics Paul Medvedev

Center for Eukaryotic Gene Regulation Song Tan

Center for Infectious Disease Dynamics Matthew Ferrari

Center for Human Evolution and Diversity Mark Shriver

> Center for Malaria Research Scott Lindner & Manuel Llinas

Center for Mathematical Biology Andrew Belmonte

Center for Mathematics of Living and Mimetic Matter Igor Aronson & Leonid Berlyand Director, Huck Institutes of the Life Sciences Christina Grozinger

Administrative Support Coordinator; Assistant to the Director Abby Ranio Administrative Support Coordinator

Ashley Smith

Department Heads

Huck Managing Director Emily Martell

> Budget Analyst Josh Yoas

Director of Facilities Mike Uchneat

Director of Information Technology Wilson Diaz

Graduate Program Coordinator Dana Coval-Dinant

> Director of Core Facilities; Genomics Core Facility Director Craig Praul

Director of Communications & Marketing Cole Hons

Director of Science-Art Initiatives Daryl Branford

Research Center and Institute Directors

Center for Medical Genomics Kateryna Makova

Center for Molecular Immunology and Infectious Disease Girish Kirimanjeswara

Center for Molecular Investigation of Neurological Disorders Bernhard Luscher

Center for Molecular Toxicology and Carcinogenesis Gary Perdew

Center for Movement Science and Technology Robert Sainburg

> Center for Neural Engineering Bruce Gluckman

Center for Neurotechnology in Mental Health Research Nanyin Zhang

Center for Parasitic and Carnivorous Plants Claude dePamphilis

> Center for Pollinator Research Heather Hines

Center for Reproductive Biology and Health Francisco Diaz

> Center for RNA Molecular Biology Paul Babitzke & Philip Bevilacqua



Core Instrumentation Facilities Directors

Automated Biological Calorimetry & X-Ray Crystallography Neela Yennawar

CSL Behring Fermentation Facility Deniz Cekmecelioglu

Cryo-Electron Microscopy Facility Sung Hyun (Joseph) Cho

> Flow Cytometry Facility Rajeswaran Mani

Genomics Core Facility Craig Praul

High Field MRI Facility Thomas Neuberger

Metabolomics Facility Ashley Shay

Microscopy Facility Gang (Greg) Ning

Proteomics and Mass Spectrometry Facility Tatiana Laremore

> Sartorius Cell Culture Facility Randy Rossi

Center for Root and Rhizosphere Biology Liana Burghardt

> Center for Statistical Genetics Rongling Wu

Center for Structural Biology Katsuhiko Murakami

Center of Excellence in Industrial Biotechnology Daniel Hayes

Ecology Institute Jennifer Macalady

Genome Sciences Institute Francesca Chiaromonte

Insect Biodiversity Center Heather Hines

Neuroscience Institute Nikki Crowley

One Health Microbiome Center Seth Bordenstein

Regenerative Engineering and Translational Ecosystem Forum Dino Ravnic & Daniel Hayes

> Plant Institute Mark Guiltinan

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