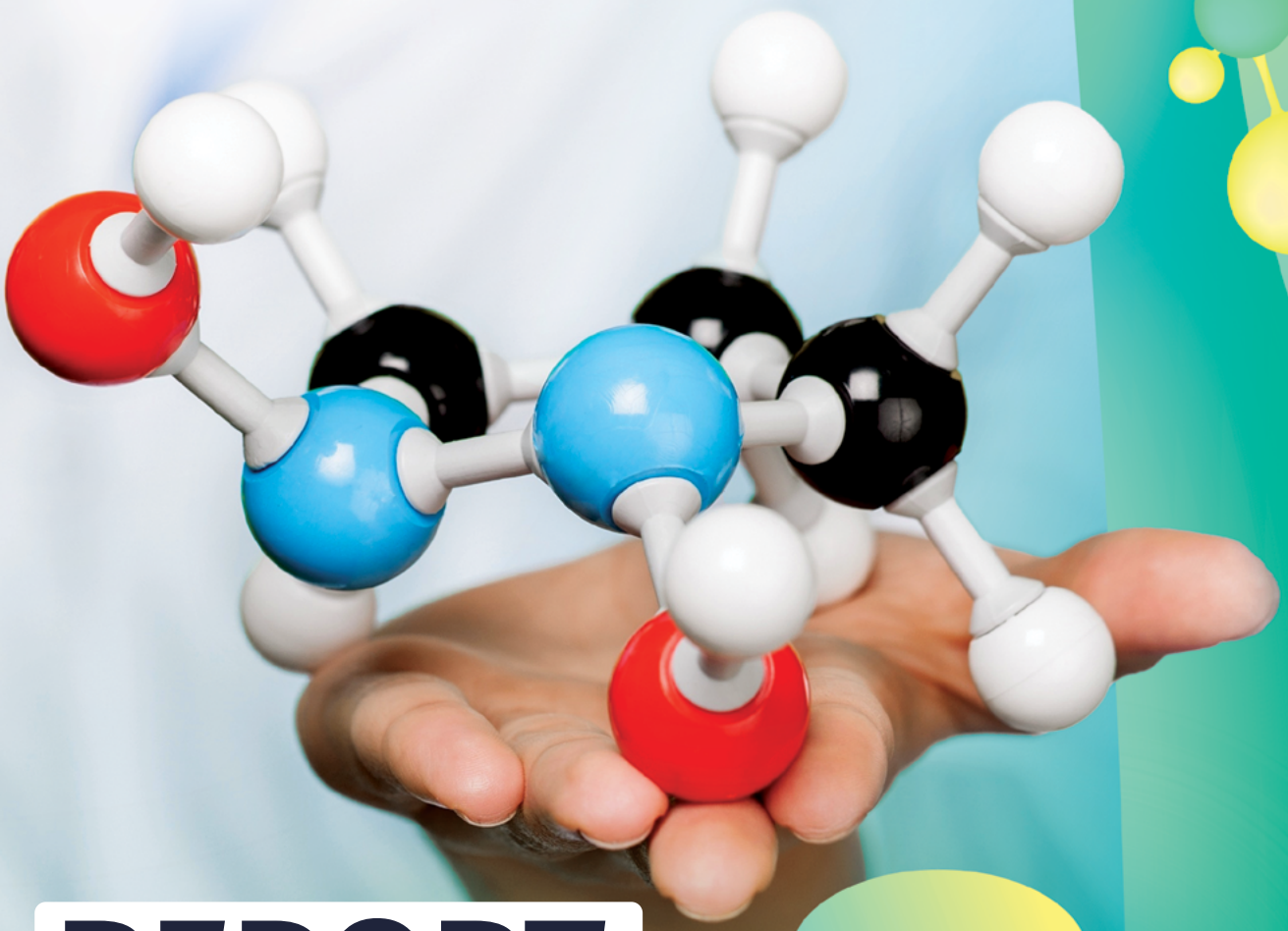
NATIONAL RESEARCH FOUNDATION OF UKRAINE



REPORT

on the activities of the National Research Foundation of Ukraine

2023

NATIONAL RESEARCH FOUNDATION OF UKRAINE

APPROVED by
the Supervisory Board
of the National Research Foundation
of Ukraine
«12» January 2024
Protocol № 1

REPORT

on the activities of the National Research Foundation of Ukraine
in 2023

KYIV – 2024

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INTRODUCTION

INTRODUCTION

The National Research Foundation of Ukraine (hereinafter referred to as the NRFU/Foundation) was established to develop the national research area and its integration into the world research area, build research infrastructure, and facilitate research and technical cooperation between research institutions, institutions of higher education, and representatives of the real economy and service sector.

In accordance with the NRFU Activity Strategy for 2020-2023, the work was aimed at:

- improvement of the mechanisms of organization and holding of joint competitive selection of projects with foreign and/or international foundations, societies, institutions, organizations, associations;
- announcement of new call projects for research and development;
- strengthening the personnel potential of the NRFU as a state budget institution and improving the interaction of the NRFU with grantees;
- measures to attract funding for research and development carried out with the support of the NRFU at the expense of contributions from legal entities and individuals, including non-residents of Ukraine, as well as other sources not prohibited by the legislation of Ukraine;
- development of the draft NRFU Activity Strategy for 2024-2026, etc.

One of the key tasks for the Foundation for 2023 was to improve the mechanisms for organizing and holding joint competitive selection for projects with foreign and/or international foundations, societies, institutions, organizations, and associations.

To fulfill this task, the Foundation, together with the Ministry of Education and Science of Ukraine, worked out a number of changes both to the Law of Ukraine 'On Scientific and Scientific-Technical Activities' and to a number of subordinate regulatory and legal acts of Ukraine, which opened the possibility for the Foundation to launch bilateral and multilateral calls and initiatives. In the reporting year, the Foundation became a partner of such international initiatives as:

- International multilateral partnership to ensure the sustainability of the system of education and science in Ukraine (IMPRESS-U);
- Competitive selection for additional NWO grant opportunities for Ukrainian researchers: Partnership initiative NWO-NRFU 2023;
- Open4UA.

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The call 'Ukrainian-Swiss Joint research projects: Call for proposals 2023' with the financial support of the SNSF was launched.

In cooperation with western partners, the Foundation is conducting a systematic search for grant proposals for Ukrainian researchers on an ongoing basis. Information on various types of assistance, including grant support provided by foreign research centers, universities, etc. to Ukrainian researchers during the russian federation's full-scale aggression against Ukraine, is regularly posted on the NRFU website under the heading 'For Grantees'.

During the reporting year, the Foundation completed the call for grant support for research and developments 'Science for the Recovery of Ukraine in the War and Post-War Periods'. The purpose of this call was to finance collective research projects aimed at solving urgent issues of recovery of Ukraine in the war and post-war periods. After the reviewing of the projects, according to the rating list, 67 projects were awarded grants (30% of those submitted for reviewing and 25% of the total number of projects submitted for the call). Among the winners: institutions of higher education – 29 projects, research institutions of the National Academy of Sciences of Ukraine – 38 projects. Among the winning institutions are V.E. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine (5 projects), Institute of Molecular Biology and Genetics, NAS of Ukraine (3 projects), E.O. Paton Electric Welding Institute, NAS of Ukraine (2 projects), Lviv Polytechnic National University (3 projects), Taras Shevchenko National University of Kyiv (4 projects), Ivan Franko Lviv National University (3 projects), Sumy State University (2 projects), National University of Bioresources and Nature Management of Ukraine (2 projects). 268 project teams, consisting of 1.382 researchers, 471 of which are early career researchers, took part in the competitive procedures.

In October 2023, based on the decision of the Call Commission, the Scientific Council of the Foundation approved the list of 12 projects recommended for implementation at the expense of grant support under the Call 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of University of Cambridge, UK)'. The success rate was 24% of the total number of projects submitted for the reviewing. Researchers who fall under at least one of the following criteria were awarded grants: the institution where the researcher works at his/her main place of work, evacuated from his/her permanent location (IHE or research institutions from the administrative-territorial units of Ukraine on the territory of which they cannot carry out their activities, and temporarily moved to the administrative-territorial units of Ukraine, on the territory of which they can carry out their activities in full, as of the date of the announcement of the Call); the premises of the institution of higher education or research institution were (partially) destroyed as a result of shelling, bombing, other military actions, and require repair or reconstruction; the researcher has the status of an internally displaced person as a result of russia's military aggression, confirmed by the relevant certificate of registration of an internally displaced person. Regionally, the winners of the call represent the following territories of Ukraine – 7 researchers from the Kharkiv region, 2 researchers from the Luhansk region, one researcher each from the cities of Berdyansk, Kherson and Odesa.

Based on the decisions of the Scientific Council of the Foundation, in 2023, agreements were concluded for the implementation of research and developments at the expense of grant support from the general fund of the state budget with 220 grantees based on the results of the NRFU calls:

> **'Science for Human Security and Society'** (2020) – 1 project– Appendix A;
>
> **'Support for Research of Leading and Young Scientists'** (2020) – 98 projects– Appendix B;
>
> **'Science for Safety and Sustainable Development of Ukraine'** (2021) – 54 projects – Appendix C;
>
> **'Science for the Recovery of Ukraine in the War and Post-War Periods'** – 67 projects (2023) – Appendix D;

The total amount of financing under the concluded agreements for projects in 2023 amounted to UAH 460,352.1 thousand, under the call:

- 'Science for Human Security and Society' – UAH 5,187.0 thousand;
- 'Support for Research of Leading and Young Scientists' – UAH 255,161.58 thousand;
- 'Science for Safety and Sustainable Development of Ukraine' – UAH 117,176.33 thousand;
- 'Science for the Recovery of Ukraine in the War and Post-War Periods' – UAH 82,827.16 thousand.

At the expense of the special fund of the NRFU the total amount of funding for the winners of the call 'Cambridge – NRFU 2022.

Individual grants for research (developments) **for Ukrainian researchers** (with the support of University of Cambridge, UK)**' amounted to UAH 693.9 thousand.**



SECTION 1

MEASURES TO ENSURE THE OPERATION OF THE INSTITUTION

1.1. Activities of the NRFU under martial law

> The second year of the war posed new challenges for the Foundation and formed the foundations for its further functioning under martial law. **The first priority is to ensure the preservation of Ukraine's research potential**, to direct the subject of new calls to ensure its utmost defense capability, to use institutional opportunities for the integration of Ukrainian research into the world research area.

Thus, with the assistance of the Ministry of Finance of Ukraine and the Ministry of Education and Science of Ukraine, in December 2023, the call 'Science for Strengthening the Defense Capability of Ukraine' was launched. The purpose of the call is to finance team applied research projects aimed at strengthening the stability and defense capability of Ukraine and ensuring its ability to respond to military challenges. The results of this call should be, at the very least, a device prototype or a software beta version that would demonstrate that the idea, technology or method works. In the case when there are similar products, technologies, methods on the market, the application must justify specific advantages over analogues.

In order to preserve the scientific potential of Ukraine and support basic research, the call 'Excellent Science in Ukraine' was launched in December 2023. The purpose of the call is to select projects for grant support for the implementation of advanced basic research which involve setting up and solving relevant scientific issues by leading and young researchers in order to ensure Ukraine's competitiveness in the world, the development of the national research area and its integration into the world research area.

Advanced research is impossible without the existence of a modern research infrastructure in Ukraine. Based on this, the Scientific Council of the Foundation has initiated the call 'Infrastructures for Advanced Research' aimed at creating teams that will become an innovative platform for future breakthrough research. The purpose of the call is to select projects for grant support for conducting basic and applied research to ensure the development of the national research area and its integration into the world research area, the development of research infrastructure as a set of means, resources and related services used by the research community for conducting research at the high-

est level, in particular for the creation of new and support of existing research units, their network structures, centers for collective use, archives and/or libraries of research information, etc., which as a result of the implementation of such projects can achieve the possibility of stable funding attraction under conditions that will allow them to organize independent work on conducting research at the level of the best global standards.

The approximate date of completion of competitive procedures for three calls is July 1, 2024. It is planned to receive applications for these calls from more than 500 teams of Ukrainian researchers.

The strategic focus of the NRFU Directorate in 2023 was ensured by the coordinated and systematic work of the Scientific Council. During the reporting year, 39 meetings of the Scientific Council of the NRFU were held, within which 144 points were considered, in particular in the following areas (Fig. 1.1):

- cstimulation of basic and applied research - 100 points;
- implementation of the state policy in the field of research and technical activities - 25 points;
- development of the national research area, its integration into the world research area and development of the research infrastructure in Ukraine and its integration into the world research infrastructure - 7 points;
- promotion of international exchange of information and researchers - 4 points;
- popularization of research and technical activities - 1 point;
- category 'other' - 7 points.

ISSUES CONSIDERED BY THE SCIENTIFIC COUNCIL OF THE NRFU in 2023

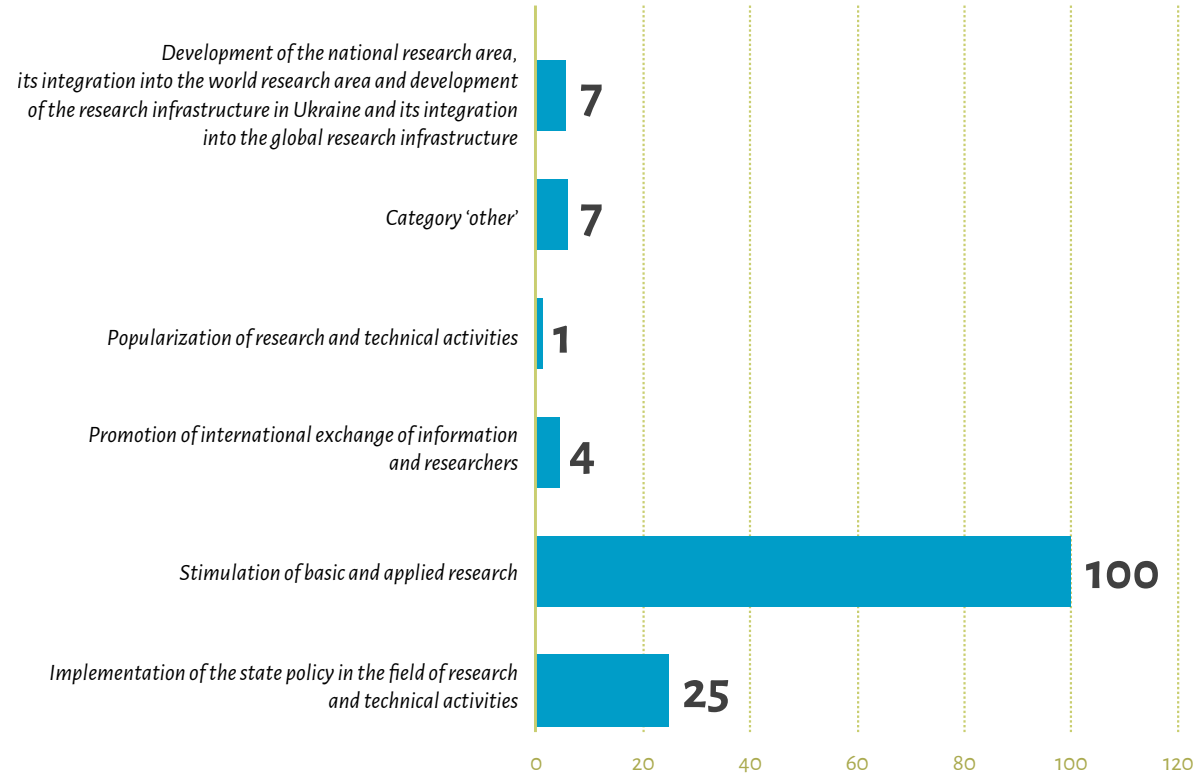


Fig. 1.1 – Categories of points considered by the Scientific Council of the NRFU in 2023

Among the most significant issues initiated and approved by the decisions of the Scientific Council of the NRFU in 2023, the following can be summarized:

1. On amendments to the provision on the Directorate of National Research Foundation of Ukraine;
2. On amendments to the Procedure of consideration and reviewing of research and development projects submitted to the National Research Foundation of Ukraine for Participation in call selections;
3. On amendments to the Regulations on Compliance with the Principles of Research Ethics and Conflict of Interest Prevention during evaluation and competitive selection of projects funded by grant support of the National Research Foundation of Ukraine;
4. On the development of criteria for determining cooperation with representatives of the aggressor country or the temporarily occupied territories of Ukraine;
5. On approval of the results of the call 'Science for the Recovery of Ukraine in the War and Post-war Periods';
6. On the continuation of funding for NRFU projects aimed at studying pandemics of various types and ways to combat their consequences;
7. On the feasibility of signing and implementing a grant agreement between the European Union, represented by the European Commission, and the National Research Foundation of Ukraine on the establishment of the Horizon Europe Office on the basis of the NRFU;
8. On signing a special agreement with the Swiss National Science Foundation (SNSF);
9. On approval of the terms and conditions of the joint call 'Ukrainian-Swiss Joint Research Projects: Call for Proposals 2023';
10. On the establishment of a temporary commission on the joint initiative of the Dutch Research Council and the National Research Foundation of Ukraine under the call 'NWO Hop-On Call for Proposals for Researchers Based in Ukraine: NWO-NRFU Partnership Initiative 2023';
11. On the creation of a temporary commission within the framework of the multilateral partnership initiative 'International Multilateral Partnerships for Resilient Education and Science System of Ukraine (IMPRESS - U)';
12. On approval of the results of the call 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of the University of Cambridge, UK)';
13. On the feasibility of signing the accession form for beneficiaries and implementation of the project 'OPEN Science for Ukrainian Higher Education System (Open4UA)' under the grant agreement between the European Education and Culture Executive Agency (EACEA), in accordance with the powers delegated by the EC, and the NRFU;
14. On approval of the structure of the database of projects that are and have been funded by the NRFU;
15. 15. On the involvement of the National Research Foundation of Ukraine in the analysis of applications submitted to the call 'NWO Hop-On Call for Proposals for Researchers Based in Ukraine: NWO-NRFU Partnership Initiative 2023';
16. On approval of the terms and conditions of the call 'Excellent Science in Ukraine';
17. On approval of the terms and conditions of the call 'Science for Strengthening the Defense Capability of Ukraine';
18. On approval of the terms and conditions of the call 'Infrastructures for Advanced Research'.

1.2. *Personnel development*

Ukraine is in a state of accelerated change due to the full-scale military invasion of the russian federation. Legislation has to be adapted to the extreme circumstances in which all spheres of social and economic life of the country have found themselves. The labor legislation of Ukraine has also undergone significant changes. In this regard, during the reporting period, the NRFU management took all necessary measures to ensure stable and coordinated work of all employees.

In order to fulfill the tasks set out in the Strategy of the NRFU for 2020-2023, the NRFU Directorate carried out organizational and personnel measures, namely:

- staffing; documentation of labor activity;
- analytical and organizational work on personnel management (appointments, dismissals, vacations, business trips);
- staff training and development, military registration and reservation of persons liable for military service for the special period.

During 2023, the Directorate carried out significant work to improve and develop internal regulatory documents governing the activities of the NRFU. In particular, amendments to the Provision on the Directorate of the National Research Foundation of Ukraine, the Procedure for filling vacant positions and replacing temporarily absent employees in the Directorate of the NRFU, as well as additions to it, were developed, and the Division of Responsibilities between the Executive Director of the NRFU and his/her deputies was amended. In addition, in order to improve the operational procedures, amendments were made to the Regulations on the NRFU's structural units and the relevant job descriptions of employees.

> **In 2023, changes were made to the structure and staffing of the NRFU to create a new structural unit, the Horizon Europe Office in Ukraine, and the Regulations on this structural unit and job descriptions for the department's employees were developed.**

As of December 31, 2023, 472 orders were issued. 373 of them were related to personnel issues (261 orders on personnel issues of long-term retention period and 112 orders on personnel issues of temporary retention period).

In order to implement the state policy on personnel management, the Directorate carries out recruitment and staffing with personnel capable of competent and responsible performance of job duties. Vacant positions were filled based on professional qualifications, work experience and organizational skills of applicants.

> **As of the end of the reporting period, the NRFU operation was ensured by 60 persons** (46 at the beginning of the year, 60 as of December 31, 2023), including 57 full-time employees and 3 part-time employees. Out of the total number of employees, 5 employees of the NRFU are exempted from their official duties with job security for the period of mobilization. In addition, 3 employees are on parental leave until the children reach the age of three.

> **The NRFU employs 17 persons** with research degrees, including: 1 Doctor of Sciences, 13 Candidates of Sciences, 3 PhDs. 8 of them have academic titles: 1 professor, 6 associate professors, 1 senior researcher.

As the new Procedure for the Organization and Maintenance of Military Registration of Conscripts, Persons Liable for Military Service and Reservists, approved by Resolution of the Cabinet of Ministers of Ukraine No. 1487 of December 30, 2022 came into force on January 5, 2023, the forms of primary registration of persons liable for military service were changed, and the information on such persons was recorded at their place of work in accordance with the updated legislation. Throughout

the year, the NRFU was working on exempting employees from the military service for the special period and periodic reporting to the Ministry of Education and Science of Ukraine was done.

In the reporting year, twice, in January and October, the general meetings of the labor collective were organized and documented to amend the NRFU Collective Agreement for 2020-2025. These changes were approved by the labor collective and registered in accordance with the procedure established by law.

