KENTUCKY

**FY 2021 Fast Facts**

- **$38,574,000**
  - Total NSF Awards to Kentucky

- **$33,358,000**
  - Invested in Fundamental Research in Kentucky

- **$5,216,000**
  - Invested in STEM Education in Kentucky

- **$1,980,000**
  - Invested in Kentucky startups

**Top NSF-funded Academic Institutions for FY 2021**

- **$26,167,000**
  - University of Kentucky

- **$5,045,000**
  - University of Louisville

- **$2,147,000**
  - Kentucky Community & Technical College

**NSF By The Numbers**

The National Science Foundation (NSF) is an $8.8 billion independent federal agency created by Congress in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. NSF's vital role is to support basic research and researchers who create knowledge that transforms the future.

- **93%**
  - Funds research, education and related activities

- **$8.8B**
  - FY 2022 Enacted

- **43,600**
  - Proposals evaluated

- **2,000**
  - NSF-funded institutions

- **11,300**
  - Number of awards NSF funds each year

- **318K**
  - People NSF supported

- **$1.5B**
  - STEM education

- **$181M**
  - To seed public/private partnerships

- **253**
  - NSF-funded Nobel Prize winners
**NSF-funded COVID-19 Research and Recovery**

Researchers at the **University of Kentucky** are developing layered, membrane-based materials that are capable of deactivating coronavirus spike proteins. This project will result in the development of advanced barrier devices such as face masks, capable of recognition-based capture and deactivation of active coronavirus-type particles. Humid air contains coronavirus droplets; the developed functionalized membranes will enable attachment to the protein spikes of the coronavirus to disarm the virus. In addition, the thin membrane architecture should result in a highly breathable mask. The integration of advanced materials with medical and biological sciences will have immense societal impact. This effort will also benefit the industrial manufacturing sector, where airborne virus or other nanoparticles present potential health hazards.

**STEM Education**

An NSF-funded Advanced Technological Education project at **Elizabethtown Community and Technical College** aims to increase the pool of qualified candidates for advanced manufacturing positions by partnering with the U.S. Army Garrison - Fort Knox to provide educational opportunities to soldiers transitioning to civilian life. These opportunities will include the high-demand areas of automation, robotics, industrial maintenance and electrical technology. The college will use flexible course options to meet the needs of transitioning soldiers so they can use their post-service time to obtain industry-recognized stackable credentials, including academic certificates and associate degrees.

**Research Driving Innovation**

With support from NSF’s Mid-scale Research Infrastructure-1, or Mid-scale RI-1, program, the **University of Kentucky** is creating a data-centric instrument platform for heritage science — the scientific study of cultural or natural heritage — called EduceLab. The instrument ecosystem is designed around key scientific capabilities that the research community has embraced as crucial and fundamental to addressing the challenging variability of heritage science contexts. EduceLab will build cohesion across a diverse group of national and international stakeholders and constituents including trainees and students; researchers in heritage science and in areas where data acquisition activities overlap; practitioners at institutions with active heritage collections and connected research efforts; and community members with investments in the ongoing conservation, preservation, study, dissemination and educational activities. The goal of Mid-scale RI-1 is to fulfill the community-defined need that enables current and next-generation U.S. researchers to be competitive in a global research environment.

**EPSCoR**

**COMPETITIVE RESEARCH** | Kentucky is one of 28 U.S. states or territories under NSF’s Established Program to Stimulate Competitive Research (EPSCoR). Over $5,610,000 in awards have been made to Kentucky academic institutions through EPSCoR in FY 2021. For more information, visit Kentucky’s EPSCoR state web page.

**NCSES**

According to the **National Center for Science and Engineering Statistics (NCSES)**, which is housed in NSF, 37% of Science, Engineering and Health doctorates conferred in Kentucky are made in Life sciences.

- 3.4% of Kentucky’s workforce are employed in S&E occupations.
- 29.41% of Kentucky’s higher education degrees are concentrated in S&E fields.

**Learn More**

**COVID RELIEF** - Congress provided NSF with funding to prevent, prepare for, and respond to COVID-19 in the CARES Act of 2020 and the American Rescue Plan (ARP) Act of 2021. For more information on NSF-funded COVID-19 research and recovery, visit NSF's award database for CARES Act and ARP awards, and NSF’s Toolkit for COVID funding updates.

**NSF FACT SHEETS** – NSF provides fact sheets about the agency and its bold investments in basic research. These fact sheets profile NSF investments in research across all fields of science and engineering, including quantum, artificial intelligence, and advanced manufacturing, and the NSF-supported research and computing infrastructure powering the U.S. response to COVID-19.

**CONNECT WITH NSF** – For more information on NSF’s impact in your state, please contact NSF’s Office of Legislative and Public Affairs at congressionalteam@nsf.gov.