

Eighteen Ukrainian Research Projects Selected for Long-Term Funding by the Polish Academy of Sciences and U.S. National Academy of Sciences

The Polish Academy of Sciences and the U.S. National Academy of Sciences (NAS) have selected 18 Ukrainian research teams across various scientific disciplines to receive financial support of up to approximately \$200,000 USD per year for up to three years - a total of around \$8 million USD (33 million PLN). The goal of the funding is to provide outstanding Ukrainian scientists with stable conditions for conducting research that, in the future, will lead to rebuilding science in Ukraine. Financial support for the grants is also being provided by the Royal Society of the U.K., Elsevier, the National Cheng Kung University of Taiwan, the German National Academy of Sciences Leopoldina, and the Royal Swedish Academy of Letters, History and Antiquities.

Selected from among 174 applications, the 18 grant recipients are working in the following scientific disciplines: astronomy, environmental sciences, mathematics, psychology, materials sciences and engineering, agriculture, biomedical sciences, physics, and chemistry. Eight of the 18 research teams are led by women.

Independence, stability, and double affiliation

The Ukrainian research teams will conduct their work in scientific units of the Polish Academy of Sciences. The principal investigator will remain in Poland for the duration of the project, while the other members may conduct research both in Poland and in Ukraine. Participation in the implementation of research projects under the affiliation of scientific units of the Polish Academy of Sciences assumes that scholars from Ukraine will keep their affiliation with Ukrainian institutions.

Projects selected for funding, in alphabetical order:

Nr	Principal Investigator	Host PAS unit	Title of the research project
1	Bertsyk Peter	Nicolaus Copernicus Astronomical Centre	Formation and evolution of the Nuclear Star Cluster in the Milky Way and other spiral galaxies on the cosmological time scale
2	Bondar Kseniia	Institute of Geophysics	Quantifying magnetic properties of soils to evaluate sustainable hazards from heavy metal pollution due to military activities in Ukraine

3	Borodina Olena	Institute of Rural and Agricultural Development	Substantiation and measures for implementation of a human rights-based integrated approach to rural development, food security and land policy in post-war rebuilding of Ukraine
4	Cherkas Volodymyr	Institute of Bioorganic Chemistry	Nanoscale Hippocalcin Signaling in Long-Term Depression in Norm and Primary Dystonia
5	Dovbeshko Galyna	Institute of Low Temperature and Structure Research	War-derived air pollution nanohybrids composed of carbon containing smoke nanoparticles and metal compounds: FIR/Raman spectroscopic, fluorescent and membrane-active properties, their potential neurotoxicity and its prevention
6	Dudko Artem	Institute of Mathematics	Ergodic group actions, characters on groups and unitary representations
7	Dudnyk Oleksii	Space Research Centre	The study of solar flares and their manifestation during 25th cycle of solar activity by using the Solar Orbiter and ground radio scientific database
8	Goncharuk Olena	Institute of Agrophysics	Biocompatible hybrid hydrogels with functional inorganic fillers for strengthening of plant vegetation
9	Kochelap Viacheslav	Institute of High Pressure Physics	Device focused research of amplification, generation and control of terahertz radiation
10	Kudrynskyi Zakhar	Institute of Physics	Probing charge-, phonon- and spin-quanta in novel two-dimensional van der Waals semiconductors: from fundamentals to applications
11	Kyrychenko Anhelina	Institute of Biochemistry and Biophysics	Experimental evaluation of virus disease of cereals in Ukraine and liposomal bionanotechnology for crop stabilization
12	Naydonova Lyubov	Institute of Psychology	War mental health crisis coping: evidence-based media psychoeducation for family and community health promotion during economic recovery
13	Poliarus Olena	Institute of Metallurgy and Material Sciences	Development of new MMCs Coating based on NiAl, NiTi intermetallic matrix reinforced with high entropy nitrides (Cr, Zr, Nb, Al., Ti)N
14	Potopnyk Mykhailo	Institute of Organic Chemistry	Organoboron materials capable of harvesting triplet excitons for a new generation of optoelectronic devices
15	Sadovyi Bohdan	Institute of High Pressure Physics	Influence of high N ₂ gas pressure on crystallization mechanisms and physical properties of h-BN
16	Sashuk Volodymyr	Institute of Physical Chemistry	Ferroelectric nematic liquid crystal: a new paradigm for breakthrough electrooptical applications
17	Shayakhmetova Ganna	Institute of Pharmacology	Long-term effects of fluoxetine on reproductive function and behavioral phenotype in a rodent model of juvenile post-traumatic stress disorder
18	Zalizovskyy Andriy	Space Research Centre	Studying the geospace plasma irregularities for the needs of Space Weather operational services

“As the war in Ukraine wages on, disrupting science and diverting resources from research programs, supporting Ukrainian scientists and keeping them connected to the global scientific community is more crucial than ever,” said U.S. National Academy of Sciences President Marcia McNutt. “We are pleased to be able to help support these outstanding researchers so that they can continue to make important contributions to science and to the future of Ukraine.”

"The program offers tools and resources enabling outstanding Ukrainian research groups to carry out scientific projects. Planning this program, we aimed to consider, among other things, the dual affiliation of all team members and the possibility of conducting research in Ukraine. I am convinced that the work of these outstanding scientists will contribute to the development and reconstruction of science in Ukraine", said prof. Marek Konarzewski, President of the Polish Academy of Sciences.

The long-term grant program is the latest in a series of efforts to support scientists from Ukraine implemented by the Polish Academy of Sciences in cooperation with the NAS and external partners. The program builds on an earlier initiative begun just after the start of the war focused on providing individual support to researchers who left Ukraine. In 2022, a total of 218 Ukrainian researchers (82% of whom are women) benefitted from this support.

CONTACT FOR MEDIA

Monika Chrobak

Polish Academy of Sciences
+48 22 182 66 02, 723 440 650
monika.chrobak@pan.pl

Molly Galvin

Office of News and Public Information
U.S. National Academies of Sciences, Engineering, and Medicine
+1 202 334 2138
news@nas.edu