Over the year, work on training and professional development of the NRFU Directorate employees was carried out in accordance with the consolidated professional development plan. For 2023, 23 events were planned on free learning platforms, through internal training or at the employees' own expense. The employees participated in 17 of them. The rest of the planned courses were replaced with trainings and webinars on other more relevant topics. In addition, 8 training events were planned at the expense of the state budget, 3 of which were postponed to 2024, and 5 events were implemented:

- Fundamentals of archival procedures – 1 person;
- Linux (Ubuntu) FreeBSD. Professional – 1 person;
- strategic management and planning – 17 persons;
- advanced training of an authorized person in the field of public procurement – 1 person;
- labor protection and fire safety – 2 persons.

The developed qualification level of the NRFU employees is confirmed by the respective certificates which are attached to their personal files.

PROFESSIONAL DEVELOPMENT OF EMPLOYEES OF THE NATIONAL RESEARCH FOUNDATION OF UKRAINE in 2023

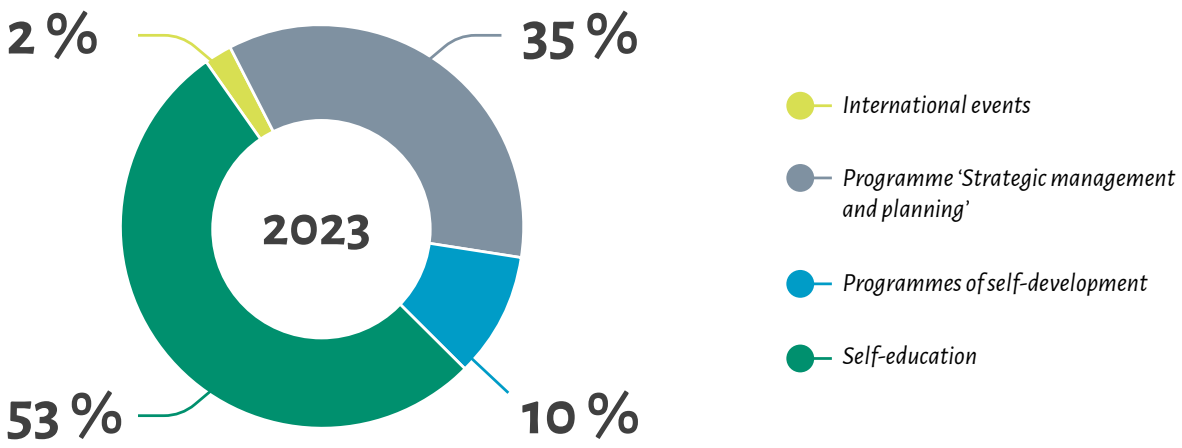


Fig. 1.2 – Professional development of the NRFU employees in 2023

1.3. Financial provision

The passport of the budget program for 2023 from the general fund of the state budget under the CPCEC 2201300 'Support for the activities of the National Research Foundation, grant support for research and scientific and technical (experimental) developments' of the Foundation provides UAH 504,818.10 thousand out of which UAH 466,835.0 thousand is allocated for 'Grant support for basic research in natural, technical, social sciences and humanities and applied research and scientific and technical (experimental) developments in priority areas of science and technology'.

In accordance with the Resolution of the Cabinet of Ministers of Ukraine on December 01, 2023 No. 1101-p 'On the Redistribution of Certain State Budget Expenditures Provided to the Ministry of Education and Science for 2023', the amount of expenditures under the budget program under CPCEC 2201300 was reduced by UAH 4,910.123 thousand (Table 1.1).

TABLE 1.1

State budget financial provision for Grant support for basic research in natural, technical, social sciences and humanities and applied research and scientific and technical (experimental) developments in the priority areas of science and technology in 2023, thousand UAH

Name	The amount of expenditures approved by the passport	Amended amount of expenditures
Call 'Science for Human Security and Society'	**5 187.0**	**5 187.0**
Call 'Support for Research of Leading and Young Scientists'	**264 038.5**	**264 038.5**
Call 'Science for Safety and Sustainable Development of Ukraine'	**121 098.3**	**121 098.3**
Call 'Science for the Recovery of Ukraine in the War and Post-War Periods'	**75 000.0**	**70 089.9**
Scientific and scientific - technical review	**1 511.2**	**1 511.2**
Total	**466 835.0**	**461929.4**

Also from the special fund of the state budget under the CPCEC 2201300 (Table 1.2).

TABLE 1.2

Financial provision from the special fund of the state budget in 2023, thousand UAH

Name	The amount of expenditures
Implementation of the project Horizon Europe Office in Ukraine as a key National Contact Point (NCP) under Grant Agreement № 101132682 – HEOinUA	**5 683.940**
Call 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of the University of Cambridge, UK)'	**5 608.944**
Scientific and scientific - technical review	**194.755**
Total	**11 487.639**

1.4. *Information, technical and operational support*

During the reporting year, information and technical support was provided to the NRFU, namely:

- providing technical support for the conduct and organization of the NRFU calls, meetings of the NRFU Scientific Council, scientific councils of its sections and the Directorate;
- ensuring technical protection of the NRFU information;
- ensuring the security of the NRFU's information resources (including the protection of information in information and telecommunication systems) and maintaining them in good working order during operation;
- implementation and maintenance of a unified information technology system of user interaction;
- coordination of the purchase and commissioning of computer equipment, computer programs, networks, systems, and their support during operation;
- organization of access to the Internet for the NRFU employees;
- providing technical support for the activities of competition commissions, conducting research reviewing and competitive selection of projects.

The NRFU uses exclusively licensed software. The following software is currently used: Microsoft Windows 10/11 Pro; Microsoft Office 365 (online, offline); Microsoft Windows Server; VMware ESXi – software product for institutional virtualization; Zabbix – a free system for monitoring the status of various computer network services, servers and network equipment; EndPoint Protection – a software package that protects endpoints from malicious and targeted attacks; ISPro – an accounting and management automation system; M.E.Doc – timely reporting and easy document exchange; LIGA:ZAKON system; and other application software.

Work is underway to modernize the structured cable network of the NRFU using communication network equipment for the needs of the Horizon Europe Office in Ukraine.

The NGFW (Next-Generation Firewall) network screen, software and hardware for virus protection and security incident investigation (NGEP, EDR) were installed. It is a unified platform with the necessary security features, such as activity detection, vulnerability assessment, intrusion detection, behavioral monitoring, and event correlation.

The parameters of security policies, Active Directory domain controller, and user group policies have been configured.

In 2023, internal regulatory documents of the Foundation were developed, in particular, as part of the construction and implementation of a comprehensive information security system:

- The Offender Model and the Threat Model of the Automated System 'The NRFU Call for Projects';
- Information Security Plan for the Automated System 'The NRFU Call for Projects';
- Information Security Policy of the Automated System 'The NRFU Call for Projects';
- Terms of reference for the development of an integrated information security system for the Automated System 'The NRFU Call for Projects'.

The work on development of an integrated information security system for the Automated System 'The NRFU Call for Projects' was completed.

The Procedure for the Use of Electronic Trust Services in the NRFU was developed and approved by the Order of the NRFU No. 94 dated 12/27/2023.

1.5. *Internal control and internal audit*

In accordance with the Plan of Internal Audit Activities for 2023-2025, approved by the Order of the Executive Director of the NRFU No. 12 of 22.12.2022 as amended of 03.05.2023, four planned internal audits were carried out. The amendments for 2023-2025 concerned only an increase in the period covered by the internal audit of the organization and activities of the accounting and budgeting department. Also in 2023, one unscheduled internal audit was conducted pursuant to the letter of the Scientific Committee of the National Council of Ukraine on Science and Technology Development No. 007-11/887 of 07.07.2023 under the budget program CPCEC 2201300 'Support for the activities of the National Research Foundation, grant support for research and scientific and technical (experimental) developments' in the field of 'Support for the activities of the Foundation'.

In 2023, audit reports with conclusions, recommendations (proposals) based on the results of the internal audit were made for the following fields:

- organization and activities of the IT Department;
- organization and activities of the Department of Accounting and Budgeting;
- organization and operation of the Sector of Paperwork and Archiving;
- organization and activity of the Grant Support Department in the Field of Technical and Natural Sciences, Mathematics, and IT;
- assessment of the effectiveness of the Foundation's activities under the budget program CPCEC 2201300 'Support for the activities of the National Research Foundation, grant support for research and scientific and technical (experimental) developments' in the area 'Support for the Foundation's activities' (unscheduled internal audit).

The results were communicated in a timely manner to the Executive Director of the NRFU, the audited departments, and risk owners.

Thus, the conclusion of the Audit Report of the scheduled internal audit ***of the organization and activities of the IT Department*** which was carried out for the period from 01.01.2020 to 01.02.2023 states that in general, the department ensured the fulfillment of the main tasks and functions defined by the Regulation on the IT Department and the Regulation on the NRFU Directorate. Staffing, training and professional development of employees were in line with the defined functions.

At the same time, certain shortcomings were identified regarding the formalization of the department's functions, the functioning of the information and communication system (ICS), information technology and security, which increase operational and IT risks at the NRFU.

In general, the assessment of the internal control system related to the activities of the IT Department was assessed as sufficient. The functioning of the systems and processes in the ICS was ensured by appropriate automated controls within the internal control system and the performance of periodic control functions by the employees of the IT Department.

> **The effectiveness of the department's organization was assessed to be satisfactory, and yet required improvement in terms of:**
>
> - control design, namely formalization of the functions of the department's employees in internal documents that are actually performed;
> - development of internal documents and spreading awareness among the NRFU employees about information security, cyber hygiene and cyber threats;
> - finalizing the organizational and technical model of cyber defense at the NRFU and implementing it.

The assessment of the effectiveness of measures to ensure the reliability and security of information resources and systems based on the test results was determined to be satisfactory, no significant

shortcomings were identified, but the audit revealed lack of a comprehensive information security system (CISS) at the NRFU in accordance with the requirements of the law, the issue has been in the process of solving since 2021, but due to the martial law in Ukraine and, accordingly, procurement restrictions, it was suspended. As of today, taking into account the recommendations of the internal audit and legal requirements, the process of procurement of the CISS has been completed.

> **According to the results of the internal audit, the assessment of the effectiveness of technical support for the work of the NRFU departments, the work of the Scientific Council of the NRFU, its sections, and the activities of the call commissions based on the results of the sample inspection is found sufficient.**

The assessment of the effectiveness of the NRFU's official website maintenance and posting of information on it, in terms of the responsibility of the IT Department, was also found sufficient.

The overall assessment according to the CobiT® 19 methodology was determined at level 2, namely, it was found that the processes achieve their objectives through the application of a basic, almost complete set of actions that can be characterized as completed or in progress. The overall conclusion of the CobiT® 19 methodology assessment is that the established maturity level is sufficient for the objectives of the NRFU, provided that the recommendations are implemented.

Based on the results and conclusions of the internal audit and in accordance with the Recommendations to the Audit Report of the scheduled internal audit of the organization and activities of the IT Department of the NRFU Directorate dated 04.04.2023, the Executive Director of the NRFU approved the Action Plan for the implementation of audit recommendations with the identification of responsible persons and a deadline for the actions implementation dated 13.04.2023 was set.

As of 16.11.2023, the Sector of Internal Audit monitored the implementation of the recommendations in accordance with the Action Plan. During the monitoring of the implementation of recommendations, it was established that the said Action Plan for the implementation of audit recommendations is being implemented but not in full, a number of actions based on the recommendations are postponed mainly due to the long-term procurement and implementation of the CISS project, and some of the actions the due date has not yet come.

> **The conclusion of the Audit Report of the scheduled internal audit of the *organization and activities of the Department of Accounting and Budgeting* of 30.06.2023 which was carried out for the period from 10.10.2019 to 01.07.2023, states that the system of Internal Audit of the processes of the Department of Accounting and Budgeting was assessed as sufficient. The department generally ensures the fulfillment of the main tasks and functions, the results are achieved in accordance with the relevant regulatory documents and the internal Regulations on the Department of Accounting and Budgeting, the Regulations on the Directorate of the NRFU.**

Absence of CISS with confirmed compliance, including regarding automated stations and programs used by employees of the Department of Accounting and Budgeting poses inherent IT and operational risks assessed as high.

Other isolated shortcomings that were detected, in the opinion of the internal audit, do not significantly affect the increase of operational risks, risks of application of fines or reputational risks. Violations regarding the use of budget funds in terms of the department's responsibility have not been established.

> **Based on the results of the random check, it was established that the analytical accounting data correspond the synthetic accounting data. No discrepancies were found by checking balance sheet indicators, general ledger data, and accounting registers.**

A selective check of the timeliness and completeness of accounting and budget reporting for 2022 revealed no violations. The principles of targeted and effective use of budget funds, according to the internal audit, within the department's competence, were observed.

At the same time, separate violations of the NRFU's internal normative documents regarding the formation of primary accounting and budgeting documents and registers were detected, including the timeliness of accounting, proper arrangement of accounting and budgeting documentation, accounting registers. A selective audit of the compliance of income and expenses provided for in the estimate found no deviations or violations, the internal control system is at a sufficient level.

Other shortcomings based on the results of the internal audit are listed in the Audit Report.

According to the results of the internal audit, the Department of Accounting and Budgeting and other owners of actions to implement the recommendations of the internal audit developed an Action Plan No. 137 dated 20.07.2023.

As of November 16, 2023, the implementation of recommendations was monitored in accordance with the specified Action Plan. When monitoring the implementation of the recommendations, it was established that the specified Action Plan is mostly implemented on time or the deadlines are postponed due to valid reasons.

In the conclusion of the Audit Report of the scheduled internal audit of the organization and activities of the Sector of Paperwork and Archiving, which was carried out for the period from 01.01.2020 to 01.07.2023, it is stated that the system of internal control of the processes of the Sector of Paperwork and Archiving was assessed as sufficient. The sector as a whole ensures the performance of the main tasks and functions, achieves results in accordance with the regulations established by the relevant legal documents and the internal Regulations on the Sector of Paperwork and Archiving and Regulations on the Directorate of the NRFU.

According to the results of the internal audit, it was established that the work planning and reporting of the Sector of Paperwork and Archiving correspond the proper real state of affairs. No significant violations of the reliability, credibility and efficiency of the activity of this sector were detected based on the results of a random check.

At the same time, certain shortcomings were identified regarding the forms of internal documents and the formation of the archive, which, according to the internal audit, did not significantly affect the increase in operational risks, the risks of the application of fines or reputational risks respectively, did not affect the assessment of the activity of the object of internal audit in general.

The check established the absence of an internal document that defines the procedure for working with information, including the protection of information that has limited access, which increased operational, legal and reputational risks.

The random check of the control functions of registration, delivery to executors and execution of administrative documents of the NRFU revealed a single deficiency which does not significantly affect the overall conclusion regarding the efficiency of the sector. It was also established that the job descriptions of the sector contain no reference to anti-corruption legislation (knowledge of it, responsibility for violations, procedure of action, notification of the authorized person of the NRFU on issues of prevention and detection of corruption of the NRFU, etc.).

According to the results of the internal audit, it was recommended to implement an electronic document management system as soon as possible, to carry out periodic internal audits and appropriate stitching of documents for their transfer to the archive, to amend internal instructions on record keeping, the internal nomenclature of cases of the NRFU in terms of compliance with the updated structure of the NRFU and its tasks. Also, among other things, it was recommended to draw up a plan for internal periodic audits of record keeping and archive management in the structural subdivisions of the NRFU for a calendar year, etc.

According to the recommendations of the Audit Report of the planned internal audit of the activities of the administration and archival storage sector of the NRFU Directorate dated 19.10.2023, the Executive Director of the NRFU approved the Action Plan for the implementation of audit recommendations with the identification of responsible persons and the established deadlines for the implementation of measures.

As of November 16, 2023, the implementation of recommendations was monitored in accordance with the specified Action Plan. During the monitoring of the implementation of the recommendations, it was established that the specified Plan is implemented as the appropriate deadline for the implementation of the measures arrives.

According to the results of an unscheduled internal audit of the effectiveness of the support of the Foundation's activities under the budget program CPCEC 2201300 'Support for the activities of the National Research Foundation of Ukraine, grant support for research and scientific and technical (experimental) developments', it was concluded that, in general, the support of the activities of the NRFU during the period under audit, with a summary as of June 1, 2023, can be considered effective. According to the results of a random inspection, the system of internal control of the NRFU processes was assessed as sufficient. The Foundation as a whole ensures the performance of its main tasks and functions at a fairly high level and quality, in accordance with the budget program of CPCEC 2201300 'Support for the activities of the National Research Foundation of Ukraine, grant support for research and scientific and technical (experimental) developments'.

The internal audit established individual shortcomings regarding the organization and maintenance of accounting, registration of business trips, accounting of intangible assets, functioning of the information and communication system, ensuring information security of the NRFU, cyber security, cyber hygiene and the plan for improving the systems of ensuring the information security of the NRFU.

Based on the results of the internal unscheduled audit, respective Audit Report provides recommendations for consideration by the Scientific Committee of the National Council of Ukraine on Science and Technology Development and the Executive Director of the NRFU regarding the elimination of shortcomings, optimization of work, and amendments to internal methodological documents, including the provisions on subdivisions, job instructions, Accounting policy of the NRFU, Program on preventing manifestations of corruption in the NRFU in terms of disclosure of certain provisions of anti-corruption legislation.

In the conclusion of the Auditor's report of the planned internal audit of the organization and activities of the Grant Support Department in the Field of Technical and Natural Sciences, Mathematics and IT of the Grant Support Division dated 12.29.2023 (with the audited period from 10.10.2020 to 10.01.2023) it is stated that the internal control system processes of the Department of Grant Support in the Field of Technical and Natural Sciences, Mathematics and IT of the Grant Support Division was assessed as sufficient, but as the one that needs improvement. The department as a whole ensures the performance of its main tasks and functions, achieves results in accordance with those established by the relevant normative legal documents and internal regulations, including the Regulations on the Directorate of the NRFU.

According to the results of the planned internal audit, separate violations of internal regulatory documents and minor deficiencies in work were detected, which, in the opinion of the internal audit, do not have a significant impact on the department's activities. The process of balance and resource management in the department, implementation of the process of typical initial training of personnel, automated document flow, and reporting need improvement.

The audit established an inflated period for drawing up the protocols of the meetings of the Scientific Council, namely twenty days, which may increase operational and reputational risks in terms of an increase in the time it takes to implement decisions or loss of data relevance, as well as the

illegitimacy of any actions without an official meeting protocol. The internal audit made a recommendation to implement and formalize the process of preparing minutes of the meeting with secretary's signature as soon as possible before the approval of the minutes of the meeting by all participants and to shorten the period for drawing up the minutes of such protocols.

It is recommended to familiarize the staff of the department with the internal Regulations on the procedure for working with information with limited access in the National Research Foundation of Ukraine.

Other shortcomings based on the results of the internal audit are listed in the Audit Report.

According to the results of the internal audit on the implementation of recommendations, the Department in the Field of Technical and Natural Sciences, Mathematics and IT of the Grant Support Division and other action owners developed a plan of measures, the implementation of which is ongoing.

In 2023, in order to ensure the effective organization and implementation of internal audit, the Procedure for conducting internal audits at the NRFU was updated, a separate internal document was developed on conducting risk-oriented internal audit planning, separate internal Regulations on the assessment of the internal control system by internal audit, systematized and streamlined monitoring implementation of internal audit recommendations based on the results of internal audit inspections, a program for ensuring and improving the quality of internal audit was developed. Also, during the year, the Internal Audit Sector, in addition to planning, conducting scheduled and unscheduled internal audits, creating files of working documents, in accordance with the rules of document flow, provided consulting support to the management of the NRFU and the person responsible for coordination of risk managers in the NRFU.

1.6. *Prevention of corruption*

In accordance with Part 1 of Article 131 of the Law of Ukraine 'On the Prevention of Corruption', the National Research Foundation of Ukraine appointed an authorized person for the prevention and detection of corruption (hereinafter - the authorized person) from among the full-time employees of the NRFU (Head of the HR Sector). The tasks, functions and rights of the authorized person are determined by the Regulation on the authorized person for the prevention and detection of corruption of the NRFU, approved by the order of the NRFU dated 31.03.2021 No. 22.

During 2023, the authorized person processed and approved 92 orders on the main activity and the following documents:

- PAnnual purchase plan of the NRFU for 2023 which is published on the official website;
- P42 economic agreements.

During the reporting period, there were no notifications from the NRFU employees about manifestations of corruption, and no actions with signs of corruption or corruption risks were detected. Cases of conflict of interests, attempts to resolve them independently, as well as facts that may indicate violation of the requirements of the law regarding the prevention and resolution of conflicts of interest in the structural divisions of the NRFU have not been recorded.

1.7. *Risk management system*

In compliance with the requirements of Article 26 of the Budget Code of Ukraine, in accordance with the Basic principles of internal control by allocators of budget funds, approved by the Decree of the Cabinet of Ministers of Ukraine dated 12.12.2018 No. 1062 and Methodical recommendations on the organization of internal control by allocators of budget funds in their institutions and sub-de-

partmental budget institutions, approved by the Order of the Ministry of Finance of Ukraine dated 14.09.2012 No. 995, the Order of the NRFU dated 15.08.2022 No. 34 approved the 'Instructions for the organization and implementation of internal control at the National Research Foundation of Ukraine' (as amended).

