

## CONDITIONS

**for the National Research Foundation of Ukraine to hold a call of projects for the implementation of research and development**

**“Cutting-edge investigations in mathematical, natural and technical sciences “**

### I. GENERAL INFORMATION ABOUT THE CALL

**1.1. The name of the call** - “Cutting-edge investigations in mathematical, natural and technical sciences”

**1.2. Purpose of the call** - funding of the best research projects aimed at solving fundamental and topical applied problems of mathematical, natural, technical, biological, agricultural and medical sciences (fields of knowledge 09-22, 27 according to the list defined by the Resolution of the Cabinet of Ministers of April 29, 2015 № 266).

<https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#Text>

Call selection is carried out in accordance with the Procedure for call selection and financing by the National Research Foundation of projects for the implementation of research and development, approved by the resolution of the Cabinet of Ministers of Ukraine of December 27, 2019. 1170.

**1.3. Thematic areas of the call** - call of collective projects in the areas of research related to the implementation of basic and applied research and development in the field of mathematical, natural, technical, biological, agricultural and medical sciences. (areas of knowledge 09-22, 27 in accordance with the list defined by the Resolution of the Cabinet of Ministers of April 29, 2015 № 266).

<https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#Text>

**1.4. Themes of projects** must correspond to at least one of the priority areas of science and technology development (in accordance with Article 3 of the Law of Ukraine “On Priority Areas of Science and Technology Development” <https://zakon.rada.gov.ua/laws/show/2623-14#Text>) and at least one of the **thematic areas** of the call, namely:

1) basic research in the field of mathematical, natural, technical, biological, medical and agricultural sciences;

2) applied research and scientific and technical (experimental) developments in the field of mathematical, natural, technical, biological, medical and agricultural sciences

Works whose content is a state secret (according to the Law of Ukraine “On State Secrets”) are not accepted for consideration at the call.

**1.5. Duration of projects to be selected based on the results of the call:**

Types of projects by deadlines:

1) projects with a deadline of 2022-2024 (4 intermediate stages)

2) projects with a deadline of 2022-2025 (6 intermediate stages)

(The start of project implementation is planned from June 2022; the implementation of projects in 2023, 2024 and 2025 will be carried out taking into account and in accordance with the budget revenues in the respective year).

The intermediate stage of project implementation may not exceed 6 months.

\*The duration of project intermediate stages for 2023, 2024 and 2025 is to be planned taking into account the deadlines for processing the reporting documentation provided by the Grant Recipient to confirm the implementation of the relevant intermediate stage of the project (14 calendar days from the end of each intermediate stage). The duration of the intermediate stages of the project implementation for 2023, 2024 and 2025 planned in the application can be adjusted at the time of concluding the research and development contract with the help of grant support, taking into account and in accordance with budget revenues in the respective year.

#### **1.6. The total amount and basic information on the procedure for financing research and development (projects) that will be selected based on the results of the call**

Total funding for the contest in 2022 is up to **UAH 294 905 500** (according to the revenue in the relevant year).

The maximum amount of funding for one project in 2022 (1 intermediate stage) is UAH 26.5 million; up to UAH 25 million of this amount may be provided for the purchase of scientific equipment if such equipment is reasonably necessary for the project, and up to UAH 1.5 million may be all other cost items.

The maximum amount of funding for one project in 2023 (2 intermediate stages) is UAH 3.15 million, in 2024 it is UAH 3.3 million for 2 intermediate stages or UAH 1.65 million for stage 1, in 2025 (1 intermediate stage) - 1.75, and the purchase of scientific equipment for 2023, 2024 and 2025 can not be planned.

The maximum amount of funding for a project with a deadline of 4 intermediate stages: 2022-2024 is UAH 31.3 million, a project with a deadline of 6 stages: 2022-2025 - UAH 34.7 million

The planned total amount of funding for the call is from UAH 384.9 million to UAH 1 billion 903.9 million.

Participants must provide proof that they have fulfilled the condition that a project submitted for participation in the call cannot be simultaneously submitted for participation in another call in order to receive funding from the budget, as well as in the case when such a project is funded or funded at the expense of budget funds based on the results of another call, including those conducted by the Ministry of Education and Science or other entities.

