



May 2024

ACHIEVEMENTS & ACCOLADES

Albert named Evan Pugh University Professor

Réka Albert, distinguished professor of physics and biology at Penn State, has been named an Evan Pugh University Professor, the highest honor that Penn State bestows on a faculty member.

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Crowley named director of Neuroscience Institute at University Park

Nikki Crowley, assistant professor of biology and of biomedical engineering and Huck Early Career Chair in Neurobiology and Neural Engineering, has been named director of the Penn State Neuroscience Institute (PSNI) at University Park.

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Okafor named Huck Early Career Chair in Biophysics

Denise Okafor, assistant professor of biochemistry and molecular biology in the Eberly College of Science at Penn State, has been awarded a Dorothy Foehr Huck and J. Lloyd Huck Early Career Chair in Biophysics.

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CORE TOPICS



High-Field Magnetic Resonance Imaging Facility

Investigating samples at the micrometer scale using in vivo imaging and magnetic resonance microscopy

Magnetic Resonance Imaging (MRI) works by placing subjects inside powerful magnets that maneuver protons to align with a magnetic field, and then detect the energy released when the field is deactivated. MRI scanning is incredibly complex and powerful in its versatility but is best known for its highly sensitive imaging of soft tissue. It is particularly useful for scanning living organisms because it is non-invasive, non-destructive, and produces high contrast without added contrasting

agents.

The <u>High-Field Magnetic Resonance Imaging Facility</u> has recently expanded its capabilities with a computed tomography (CT) scanner, which does utilize potentially harmful ionizing radiation (similar to an X-ray machine), but typically has much higher spatial resolution than MRI and better can better handle harder materials like bone. The Director of the MRI Core Facility is <u>Thomas Neuberger</u>. A major user of the facility is <u>Nanyin Zhang</u>, Professor of Biomedical Engineering & Electrical Engineering and Huck Chair in Brain Imaging.

Penn State researchers who are interested in using the Huck High-Field Magnetic Resonance Imaging Facility for their research can contact Thomas Neuberger at tun30@psu.edu.

HUCK RESEARCH NEWS



Complete X and Y chromosome sequences of living great ape species determined

New end-to-end sequences uncover enormous variation on the Y chromosome, informing human evolution and disease as well as conservation genetics of endangered apes

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'Better than graphene' material development may improve implantable technology

A team led by Dipanjan Pan, Huck Chair Professor in Nanomedicine, have devised a way to impart chirality — or handedness — to borophene, which enables the material to interact in unique ways with different biological units such as cells and protein precursors.



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Type 2 diabetes treatment found to impact fungal community in human gut

Metabolic diseases, like Type 2 diabetes, are associated with compositional shifts in the human gut microbiome, including the fungal fraction called the mycobiome.

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Local disparities may prevent national vaccination efforts for rubella

When public health officials make policies about when and how vaccination programs are implemented, their analyses are often based on national-level data and, in some countries, may overlook nuances at the local level.



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NEW MEDIA



Jennine Lection is Advancing Veterinary Diagnostics and Treatment Through Research

Jennine Lection is a fully qualified veterinarian and board-certified theriogenologist who came to Penn State to obtain a PhD from the Huck's Integrative and Biomedical Physiology program. She's studying how animal diseases can be better detected and treated and passing that expertise on to the public and the undergrads working with her.

Watch video

Media Mentions May 2024 VIEW

















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