The heads of the structural subdivisions created a list of risks that may affect the performance of assigned tasks and functions by the structural subdivision or the activities of the NRFU Directorate as a whole.

Based on the results of risk identification and assessment, all risks and proposals for ways to react to them, the main control measures and responsible actors for influencing the identified risks were summarized by the heads of structural divisions of the NRFU in the List of risks that may affect the performance of established tasks and functions or the activities of the NRFU and in the Plan for the implementation of measures to control the identified risks.

In order to bring the internal regulatory documents of the Directorate of the National Research Foundation of Ukraine into compliance with the amendments made by the Decree of the Cabinet of Ministers of Ukraine dated 04.07.2023 No. 742 and 04.08.2023 No. 808, aswell as adopted administrative documents of the NRFU, amendments were made to the Instructions for the organization and implementation of internal control at the National Research Foundation of Ukraine (Order No. 77 dated 23.10.2023).

The state of implementation of measures to control the identified risks was monitored.

In order to implement clause 6.11 of the Instruction on the organization and implementation of internal control, the National Research Foundation of Ukraine has prepared 'Results of monitoring the state of implementation of measures to control identified risks' as of May 29, 2023, in the form established by the Instruction.

In order to identify new and changed risks, a review of the identified risks for 2022, formed in the 'List of risks that may affect the performance of established tasks and functions or the activity of the NRFU for 2022' (order No. 79 of 06.11.2023) was carried out.

In accordance with clause 5.27 of the Instructions on the organization and implementation of internal control at the National Research Foundation of Ukraine, approved by the order of the National Research Foundation of Ukraine dated 15.08.2022 No. 34 (as amended), the 'Generalized list of risks in the activities of the National Research Foundation of Ukraine for 2023' and 'Generalized plan for the implementation of measures to control the identified risks for 2023'.

A total of 94 risks were identified, of which: internal – 60, external – 30, external and/or internal – 4 (Fig. 1.3).

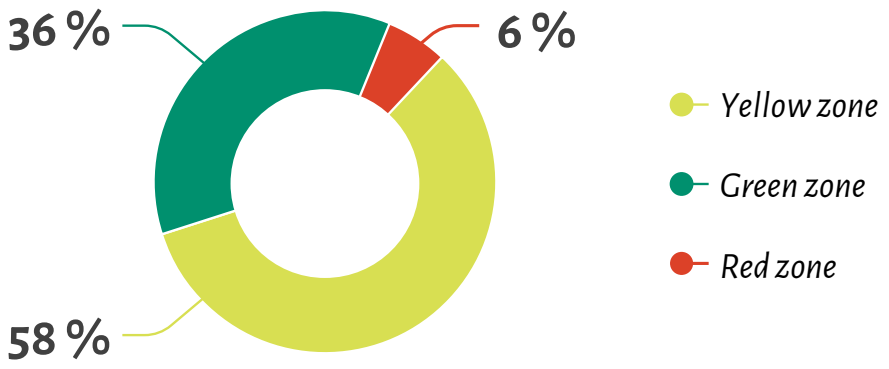


Fig. 1.3 - Classification of risks according to the degree of their impact on the NRFU activities



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SECTION 2

GRANT SUPPORT OF RESEARCH AND DEVELOPMENTS

2.1. *Organisation and conduct of calls*

The main task of the NRFU is grant support for basic research in the field of natural, technical, social sciences and humanities, as well as applied research and scientific and technical (experimental) developments in the priority areas of the development of science and technology, including providing technical and organizational support for conducting and organizing calls by the Foundation, control over the implementation of projects.

Organizational and technical support is provided by three departments of the Grant Support Division (Grant Support Department in the Field of Technical and Natural Sciences, Mathematics, and IT; Grant Support Department in the Field of Biology, Healthcare and Bioresources; Grant Support Department in the Field of Social Sciences and Humanities), Department of Monitoring of Grant Projects Implementation and Department of Grant Projects Financing (the latter performing its functions in close cooperation with the Grant Support Division).

During the reporting period, the Foundation organized and held a call for grant support of research and developments 'Science for the recovery of Ukraine in the war and post-war periods'. The reviewing was completed and the winners of the call 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of the University of Cambridge, UK)' were selected. Three new calls for R&D projects 'Excellent science in Ukraine', 'Science for Strengthening the Defense Capability of Ukraine' and 'Infrastructures for advanced research' were launched and are being held.

Also, at the end of 2023, the Scientific Council of the Foundation launched a joint call 'Ukrainian-Swiss Joint research projects: Call for Proposals 2023'. The purpose of the call is to provide an opportunity for researchers in Ukraine, together with researchers in Switzerland, to carry out scientific and scientific-technical activities in any field of science. The call is aimed at supporting researchers who are currently in Ukraine, including early career researchers. The thematic area of the Call is conducting basic research. Joint projects from any scientific field, as well as interdisciplinary joint projects, are invited for participation. On December 15, 2023, the acceptance of applications for the call was completed, and the stage of preliminary consideration regarding compliance with the terms and conditions of the call is currently underway.

To facilitate the preparation of documents for calls by potential grantees, the following methodological recommendations were developed and approved by the Scientific Council of the NRFU: methodological recommendations for planning the estimated cost of the project for the implementation of research (developments) at the expense of the grant support of the NRFU; sample forms of documents (for the NRFU website) to be submitted by the call participants along with the application, as well as application forms; recommendations for filling out applications, sample forms of grant agreements.

2.2. *Procedures of reviewing, information and technical support*

During the reporting period, competitive selection was carried out in accordance with the Procedure for competitive selection and financing of research and developments projects by the National Research Foundation of Ukraine, approved by the Decree of the Cabinet of Ministers of Ukraine No. 1170 of December 27, 2019 (as amended).

Scientific and methodological support in the organization and conduct of calls for research and developments at the expense of the NRFU, was provided by the work of collegial bodies (Fig. 2.1, as of 12.31.2023):

- Scientific Council of the NRFU (39 meetings held);
- Section of the Scientific Council of the NRFU on natural and technical sciences and mathematics (12 meetings held);
- Section of the Scientific Council of the NRFU on biology, medicine and agricultural sciences (12 meetings held);
- Section of the Scientific Council of the NRFU on social sciences and humanities (11 meetings held);
- Call Commission 'Science for the Recovery of Ukraine in the War and Post-War Periods' (25 meetings held, 26 meetings of thematic panels of the Call Commission, including: Panel of technical, mathematical and natural sciences - 6; Panel of biology, medicine - 7; Panel of social sciences and humanities – 13);
- Call Commission 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of the University of Cambridge, UK)' (34 meetings held, 19 meetings of thematic panels, including: Panel of natural and technical sciences and mathematics – 8; Panel of biological and medical sciences – 5; Panel of social sciences and humanities– 6).

Call for grant support for research and developments 'Science for the Recovery of Ukraine in the War and Post-War Periods': in the terms and conditions of the call, the duration of the implementation of the projects to be selected based on the results of its implementation was determined: for a period of 2023-2024 (2 stages). The call was held from December 23, 2022 to July 6, 2023.

Before submission of applications by potential grantees, the Directorate of the NRFU held an online webinar explaining the terms and conditions of the call and the procedure for drawing up the call documentation.

A total of 221 potential grantees took part in the call (117 from technical sciences, 59 from biological sciences, 45 from social sciences and humanities). Of these, 83 applications were rejected due to non-compliance with formal requirements, and the remaining 138 were sent for consideration by reviewers.

These 138 applications were submitted by 76 institutions of the NASU and 62 institutions of higher education. After the review of the projects, according to the rating list, on the basis of the decision

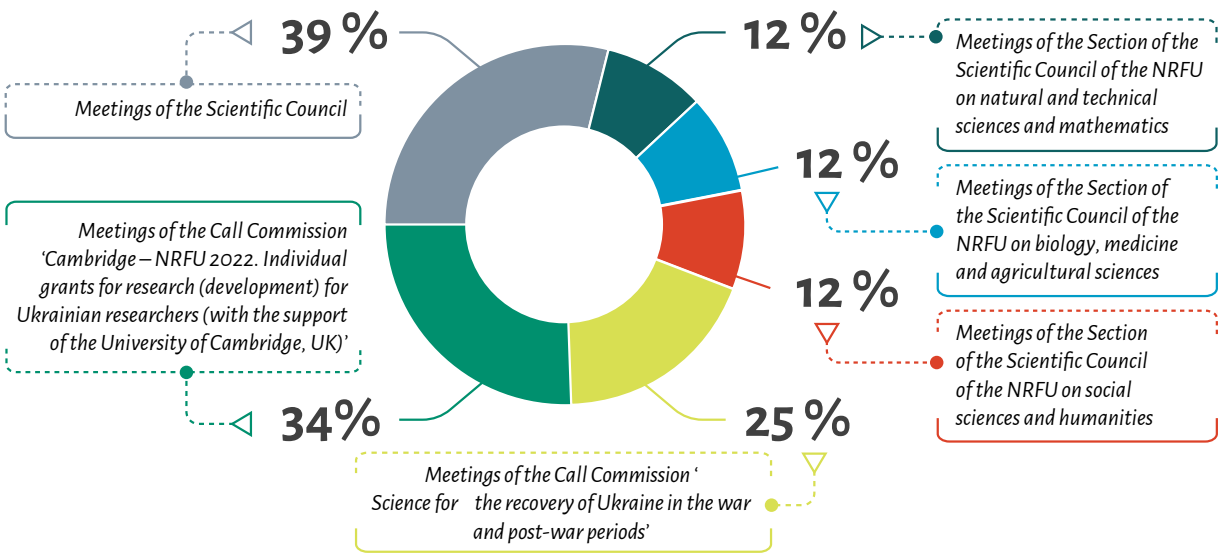


Fig. 2.1 Scientific and methodological support in the organization and conduct of calls for research and developments at the expense of the NRFU in 2023

of the Scientific Council of the NRFU, 67 projects were awarded grants (30% of those who were submitted for the review, and 25% of the total number of projects submitted for the call).

Scientific and scientific-technical review was conducted by 325 reviewers, of which 300 were Ukrainian reviewers and 25 were foreign ones. Agreements of a civil law nature were concluded with all Ukrainian reviewers (290 on a paid basis, 10 on a pro bono basis).

In the course of work with reviewers during their scientific and scientific-technical review, referents processed applications for receiving grant support, submitted for calls – 142 applications, including: in the Grant Support Department in the Field of Technical and Natural Sciences, Mathematics, and IT – 46; in the Grant Support Department in the Field of Biology, Healthcare and Bioresources – 64; in the Grant Support Department in the Field of Social Sciences and Humanities – 32.

Call for grant support for research and developments 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of the University of Cambridge, UK)'. In the terms and conditions of the call, the duration of the implementation of the projects to be selected based on the results of its implementation was determined: for a period of 2023-2024 (12 months). The call was held from December 29, 2022 to October 10, 2023. 50 applications were submitted to the call, 12 of which were awarded grants. The scientific and scientific-technical review was carried out by 134 reviewers, of which 100 were Ukrainian reviewers and 34 were foreign ones. Civil agreements were concluded with all Ukrainian reviewers (81 - on a paid basis, 19 on a pro bono basis).

During work with reviewers during their scientific and scientific-technical review, referents processed 50 applications for receiving grant support submitted to the call, including: in the Grant Support Department in the Field of Technical and Natural Sciences, Mathematics, and IT – 20; in the Grant Support Department in the Field of Biology, Healthcare and Bioresources – 18; in the Grant Support Department in the Field of Social Sciences and Humanities – 12.

2.3. *Financing of research and developments*

In 2023, 98 grant agreements were concluded with the winners of the call 'Support for Research of Leading and Young Scientists' – for a total of UAH 255,161,586.00.

1 grant agreement was concluded with the winner of the call 'Science for Human Security and Society' – **for UAH 5,187,000.**

54 grant agreements were concluded with the winners of the call 'Science for Safety and Sustainable Development of Ukraine' – **for a total of UAH 117,176,329.00.**

67 grant agreements were concluded with the winners of the call 'Science for the Recovery of Ukraine in the War and Post-War Periods' – **for a total of UAH 82,827,160.83.**

12 grant agreements were concluded with the winners of the call 'Cambridge – NRFU 2022. Individual grants for research (development) for Ukrainian researchers (with the support of the University of Cambridge, UK)' – **for a total of UAH 5,551,200.00.**

2.4. *Control over the implementation of grant projects*

Control over the implementation of grant projects during the reporting year was carried out by means of monitoring and checks of:

- grant agreements for the performance of research and development by grantees;
- following the provisions of grant agreements by the grantees, taking into account the specifics of the research in accordance with the technical task, calendar plan and budget estimate at all stages of project implementation.

During the reporting period, operational information was prepared regarding the following: special equipment purchased by grantees under grant agreements, information on the financing of grant projects under grant agreements in 2021–2023, information with a list of PIs and implementers of projects under the calls 'Science for Human Security and Society', 'Support for Research of Leading and Young Scientists', 'Science for Safety and Sustainable Development of Ukraine', 'Science for the Recovery of Ukraine in the War and Post-War Periods'.

Consolidated tables were prepared as of correctness of the reporting documentation for the calls 'Support for Research of Leading and Young Scientists', 'Science for Safety and Sustainable Development of Ukraine' and the call 'Science for the Recovery of Ukraine in the War and Post-War Periods'.

During the reporting period, in accordance with the order of the NRFU No. 34 dated 15.08.2022 'On the approval of the Instructions for the organization and implementation of internal control in the National Research Foundation of Ukraine', the identified risks were monitored and reviewed by checking the correctness of the research reports and the completeness of the agreement documents provided by the grantees after the completion of the intermediate stage of project implementation before the submission of the research reports for consideration by the Scientific Council of the NRFU for the 2020-2021 calls. Based on the results of the monitoring, analysis of the implementation of measures to eliminate the identified shortcomings was conducted. 224 projects in the Automated System 'The NRFU Call for Projects' were thoroughly analyzed. The analysis is complete. The shortcomings have been eliminated.

In order to implement Clause 8 of Section 11 of the Procedure for conducting work related to the conclusion of agreements for the implementation of research and developments at the expense of grant support, approved by the order of the NRFU No. 66 dated 11.10.2023, the employees of the department prepared the following:

- inquiries to grantees regarding the status of project implementation, letter of the NRFU No. 3-8/216 dated June 20, 2023 (sent to 140 PIs). Analysis of the responses from the grantees regarding the state of implementation of projects was conducted. Analytical table was developed and the corresponding answers of the grantees were entered;
- 16 letters of requests from the NRFU No. 3-8/397 - No. 3-8/411 dated 04.09.2023 regarding the payment for publications in foreign journals in accordance with the Agreement on the implementation of research and developments at the expense of grant support and according to the appendix of the Project Cost Estimate;
- letters of inquiry to the grantees for the calls 'Support for Research of Leading and Young Scientists', 'Science for Human Security and Society', 'Science for Safety and Sustainable Development of Ukraine' regarding the status of the implementation of the agreement. A total of 153 requests were sent;
- letters of inquiry of the NRFU No. 3-2/522 dated 23.10.2023 regarding the purchase of equipment and materials as part of the implementation of projects under the 'Science for the Recovery of Ukraine in the War and Post-War Periods' call (sent to 67 grantees). On the basis of the processing of the aggregated analytical information, analysis of risk factors was carried out to ensure the achievement of project performance indicators, and the possibilities of grantees to purchase equipment/appliances within the scope of the stage were assessed. For the most risky projects, constant monitoring and control of project implementation was applied.

In the third quarter of the reporting period, analysis was carried out regarding the availability of relevant CTEA for carrying out research and developments in institutions/organizations that were awarded grants in the call 'Science for the Recovery of Ukraine in the War and Post-War Periods', which is a total of 67 projects.

In the course of the implementation of the Plan of measures for the implementation of the state program to stimulate the economy to overcome the negative consequences caused by restrictive measures in order to prevent the occurrence and spread of the acute respiratory disease COVID-19, caused by the SARS-CoV-2 coronavirus, on the territory of Ukraine during 2020-2022, approved by the Decree of the Cabinet of Ministers of Ukraine No. 534 of May 27, 2020, it became necessary to determine the number of projects for the implementation of research and development related to overcoming the impact of the spread of the coronavirus disease (COVID-19). In this regard, the employees of the department analysed completed projects for 2020 and 2021 that investigated the topic of acute respiratory disease COVID-19. A total of 152 projects were analyzed, and a table with relevant information was created for 14 projects.

At the end of 2023, a systemic problem arose with the State Treasury Service of Ukraine issuing payment instructions to grantees for the purchase of equipment/appliances (3rd stage of service), which created risks of non-purchase of equipment and the return of unused funds to the State Budget of Ukraine. The Directorate of the Foundation took a number of measures in order to help solve this situation, in particular, letters were sent to the State Treasury Service of Ukraine, additional agreements were concluded with the grantees, daily monitoring of the payment situation was introduced, etc.



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SECTION 3

CALLS AND INITIATIVES WITH THE SUPPORT OF INTERNATIONAL PARTNERS

At the end of 2023, the Foundation announced the winners of the call with the support of a foreign partner – 'Cambridge – NRFU 2022. Individual grants for research (development) for Ukrainian researchers (with the support of the University of Cambridge, UK)'.

The purpose of this call was to support the advanced research and developments of Ukrainian researchers who were directly affected by the hostilities in Ukraine in 2022, through the award of individual grants with the support of the University of Cambridge (UK).

The thematic area of the call covers a wide range of basic and applied research problems in all fields of research, related to the solution of the most urgent research tasks aimed at the technological, economic, social, and cultural progress of Ukraine.

The call had a targeted focus, including the following eligibility criterion: researchers who work in research institutions or institutions of higher education of Ukraine of state ownership at the main place of work, which must be confirmed by a certificate from the main place of work (as of submitting the application) were invited for submission.

The category of researchers directly affected by hostilities in Ukraine in 2022 includes researchers who fall under at least one of the following criteria:

1. The institution in which the researcher works at the main place of work was evacuated from its permanent location (institutions of higher educational or research institutions from the administrative-territorial units of Ukraine on the territory of which they cannot carry out their activities, and temporarily relocated to the administrative-territorial units of Ukraine on the territory of which they can carry out their activities in full, as of the date of the announcement of the Call). The fact was to be confirmed with an official letter signed by the head of the institution of higher educational or research institution.
2. The premises of the institution of higher educational or research institution were (partially) destroyed as a result of shelling, bombing, other hostilities, and require repair or reconstruction. The fact was to be confirmed with an official letter signed by the head of the institution of higher educational or research institution.
3. The researcher has the status of an internally displaced person as a result of russia's military aggression, confirmed by the respective certificate of registration of an internally displaced person.

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In October 2023, the National Research Foundation of Ukraine together with the Swiss National Science Foundation (SNSF) announced a new call 'Ukrainian-Swiss Joint Research Projects: Call for Proposals 2023'.

> The purpose of the call is to **provide an opportunity for researchers in Ukraine, together with researchers in Switzerland**, to carry out research activities in any field of science. The call is aimed at researchers who are currently in Ukraine, including early career researchers. The call is focused on joint projects from any research field, as well as interdisciplinary joint projects. Each joint project submitted for participation in this call had to have at least one main applicant from Switzerland and one main applicant from Ukraine. It is assumed that the project will be implemented under the guidance of these leading researchers from the Swiss and Ukrainian sides, respectively. They have primary responsibility for the joint project, including its technical and administrative coordination, as well as the timely submission of research and financial reports.

The call aims to encourage the involvement of early career researchers as authors of joint projects. Institutions of higher education and research institutions of state ownership had the right to submit applications for the Call from the Ukrainian side. In the mySNF system, the Ukrainian PI is be listed as the main applicant. 124 joint project teams submitted applications for this call. Currently, review and consideration procedures are ongoing.

As a result of fundraising activities, the following calls and initiatives were launched:

- the joint call of the SNSF and the NRFU, the budget of which can reach from 3.9 million euros to 6.2 million euros, depending on the duration of the winning projects;
- the joint initiative of NWO and the NRFU: the budget that the Foundation managed to attract is 250,000.00 euros;
- the Multilateral initiative IMPRESS-U, the budget of which is 1 million dollars to finance the Ukrainian part of the joint project;
- the launch of the Office of the EU Framework Program for Research and Innovation 'Horizon Europe', the budget is 1 749 000 euros.

As part of the fundraising activity, 21,649.79 UAH, 149,000 euros and 1,000 dollars were deposited into the accounts of the NRFU.



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SECTION 4

LEGAL SUPPORT OF THE FOUNDATION'S ACTIVITIES

During 2023, the National Research Foundation of Ukraine was actively working on the legal and regulatory support of its activities and improvement of the legal acts regulating the activities of the NRFU.

The Foundation took part in the elaboration of such projects of regulatory acts, amendments to regulatory acts regarding the provision of activities of the NRFU, namely, proposals were prepared for the following:

- Law of Ukraine 'On Amendments to Certain Laws of Ukraine Regarding Support (Grant Funding) of Scientific, Scientific and Technical Activities and Innovative Activities';
- Law of Ukraine 'On Amendments to Certain Laws of Ukraine Regarding Priority Areas of Development of Science and Technology and Innovation Activities';
- Decree of the President of Ukraine 'On Amendments to some Decrees of the President of Ukraine regarding the annual grants of the President of Ukraine to young scientists and doctors of science';
- Decree of the Cabinet of Ministers of Ukraine 'On Amendments to Certain Decrees of the Cabinet of Ministers of Ukraine Regarding the National Research Foundation of Ukraine';
- Law of Ukraine 'On the System of priority areas of scientific, scientific and technical and innovation activities in Ukraine';
- Decree of the Cabinet of Ministers of Ukraine 'On the approval of the Exemplary Regulation on the calculation and planning of the estimated cost of research and scientific and technical (experimental) developments, which are carried out at the expense of state and local budgets';
- Law of Ukraine 'On Amendments to the Law of Ukraine 'On Scientific and Scientific - Technical Activities' on Issues of Infrastructure for advanced research and Support for Young Scientists'.