The conditions and procedure for financing projects depend on the amount of budget allocations provided in the state budget for the relevant year to finance the activities of the National Research Foundation of Ukraine (hereinafter - the Foundation).

The grant is provided to the grant recipient in the amount of full or partial cost of works required for the project.

Full funding is provided in the case of a project that is not funded from other sources. Partial funding is subject to the implementation of a project that is simultaneously funded from several sources. In this case, the Foundation determines the specific scope of work and the amount of financial support that will be provided by the Foundation for the project, taking into account the total estimated cost of the project and the amount of financial support provided from other sources.

Projects are financed by the grantor gradually transferring funds from its registration account to the grant recipient's accounts in accordance with the Research and Development Agreement with grant support (Agreement) concluded between the Foundation and the winning organization (grant recipient), in accordance with the Calendar Plan and Schedule of funding for the research and development project, within the funding actually received by the grantor.

Unused during the relevant stage of project implementation amounts are subject to return to the NRFU's registration account within five working days after the completion of the intermediate stage of project implementation.

All costs for each stage of project implementation must be incurred before the completion of the relevant stage of project implementation.

Under this call, the Foundation's grant funds may be provided for the following cost items:

**1) Direct costs:**

- remuneration of the supervisor and executors of the project;
- payroll;
- materials required for the performance of works, except for equipment and facilities;
- equipment and facilities necessary for research;
- business trip expenses (in accordance with current regulations);

**2) Indirect costs**

The total amount of **indirect costs** (costs that are not directly related to research and development (hereinafter - R & D), but are necessary to ensure the full implementation of R & D) may not exceed 15% of the total cost item "Direct costs" except for equipment costs.

Such costs may include:

- payment of utility costs associated with the implementation of research;
- payment of operating costs associated with the implementation of research;
- remuneration of staff, in particular, employees of financial services, employees of legal services, etc., who will be involved in servicing the contract for research and development through grant support. Such costs may not exceed 30% of the total cost of "Indirect costs".

**3) Other costs (if necessary)**

- costs that are not reflected in the above cost items, but are necessary for R & D, in particular the cost of services (except utilities). This cost item may include: costs for publications, obtaining patents, translation, rental of scientific equipment, costs for access to databases, libraries and more.

- 4) **Project implementation costs by the subcontractor (if necessary)** - R&D costs that cannot be performed by the employees of the call participants / grant recipient's executors or the grant recipient's available equipment are incurred on a contractual

basis by other enterprises, institutions and organizations regardless of ownership. The total amount of the cost item "Costs for the implementation of the project by the subcontractor / subcontractors" in total may not exceed 30% of the total cost of the project except for equipment costs.

Note: see *"Methodological recommendations for cost planning on the application for grant support and the agreement on the implementation of research and development through grant support of the National Research Fund of Ukraine."*

Expenses for all items must be justified.

If the project provides for the purchase of equipment and facilities worth more than 200 thousand UAH per unit, the application must contain a detailed feasibility study of the need to purchase it for the project implementation, namely:

- 1) confirmation that the equipment and facilities planned for the purchase are not available to the call participant;
- 2) detailed justification of the need, suitability and effectiveness of the use of such equipment and facilities for the planned research (development), taking into account the impact of the latter on the research capacity of the call participant;
- 3) description of the main characteristics of the equipment and facilities required for research (development);
- 4) detailed confirmation of availability of the necessary conditions for installation, operation and maintenance of such equipment and facilities (premises, maintenance of the required temperature / lighting / humidity / other conditions in it, appropriate qualified technical personnel, etc.) by the participant. If the equipment requires specially prepared premises / conditions - a description of the funds for which these works will be performed);
- 5) if the application provides for the purchase of equipment and facilities outside Ukraine, it is necessary to provide a justification for the impossibility of purchasing such equipment in Ukraine and the possibility of its delivery from abroad in due time;
- 6) a description of the prospects for the use of equipment and facilities that are planned to be purchased after the completion of the project;
- 7) commercial proposals (not less than 2 different suppliers) with details of the cost, terms and conditions of delivery of equipment with reference to the websites of suppliers are attached to the feasibility study. If the equipment is unique (has no analogues on the market), and in the absence of the opportunity to provide two commercial proposals, a justification is provided (documentary evidence of lack of competition in the market for such equipment);
- 8) if the project envisages the purchase of equipment and facilities with a total value of more than UAH 3 million, the feasibility study must contain information on the availability of similar equipment in other institutions of Ukraine;