Also, during the year, active work was carried out to improve the regulatory and legal provisions of the Foundation's activities in terms of the development of projects of regulatory and legal acts, amendments to regulatory and legal acts, etc. **As part of the preparation for the implementation of the decision of the European Commission of 19.12.2022 regarding the functioning of the 'Horizon Europe Office in Ukraine' department as a part of the NRFU, proposals for the following projects were prepared:**

- Decree of the Cabinet of Ministers of Ukraine No. 742 of July 4, 2023 'On Amendments to Certain Decrees of the Cabinet of Ministers of Ukraine Regarding the National Research Foundation of Ukraine';
- Decree of the Cabinet of Ministers of Ukraine No. 808 of August 4, 2023 'Some Issues of Activity of the National Research Foundation of Ukraine'.

In connection with the adoption of the Law of Ukraine No. 2842-IX 'On Amendments to the Law of Ukraine 'On Scientific and Scientific-Technical Activities' regarding the National Research Foundation of Ukraine' proposals for the following projects were prepared:

- Decree on the National Research Foundation of Ukraine, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 528 of July 4, 2018;
- new version of the Procedure of the competitive selection and financing research and developments projects by the National Research Foundation of Ukraine, approved by the Decree of the Cabinet of Ministers of Ukraine dated December 27, 2019 No. 1170;
- amendments and additions to the Procedure for the use of funds of the National Research Foundation of Ukraine, approved by Decree of the Cabinet of Ministers of Ukraine No. 1007 of December 4, 2019;
- comparative table to the Procedure for competitive selection and financing research and developments projects by the National Research Foundation of Ukraine, approved by the Decree of the Cabinet of Ministers of Ukraine No. 1170 of 12.27.2019 for approval by the Supervisory Board of the NRFU.

In relation to the need for regulatory and legal support for the start of operation of the 'Horizon Europe Office in Ukraine' department as a structural division of the NRFU, the Foundation developed:

- Regulations on the 'Horizon Europe Office in Ukraine' department;
- job descriptions for the chief specialist of the department, job descriptions for the chief specialist in operational support, job descriptions for the chief communications specialist, job descriptions for the deputy head of the 'Horizon Europe Office in Ukraine' department.

During the year, the following NRFU draft documents were prepared:

- sample form of the grant support agreement under the call 'Cambridge – NRFU 2022. Individual grants for research (development) for Ukrainian researchers (with the support of the University of Cambridge, UK)';
- sample form of the grant support agreement under the call 'Excellent science in Ukraine';
- sample form of the grant support agreement under the call 'Science for Strengthening the Defense Capability of Ukraine';
- sample form of the grant support agreement under the call 'Infrastructures for Advanced Research';
- amendments to the Procedure for contractual work in the National Research Foundation of Ukraine;
- the procedure for contractual work related to the conclusion of agreements on the implementation of research and development at the expense of grant support, and the processing of reporting documents of grantees;
- the procedure of verification by the Directorate of the NRFU of applications for grant support for compliance with formal requirements;
- regulations on the procedure for working with information with limited access in the NRFU.



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SECTION 5

INTERNATIONAL COOPERATION

After the start of the full-scale invasion, the NRFU has intensified its activities in the direction of strengthening international cooperation. As a result of active activities, professional contacts were established with colleagues from Switzerland, the Netherlands, the USA, Great Britain, Sweden, Belgium, Germany, Finland and other countries.

Throughout the year, a number of negotiations were held with representatives of foreign institutions and organizations (Table 5.1). The main objectives of communications were as follows:

- discussing opportunities for establishing and developing research cooperation between institutions;
- attracting communication, institutional and financial support from abroad;
- measures to support the development of the Ukrainian research system during and after the war;
- joint events, calls, etc.

TABLE 5.1

International meetings

Contact person	Organisation/ institution	Areas of cooperation/ Topics discussed	Form of participation
Matthias Kimmich Angelika Kalt Arthur Fridley Céline Rossier Laura Lots Andrea Landolt Matthias Egger	Swiss National Science Foundation, SNSF	• Strengthening cooperation between SNSF and the NRFU; • Initiatives to support Ukrainian researchers; • signing a Memorandum of Understanding between the institutions; • nominating Ukrainian female researchers to the international database AcademiaNet;	Online

Contact person	Organisation/ institution	Areas of cooperation/ Topics discussed	Form of partici-pation
Alexey Boyarsky Jun Sarbach Georges Klein Timothy Ryan		• exchange of experience and advisory assistance; • holding joint events; • development of a call for joint Ukrainian-Swiss research projects; • development of the Ukrainian research system.	
Sebastiaan den Bak Marcel Levy Caroline Visser Margit de Kock Astrid Zuurbier Barbara Dammers-Shenasi Deli Hofland	The Dutch Research Council, NWO	• Enhancing the institutional capacity of the NRFU by providing expert support and sharing NWO best practices in the competitive selection of research projects; • exchange of views on the development of effective tools to support the Ukrainian research system; • strengthening cooperation between NWO and the NRFU at the institutional level; • signing a Memorandum of Understanding between the NRFU and NWO; • development of a partnership initiative to obtain additional NWO grant opportunities for Ukrainian researchers.	Online, offline
Renata Schaeffer Susan Black Olena Fimyar	University of Cambridge, UK	• Strengthening cooperation between the University of Cambridge and the NRFU; • Developing the terms and conditions of the competitive selection 'Cambridge – NRFU 2022. Individual grants for research (developments) for Ukrainian researchers (with the support of the University of Cambridge, UK)'; • involvement of foreign reviewers in assessment of applications; • initiatives to support Ukrainian researchers.	Online

Contact person	Organisation/ institution	Areas of cooperation/ Topics discussed	Form of partici-pation
Natalia Dolya Ruta Zarnauskaite Lyudmila Nistor-Mikhailova Carlo Panella Iuliana Raluca Ionescu	European Commission, Belgium	• Integration of Ukraine into the European Research Area; • preservation of Ukraine's research and innovation potential; • opportunities for cooperation in research and innovation provided by Ukraine's membership in the Horizon Europe program; • expanding and strengthening the network between research and innovation institutions of Ukraine and the EU; • providing information and consulting support on the establishment of the Horizon Europe Office in Ukraine on the basis of the NRFU.	Online
Manfred Spiesberger	Centre for Social Innovation, ZSI	• Strengthening the institutional capacity of the NRFU by providing expert support and sharing best practices for the establishment and operation of the Horizon Europe Office in Ukraine on the basis of the NRFU.	Online
Anneli Rose Iurii-Volodymyr Blavt	CIVITTA, Estonia	• Strengthening the institutional capacity of the NRFU by providing expert support and sharing best practices for the establishment and operation of the Horizon Europe Office in Ukraine on the basis of the NRFU.	Online
Erekle Astakhishvili Nino Inasaridze	Horizon Europe National Office of Georgia	• Establishing cooperation between the NRFU and the Horizon Europe National Office of Georgia; • Providing information and consulting support on the establishment and functioning of the Horizon Europe Office in Ukraine on the basis of the NRFU; • participation of the NRFU staff in trainings organized by the European Commission.	Online

Contact person	Organisation/ institution	Areas of cooperation/ Topics discussed	Form of partici-pation
Paula Eerola Johanna Hakala	Academy of Finland	• Potential areas of cooperation between the NRFU and the Academy of Finland; • initiatives to support Ukrainian researchers; • involvement of international reviewers in the evaluation of projects submitted to NRFU calls.	Online
Yulia Kukharenko Michael Leskiv	Massachusetts Institute of Technology, MIT	• Institutional and communication support for the NRFU activities.	Online, offline
Jerzy Duszynski Anna Plater-Zyberk Mateusz Bialas	Polish Academy of Sciences, PAN	• Strengthening cooperation between PAN and the NRFU; • initiatives to support Ukrainian research; • involvement of international reviewers in the evaluation of projects submitted to the NRFU calls.	Online, offline
Lidia Borrell-Damian Valentina Garoya Iwan Groeneveld	Science Europe (SE)	• Communication interaction between the institutions; • strengthening cooperation between SE and the NRFU; • involvement of the NRFU in the development of EU policies in the field of research evaluation and communication; • measures to support the development of the Ukrainian research system during and after the war; • involvement of the NRFU representatives in SE working groups.	Online
Lena Renner Stefan Ternqvist Lisa Westholm	Swedish Research Council	• Increasing the institutional capacity of the NRFU by providing expert support and sharing best practices of the Swedish Research Council; • organizing and conducting joint events to support Ukrainian researchers.	Online

Contact person	Organisation/ institution	Areas of cooperation/ Topics discussed	Form of partici-pation
Marie Vaadre Eric Lighthorne	Swedish Agency for Innovation Systems, Vinnova	• Organizing and conducting joint events to support Ukrainian researchers; • providing information and advisory support on the establishment and operation of the Horizon Europe Office in Ukraine on the basis of the NRFU	Online
Britta Fengström Clara Eitrem Holmgren Sule Karamik Zandra Tuveson	Swedish Research Council for Sustainable Development (Formas)	• Organizing and conducting joint events; • communication support of the NRFU activities; • involvement of the NRFU representatives in international events.	Online
Von Turekian Franklin Carrero-Martinez Katie Campbell	The National Academy of Sciences, Engineering, and Medicine, NASEM	• Establishment of cooperation between NASEM and the NRFU; • providing the NRFU with information support and advisory assistance on operational issues; • initiatives to support Ukrainian researchers; • design of a multi-stakeholder partnership initiative to ensure the sustainability of the education and science system in Ukraine; • search for sources of funding from abroad to support Ukrainian researchers.	Online, offline
Gétan de Rassenfoss Tetiana Murovana Wolf-Hendrik Ulbach	Swiss Federal Institute of Technology in Lausanne, Switzerland, EPFL	• Providing information support; • identifying the real needs of Ukrainian researchers and research infrastructure; • providing advisory assistance in conducting a survey of Ukrainian researchers affected by the war.	Online

Contact person	Organisation/ institution	Areas of cooperation/ Topics discussed	Form of participation
Katja Becker Mechthild Köhler Jörn Achterberg	German Research Foundation, DFG	• Strengthening cooperation between the DFG and the NRFU; • holding joint research events based on the results or in the process of joint activities; • development of joint initiatives, particularly calls, including bilateral or multilateral ones.	Online, Offline
Bettina Stark-Watzinger	German Federal Ministry of Education and Research, BMBF	• Developing a dialogue on science policy at various levels; • expanding research cooperation in research areas of mutual importance and common interest; • enhancing academic mobility of early-career researchers; • establishing joint operation of research and/or innovation institutions, laboratories and international cores of excellence; • encouraging institutional partnerships between German and Ukrainian universities and research institutions.	Offline
Georg Schütte	Volkswagen Foundation, Germany	• Opportunities for Ukrainian researchers to continue their scientific and research activities in Germany; • establishing cooperation between foundations.	Offline

As a result of active international activities throughout the year, the Foundation launched a number of joint initiatives and calls involving financial support from abroad.

In April of the current year, a Memorandum of Understanding was signed between the National Research Foundation of Ukraine and the Dutch Research Council (NWO). The objective of the Memorandum was to officially record the mutual interest of the NWO and the NRFU in the promotion and development of research relations between the two institutions.

According to the Memorandum, the NRFU and NWO expressed their intention to cooperate in the following areas:

- promotion of international exchange of information and researchers in the process of scientific and scientific - technical activities;
- conducting joint research activities based on the results or in the process of joint activities;

- participation in joint initiatives, such as calls, including bilateral or multilateral, which are subject to agreement in terms of specific contractual conditions and the availability of necessary funding, etc.

As part of strengthening cooperation between institutions, representatives of the Foundation had the opportunity to pay a working visit to the Hague, the Netherlands, where they attended a number of events organized by the Dutch Research Council to reveal the specifics of NWO activities in order to share experience and best practices in grant funding of research projects, in which all member organizations are invited to participate, including the NRFU. The meetings concerned increasing the institutional capacity of the NRFU by providing expert support and sharing NWO best practices regarding the competitive selection of research projects; exchange of views on the development of effective tools aimed at supporting the Ukrainian research system; ways of strengthening cooperation between NWO and the NRFU at the institutional level, etc.

As a result of active joint work, the 'NWO Hop-On Call for Researchers Based in Ukraine: NWO-NRFU Partnership Initiative 2023' was launched in September. Therefore, thanks to the consolidated efforts of the NRFU and NWO, by taking part in the call, researchers in Ukraine have the opportunity to cooperate with researchers from the Kingdom of the Netherlands and thus continue their research career under the complicated conditions.

In order to promote the participation of Ukrainian researchers in this international initiative, before the start of submitting applications, representatives of the NRFU and NWO jointly held the following events:

- online information session dedicated to the competitive selection for additional grant opportunities of the Dutch Research Council (NWO) for Ukrainian researchers: NWO-NRFU Partnership Initiative 2023. During this information session, representatives of NWO and the NRFU made a short presentation of the initiative. Researchers also had the opportunity to ask questions;
- an online meeting for finding partners during which researchers from Ukraine and the Kingdom of the Netherlands working in the same research discipline could provide information about their projects, get to know each other and find partners for cooperation within the framework of this call.

More than 300 researchers took part in the events. In addition, throughout the year, employees of the Directorate of the NRFU separately provided consultations to potential participants of the initiative.

In August 2023, the NRFU announced the launch of the multilateral partnership initiative 'International Multilateral Partnership for Resilient Education and Science System in Ukraine (IMPRESS-U)', launched by the Office of International Science and Engineering (OISE) of the National Science Foundation (NSF), USA, in partnership with:

- Estonian Research Council (ETAG), Estonia;
- Latvian Council of Science (LCS), Latvia;
- Research Council of Lithuania (LMT), Lithuania;
- National Science Center (NCN), Poland;
- Polish National Agency for Academic Exchange (NAWA), Poland;
- National Research Foundation of Ukraine (NRFU), Ukraine;
- National Academy of Sciences (NAS), USA;
- Office of Naval Research Global (ONRG), USA.

Activities of Ukrainian researchers within the framework of the initiative will be funded by private donors and foundations (this funding will be coordinated by NAS). In 2023, the NRFU began close

cooperation with NAS to ensure appropriate funding and participation of Ukrainian researchers in collaborative projects. This is an unprecedented initiative involving six partner countries and even more organizations.

> **In October of the reporting year, the NRFU together with the Swiss National Science Foundation (SNSF) announced a new call 'Ukrainian-Swiss Joint Research Projects: Call for Proposals 2023'.**

The background of the call was that the russian invasion has a negative impact on the population of Ukraine, including researchers, and on almost all spheres of life. Many researchers cannot continue their activities due to unavailability, damage or destruction of research facilities. In other cases, researchers join the Armed Forces of Ukraine, take care of their family members, or volunteer to help the country. However, many institutions of higher education and research institutions continue to function, and researchers continue their work, especially in the center and west of Ukraine. Other institutions/organizations were relocated from the east and south of Ukraine to safer parts of the country.

> The objective of the call is to provide an opportunity for researchers in Ukraine, together with researchers in Switzerland, to carry out scientific and scientific - technical activities in any field of science. The call is aimed at researchers who are currently in Ukraine, including early career researchers.

> The topics of the projects cover fundamental research on the most important issues of the development of scientific and technical, social, economic, political and human potential to ensure Ukraine's competitiveness in the world and sustainable development of society and the state.

In addition, within the framework of cooperation with SNSF, in July 2023, the NRFU nominated Ukrainian female researchers to the international database AcademiaNet.

As part of the Agreement on Nomination signed by the NRFU in 2022, the Scientific Council of the Foundation identified specific selection criteria which include:

- outstanding academic qualifications (depending on discipline: publishing activity, prizes and awards, independently raised funding, patents, invitations to conference talks, etc.);
- independent leadership activities;
- achievements in scientific and technical activity;
- additional criteria (balance of combining family and academic career, international experience, positions held as visiting professor, teaching activities, social commitment, involvement in research and university committees/commissions, etc.).

Applications were accepted from February 21 to April 1, 2023. A total of 46 applications were received. From them, the Scientific Council of the Foundation selected 32 female candidates.

In the future, the NRFU will nominate to the international database AcademiaNet female researchers who have experience of direct professional relations with the NRFU (in particular, female members of the NRFU Scientific Council and Supervisory Board, calls commissions of the NRFU, female PIs of the winning projects of the NRFU calls, female experts who participated in the assessment of applications submitted for NRFU calls, etc.) on an annual basis. In this way, the NRFU increases the visibility and prestige of Ukrainian female researchers in the world.

One of the important areas of international cooperation during the reporting year was the strengthening of the Foundation's cooperation with a recognized organization that unites the main state agencies that finance or perform research of the highest level in Europe – Science Europe which in 2022 started supporting the NRFU as a new member of the Association.

In 2023, the Foundation joined the initiatives and opportunities provided by the membership, including close cooperation with other members of the Association. In particular, employees of the Directorate of the NRFU became members of working groups on research communication, Horizon Europe Actions, research culture, development of the EU research policy, in particular, in the context of the development of the policy of the European Research Area, in defining the Activity Strategy of the Association for 2021-2026, as well as discussions on the possibilities of training programs by member organizations and initiatives to rebuild the destroyed research infrastructure in Ukraine.

In addition, after acquiring membership in the coalition of organizations working in the field of research for the purpose of reforming the assessment of research – CoARA, in 2023 the Foundation started implementing the principles of reforming the assessment of research. The Foundation's representatives became members of the CoARA National Chapter in Ukraine whose mission is to promote the growth of Ukraine's knowledge-based economy for post-war recovery by reforming the country's research and higher education system by increasing the assessment of research based on CoARA principles and prioritizing Open Science.

TABLE 5.2

Participation in international research and communication events

Title of the event	Organizer	Form of participation
Workshop Series on Science Communication Science Europe	Science Europe (SE)	Online
Conference 'A year of war in Ukraine: identifying the impact on the science sector and initiatives to support it'	International Science Council (ISC) together with the European Federation of Academies of Sciences (ALLEA)	Online
British-Ukrainian conference of scientific partnership on digital technologies UA-DIGITAL 2023	«ScienceForUkraine» group in cooperation with the University of Liverpool and EPSRC's Global Challenges Research Fund (GCRF)	Online
The Spring General Assembly of Science Europe	Science Europe (SE)	Offline
Conference 'The importance of knowledge in times of uncertainty and crisis'	Swedish Research Council for Sustainable Development (Formas)	Online
Webinar 'Scientific data on society in Ukraine'	The European Alliance for Social Sciences and Humanities (EASSH) in cooperation with the Strategic Working Group on Social and Cultural Innovation (ESFRI)	Online
5th meeting of the informal working group on research and innovation	European Commission	Offline

Title of the event	Organizer	Form of participation
Seminar 'Research excellence'	Representatives of Canada and Italy with the support of representatives of Chile, the European Research Council and the European Commission	Online
Webinar series 'Preservation and development of human capital of Ukraine in the field of research, education and innovation'	The National Academies of Sciences, Engineering and Medicine (NASEM), the National Academy of Sciences (NAS) and the Workshop Planning Committee	Online
Ukrainian Day	The Alliance of 9 European Coastal Universities (SEA-EU) in cooperation with Erasmus+	Online
Opening of the Horizon Europe Proposal Writing Camp for Ukraine	European Commission	Online
Swedish-Ukrainian contact seminar 2023	Swedish Council for Higher Education in cooperation with the National Erasmus+ Office in Ukraine	Online
European regional meeting of the Global Research Council	Global Research Council (GRC), Science Europe (SE)	Offline
15th High Level Seminar of the European Research Area	Science Europe (SE) in cooperation with the Spanish National Research Council (CSIC) Ministry of Science and Innovation of Spain (MCIN)	Offline

An important achievement of international cooperation in 2023 was the strengthening of cooperation with the European Commission. On February 2, 2023, at a meeting of the Board of the European Commission and the Government of Ukraine which was dedicated to the support of Ukraine during the war, plans for post-war recovery and the further process of European integration, a decision was announced to create the Horizon Europe Office in Ukraine on the basis National Research Foundation of Ukraine. This decision was made by the EC based on its own positive evaluations of the Foundation's work in supporting and popularizing science in Ukraine, as well as taking into account the future plans presented by Ukraine to build the Foundation's capacity within the framework of the Recovery Plan.

In May 2023, the Foundation started contractual procedures before signing the Grant Agreement with the European Commission, and in October, the Horizon Europe Office in Ukraine on the basis of the NRFU already started working.

The European Commission will finance the work of the Office for 36 months (according to the Grant Agreement under the project 101132682 – HEOinUA). Receiving this grant has become a real professional challenge for the NRFU team. We perceive the creation of the Office as an im-

> portant stage in strengthening the institutional capacity of the Foundation. We believe that the work of the Office will contribute to the expansion of opportunities for academics of universities and research institutions of various jurisdictions, and innovators.

In addition, during the reporting year, representatives of the Directorate of the Foundation participated in international research and communication events (Table 5.2). Furthermore, the NRFU co-organized the series of webinars 'Preservation and development of human capital of Ukraine in the field of research, education and innovatione and the Swedish-Ukrainian Contact Seminar 2023.

Within the framework of international cooperation, during the reporting year, two meetings of the Board of International Counselors of the NRFU were held. The main topics of discussion were as follows:

- involvement of international reviewers in the review of projects submitted to the NRFU calls;
- implementation of the fundraising strategy of the NRFU activities;
- search for funding sources for Ukrainian researchers;
- cooperation with Ukrainian research diaspora;
- appeal to international reviewers for the purpose of popularizing the activities of the Foundation, etc.

Furthermore, in May 2023, George Gamota (doctor of physics, president of the Association of Science and Technology Management (Massachusetts, USA), was elected a member of the National Academy of Sciences of Ukraine, an honorary member of the Ukrainian Physical Society, and a member of the Science Identification Committee) joined the Board.

Members of the Board make every effort to promote the establishment and development of cooperation of the NRFU with foreign organizations, institutions, international organizations, including those that fund research, and also provide advisory assistance to implement the best world practices in the activities of the NRFU.



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SECTION 6

COMMUNICATION ACTIVITIES

During the reporting year, the NRFU carried out a number of communication activities in various formats. In particular, employees of the Directorate conducted webinars for participants of the NRFU calls:

- **On April 6, 2023,** a webinar was held for the winners of the call 'Support for Research of Leading and Young Scientists' and 'Science for Safety and Sustainable Development of Ukraine' on the conclusion of agreements for grant support in 2023;
- **On October 31, 2023,** a webinar was held on the terms and conditions for conducting the call 'Ukrainian-Swiss Joint Research Projects: Call for Proposals 2023'.

In the course of the reporting year, the Foundation, to the best of its abilities, tried to organize events in various formats and invite foreign colleagues, patrons, and donors. So, on the occasion of Science Day, on May 19, 2023, the National Research Foundation of Ukraine held the event in a hybrid format. The event brought together researchers, Ukrainian and international partners with the aim of drawing attention to the needs of researchers and trying to find ways to support research in Ukraine, as well as to discuss ways of integration into the world research area. The following officials joined the conversation:

- Denys Kurbatov – Deputy Minister of Education and Science of Ukraine;
- Serhiy Babak – Chairman of the Committee on Education, Science and Innovation in the Verkhovna Rada;
- Signe Ratso – Deputy Director-General for Research and Innovation of the European Commission;
- Oleksiy Kolezhuk – Chairman of the Scientific Committee of the National Council of Ukraine on Science and Technology Development.

During the event, a panel discussion was held on the topic 'Ways to support science and research in Ukraine during the war' in which the following guests took part:

- Ihor Taranov – Director-General of the Science and Innovation Directorate of the Ministry of Education and Science of Ukraine;

- Olha Budnyk – Authorized Advisor to the President of Ukraine on issues of the President of Ukraine's Fund for the support of education, science and sports;
- Yuliya Bezvershenko – Co-founder of the UA Science.reload and Science at Risk initiatives;
- Yuriy Khalavka – Associate professor at Yuriy Fedkovych Chernivtsi National University, co-founder of the UA Science.reload and Science at Risk initiatives.

As part of the session 'Integration into the world research area and international cooperation', the following officials joined the event online:

- Lidia Borrell-Damian – Secretary General of Science Europe;
- Mateusz Bialas – Director of the Representative Office of Polish Academy of Sciences in Kyiv;
- Vaughan Turekian – Executive Director for Policy and Global Affairs, U.S. National Academies of Sciences, Engineering and Medicine;
- Sebastiaan den Bak – Interim Director, Head of International Policy, Dutch Research Council (NWO);
- Gerson S. Sher – Member of the Board of International Counselors of the National Research Foundation of Ukraine.

The event had much positive feedback, in particular from the international community: the Foundation received gratitude from representatives of the European Commission, the US National Academy of Sciences and others.

On July 26, 2023, the Innovation Breakthrough Day event was held in Kyiv during which the winners of the NRFU calls spoke about their developments to government officials and members of the Verkhovna Rada. Partners of the event included the Ministry of Digital Transformation, the Innovation Development Fund, Vacuum Deep Tech Acceleration, YEP. The objective of the event was to present promising innovative projects and strategically important ideas for the development of Ukrainian science, business and industry. During the meeting, there was a short pitching of ten selected projects from various fields – from medicine to agricultural technologies and raw materials. The Minister of Education and Science of Ukraine, Oksen Lisovyi, praised the high potential of Ukrainian researchers and the level of their research.

During the reporting year, the Foundation continued to disseminate information on the work of the winning teams of the NRFU calls in various areas of science and technology. Researchers obtained excellent results important for the development of medicine, physics, chemistry, mathematics and other sciences. These results are important for the peaceful life and future of Ukraine. Thus, the Department of Communications and International Cooperation continued to publish stories in the section 'Success stories'. In total, 14 stories in Ukrainian and 14 stories in English were published in 2023.

The NRFU popularized the results of which are of great importance and have already become useful for preparing to possible emergency situations in a separate section 'Science in action'. As part of the project, 4 videos in Ukrainian and 4 in English were released.

In collaboration with Western partners, the Foundation continued its systematic search for grant proposals for Ukrainian researchers. The section 'International support for Ukrainian researchers' was supplemented with 19 opportunities to get support, including grant support provided by international research centers, universities, etc. for Ukrainian researchers during a full-scale invasion.

As part of the 'Ukrainian Science.Reload' initiative which the Foundation joined in 2022, a final survey was conducted in order to obtain more detailed information, in particular, about the psychological state and health of researchers during the war in order to obtain effective assistance for a larger number of researchers.

During the reporting year, specific actions were carried out to establish communication with Ukrainian stakeholders. So, representatives of the Foundation participated in research and communication events, meetings, sessions, etc. Some of them can be found below (Table 6.1).

TABLE 6.1

Participation in research and communication events

Title of the event	Organizer	Form of participation
Presentation of the Science at Risk platform	Popular science media 'Kunsht'	Offline
All-Ukrainian call 'Young Scientist of the Year'	Council of Young Scientists at the Ministry of Education and Science of Ukraine	Online
Strategic session to develop a Roadmap for the harmonization of sectoral policies and legislation in the fields of education and science with the EU acquis by 2027	Ministry of Education and Science of Ukraine	Offline
Forum 'Days of Educational Leadership'	National University 'Zaporizhzhia Polytechnic'	Online
Launching of the International Center of Mathematics in Ukraine	International Center for Mathematics in Ukraine	Online
Round table on energy efficiency: Drivers of energy transition in the post-war economy of Ukraine.	Ivano-Frankivsk National Technical University of Oil and Gas	Offline
Public discussion on grant funding issues	'Real Science' and 'Science of EveryDay Life'	Online
IV All-Ukrainian Forum of Councils of Young Scientists	Council of Young Scientists at the Ministry of Education and Science of Ukraine	Offline

In September 2023, the Foundation signed a Memorandum of Understanding with the State Organization 'Ukrainian National Office of Intellectual Property and Innovations' (IP Office). The purpose of the Memorandum is coordinate efforts in stimulating fundamental and applied research, developing the national research area and its integration into the world research area, as well as legal protection of intellectual property rights and assistance in the development of an innovative environment free from infringement of intellectual property rights. From now on, the institutions will coordinate their efforts for the joint development of the educational, scientific and innovative potential of Ukraine.

> **In 2023, the Foundation expanded its media resources and launched a page on the LinkedIn platform. Throughout the year, 188 posts were published in it.**

Other social networks were also active:

- 217 posts on Facebook;
- the number of Facebook followers increased from 3,511 to 5,400 persons;
- 167 posts on Twitter;
- 13 videos on the Foundation's YouTube channel;

News was regularly published on the Foundation's website:

- 202 publications on the Ukrainian version of the website;
- 142 publications on the English version.

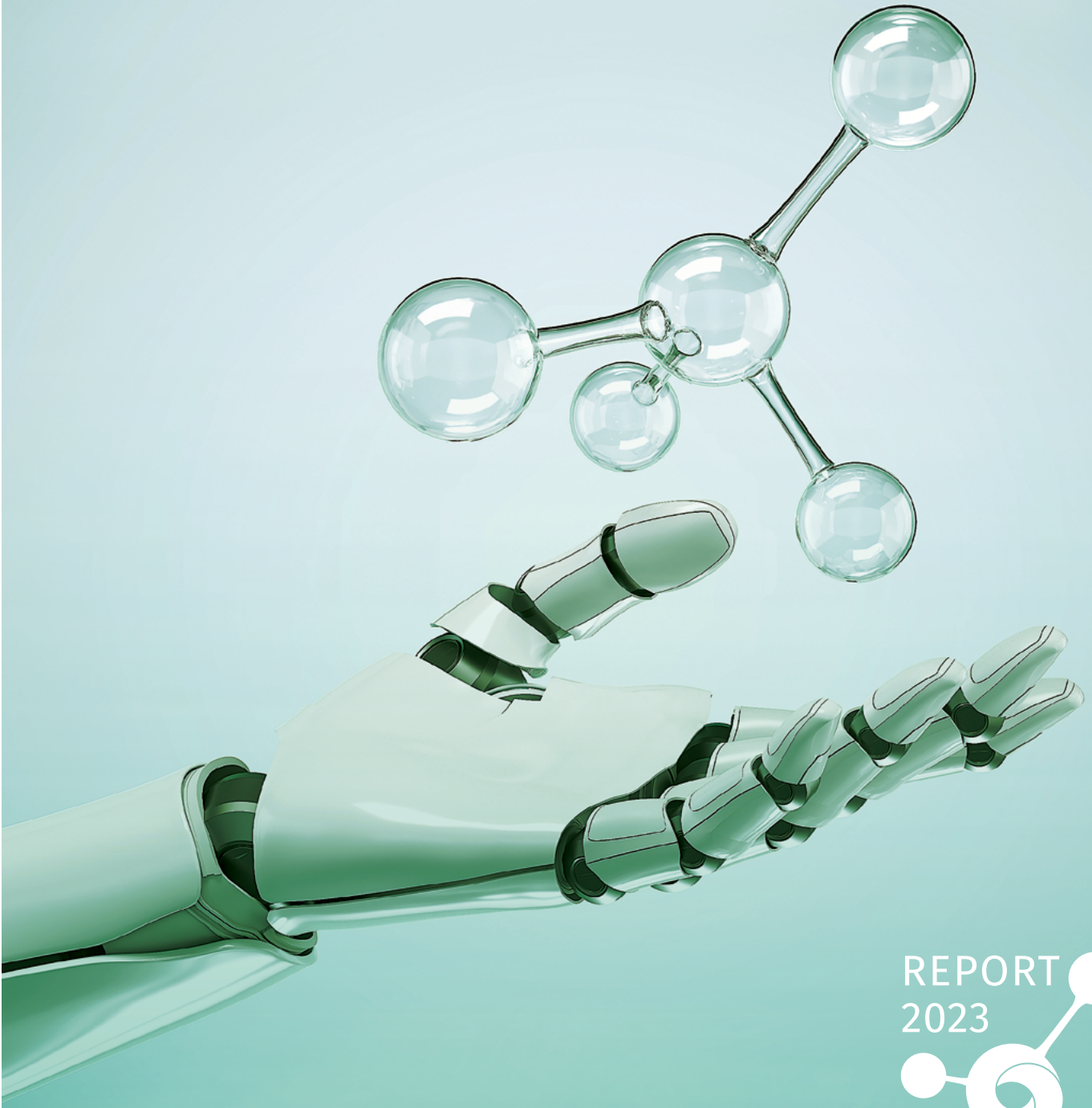
This year, the Foundation continued to popularize the achievements of Ukrainian researchers, further development plans, the implementation of scientific and scientific - technical research and developments, and much more on the pages of the NRFU 'Herald' which is published on the official website in Ukrainian and English. 4 publications were prepared this year:

- Publication No. 5 (January 2023) Jerzy DUSHYŃSKI: "Our mission is to support Ukraine which is fighting against russian aggression!";
- Publication No. 6 (March 2023) Serhii KOLOTILOV: "It is necessary to solve the most important fundamental issues. And to implement the results in life";
- Publication No. 7 (June 2023) Oksana KIS: "Lessons of the past encourage us not to mourn over Ukraine, but to fight back and win";
- Publication No. 8 (December 2023) Gerson S. SHER: "Ukrainian scientists should not expect that the world will come to them. They must reach out to the world".

Regarding official communication, as of December 31, 2023, 1,101 incoming letters were registered, including 786 letters from grantees. In addition, 803 letters were sent, 40 of which were addressed to foreign partners. 99 orders on main activities and 5 decrees on administrative and economic activities were issued. In addition, during the reporting period, 26 separate assignments of the Executive Director, 450 service/report notes addressed to the management of the NRFU and 4 notifications were registered.

A total of 1,311 e-mails sent to the NPFU's e-mail address nrfu@nrfu.org.ua were processed and forwarded to the relevant departments of the NRFU.

During the reporting period, 1 request for public information was registered and responded to.



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SECTION 7

LAUNCH OF HORIZON EUROPE OFFICE IN UKRAINE

The key tasks of the Department 'Horizon Europe Office in Ukraine' are as follows:

- providing assistance to Ukrainian organizations – potential participants of the Horizon Europe Program, National Contact Points (NCPs) regarding the peculiarities of the implementation of the Program and the submission of applications for project financing;
- organization of targeted information and communication activities regarding opportunities for cooperation in the field of science and innovation; preparation of relevant materials, conducting training events on the formation of competitive proposals, search for partners under the Horizon Europe Program;
- raising awareness of success stories and working with specific problematic issues of the Program implementation in Ukraine (legal, operational, financial, etc.);
- promoting the active participation of representatives of the Ukrainian research community, business structures in the Program with a focus on the priorities in the field of scientific, scientific and technical and innovative activities;
- promoting Ukraine's integration into the European Research Area (ERA).

As of 31.12.2023:

1. 11 employees out of 14, determined by the terms and conditions of the Grant Agreement (Project HEOinUA – 101132682), perform their duties.
2. The work of the Office is well-planned, plans and reporting schedules by key indicators for 18, 23, 36 months have been developed.
3. Project implementation status.

A list of national stakeholders, businesses and public authorities that can become part of the network:

1. Ministry of Digital Transformation of Ukraine;
2. Ministry of Education and Science of Ukraine;
3. Ministry of Economy of Ukraine;
4. Ukrainian National Office of Intellectual Property and Innovations;

5. Council of Young Scientists at the Ministry of Education and Science of Ukraine;
6. Ukrainian Startup Fund;
7. Ukrainian Automotive and Mobility Cluster;
8. Ukrainian Cluster Alliance;
9. Association of Industrial Automation of Ukraine;
10. Enterprise Europe Network;
11. Solomonovo Industrial Park;
12. AHP International Group;
13. Institutions of higher education of Ukraine;
14. Scientific institutions of various spheres of subordination.

For the period from October 17, 2023, the Office employees have taken part in the following events:

Online:

November 10, 2023 – Seminar dedicated to the World Science Day for Peace and Development (organizer – Kharkiv National Pharmaceutical University). Igor Taranov took part in it and presented the concept of creating the Office
- *record* http://surl.li/opcqh *news* http://surl.li/opcqn

November 16, 2023 – meeting with representatives of the National Contact Point of the Horizon Europe Program of the Republic of Poland. 10 employees of the Office participated. Polish colleagues acquainted the team with the peculiarities of work organization and cooperation opportunities;
- *online*

November 17, 2023 – meeting with representatives of the NCP_WIDERA.NET project (Republic of Poland). 10 employees of the Office participated. Polish colleagues acquainted the team with the features of the project and the possibilities of further cooperation;
- *record* http://surl.li/opcrf

December 5, 2023 – a joint seminar of the NRFU and the Swedish Research Council (SRC). 10 employees of the Office also participated in the event together with representatives of the NRFU. The main issues of implementation and evaluation of research projects were discussed;
- *news* http://surl.li/opcrz; *record* http://surl.li/opdqa

December 7, 2023 – the head of the Office participated in the Autumn School of a Young Scientist 3.0 which was organized by the Council of Young Scientists of the Ministry of Education and Science of Ukraine. During the speech, the concept of creating the Office was presented;
- *news* http://surl.li/opcsi

December 8, 2023 – the second online meeting with representatives of the National Contact Point of the Horizon Europe Program of the Republic of Poland in which 11 employees of the Office participated. The meeting took place in the 'question- answer' format regarding the peculiarities of the work of the Polish NCP;
- *online*

December 11, 2023 – online meeting with Acting Vice-Rector on scientific work and innovative development of NAU K.Semenova, regarding cooperation opportunities and features of the 'Horizon Europe' Program. Olga Polotska and Igor Taranov participated;
- *online*

December 14, 2023 – the Regional Development Forum (organizers – the Lviv Region Regional Development Agency with the support of the Lviv Regional Military Administration and Lviv Regional Council). Igor Taranov participated with the presentation of the concept of creating the Office.

- *record http://surl.li/opcsu*

Offline:

November 14, 2023 – Marathon 'United by Science' to the World Day of Science for Peace and Development (organizer – Taras Shevchenko National University of Kyiv). Igor Taranov participated with the presentation of the concept of creating the Office and the possibilities of the Horizon Europe Program;

- *record http://surl.li/opctv пароль B8&7kxOT*

November 15-16, 2023 – Exploring Pathways to Comprehensive MHPSS Services to All Affected by Crisis in Oponice, Slovakia. Tayisiya Simochko participated, facilitating cooperation with international partners;

- *news http://surl.li/opcwm*

November 25, 2023 – INVESTinUA Investment Forum, Kyiv. Igor Taranov took part presenting the concept of lauching the Office and the peculiarities of its work;

- *record http://surl.li/opcus*

November 30, 2023 – Manufacturing Day Ukraine Forum (Solomonove village, Zakarpattia region). Maksym Kolisnyk took part with the presentation about the Horizon Europe Office in Ukraine;

- *record http://surl.li/opcvr*

December 13-15, 2023 – International Medical Forum 'Ukraine and the World: Fundamentals, Realities and Strategic Prospects', Lviv. Tayisiya Simochko took part, presenting the concept of creating the Horizon Europe Office in Ukraine;

- *news http://surl.li/opdgs*

December 14, 2023 – 'IP&I for Science and Business': synergy of science and business, development of innovations and commercialization of objects of intellectual property law' (organizer – Ukrainian National Office of Intellectual Property). Igor Taranov participated, presenting the concept of creation and launching of the Office;

- *record http://surl.li/opcxg);*

December 20, 2023 – the official opening ceremony of the Department 'Horizon Europe Office in Ukraine' at the Club of the Cabinet of Ministers of Ukraine with the participation of the European Commissioner for Innovation, Research, Culture, Education and Youth Iliana Ivanova, Deputy Prime Minister of Ukraine for Innovation, Education, Science and Technology Development – Minister of Digital Transformation of Ukraine Mykhailo Fedorov, Minister of Education and Science of Ukraine Oksen Lisovyi, members of the Verkhovna Rada, representatives of the diplomatic corps, officials and researchers. The launch of the Office was officially announced, the directions and features of its work were presented;

- *news http://surl.li/oncqm record in Ukrainian http://surl.li/opcnw, record in English http://surl.li/opcog*

72 people took part offline and 120 people connected online in the official opening ceremony of the Horizon Europe Office in Ukraine;

> **The launch of the Office took place on the basis of the National Research Foundation of Ukraine as a result of the Grant Agreement concluded with the European Commission on the HEOinUA Project.**

In the framework of the event, discussions were held in three thematic panels in which representatives of the European Commission, state authorities of Ukraine, diplomatic missions of foreign

countries and representatives of international organizations in Ukraine, specialized institutions, research institutions and educational institutions took part.

The solemn ceremony was opened by the Director-General of the Directorate General for Research and Innovation (DG RTD) of the European Commission Marc Lemaître.

European Commissioner for Innovation, Research, Culture, Education and Youth Iliana Ivanova addressed the participants with a welcome speech. Commissioner Ivanova emphasized that the opening of the Horizon Europe Office in Ukraine is a clear evidence of the development of the domestic economy, a cornerstone of cooperation that not only stimulates innovation, but also serves as a pulsating heart between the European Union and Ukraine, moving us all towards common goals and a prosperous future.

During the ceremonial opening panel, the Deputy Prime Minister of Ukraine for Innovation, Education, Science and Technology Development – Minister of Digital Transformation of Ukraine Mykhailo Fedorov addressed the event participants with welcoming words.

The importance of joint efforts in strengthening the research potential of European countries was emphasized in opening speeches of the Ambassador of the Kingdom of Spain to Ukraine Ricardo López-Aranda Jagu, and of the Counsellor and Chargé d'Affaires of the Embassy of Belgium in Ukraine Frederic Develter. Honorable representatives of diplomatic missions emphasized the positive role of the creation of the Horizon Europe Office in Ukraine as a structural unit of the National Research Foundation of Ukraine.

During the ceremonial opening panel, the Minister of Education and Science of Ukraine Oksen Lisovyi and People's Deputy of Ukraine, Chairman of the Committee on Education, Science and Innovation in the Verkhovna Rada of Ukraine Serhiy Babak addressed participants and guests with welcoming words.