9) if the project provides for the purchase of equipment and facilities with a total value of more than UAH 10 million and which can potentially be used collectively, the feasibility study should contain information on specific measures to ensure the collective use of this equipment after the project;

If the project envisages the purchase of equipment and facilities worth more than UAH 200,000 per unit, employees of financial services, structural units responsible for procurement (tenders) and other interested units of the call-participant's institution must be involved in the preparation of the feasibility study.

*Note 1: Feasibility study for the purchase of equipment and facilities for the project is signed by the head of the institution participating in the call, the head of the financial department of the institution participating in the call and the project supervisor.*

*Note 2: items 1-7 are mandatory for all applications, which provide for the purchase of equipment and facilities worth more than 200 thousand UAH per unit, items 8-9 are filled in if necessary.*

After announcing the results of the call, the winner submits a declaration (if the project provides for the purchase of equipment worth over UAH 3 million), in which the head of the winning institution and the project supervisor confirm that the project will be implemented in the winning institution in full, according to application for grant support; the institution has the material and technical base, organizational resources and staff, which allows to ensure the implementation of the project in full; the equipment to be purchased at the expense of the grant will be used for its intended purpose (in order to perform the tasks under the Project and implement the Project in full).

Upon completion of each of the intermediate stages of the project, defined in the Research and Development Agreement, the grant recipient submits to the Foundation scientific reports on the interim results of the project and financial reports on the use of budget funds, as well as other documentation provided for in the Agreement concluded between the Fund and the grantee which are a prerequisite for deciding to continue or terminate grant support of the project.

The decision to extend or terminate the grant support is made by the scientific council of the Foundation on the proposal of the relevant scientific council of the section of the Foundation. Based on the results of the work and within the deadlines specified in the Agreement, the grant recipient sends to the Foundation:

- scientific report on the interim results of the Project, prepared in accordance with DSTU 3008: 2015 "Information and documentation. Reports in the field of science and technology. Structure and rules of design" - in electronic form and in one paper bound copy;
- financial report on the use of budget funds - in electronic form and in one paper copy;
- other documentation provided for in the Agreement concluded between the Foundation and the Grant Recipient.

The reports are considered and approved by the scientific council of the Foundation. Approval of these documents by the Scientific Council is the basis for signing the Project Implementation Act.

The Grant Recipient also submits an annotated report on the work performed within the project, which together with the report on the use of budget funds within the project is posted on the official website of the Foundation within five working days after approval of the reporting documentation by the Scientific Council.

Within all projects of the Foundation in which the supervisor and any executor participates in the relevant year, the maximum monthly salary of the supervisor and each executor may not exceed 10 minimum wages in Ukraine, set at the beginning of the year in which the relevant payment is to be committed. The project estimate should indicate the employment (by month) of the supervisor and each project executor.

At the end of the calendar year, the Grant Recipient submits a scientific report on the project implementation and a report on the use of budget funds. The reports are considered and approved by the scientific council of the Foundation.

The following cannot be financed by grant funds: costs not directly related to the project implementation (in particular, payment for intermediary services, purchase of goods, performance of works, provision of services that are not related to the project implementation); payment for goods, works and services that were or will be financed from other sources before or after signing the contract; maintenance costs of institutions and organizations, including those involved in the project.

## II. REQUIREMENTS FOR CALL PARTICIPANTS

**2.1. General requirements.** The participants of the call can be higher education institutions and scientific institutions. Teams of project authors (supervisor and executors) consisting of 2 to 10 scientists have the right to submit applications for grant support (application). The number of young scientists in the team of authors may not be less than 1 with a team of authors from 2 to 4 people inclusive, less than 2 with a team of authors from 5 to 7 people inclusive, and less than 3 with a team of authors from 8 to 10 people inclusive.