During the first discussion panel, moderated by Ruta Zarnauskaite, head of the Directorate-General for Research and Innovation of the European Commission, the participants focused their attention on the fact that the idea of creating the Office corresponds Ukraine's desire for excellence in the field of research and innovation. Thus, People's Deputy of Ukraine, member of the Committee on Education, Science and Innovation Roman Hryshchuk emphasized the new opportunities that are opening up for Ukrainian researchers in the Horizon Europe Framework Program. The Executive Director of the National Research Foundation of Ukraine, Olga Polotska, as one of the speakers of the panel discussion, focused particular attention on the results already achieved by the Foundation in terms of the implementation of the EU Framework Program for Research and Innovation Horizon Europe and informed the participants of the event about the achievements of the Horizon Europe Office in Ukraine in a short period of its activity.

The second discussion panel concerned the peculiarities of the functioning of the Office as a consulting center that will assist representatives of the domestic research community to join the European research and innovation area. The panel was moderated by Oleksandr Bilyi, head of the Department of Communications and International Cooperation of the NRFU.

In particular, during this session, the head of the Office, Igor Taranov, addressed the participants of the event with a presentation dedicated to the strategic positioning of the Office as a catalyst of research and innovation cooperation, designed to provide a platform for active participation of Ukrainian researchers in European research initiatives. During the presentation, special attention was paid to the objectives, tasks and structure of the Office

At the end of the panel discussion, the Head of the NRFU, Professor Stanislav Vilchynskii, expressed his sincere gratitude to all the participants of the event for the opportunity to discuss the vitally important topic of the role of joint efforts in strengthening the research potential of Ukraine.

December 21, 2023 – a meeting with Vyacheslav S. Shebanin, Rector of Mykolaiv National Agrarian University, in the office of the NRFU. The employees of the Office took part in it. The possibilities of the Horizon Europe Program and participation in grant calls of the NRFU were discussed;

- *news http://surl.li/opctj*

December 28, 2023 – a meeting with the Vice-Rector on scientific work of Taras Shevchenko National University of Kyiv, Professor Ganna Tolstanova. The employees of the Office took part. The possibilities of the Horizon Europe Program and participation in grant calls of the NRFU were discussed, as well as the needs of institutions of higher education for full participation in the Horizon Europe Program

- *news https://nrfu.org.ua/news/programa-goryzont-yevropa-ta-zapyty-universytetiv-ukrayiny/ , https://www.facebook.com/HEOinUA/posts/122111525084150289?ref=embed_post).*

Training:

December 11, 13, 15, 2023 – Horizon Europe Proposal Writing Camp Ukraine (organized by the Center for Social Innovation). Training on drawing up project applications. 11 employees of the Office participated;

- *on the ZOOM platform without registration*

They received training certificates;

December 14-15, 2023 – Online training 'Project management for research administrators' (organizer – Representative Office of the Polish Academy of Sciences in Kyiv). Yuliia Reminska, Grygoriy Naumovets, Oleksandr Moiseiev, Nadiia Naumova were trained.

- *on the ZOOM platform without registration*

Since December 8, 2023, three pages in social networks have been created and maintained:

Facebook https://www.facebook.com/HEOinUA

as of December 28, 2023, 414 followers subscribed to the page, 14,841 people viewed posts, 3,480 reactions and shares

X (Twitter) https://twitter.com/HEOinUA

as of December 28, 2023, 387 posts in the network, 62 interactions with posts

LinkedIn https://www.linkedin.com/company/heo-in-ua

as of December 28, 2023, 606 views of posts, 25 reactions

Cooperation with the Polish National Contact Point was established, two meetings were held on the ZOOM platform (**November 16, 2023** and **December 8, 2023**).

On **December 20, 2023**, a solemn opening ceremony of the Horizon Europe Office in Ukraine was held at the Club of the Cabinet of Ministers of Ukraine.



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CONCLUSIONS

CONCLUSIONS

Summarized, the results of the work of the National Research Foundation of Ukraine in 2023, are the following:

1. The Work Plan of the National Research Foundation of Ukraine for 2023 can be considered fulfilled. The planned task of developing the NRFU Activity Strategy for 2024-2026 can be considered partially fulfilled. The draft of the document was presented and discussed at the meeting of the Scientific Council of the Foundation.

2. Based on the decisions of the Scientific Council of the Foundation, in 2023, agreements were concluded for the implementation of research and development at the expense of grant support from the general fund of the state budget with 221 grantees based on the results of the NRFU calls: 'Science for Human Security and Society' - 1 project; 'Support for Research of Leading and Young Scientists' - 99 projects; 'Science for Safety and Sustainable Development of Ukraine' - 54 projects; 'Science for the Recovery of Ukraine in the War and Post-War Periods' - 67 projects. Grant agreements were signed with 12 grantees in the Call 'Cambridge – NRFU 2022. Individual grants for research (development) for Ukrainian researchers (with the support of the University of Cambridge, UK)' (special fund of the state budget).

   The total amount of financing under the concluded agreements for projects in 2023 was UAH 455,231.85 thousand.

3. The Foundation has made considerable progress in strengthening its international cooperation. The Horizon Europe Office in Ukraine was launched and as of today it employs 11 persons: the head of the department and 10 specialists. Employees of the Office are already providing consultations on the implementation of the Horizon Europe Framework Program. The office is positioned as a catalyst for research and innovation cooperation, designed to provide a platform for active participation of Ukrainian researchers in European research initiatives. As a result of actions to attract funding, the following calls and initiatives were launched: a joint call of SNSF and the NRFU; joint partnership initiative of NWO and the NRFU; multilateral partnership initiative IMPRESS-U.

4. Thorough work was carried out on legal and regulatory support of the NRFU's activities and improvement of regulatory acts that regulate its activities. Amendments to the following draft laws were processed: Law of Ukraine 'On Amendments to Certain Legislative Acts of Ukraine Regarding Support (Grant Funding) of Scientific, Scientific and Technical Activities and Innovation Activities'; Law of Ukraine 'On Amendments to Certain Laws of Ukraine Regarding Priority Areas of Development of Science and Technology and Innovative Activities'; Decree of the President of Ukraine 'On Amendments to Certain Decrees of the President of Ukraine Regarding Annual Grants of the President of Ukraine to Young Scientists and Doctors of Science'; Decrees of the Cabinet of Ministers of Ukraine 'On Amendments to Certain Resolutions of the Cabinet of Ministers of Ukraine Regarding the National Research Foundation of Ukraine'; Law of Ukraine 'On the system of priority areas of scientific, scientific and technical and innovation activities in Ukraine'; Resolution of the Cabinet of Ministers of Ukraine 'On the approval of the Model

Regulation on the calculation and planning of the estimated cost of research and scientific and technical (experimental) developments, which are carried out at the expense of state and local budgets'; Law of Ukraine 'On Amendments to the Law of Ukraine 'On Scientific and Scientific - Technical Activities' on Research Infrastructure and Support of Young Scientists', etc.

5. Work on the construction of a comprehensive information protection system (CIPS) for the Automated System 'The NRFU Call for Projects' has been completed. The CIPS compliance certificate is automatically extended to the Foundation's cloud infrastructure, namely: data centers security control; virtual infrastructure security control (virtual servers protection); Veeam Backup.

6. Three new calls were launched: 'Excellent Science in Ukraine', 'Science for Strengthening the Defense Capability of Ukraine' and 'Infrastructures for Advanced Research'. It is planned that more than 500 project teams will join the submission of applications for these calls.



PROMISING AREAS OF DEVELOPMENT

PROMISING AREAS OF DEVELOPMENT

The promising areas of development of the National Research Foundation of Ukraine for 2024 include the following:

- deployment and institutional strengthening of the Horizon Europe Office in Ukraine;
- further strengthening of the Foundation's institutional capabilities through legislative consolidation of the peculiarities of its status (through amendments to the Tax, Budget and Commercial Codes of Ukraine, as well as to other legal and regulatory acts of Ukraine);
- provision of the organizational and technical component in the conduct and organization of calls by the Foundation in the fields of grant support defined in Art. 51 of the Law of Ukraine 'On Scientific and Scientific - Technical Activities';
- activation of work as part of the sectoral working group 'Education and Science', further cooperation in implementation of promising tasks defined in the Strategic Plan for the Recovery of Ukraine in the field of 'Education and Science' (in accordance with the Plan for the Recovery of Ukraine in the field of Education and Science, which was prepared by the working group on education and science at the National Council for the Recovery of Ukraine from the Consequences of War, taking into account the Regulation on the National Council for the Recovery of Ukraine from the Consequences of War, approved by the Decree of the President of Ukraine No. 266/2022 of April 21, 2022);
- strengthening the HR potential of the Foundation as a state budgetary institution and improving the Foundation's interaction with grantees;
- improvement of the mechanisms for the Foundation to conduct joint competitive selection of projects with foreign and/or international foundations, societies, institutions, organizations, associations to be implemented jointly by Ukrainian and foreign legal entities, foreign (international) research societies, institutions, organizations, associations within the framework of international bilateral and/or multilateral research and scientific-technical cooperation in accordance with bilateral or multilateral agreements (including in the form of memorandums, protocols, annexes to protocols) between the Foundation and a foreign legal entity, foreign (international) foundation, company, institution, organization, association on holding a joint call for projects and their financing;
- increasing the objectivity of project evaluation by: increasing the involvement of foreign reviewers; ensuring maximum transparency and efficiency of project evaluation procedures for compliance with formal features; conducting educational workshops/webinars for potential reviewers; adaptation to the provisions of the Agreement on Reforming the Research Assessment, joint work on determining the direction of changes in assessment of research, researchers and organizations that perform research in order to maximize their quality and impact;
- strengthening the Foundation's international cooperation through joining international professional research communities in order to popularize the Foundation and projects funded by the Foundation;
- support of the software for online submission and assessment of applications for the Foundation's calls;

- popularization of the Foundation's activities and the results of projects funded by the Foundation;
- further implementation of the Foundation's Fundraising Strategy for 2022-2024;
- completion of the development and start of implementation of the Strategy of the National Research Foundation of Ukraine for 2024-2026.



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ANNEXES

ANNEX A

The Call
'Science for Human Security and Society'

№	Project number	Institution (grantee)	Project name	Project PI
1	2020.01/0546	State Educational-Scientific Establishment «The Academy of Financial Management»	Fiscal and Monetary Security of the National Economy under Global Challenges and Threats Posed by the COVID-19 Pandemic	Iefymenko Tetiana Ivanivna

ANNEX B

The Call
'Support for Research of Leading and Young Scientists'

№	Project number	Institution (grantee)	Project name	Project PI
1	2020.02/0038	Lviv Polytechnic National University	Production of bitumen from oil residues modified with low-molecular organic compounds	Gunka Volodymyr Myroslavovych
2	2020.02/0048	Institute Mathematical Machine and System Problems, NASU	Direct and inverse problems of pollution distribution in the atmospheric and marine environment and their use to identify sources of pollution	Maderych Volodymyr Stanislavovych
3	2020.02/0057	Chuiko Institute of Surface Chemistry, NASU	New functional materials that use the ability to control the phase state of substances in the boundary layer	Turov Volodymyr Vsevolodovych
4	2020.02/0063	Karpenko Physico-Mechanical Institute of the NAS of Ukraine	Synthesis and properties of new complex anticorrosion pigments for paints based on aluminosilicate nanocontainers	Korniy Sergiy Andrijovych

№	Project number	Institution (grantee)	Project name	Project PI
5	2020.02/0089	Institute of Mathematics of NASU	Complex dynamical systems in the sciences: theory, mathematical modelling, computing and application to advanced technology	Timokha Alexander Mykolayovych
6	2020.02/0204	V. Lashkaryov Institute of Semiconductor Physics NAS of Ukraine	Advanced SERS-based nanoplatform for efficient detection of biomolecules and pathogens	Dzhagan Volodymyr Mykolayovych
7	2020.02/0283	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	Advanced high-strength and high-ductility steel Fe-Mn-Al-C: the effect of technological parameters on the formation of their structure and physicochemical properties	Shemet Volodymyr Zhdanovych
8	2020.02/0296	Bogolyubov institute for theoretical physics, NASU	Equilibrium and non-equilibrium processes in quantum integrable models in condensed matter physics	Iorgov Mykola Zinoviyovych
9	2020.02/0380	Nizhyn Mykola Gogol State University	Structure transformation and non-equilibrium electron processes in wide bandgap metal oxides and their solid solutions	Melnichuk Olexander Volodymyrovych
10	2020.02/0062	Taras Shevchenko National University of Kyiv	Generation and evolution of primordial magnetic fields	Gorbar Eduard Volodymyrovych
11	2020.02/0211	Karpenko Physico-Mechanical Institute of the NAS of Ukraine	Experimental and theoretical study and prediction of the photoelastic properties of crystalline materials for devices of electromagnetic radiation control	Mytsyk Bohdan Grygorovych
12	2020.02/0261	Institute of Magnetism, NASU and MESU	The development of physical principles of magnetic nanoelectronics	Golub Volodymyr Olehovych

№	Project number	Institution (grantee)	Project name	Project PI
13	2020.02/0115	Institute for Condensed Matter Physics of the National Academy of Sciences of Ukraine	Estimating the nature of unusual collective properties in disordered systems: Theory and ab initio simulations	Bryk Taras Mykhaylovych
14	2020.02/0119	National aerospace university “Kharkiv aviation institute”	Scientific foundations of growth of oxide and carbon nanostructures under conditions of plasma environment	Baranov Oleg Olegovych
15	2020.02/0094	B.Verkin Institute for Low Temperature Physics and Engineering National Academy of Sciences of Ukraine	Quantum tunneling of vibrational excitations in thermal conductivity of crystalline and amorphous materials and composites	Kryvchikov Olexander Ivanovych
16	2020.02/0150	O. Y. Usikov Institute of Radiophysics and Electronics, NASU	Electromagnetic modeling of micro and nano lasers with resonant graphene elements, at the threshold of stationary radiation	Zinenko Tatjana Leonidivna
17	2020.02/0309	Lviv Polytechnic National University	Design of polyfunctional nanostructured mono- and bimetals with electrocatalytic and antimicrobial properties	Kuntyi Orest Ivanovych
18	2020.02/0408	State Research Institution "Kyiv Academic University", NASU	Multiband electronic states: physics and applications	Kordyuk Alexander Anatolijovych
19	2020.02/0024	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	Synthesis of low-cost ceramic membranes of the controlled design for mobile MF/UF/NF systems	Dontsova Tetiana Anatoliivna
20	2020.02/0061	Chernivtsi National University named after Yuriy Fedkovych	Novel methods and systems of multifunctional Muellermatrix polarization and fluorescence tomography of micro and nanostructure of biological crystal networks	Ushenko Yuriy Oleksandrovych

№	Project number	Institution (grantee)	Project name	Project PI
21	2020.02/0015	Space Research Institute National Academy of Sciences of Ukraine and State Space Agency of Ukraine	Theoretical and experimental studies of global perturbations of natural and man-made origin in the Earth-Atmosphere-Ionosphere system	Cheremnykh Oleg Kostyantynovych
22	2020.02/0031	Institute of Organic Chemistry, NASU	Design, synthesis and activity of calixarene derivatives as inhibitors of protein tyrosine phosphatases and other enzymes	Kalchenko Vitaly Ivanovich
23	2020.02/0011	Institute for Nuclear Research of the National Academy of Sciences of Ukraine	Double beta decay of atomic nuclei	Kobychev Vladyslav Valeriyovych
24	2020.02/0284	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Geospatial models and information technologies of satellite monitoring of smart city problems	Shelestov Andrii Yuriyovych
25	2020.02/0016	V.N. Karazin Kharkiv National University	Indicators based on chromone derivatives for fluorescent determination of β-glucosidase activity	Roshal Oleksandr Davydovych
26	2020.02/0025	Vasyl Stefanyk Precarpathian National University	Symmetries in algebraic and topological structures on infinitely dimensional analytic manifolds and their possible applications	Zagorodnyuk Andriy Vasyl'ovych
27	2020.02/0043	Vasyl Stefanyk Precarpathian National University	Asymmetric aqueous electrolyte supercapacitors based on iron-nickel oxides / reduced graphene oxide nanocomposites and microporous carbon	Kotsiubynskyi Volodymyr Olegovich
28	2020.02/0301	Karpenko Physico Mechanical Institute of the National Academy of Sciences of Ukraine	Development of new functional materials for the needs of hydrogen energy	Zavaliy Ihor Yulijanovych

№	Project number	Institution (grantee)	Project name	Project PI
29	2020.02/0313	Sumy State University	Promising semiconductor nanomaterials for flexible electronics: synthesis, development of printing methods and optimization of structural, optical and photoelectric properties	Opanasyuk Anatoliy Sergievich
30	2020.02/0317	Institute for Condensed Matter Physics of the National Academy of Sciences of Ukraine	Patchy colloids in porous media: theory and computer simulations	Holovko Myroslav Fedorovych
31	2020.02/0390	Kharkiv national university of radioelectronics	Novel (Electro) Chemiluminescence (bio)sensing platforms with laser-induced functional micro- and nanostructures	Zholudov Yuriy Tymofiyovych
32	2020.02/0022	Taras Shevchenko National University of Kyiv	Plasmon hybrid nanosystems "metal-polymer fluorophore" with enhanced optical response for photonics and biomedical applications	Yeshchenko Oleg Anatoliyovych
33	2020.02/0292	Space Research Institute National Academy of Sciences of Ukraine and State Space Agency of Ukraine	Deep learning methods and models for applied problems of satellite monitoring	Lavrenyuk Mykola Sergiyovych
34	2020.02/0130	Ivan Franko National University of Lviv	Multifunctional organic-inorganic magnetoelectric, photovoltaic and scintillation materials	Kapustianyk Volodymyr Bogdanovych
35	2020.02/0165	Ivan Franko National University of Lviv	Development of palaeocryogenic processes in the Pleistocene loess-palaeosol sequences of Ukraine: engineering-geological, soil, climatic, and environmental protection aspects	Bogucki Andriy Bonifatiiovych
36	2020.02/0128	A. Pidgorny Institute of Mechanical Engineering Problems of the National Academy of Sciences of Ukraine	Topology optimization and increase of strength characteristics of multilayer shells and solid bodies using additive manufacturing	Avramov Konstantin Vitaliyovych

№	Project number	Institution (grantee)	Project name	Project PI
37	2020.02/0134	Taras Shevchenko National University of Kyiv	Development of advanced thin film optoelectronic materials based on coupled hybrids of quantum dot and two-dimensional nanostructures	Kondratenko Serhiy Victorovich
38	2020.02/0404	National Aerospace University "Kharkiv Aviation Institute"	Development of intelligent technologies for assessing the epidemic situation to support decision-making in the population biosafety management	Yakovlev Sergiy Vsevolodovych
39	2020.02/0346	Main Astronomical Observatory, NASU	Astrophysical Relativistic Galactic Objects (ARGO): life cycle of active nucleus	Berczik Peter Peterovich
40	2020.02/0247	Schmalhausen Institute of Zoology	Integration of mammalian organism as a proxy of stability at aquatic and aerial life (as illustrated by skeleton traits)	Gol'din Pavlo Evgenovych
41	2020.02/0100	Institute of Cell Biology, NASU	Development of new nanozymes as catalytic elements for enzymatic kits and chemo/biosensors	Gonchar Mykhailo Vasyliovych
42	2020.02/0263	Institute of Food Biotechnology and Genomics	Enzymes of post-translational modifications of microtubule proteins as targets for inhibition of the excitability of primary nociceptive neurons	Karpov Pavlo Andriyovych
43	2020.02/0316	Institute of Cell Biology and Genetic Engineering	Effects of stress factors on prion-like proteins synthesis in plants	Rashydov Namik Mammad Ogly
44	2020.02/0070	Bogomoletz Institute of Physiology, NASU	Intermittent hypoxia as a novel strategy for treatment/ prevention of Alzheimer disease: molecular mechanisms and therapeutic implementation	Serebrovska Tetyana Viktorivna
45	2020.02/0075	Institute of Molecular Biology and Genetics, NASU	Site-directed mutagenesis as a novel strategy to investigate and overcome Mycobacterium tuberculosis antibiotic resistance	Yarmoluk Sergiy Mykolayovych

№	Project number	Institution (grantee)	Project name	Project PI
46	2020.02/0171	I.I. Schmalhausen Institute of Zoology, NASU	Development of scientific backgrounds of comprehensive monitoring and threats of distribution of invasive fish species by riverine systems and transitional waters of Ukraine (based on parasite, population and genetic markers)	Kutsokon Yuliia Kostiantynivna
47	2020.02/0147	Palladin Institute of Biochemistry NAS of Ukraine	Glutamate/GABA signalling in bidirectional Gut-Brain communication system: a focus on harmful effects of air pollution carbon-containing nanoparticles	Borisova Tatiana Olexandrivna
48	2020.02/0336	Palladin Institute of Biochemistry, NASU	Neuroprotective action of vitamin D3 in glucocorticoidinduced neurotoxicity	Shymanskyi Ihor Olexandrovich
49	2020.02/0118	Public Higher Education Institution “Vasyl Stefanyk Precarpathian National University”	Intermediates of phenylpropanoid pathway as substances to prolong lifespan and healthspan	Bayliak Maria Mykhailivna
50	2020.02/0264	Institute of Hydrobiology, NASU	Comprehensive assessment of radiation hazard of the nuclear legacy sites for aquatic ecosystems	Gudkov Dmitri Igorevich
51	2020.02/0035	Danylo Halytsky National Medical University	Thiazolidinones with polypharmacological properties: molecular design, synthesis and mechanisms of action of anticancer, anti-inflammatory and antimicrobial agents	Lesyk Roman Bogdanovych
52	2020.02/0246	Institute of Molecular Biology and Genetics, NASU	Development of combined therapy for severe Klebsiella pneumoniae-associated nosocomial infections to overcome the antibiotic resistance	Moshynets Olena Volodymyrivna

№	Project number	Institution (grantee)	Project name	Project PI
53	2020.02/0160	V. Bakul Institute for Superhard Materials, NASU	Development of new carbon solvents compositions for diamond single crystals growth in the thermodynamic stability area with a controlled content of nitrogen and boron impurities in order to create conceptual electronic devices construction	Ivakhnenko Sergii Oleksiyovich
54	2020.02/0097	Institute of Molecular Biology and Genetics, NASU	Investigation of formation features of advanced bioselective elements based on nanomaterials of different nature for electrochemical biosensors and sensor arrays with specified and adjustable properties	Dzyadevych Sergei Viktorovych
55	2020.02/0195	Palladin Institute of Biochemistry, NASU	Differential control of regulatory networks involved in the maintaining of epithelial-mesenchymal plasticity of breast adenocarcinoma cells	Drobot Liudmyla Borysivna
56	2020.02/0131	Danylo Halytsky Lviv National Medical University	Center for investigation of neutrophil exctracellular traps involvement in initiating tissue pathologies in vivo	Bilyy Roman Olexandrovych
57	2020.02/0369	I.I. Schmalhausen Institute of Zoology NAS of Ukraine	Extinct and extant forests: taxonomy, phylogeny, genesis of fauna and diversity conservation of hymenopteran insects	Varga Oleksandr Oleksandrovych
58	2020.02/0189	Bogomoletz Institute of Physiology, NASU	Myogenic mechanisms of urinary bladder mechanical sensitivity in norm and animal model of type 2 diabetes	Shuba Yaroslav Mykhailovych
59	2020.02/0223	Sumy State University	Personalized bioengineered scaffolds for osteochondral regeneration produced by additive manufacturing with enhanced surface properties	Pogrebnjak Alexander Dmytrovych

№	Project number	Institution (grantee)	Project name	Project PI
60	2020.02/0051	Bogolyubov Institute for Theoretical Physics, NASU	Topological phases of matter and excitations in Dirac materials, Josephson junctions and magnets	Sharapov Sergiy Gennadiyovych
61	2020.02/0078	V. Bakul Institute for Superhard Materials	GaN single crystals: production under high pressure, structure, properties	Turkevych Volodymyr Zinoviyovich
62	2020.02/0121	V.M. Glushkov Institute of Cybernetics of the National Academy of Sciences of Ukraine	Analytical methods and machine learning in control theory and decision-making in conditions of conflict and uncertainty	Norkin Volodymyr Ivanovych
63	2020.02/0217	Ivan Franko National University of Lviv	Light-generating low-dimensional structures with polarized luminescence based on organic and inorganic materials	Karbovnyk Ivan Dmytrovych
64	2020.02/0138	F.D. Ovcharenko Institute of Biocolloidal Chemistry, NASU	Electrokinetic phenomena in natural nano/ microfluidic and disperse systems: characterizing, treatment, modelling	Kovalchuk Volodymyr Ivanovych
65	2020.02/0052	Institute for Scintillation Materials, NASU	Development of nanomaterials with controlled redox activity and luminescent properties for biomedical applications	Yefimova Svetlana Leonidivna
66	2020.02/0049	Karpenko PhysicoMechanical Institute of National Academy of Sciences of Ukraine	Physicomechanical macro, micro and nano mechanisms of hydrogen interaction with low-alloyed steels as fundamental factor for strength and workability of hydrogen storage and transportation systems	Dmytrakh Ihor Mykolayovych
67	2020.02/0357	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	Development of thermophysical and designtechnological bases for increasing the cooling efficiency of radar transmit/receive modules	Nikolaenko Yurii Yegorovich

№	Project number	Institution (grantee)	Project name	Project PI
68	2020.02/0234	V. N. Karazin Kharkiv National University	Modification of the solid surface under the influence of plasma and charged particle beams	Beresnev Vyacheslav Martynovich
69	2020.02/0335	L.V. Pisarzhevsky Institute of Physical Chemistry NAS of Ukraine	New effective zeolite catalysts for environmentally friendly processes of the conversion of renewable raw materials into valuable organic compounds	Shcherban Nataliya Dmytrivna
70	2020.02/0073	Bogolyubov Institute for Theoretical Physics, NASU	Light dark matter and dynamical dark energy in the Universe	Shtanov Yuri Vladimirovich
71	2020.02/0367	Taras Shevchenko National University of Kyiv	Hybrid nanosystems for photoimmunotherapy in the optical and X-ray energy range	Yashchuk Valeriy Mykolayovych
72	2020.02/0014	Taras Shevchenko National University of Kyiv	Asymptotic regimes of perturbed random walks: on the edge of modern and classical probability	Iksanov Oleksandr Maratovych
73	2020.02/0050	L.V.Pisarzhevskii Institute of Physical Chemistry, Natinal Academy of Sciences of Ukraine	Design and development of zeolite- and nanocarbonbased catalysts with enhanced mass transfer for H2/ CH3OH economy	Strizhak Peter Evgenovich
74	2020.02/0108	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	Development of new class of metal-ceramic composites based on powders of superhard reinforced ceramics for extreme operating conditions	Loboda Petro Ivanovych
75	2020.02/0067	Taras Shevchenko National University of Kyiv	Computer design, synthesis and heat transfer properties of silicon nanostructures for energy efficient applications	Kuryliuk Vasyl Vasyliovych
76	2020.02/0177	Lviv Polytechnic National University	Development of a complex technology for obtaining and using substrates based on organic waste and natural sorbents for the needs of biological reclamation and remediation of industrially disturbed lands	Malovanyy Myroslav Stepanovych

№	Project number	Institution (grantee)	Project name	Project PI
77	2020.02/0059	Ivan Franko National University of Lviv	Ukrainian Spatial Boundaries: A Study on Notions and Their Implementation in Early Modern Ukraine, 1500–1800	Zayats Andriy Yevhenovych
78	2020.02/0237	Poltava V.G. Korolenko National Pedagogical University	Living standards and demographic profile of Dnieper Ukraine in the second half of the eighteenth - early twentieth century	Serdiuk Igor Olexandrovych
79	2020.02/0215	State institution Institute of Regional Research named after M.I. Dolishniy of the NAS of Ukraine	Financial determinants of the provision of economic growth in the regions and territorial communities based on behavioural economy	Vozniak Halyna Vasylivna
80	2020.02/0111	M. M. Bogolyubov Institute for Theoretical Physics NASU	Nonclassical and hybrid correlations of quantum systems under realistic conditions	Semenov Andrii Oleksandrovych
81	2020.02/0183	State Scientific Institution “Institute for Single Crystals” of National Academy of Sciences of Ukraine, NASU	Study of polymorphic transitions of molecular crystals for the needs of the pharmaceutical industry	Shyshkina Svitlana Valentynivna
82	2020.02/0299	National Science Center "Kharkiv Institute of Physics and Technology", NASU	Transport of electron/positron bunches at high-gradient acceleration by electromagnetic fields excited in dielectric structures or plasma by high power electron bunches and by an intense laser pulse	Sotnikov Gennadiy Vasil'jovich
83	2020.02/0406	Subbotin Institute of Geophysics of NAS Ukraine	Magnetic proxies of palaeoclimatic changes in the loess-palaeosol sequences of Ukraine	Bakhmutov Volodymyr Georgiyovych
84	2020.02/0105	Institute of Organic Chemistry, NASU	Latent carbenes for organic synthesis	Kostiuk Oleksandr Mykolaiovych
85	2020.02/0293	Institute for Single Crystals NAS of Ukraine	Novel and traditional IR-transparent ceramics of complex architecture for extreme operating conditions	Yavetskiy Roman Pavlovich

№	Project number	Institution (grantee)	Project name	Project PI
86	2020.02/0196	Ivan Franko National University of Lviv	Studies of physical systems and effects of space quantization on quantum computers	Tkachuk Volodymyr Mykhailovych
87	2020.02/0310	Institute of Information Technologies and Learning Tools	Cloud-based systems of open science for teachers' training and professional development	Shyshkina Mariya Pavlivna
88	2020.02/0265	Institute of Organic Chemistry of the NAS of Ukraine	Development of continuous-flow approach of safe and scalable utilization of non-stabilized diazoalkanes as reagents for organic synthesis	Volochnyuk Dmitriy Myhailovych
89	2020.02/0112	S.P. Tymoshenko Institute of Mechanics of National Academy of Science of Ukraine	Diffraction processes and acoustic radiation forces in the bounded hydroelastic systems	Kubenko Veniamin Dmytrovych
90	2020.02/0125	Odessa national academy of food technology	Improvement of the efficiency of thermal storage devices for solar energy by the use of nanofluids and capillary-porous structures	Zhelezny Vitaly Petrovich
91	2020.02/0027	Institute of Physics, National Academy of Sciences of Ukraine	Low-dimensional graphene-like transition metal dichalcogenides with controllable polar and electronic properties for advanced nanoelectronics and biomedical applications	Morozovska Anna Mykolaivna
92	2020.02/0228	Main Astronomical observatory, NASU	Detection and analysis of the cometary activity in extrasolar planetary systems	Pavlenko Yakiv Volodymyrovych
93	2020.02/0327	National Science Center Kharkov Institute of Physics and Technology, NASU	Fundamental aspects of the new materials creation with unique physical, mechanical and radiation properties based on the concentrated multicomponent alloys	Tolstolutska Galyna Dmytrivna

№	Project number	Institution (grantee)	Project name	Project PI
94	2020.02/0023	State Scientific Institution "Institute for Single Crystals" NAS of Ukraine	Polypharmacophoric organic compounds based on peptidomimetics and fused benzodiazepines	Chebanov Valentyn Anatolijovych
95	2020.02/0053	National Science Center "Kharkiv Institute of Physics and Technology", NASU	Spatial correlations and ordered phases caused by interaction effects in the ultracold atomic gases	Sotnikov Andrii Gennadiovych
96	2020.02/0360	National University 'Odesa Law Academy'	Alternative energy in Ukraine: ways of systematic legislative incentives	Kharytonova Tetiana Evgenivna
97	2020.02/0373	Lviv Polytechnic National University	Crystalline phosphors' engineering for biomedical applications, energy saving lighting and contactless thermometry	Vasylechko Leonid Orestovych
98	2020.02/0149	O. Ya. Usikov Institute for Radiophysics and Electronics, NASU	Quantum phenomena in the interaction of electromagnetic waves with solid-state nanostructures	Maizelis Zakhar Oleksandrovych

ANNEX C

The call

'Science for Security and Sustainable Development of Ukraine'

№	Project number	Institution (grantee)	Project name	Project PI
1	2021.01/0093	Sumy State University	Physical bases of formation of apatite-biopolymercarbon 3D nanometric scaffolds for biomedical purpose with prolonged delivery of antimicrobials to the implantation area	Sukhodub Leonid Fedorovich
2	2021.01/0391	Taras Shevchenko National University of Kyiv	Development of novel anesthetic agents	Mykhailiuk Pavel Kostyantynovych
3	2021.01/0136	V.M. Glushkov Institute of Cybernetics	Development of the cloud-based platform for patientcentered telerehabilitation of oncology patients with mathematical-related modeling	Stetsyuk Petro Ivanovych
4	2021.01/0204	V. N. Karazin Kharkiv National University	Research And Development Of Ion-Plasma Technologies for Synthesis of Complex Composite Multifunctional Coatings For Medical Implants And Biosafety	Lisovsky Valery Oleksandrovych
5	2021.01/0410	Lviv Polytechnic National University	Optically and acoustically controlled devices based on crystalline and nanocomposite materials for modulation of terahertz radiation	Andrushchak Anatoliy Stepanovych
6	2021.01/0229	Institute of Physics NAS of Ukraine	Biophysical characteristics of circulating metastatic cells as potential targets of antimetastatic therapy	Dovbeshko Galyna Ivanivna
7	2021.01/0062	V. N. Karazin Kharkiv National University	Molecular design, synthesis and screening of new potential antiviral pharmaceutical ingredients for the treatment of infectious diseases COVID-19	Kalugin Oleg Nikolaevich

№	Project number	Institution (grantee)	Project name	Project PI
8	2021.01/0017	L.V. Pisarzhevskii Institute of Physical Chemistry of the National Academy of Sciences of Ukraine	Design of nanocomposite metal-oxide catalysts for compatible oxidative conversion of C1-4-alkanes and carbon dioxide with obtaining of hydrogen/syngas, valuable organic compounds	Soloviev Sergii Oleksandrovych
9	2021.01/0311	Institute Mathematical Machines and System Problems, Ukrainian National Academy of Sciences	Mathematical methods and models for analysis, forecasting and decision support for the spread of the SARS-Cov-2 epidemic in Ukraine	Brovchenko Igor Olexandrovich
10	2021.01/0278	Frantsevich Institute for Problems of Materials Science, National Academy of Sciences of Ukraine	Development of scientific and technological bases for the creation of new materials based on Fe-Al intermetallics with increased resistance and heat resistance to ensure efficient operation and environmental safety in the nodes of energy and transport engineering	Fartushna Iuliia Victorivna
11	2021.01/0178	FD Ovcharenko Institute of Biocolloidal Chemistry	Hybrid hydrogel materials with gold nanoparticles and cytostatics with complex antitumor and regenerative activity for the needs of reconstructive surgery in the oculoorbital region	Samchenko Yuriy Markovych
12	2021.01/0103	Lviv Polytechnic National University	Methods and means of research of markers of aging and their influence on postcovid effects for prolongation of the working period	Shakhovska Nataliya Bohdanivna
13	2021.01/0306	Dnipro University of Technology	Development of technology for the restoration of lands disturbed by mining operations by forming backfill masses based on natural and technogenic materials	Petlovanyi Mykhailo Volodymyrovych

№	Project number	Institution (grantee)	Project name	Project PI
14	2021.01/0108	Ivan Franko National University of Lviv	Development of novel materials and processes for the production of environmentally friendly veterinary pharmaceuticals	Gladyshevskii Roman Evgenovych
15	2021.01/0022	V. P. Kukhar Institute of Bioorganic Chemistry and Petrochemistry	Structurally modified natural compounds of the bromotyrosine series as inhibitors of bacterial biofilms for the prevention and treatment of persistent infections	Smolii Oleg Borysovych
16	2021.01/0276	Institute for Problems of Cryobiology and Cryomedicine	Therapeutic potential and safety of three-dimensional constructs based on mesenchymal stem cells for treatment of non-healing wounds	Petrenko Oleksandr Yuriovich
17	2021.01/0211	Taras Shevchenko National University of Kyiv	Improving the quality and safety of radiation therapy of cancer and X-ray diagnosis	Bezshyyko Oleg Anatoliovych
18	2021.01/0208	Palladin Institute of Biochemistry	The effect of natural and artificial immunization with SARS-CoV-2 antigens on the state of hemostasis system	Skok Maryna Volodymyrivna
19	2021.01/0042	Institute for Scintillation Materials, NASU	Development of effective detection systems for the most harmful ionizing radiation for humans, for radioecology tasks	Tarasenko Oleg Anatoliyovych
20	2021.01/0189	Zaporizhzhia Polytechnic National University	New materials with a gradient nanostructure for load-bearing structures of the increased reliability and human security under special conditions	Brykov Mikhailo Mykolayovych
21	2021.01/0316	National Technical University "Kharkiv Polytechnic Institute"	Development of composite materials for road construction on the based on heavy tonnage waste	Sakhnenko Mykola Dmytrovych

№	Project number	Institution (grantee)	Project name	Project PI
22	2021.01/0030	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Microwave devices based on resonant structures with metamaterial properties for the life protection and information security of Ukraine	Ilchenko Mykhailo Yukhymovych
23	2021.01/0210	Bogomoletz Institute of Physiology	The role of mitochondrial mechanisms in the development and prevention of cardiovascular dysfunctions in aging	Sagach Vadym Fedorovych
24	2021.01/0332	Zabolotny Institute of Microbiology and Virology	Development of effective antimicrobial and woundhealing biological product for the prevention and treatment of purulent-inflammatory wounds of the skin and mucous membranes	Spivak Mykola Yakovych
25	2021.01/0282	SI "Institute of Food Biotechnology and Genomics of NAS of Ukraine"	Development an aerosol liposomal form of curcuminoids and miRNAs complex for the treatment of Alzheimer's disease early-stage	Shulga Sergiy Mikhailovich
26	2021.01/0024	Institute of Molecular Biology and Genetics	Determination of clinically significant gene mutations in malignant neoplasms samples of Ukrainian patients for the development of diagnosticums and the establishment of tumor pharmacological resistance to drugs	Tukalo Mykhailo Arsentyiovych
27	2021.01/0313	Institute of Food Biotechnology and Genomics, National Academy of Sciences of Ukraine	Development of the wheat genotypes with the genes conferring resistance to highly pathogenic races of stem rust with use of molecular markers to ensure food security of Ukraine	Pirko Yaroslav Vasylovych
28	2021.01/0010	Institute of Cell BIology of NAS of Ukraine	Development of an enzymatic kit and portable biosensors for express-analysis of creatinine, a marker of acute functional disorders of the kidneys	Gonchar Mykhailo Vasyliovych

№	Project number	Institution (grantee)	Project name	Project PI
29	2021.01/0184	Ukrainian National Forestry University	Silvicultural and molecular genetic principles of increasing the biotic resilience of Scots pine stands in the context of adaptation to climate change and anthropogenic pressure	Kovaleva Valentina Andriivna
30	2021.01/0006	National Scientific Center “Institute of Experimental and Clinical Veterinary Medicine”	Study of the circulation of zoonotic influenza A viruses in the natural reservoir and assessment of their epidemic risks and threat to human health in Ukraine	Stegniy Borys Tymofiiovych
31	2021.01/0213	State Institution “V.P.Komisarenko Institute of Endocrinology and Metabolism of the National Academy of Medical Sciences of Ukraine”	Study of the course and consequences of COVID-19 in patients with diabetes mellitus and the impact of SARSCoV-2 infection on the rate of biological aging	Tronko Mykola Dmytrovych
32	2021.01/0414	State Scientific Institution "Institute for Single Crystals" NAS of Ukraine	New fluorescent dyes and multifluorophore systems for the improvement of sensitivity of flow cytofluorometry and fluorescence microscopy diagnostic methods	Tatarets Anatoliy Leonidovych
33	2021.01/0009	Ivan Franko National University of Lviv	Drosophila melanogaster as a platform for screening of novel antiviral compounds and studies of cellular mechanisms of antiviral defenses	Ostash Bohdan Omelyanovych
34	2021.01/0417	Palladin Institute of Biochemistry, National Academy of Sciences of Ukraine	Cellular and molecular mechanisms of vitamin D3 hepatoprotective action in non-alcoholic fatty liver disease associated with experimental type 2 diabetes mellitus	Shymanskyi Ihor Olexandrovich
35	2021.01/0061	Palladin Institute of Biochemistry NAS of Ukraine	Cumulative neurotoxic effect of multicomponent pollution by airborne particles and neuroactive pharmaceuticals, biomaterials (including SARS-CoV-2), toxic metals and its prevention	Borisova Tatiana Alexandrivna

№	Project number	Institution (grantee)	Project name	Project PI
36	2021.01/0087	Institute of Molecular Biology and Genetics, National Academy of Sciences of Ukraine	The role of G-quadruplexes and pseudouridine sites in the development of new SARS-CoV-2 antiviral therapy strategies	Platonov Maksym Olehovych
37	2021.01/0416	West Ukrainian National University	Introduction of climate-neutral innovations into agricultural nature management within the context of ecological and energy security of Ukraine	Brych Vasyl Yaroslavovych
38	2021.01/0272	Taras Shevchenko National University of Kyiv	Factors of psychological attitudes towards vaccination: cross-cultural aspect	Danyliuk Ivan Vasiliovych
39	2021.01/0177	Palladin Institute of Biochemistry, NASU	Development of test-system for the quantification of protein C for diagnostics of intravascular thrombus formation danger	Korchynskyi Olexandr Gennadiyovych
40	2021.01/0076	State Scientific Institution "Institute for Single Crystals" NAS of Ukraine	Development of a novel, nanoparticle-based disinfectant for deactivation of pathogens causing emergent infectious diseases	Belikov Konstantin Mykolayovych
41	2021.01/0328	Private Institution "Dobrobut Academy"	Effective treatment of peripheral nerve injury by biomimetic 3D scaffolds	Voitenko Nana Volodymyrivna
42	2021.01/0263	Ivan Franko National University of Lviv	Biotechnological and pharmacological potential of new antibiotic Je478 with the antimycobacterial activity	Fedorenko Viktor Oleksandrovych
43	2021.01/0151	Vasyl' Stus Donetsk National University	Improving effectiveness of criminal law protection of the environment in Ukraine: theoretical and practical elements	Movchan Roman Oleksandrovych
44	2021.01/0295	Ptoukha Institute For Demography And Social Studies of the National Academy of Sciences of Ukraine	Rising inequality and poverty in Ukraine due to the COVID-19 pandemic	Libanova Ella Marlenivna