*Note: a young scientist is a person under the age of 35 at the time of the call who has a higher education not lower than the second (master's) level, or a person under the age of 40 at the time of the call who has a doctorate or is studying for a doctorate.*

The application may additionally provide for the involvement of up to 3 assistants from among young scientists and students, without specifying their names; such assistants are not considered as members of the project authors, but the need to involve them (indicating the number of persons) must be specified in the application.

The team (project authors) may consist of scientists representing one institution (organization), as well as scientists working in different institutions (organizations) including subcontractors. One individual may not be represented in more than one application submitted to this call.

The research supervisor of the project should be a scientist working at the main place of work in the institution / organization / enterprise that applies for participation in the call.

The supervisor and at least one project executor must have a degree obtained or recognized in Ukraine, scientific publications in periodicals indexed by Scopus or WoS.

One individual cannot be represented in more than two projects that are winners of the Foundation's calls and are funded by grant support from the NRFU.

Executors of the project cannot work in a foreign institution at the main place of work.

Employees of the Foundation's management, members of the Foundation's Scientific Council, the Scientific Committee of the National Council for Science and Technology Development, members of the call commission and experts involved in conducting scientific and scientific-technical examination of projects under this call, as well as family members of these persons.

Project supervisor is responsible for the accuracy of the information contained in the application and the documents attached to it. The consequence of providing inaccurate information is the withdrawal of the project from the call.

*Violation of these requirements is the basis for rejecting all applications, where the person who violated the above requirements is presented.*

**2.2. The project supervisor** can be only a scientist who simultaneously meets the following criteria:

- has a scientific degree obtained or recognized in Ukraine (information on the recognition of a scientific degree in Ukraine must be indicated in the CV of the supervisor);
- has a Hirsch index (according to Scopus):

not less than 7 for a supervisor under the age of 35 inclusive,

not less than 8 for a supervisor aged 36-37;

not less than 9 for a supervisor aged 38-39;

not less than 10 for a supervisor aged 40-41;

not less than 11 for a supervisor aged 42-43;

not less than 12 for a supervisor aged 44-45;

not less than 13 for a supervisor aged 46-47;

not less than 14 for a supervisor under the age of 48 and over;

*Note 1: The age of the supervisor is taken into account at the time of start of submitting applications.*

- is the author (or co-author) of at least 5 publications for the period 2016-2021 or at least 12 publications for the period 2011-2021 in periodicals classified as the first (Q1) and second (Q2) quartiles according to the Scimago classification. The number of co-authors in each of the submitted publications should not exceed 15 people.

*Note 1: The application **must** contain information (web links to publications and a profile in Scopus) confirming that the supervisor meets the above criteria.*

*Note 2: The quartile to which the journal belongs is determined by the Scimago Journal & Country Rank (scimagojr.com) at the time of publication. For publications published in 2020 - 2021, the quartile is determined by the indicator of the last year for which this quartile is determined; if the journal has two versions - electronic and paper, and the dates of publication in these versions differ by year, the date of publication is set in favor of the author of the application.*

The scientific supervisor and executor of the project **cannot** be a scientist who previously participated as a supervisor in a project funded by the Foundation and whose grant support was terminated by the decision of the Scientific Council of the Fund due to non-fulfillment or improper fulfillment of the terms of the agreement on the implementation of scientific research and development at the expense of grant support.

### 2.3. Features of project implementation

During the project implementation, the research supervisor or project executors may work in foreign institutions with the receipt of monetary remuneration (compensation) for no more than three months in total per year and during this time may not receive remuneration and / or other payments from the Foundation's grant funds. In such circumstances, the project supervisor must inform the Foundation of the terms and conditions of such work.

A project submitted for participation in the call may not be submitted simultaneously for participation in another call for the purpose of obtaining funding from the budget, as well as if such a project is already or was funded from the budget as a result of another call.