№	Project number	Institution (grantee)	Project name	Project PI
45	2021.01/0021	State Institution "Luhansk Taras Shevchenko National University"	Formation of critical thinking of citizens as a security factor in the conditions of armed violence and information aggression in the East of Ukraine	Kurylo Vitalii Semenovych
46	2021.01/0106	Yaroslav Mudryi National Law University	Collaborationism in the temporarily occupied territories of Ukraine: problems of legal assessment, guarantees of human rights and freedoms and reintegration of territories	Yakoviyk Ivan Vasylovych
47	2021.01/0239	Taras Shevchenko National University of Kyiv	New geostrategic threats to human social security under a hybrid war and ways to prevent them	Varnalii Zakharii Ztepanovysh
48	2021.01/0343	National University of Water and Environmental Engineering	Ensuring social protection of ATO / JFO participants and social integration of IDP under the condition of increasing threats to social security	Samoliuk Nataliia Mykolaivna
49	2021.01/0409	Ivano-Frankivsk National Technical University of Oil and Gas	Formation of tariff policy in gas supply for information and social security	Horal Liliana Tarasivna
50	2021.01/0040	Sumy State University	Formation of economic mechanisms to increase energy efficiency and provide sustainable development of renewable energy in Ukraine's households	Telizhenko Oleksandr Mykhailovych
51	2021.01/0183	Sumy State University	Restructuring of the national economy in the direction of digital transformations for sustainable development	Karintseva Oleksandra Ivanivna
52	2021.01/0433	Lviv Polytechnic National University	Assessing the impact of the Covid-19 pandemic on Ukraine's human resources and identifying ways to overcome them	Podolchak Nazar Yuriyovych

№	Project number	Institution (grantee)	Project name	Project PI
53	2021.01/0198	Ukrainian Scientific and Methodological Center of applied psychology and social work of NAS of Ukraine	Post-COVID Socio-psychological Rehabilitation of Participants in the Educational Process in the Activities of Employees of the Psychological Service	Panok Vitalii Hryhorovych
54	2021.01/0435	Bogomoletz Institute of Physiology of NASU	Development of novel technology for treatment of diabetic neuropathic pain using viral vectors	Bilan Pavel Volodymyrovych

ANNEX D

The Call

'Science for the Recovery of Ukraine in the War and Post-War Periods'

№	Project number	Institution (grantee)	Project name	Project PI
1	2022.01/0009	Lviv Polytechnic National University	Assessing and forecasting threats to the reconstruction and sustainable operation of objects of critical infrastructure	Kochan Orest Volodymyrovych
2	2022.01/0034	Yuriy Fedkovich Chernivtsi National University	The newest system of polarization tomography of human polycrystalline films of biological fluids for the diagnosis of the severity and monitoring of the rehabilitation of war injuries	Sklyarchuk Valeriy Myhailovich
3	2022.01/0154	V.I. Vernadskii Institute of General and Inorganic Chemistry of the National Academy of Sciences of Ukraine	Development of new types of high-capacity solid-state lithium batteries to ensure the energy security of Ukraine	Anatolii Belous Grigorovich
4	2022.01/0131	V. Lashkaryov Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine	Development of the latest manufacturing technology of a silicon avalanche photodiode for the near-infrared region of the spectrum	Melnyk Viktor Pavlovich
5	2022.01/0224	State University of Infrastructure and Technologies	Development of the scientific principles of comprehensive improvement of safety, efficiency of operation and management of critical objects of railway transport in the conditions of post-war development of Ukraine	Goolak Sergey Oleksandrovych
6	2022.01/0103	V.Lashkarev Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine	Development of the technology of biocompatible antibacterial coatings of orthopedic implants by the gas-detonation deposition method for the needs of military and civilian medicine	Byelyayev (Belyaev) Oleksandr (Alexander) Yevgenovych

№	Project number	Institution (grantee)	Project name	Project PI
7	2022.01/0046	V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine	Development of composites based on cubic boron nitride with protective nanostructured coatings, study of their physical, mechanical and operational properties in the conditions of formation of aviation equipment products.	Klymenko Sergey Anatoliyovych
8	2022.01/0121	Institute of Geography of the National Academy of Sciences of Ukraine	Geographic Information System for Spatial Assessment of Environmental Degradation in Ukraine as a Result of Russian Aggression	Maruniak Eugenia Oleksandrivna
9	2022.01/0199	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	System of integration and intelligent processing of data from satellites, unmanned aerial vehicles and ground sources based on artificial intelligence methods	Stirenko Sergii Grygorovych
10	2022.01/0125	Institute of Organic Chemistry of the NAS of Ukraine	Development of semi-industrial protocols for the synthesis of functionalized carboranes – a promising platform for biomedical applications	Rassukana Yuliya Viktorivna
11	2022.01/0039	RE Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of the National Academy of Sciences of Ukraine	Designing smart biomaterials and functionalized nanoparticles for cancer diagnosis and therapy under stress conditions	Ganusevich Iryna Ivanivna
12	2022.01/0038	G.V. Kurdyumov Institute for Metal Physics of the NAS of Ukraine	Durability Enhancement of Aircraft Metal Materials: Formation of Structural-Phase States and Physical-Mechanical Properties as Affected by the Solid-Solution, Dispersion and Work Hardenings, and Surface Finishing	Mordyuk Bohdan Mykolayovych

№	Project number	Institution (grantee)	Project name	Project PI
13	2022.01/0172	Institute of Engineering Thermophysics of the National Academy of Sciences of Ukraine	Aerodynamics, heat exchange and innovations for increasing the energy efficiency of window structures and their use for the reconstruction of war-damaged buildings in Ukraine	Basok Borys Ivanovych
14	2022.01/0126	V. Lashkaryov Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine	Development and implementation of a dust-insensitive smoke detector based on a plasmon-polariton photodetector	Mamykin Sergii Vasilievych
15	2022.01/0095	E.O. Paton Electric Welding Institute (PWI) of the National Academy of Sciences of Ukraine	Development of technology for remote diagnosis of damaged large-scale objects based on the use of unmanned aerial vehicles (UAVs) and photogrammetry	Lobanov Leonid Mikhailovich
16	2022.01/0135	Vinnytsia National Technical University	Development of a Laser - Photonic Treatment-Diagnostic Complex for the Medical Rehabilitation of Patients with Polytraumas of Various Degrees of Severity	Pavlov Sergii Volodymyrovich
17	2022.01/0209	Institute of Geological Sciences of the National Academy of Sciences of Ukraine	Complex research of the geoecological state of preservation of the historical and cultural heritage objects of the National Reserve "Kyiv-Pechersk Lavra" in the conditions of military operations.	Bugai Dmytro Oleksandrovich
18	2022.01/0048	General Energy Institute of the National Academy of Sciences of Ukraine	Information technology for energy audit of buildings as a component of the energy security of the country	Babak Vitalii Pavlovych
19	2022.01/0005	Karpenko Physico-Mechanical Institute of the National Academy of Sciences of Ukraine	The concept of restoring and extending exploitation resource of equipments of the most important branches of the national economy of Ukraine	Student Mykhailo Mikhaylovich

№	Project number	Institution (grantee)	Project name	Project PI
20	2022.01/0037	V. Lashkaryov Institute of Semiconductor Physics of the National Academy of Sciences of Ukraine	Energy-efficient lighting and power supply systems using renewable energy sources in conditions of unstable electricity supply	Sorokin Viktor Mykhaylovich
21	2022.01/0011	Institute of Physics of the National Academy of Sciences of Ukraine	Innovative photonic technologies of bio-medical direction for the post-war reconstruction of Ukraine	Bondar Mykhailo Vitaliyovych
22	2022.01/0171	Ivan Franko National University of Lviv	New amorphous metal nanocomposites with programmable properties obtained by the method of additive technologies	Shtablavyi Ihor Ivanovych
23	2022.01/0058	Thermal energy technology institute of the NAS of Ukraine	Modernization of coal-fired boiler units of TPPs and CHPs taking into account the diversification of their fuel base to ensure stable heat and energy supply and power system load regulation	Dunayevska Nataliya Ivanivna
24	2022.01/0069	Institute of Electrodynamics of the National Academy of Sciences of Ukraine	Models and means for improving operational efficiency of hydroelectric and hydroelectric pumped-storage power plants for IPS of Ukraine power balancing in the conditions of the electricity market and special technical constraints	Blinov Ihor Viktorovych
25	2022.01/0013	State Museum of Natural History of the National Academy of Sciences of Ukraine	Digitization of natural history collections damaged as a result of hostilities and related factors: development of protocols and implementation on the basis of the State Museum of Natural History of the National Academy of Sciences of Ukraine	Novikov Andriy Valeriyovych
26	2022.01/0022	Institute of Molecular Biology and Genetics of the National Academy of Sciences of Ukraine	Sensing platform based on graphene and textiles for analysis of metabolites in sweat	Korpan Yaroslav Izydorovych

№	Project number	Institution (grantee)	Project name	Project PI
27	2022.01/0031	National Scientific Center «Institute for Soil Science and Agrochemistry Research named after O.N. Sokolovsky»	Assessment of the impact of armed aggression on the state of black soils and the development of measures for the accelerated restoration of soil fertility in the context of ensuring food security	Baliuk Sviatoslav Antonovych
28	2022.01/0089	Bogomolets National Medical University	The optimization of medical care to patients with type 2 diabetes during the war and post-war periods	Kobyliak Nazarii Mykolaiovych
29	2022.01/0065	Taras Shevchenko National University of Kyiv	Bacteriophages as biological agents for the control of bacterial complications in victims of gunshot and mine-explosive injuries	Shevchenko Oleksiy Volodymyrovytch
30	2022.01/0030	Taras Shevchenko National University of Kyiv	Innovative model of mental health protection of students during and after the war	Pinchuk Iryna Yakovlevna
31	2022.01/0077	Institute of Hydrobiology of the National Academy of Sciences of Ukraine	The development of technologies and measures for the revitalization of river systems affected by Russian aggression as a component of section 8 of River Basin Management Plans	Afanasyev Sergiy Oleksandrovich
32	2022.01/0207	Institute of Cell Biology of the NAS of Ukraine	Anti-inflammatory and wound-healing agent containing the composition of the cannabimimetic N-stearoylethanolamine with chitosan-based hydrogel	Stoika Rostyslav Stefanovych
33	2022.01/0105	Ivan Franko National University of Lviv	New means based on compositions of natural zeolite for disinfection of surfaces in the field conditions	Kalychak Yaroslav Mychaylovych
34	2022.01/0091	Lviv Polytechnic National University	Development of a hydrogel composition for fire-resistant glass units and its production technology	Varvarenko Serhii Mykolaiovych

№	Project number	Institution (grantee)	Project name	Project PI
35	2022.01/0096	Sumy State University	Development of design solutions and layout schemes of a parametric series of high-speed energy-efficient well pumps for the needs of enterprises in the field of critical infrastructure	Liaposhchenko Oleksandr Oleksandrovich
36	2022.01/0129	National University of Life and Environmental Sciences of Ukraine	Formation of technological structures of decentralized energy systems in the post-war reconstruction of the infrastructure of territorial communities in the context of combating climate change	Trokhaniak Viktor Ivanovych
37	2022.01/0025	Institute of Molecular Biology and Genetics of the National Academy of Sciences of Ukraine	Hydrogel smart dressings for wound healing monitoring	Kozyrovska Natalia Oleksiyivna
38	2022.01/0043	Institute of Molecular Biology and Genetics of the National Academy of Sciences of Ukraine	Development of a portable system for express monitoring of lactate and pyruvate ratio in blood for urgent needs of clinical diagnostics	Soldatkin Oleksandr Oleksiyovych
39	2022.01/0004	Taras Shevchenko National University of Kyiv	Development of the technology of using water-soluble C60 fullerenes to recover the functional activity of skeletal muscles after mechanical trauma	Nozdrenko Dmitro Mykolayovich
40	2022.01/0163	Lviv Polytechnic National University	Creation and properties optimization of the film structures based on CdSe1-xSx and CdTe1-xSex solid solutions for optoelectronic systems	Ilchuk Hryhorii Arkhypovych
41	2022.01/0151	Danylo Halytsky Lviv National Medical University	Improvement of diagnosis and treatment of disorders of sexual and reproductive functions of men suffered as a result of hostilities	Vorobets Dmytro Zinoviyovych

№	Project number	Institution (grantee)	Project name	Project PI
42	2022.01/0188	National University of Life and Environmental Sciences of Ukraine	Scientific substantiation returning of decommissioned radioactive contaminated land of the Chernobyl nuclear power plant 2nd zone for food potential replenishment of Ukraine	Lazariev Mykola Mykhaylovych
43	2022.01/0001	National Science Center "Kharkiv Institute of Physics and Technology" of the National Academy of Sciences of Ukraine	Development and implementation of plasma technologies of low-temperature sterilization and disinfection for military and civilian medicine	Garkusha Igor Evgeniyovych
44	2022.01/0066	V.E. Lashkaryov Institute of Semiconductor Physics of the NAS of Ukraine	Development of nanocomposite material technology for highly efficient absorption of electromagnetic radiation	Evtukh Anatoliy Antonovych
45	2022.01/0170	Oles Honchar Dnipro National University	Justification of aerodynamic and design parameters of a high-speed wing-in-ground craft	Dreus Andrii Yuliovych
46	2022.01/0099	Karpenko Physico-Mechanical Institute of the National Academy of Sciences of Ukraine	Development of the methodology for assessing the serviceability of existing gas pipelines to improve the operational stability of the energy system of Ukraine under green hydrogen transportation	Zvirko Olha Ivanivna
47	2022.01/0142	National Transport University	Development of a load model based on the actual parameters of heavy vehicles to determine the load-carrying capacity of highway bridges during their rebuilding and operation in the war and post-war periods	Slaviska Olena Serhiivna
48	2022.01/0064	Ivan Franko National University of Lviv	Metal hydrides based on modified magnesium alloys for modern high-capacity hydrogen storage systems	Volodymyr Pavlyuk Vasyl'ovych
49	2022.01/0168	Taras Shevchenko National University of Kyiv	Environmentally safe piezo/ferroelectric flexible nanocomposites for converting mechanical load into light and electrical energy	Lazarenko Maxim Myhailovych

№	Project number	Institution (grantee)	Project name	Project PI
50	2022.01/0094	B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine	Thermal imaging study of soft tissues with thermal injury and mathematical modeling of the processes accompanying it	Shevchenko Sergiy Nikolayevich
51	2022.01/0087	State Scientific Institution "Institute for Single Crystals" of the National Academy of Sciences of Ukraine	Development of components of antimicrobial drugs to increase the effectiveness of their action and prevent resistance of microorganisms	Lipson Victoria Victorivna
52	2022.01/0014	National Technical University «Kharkiv Polytechnic Institute»	Development of an experimental sample of electronic equipment film protection element against pulses of electromagnetic radiation	Zaitsev Roman Valentinovich
53	2022.01/0017	O.M.Beketov National University of Urban Economy in Kharkiv	Development of methodological and instrumental support for Agile transformation of the reconstruction processes of medical institutions of Ukraine to overcome public health disorders in the war and post-war periods	Chumachenko Igor Volodumurovich
54	2022.01/0010	Berdyansk State Pedagogical University	Design of inclusive educational environment of higher education institution	Hurenko Olha Ivanivna
55	2022.01/0021	Ukrainian State University of Science and Technologies	Scientific justification of the introduction of the European track on the territory of Ukraine in the post-war period	Tiutkin Oleksii Leonidovych
56	2022.01/0145	National Scientific Centre “Institute of Agrarian Economics” of the National Academy of Sciences of Ukraine	Develop methodical approaches to calculating losses, assessing the impact of military aggression and compensation policy on the development of agrarian entrepreneurship	Pugachov Mykola Ivanovych

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57	2022.01/0144	V.N. Karazin Kharkiv National University	Implementation of the "Public Participation 2.0" concept for the reconstruction of the city of Kharkiv in the war and post-war periods	Dziundziuk Viacheslav Borysovych
58	2022.01/0098	Ivan Ziaziun Institute of Pedagogical Education and Adult Education of the National Academy of Sciences of Ukraine	Maximizing the effectiveness of blended learning resources in higher pedagogical education institutions during the War and Post-War recovery of Ukraine	Kotun Kyryl Vasyliovych
59	2022.01/0073	Sumy State University	Digital archiving of monuments as objects of public memorialization for the preservation of the cultural heritage of Ukraine.	Tatsenko Nataliia Vitaliivna
60	2022.01/0166	Ternopil Volodymyr Hnatiuk National Pedagogical University	Research on the development of social rehabilitation services for children with disabilities and their families at the level of territorial communities in the war and post-war periods	Slozanska Hanna Ivanivna
61	2022.01/0060	Academician Stashis Scientific Research Institute for the Study of Crime Problems of the National Academy of Sciences of Ukraine	Criminal law and criminological principles of counteracting the glorification of Russia's armed aggression in Ukraine	Batyrgareieva Vladyslava Stanislavivna
62	2022.01/0204	Academician Stashis Scientific Research Institute for the Study of Crime Problems, National Academy of Legal Sciences of Ukraine	Protection of human rights in the concept of transitional justice: the Ukrainian model	Pashkov Vitalii Mihailovich
63	2022.01/0061	Research center for industrial problems of development of the NAS of Ukraine	Creation of the production of synthetic liquid fuel from coal in Ukraine in the war and post-war periods	Khaustova Viktoriia Yevhenivna

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64	2022.01/0074	State Institution "Marian Dolishniy Institute of Regional Research" of the National Academy of Sciences of Ukraine	Youth Migration Losses: Simulation Technique and Scenario Forecasting in the Context of Preserving Human Potential for the Post-War Reconstruction of Ukraine	Vasyltsiv Taras Grygorovych
65	2022.01/0211	Institute of Electrodynamics of the National Academy of Sciences of Ukraine	Development of a mobile voltage generation system with variable parameters for monitoring the safety and reliability of high-voltage electrical equipment of power facilities of critical infrastructure of Ukraine	Shcherba Anatolii Andriiovych
66	2022.01/0019	E.O.Paton Electric Welding Institute of the National Academy of Sciences of Ukraine	Development of antimicrobial packaging biopolymer materials and technology of their welding for long-term food storage	Iurzhenko Maksym Volodymyrovych
67	2022.01/0107	Dnipro University of Technology	A resource-saving technology development for mining and processing of non-metallic mineral raw materials in the war and post-war periods	Saik Pavlo Bohdanovych

The Call
Cambridge - NRFU 2022.
Individual research (developments) grants for researchers in Ukraine (supported by the University of Cambridge, UK)

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1	2022.02/0004	National Science Centre "Kharkiv Institute of Physics and Technology"	Investigation of the possibility of using bent crystals to deflect charged particles at electron-positron colliders	Kyryllin Igor Volodymyrovych
2	2022.02/0048	Luhansk State University of Internal Affairs named after E.O. Didorenko	Rationalization of Combating Crime in Ukraine	Karchevskyi Mykola Vitaliovych
3	2022.02/0046	Luhansk State University of Internal Affairs named after E.O. Didorenko	Criminal Policy of Ukraine under the Influence of Factors of Military Nature and Its Reflection in Expert Opinion	Pysmenskyi Yevhen Oleksandrovych
4	2022.02/0022	National Science Center "Kharkov Institute of Physics and Technology"	Simulation of high-frequency plasma heating in the Joint European Torus nuclear fusion facility (Great Britain)	Grekov Dmytro Leonidovych
5	2022.02/0052	O.I. Akhiezer Institute for theoretical physics of the NAS of Ukraine	Dual Models of Kerr black holes in flat and curved spacetimes	Nurmagambetov Oleksiy Juriyovych
6	2022.02/0054	National Aerospace University «Kharkiv Aviation Institute»	Theory development for designing autonomous and non-autonomous helicopter systems of surface elevation measurements for safe landing in different weather conditions	Zhyla Semen Serhiyovych

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7	2022.02/0062	National University Odesa Law Academy	Legislative reform of agricultural support as a guarantee of food security in Ukraine in war and post-war conditions	Hryhorieva Khrystyna Antonivna
8	2022.02/0007	Kherson State University	Resistance of epiphytic lichen communities in old-growth and primeval forests of the Ukrainian Carpathians to global climate changes and regional management	Khodosovtsev Olexander Yevgenovych
9	2022.02/0036	National Science Center Kharkov Institute of Physics and Technology of the NAS of Ukraine	Investigation of high-frequency discharges for wall conditioning of toroidal fusion devices	Kovtun Yurii Viktorovych
10	2022.02/0008	National Aerospace University «Kharkiv Aviation Institute» named by M.E.Zhukovskiy	Analysis of the strength of high-power Turbogenerator assembly units to ensure their reliable operation under the influence of supercritical loads to ensure the energy security of Ukraine during martial law	Tretiak Oleksii Volodymyrovych
11	2022.02/0045	Sociology School of V.N. Karazin Kharkiv National University	Social Effects and Challenges of Distance Learning in the Higher Education of Ukraine: from COVID-19 to the War	Boiko Dmytro Mykolayovych
12	2022.02/0001	Berdyansk State Pedagogical University	Design and Research of Oxide Heterostructures for Portable Solar Cells	Suchikova Yana Oleksandrivna