If the main objectives of the project fully or partially coincide with the main objectives of other projects that are not funded by the Foundation, information about this should be provided in the application, indicating the relevant projects, objectives, sources and amounts of funding.

The indicator of the implementation of each intermediate stage should be a scientific and / or scientific and technical result (see paragraphs 22, 27 of Article 1 of the Law of Ukraine "On scientific and scientific and technical activities").

All publications and other scientific and scientific-technical products submitted as part of the reporting documentation must comply with the Terms of Reference and the Project Schedule. Publications, official announcements, information for the media, social networks, other open sources and speeches at scientific events to present the study should indicate:

- the fact of its financing by the National Research Foundation of Ukraine from the state budget;
- project number and name.

## III. CRITERIA FOR SELECTION AND NUMERICAL EVALUATION OF PROJECTS

The selection of projects is carried out in accordance with the procedure specified in the [Procedure for consideration and examination of projects for research and development submitted to the National Research Foundation of Ukraine for participation in call selections](#), approved by the Scientific Council of the National Research Foundation of Ukraine (Minutes of the meeting № 25 of June 29, 2021).

### Algorithm for forming the final numerical evaluation (rating score) of applications

Curators analyze the set of expert opinions on the project and report on the results on the Panel meeting. For each project, the indicator R of the discrepancy of the scores  $S_1$ ,  $S_2$  and  $S_3$ , given by three experts: ,

$$R = \frac{SD}{S} \cdot 100\%,$$

where  $S$  - the arithmetic mean of the score, i.e.

$$S = \frac{S_1 + S_2 + S_3}{3},$$

SD - standard deviation:

$$SD = \sqrt{\frac{(S_1 - S)^2 + (S_2 - S)^2 + (S_3 - S)^2}{3}}.$$



1. If the discrepancy index R does not exceed the critical value of 20%, the final numerical score of the application is defined as the arithmetic mean S of the expert scores.
2. If the discrepancy rate exceeds the critical value of 20%, then:
  - a) each member of the panel, ( $j = 1, \dots, N$ , where N – number of panel members) determines the degree of validity of  $k_{ij}$  of each of the expert assessments, in points from 1 (bad) to 5 (good);
  - b) the final rating score of the application is calculated as the weighted average of the expert scores:

$$S = S_1\beta_1 + S_2\beta_2 + S_3\beta_3, \quad ,$$

where

$$\beta_i = \frac{\sum_{j=1}^N k_{ij}}{\sum_{i=1}^3 \sum_{j=1}^N k_{ij}}, \quad i = 1, 2, 3.$$

The order of priority and coefficients of individual criteria - see § VIII of the Terms.

#### **IV. CONDITIONS, TIME AND PLACE OF THE CALL**

The terms of the call are specified in all paragraphs of this document, compliance with which is mandatory.

The call is held 01.10.2021 to 07.04.2022.

Venue of the call: Kyiv, street Borys Hrinchenko, 1

#### **V. PROCEDURE FOR ACCEPTANCE (RECEIPT), REGISTRATION AND PRELIMINARY CONSIDERATION OF APPLICATIONS**

The documents are submitted in electronic form by filling in the application for grant support on the official website of the Foundation ([https // nrfu.org.ua](https://nrfu.org.ua)) in Ukrainian and English (using the automated system "NRFU Project Calls").

Replacement or clarification of the submitted documents by the participant of the call after the deadline for submission of applications is not allowed.

To apply, the project supervisor and project executors must pre-register on the Foundation's official website. The identification of the applicant is carried out during registration by using a qualified electronic signature (QES).

The participant has the right to withdraw the application before the deadline for its submission, about which the project supervisor notifies the call commission by e-mail to [support@nrfu.org.ua](mailto:support@nrfu.org.ua)

Preliminary consideration of the application regarding compliance with the requirements for its execution, completeness and accuracy of the submitted information is carried out by the tender commission (with organizational and technical support of the Foundation) within 5 (five) working days after the deadline.

The application may also be rejected during the preliminary consideration on the basis of its inconsistency with the thematic direction and purpose of the call.

**Grounds for rejection of the application on formal grounds:**

- Non-compliance of the submitted project with the purpose, subject or conditions of the call (justification of such compliance must be provided in the text of the application).
- Inconsistency of the application submitted by the participant with the form provided by the terms of the tender.
- The participant submitted an incomplete package of documents or the amount of documents exceeds the established requirements.
- The application does not contain the required information provided by the terms of the call.
- The participant submitted inaccurate information.
- The project supervisor and / or executor is represented in more than one application submitted to the call.
- Absence or non-compliance of the feasibility study for the purchase of equipment and facilities with the terms of the call (if the project provides for the purchase of equipment and facilities worth more than UAH 200 000 per unit).

**List of documents to be submitted by the participant together with the application:**

- The application for grant support is submitted electronically (in Ukrainian and English) and certified by the electronic digital signature of the project supervisor.
- Consent of the authors of the project for its implementation (for which a mark is affixed through the personal account of the executor using an electronic digital signature) \*
- Consent of the head of the organization / institution / enterprise to implement the project (scanned copy of the consent signed by the head of the organization / institution / enterprise in PDF format) (in Ukrainian) \*
- Consent of the head of the subcontractor to implement the project (scanned copy of the consent signed by the head of the organization / institution / enterprise in PDF format) (in Ukrainian) \*
- Certificate (in Ukrainian) from the place of work of the project supervisor stating that the project manager works at the main place of work in the organization / institution / enterprise on whose behalf the application is submitted (scanned copy of the consent signed by the head of the institution in PDF format) \*
- Statement signed by the head of the participant on compliance of the call participant with paragraph 5 of the criteria for assessing the eligibility of state aid to economic entities for research, technical development and innovation, approved by the Cabinet of Ministers of Ukraine dated February 7, 2018 № 118 (in Ukrainian) \*
- Feasibility study of the need to purchase equipment and facilities (in Ukrainian, scanned copy in PDF format) signed by the head of the institution-participant of the call, the head of the financial department of the institution-participant of the call and the project supervisor (if the project provides for the purchase of equipment and facilities worth more than 200 thousand UAH per unit) \*

\* By the time of signing the Agreements with the winners of the call, these documents must be submitted to the Foundation in paper form (originals, certified by signatures and seals).

## **VI. TERMS OF CONSIDERATION OF APPLICATIONS AND CONDUCTING SCIENTIFIC AND SCIENTIFIC AND TECHNICAL EXAMINATION OF PROJECTS AND SUMMARIZATION OF THE CALL**

Date and time of the beginning of submission of applications: **12.10.2021, 00:01** Kyiv time

Date and time of completion of applications: **16.11.2021, 23:59** Kyiv time

Conducting scientific and technical expertise and summing up the call: up to **07.04.2022**.

Information about the results of the call is posted on the official website and includes:

- 1) the decision of the Scientific Council of the Foundation on the approval of the results of the call;
- 2) a list of projects recommended for implementation at the expense of grant support from the Foundation;
- 3) the amount of funding for projects recommended for implementation through grant support from the Foundation;
- 4) rating list of projects with indication of points received by each project.

A text study, which estimates the results of scientific and technical expertise, that the project received is sent to the call participants via email.

After the Foundation decides on the grant, the Foundation and the winner of the call enter into an agreement on research and development through grant support, which defines all the necessary conditions for the project, including the responsibility of the Grant Recipient and the application of penalties for non-performance or late implementation of their obligations.

The term of concluding the Agreement shall not exceed 30 calendar days from the moment of making the decision on the grant award. If the Agreement between him and the Foundation is not concluded within the specified period due to the fault of the winner, it is considered that the winner has refused to further implement the project.

Upon completion of the project, the Grant Recipient submits to the Foundation a final report on the project implementation. Information on the results of the project together with the final report and the report on the use of budget funds within the project is posted on the official website of the Foundation within five working days.

## **VII. Number of experts conducting scientific and technical expertise of a project**

Scientific and scientific-technical examination of the project submitted to the call "**Cutting-edge investigations in mathematical, natural and technical sciences**" is carried out by three experts, at least one of whom is a foreign expert and at least one - Ukrainian.

## **VIII. PROCEDURE FOR PRIORITY AND COEFFICIENTS OF CERTAIN CRITERIA FOR NUMERICAL EVALUATION OF PROJECTS**

1. Projects are evaluated by independent experts according to the form and criteria approved by the Scientific Council of the Foundation.
2. Each project is evaluated on the following aspects with appropriate weights:
  - The quality of the planned research – 0,2;

- Significance of the project - 0,1;
  - Quality and realism of the proposed project implementation plan – 0,3;
  - Scientific achievements of the project executors – 0,4.
- Each aspect includes several evaluation criteria that have their own weights.
  - Evaluation of each criterion is carried out by an expert on a 5-point scale with the obligatory provision of appropriate justification.
  - The number of points for an aspect is calculated as the arithmetic mean of the weighted points according to the evaluation criteria for this aspect.
  - The total number of project points is calculated as the arithmetic mean of the weighted points by aspects, multiplied by 20.
  - During the evaluation of the project for each criterion a 5-point scale with the following value of points is used:

|                          |  |
|--------------------------|--|
| <b>0</b>                 | The project does not meet the criteria or can not be assessed due to lack of or incomplete information provided by this criterion. |
| <b>1. Bad</b>            | Information on the criteria evaluated are not presented properly or it has critical flaws  |
| <b>2. Satisfactorily</b> | In general, the project meets the criteria, but there are significant shortcomings.  |
| <b>3. Good</b>           | The project meets the criteria, but there are some shortcomings.   |
| <b>4. Very good</b>      | The project meets the criteria very well, but improvements are possible.   |
| <b>5. Perfect</b>        | The indicator fully meets the criteria.  |

The following criteria, weights and form are used to evaluate the project in the call "Cutting-edge investigations in mathematical, natural and technical sciences ":

| <b>Evaluation criteria</b>   | <b>Rating scale</b>   | <b>Weighting factor</b> |
|--|---|-------------------------|
| <p><b>1. The quality of the planned research</b></p> <p>This section provides an assessment of the justification of the research project, its focus on solving current (urgent) scientific problems, clarity of goal and objectives, their compliance with the current level of scientific achievements, novelty of scientific ideas, originality of scientific hypothesis, correct choice of methodology and research methods hypotheses.</p> | <p><b>From 0 to 5</b></p> <p>The number of points on the aspect is calculated as the arithmetic mean of the weighted points on the criteria</p> | <b>0,2</b>              |

|  |                               |     |
|--|-------------------------------|-----|
| <p><b>1.1.</b> Motivation and validity of the scientific concept:</p> <p>whether the current state of research and the problems that need to be solved are adequate and with appropriate references.</p> | 0-5                           | 0.3 |
| <i>Comments:</i>   |                               |     |
| <p><b>1.2.</b> Novelty of scientific ideas (including from the standpoint of interdisciplinarity if the research is multidisciplinary)</p>   | 0-5                           | 0.3 |
| <i>Comments:</i>   |                               |     |
| <p><b>1.3.</b> Clarity and relevance of the stated purpose and objectives of the study</p>   | 0-5                           | 0.2 |
| <i>Comments:</i>   |                               |     |
| <p><b>1.4.</b> Adequacy of the proposed approaches and research methods, their compliance with the purpose and objectives of the project.</p>  | 0-5                           | 0.2 |
| <i>Comments:</i>   |                               |     |
|  | <b>Average weighted score</b> |     |

|  |   |                   |
|--|---|-------------------|
| <p><b>2. Significance of the project for further development of science / technology / technology / society (according to the direction of the project)</b></p> <p>This section provides an assessment of the clarity of definition and argumentation of the prospects for further application of research results for the development of science and new technologies, as well as the possibility of implementing research results in the economic and social spheres. The completeness and potential efficiency of publication of research results, the possibility of commercialization of project achievements are taken into account.</p> | <p><b>From 0 to 5</b></p> <p>The number of points on the aspect is calculated as the arithmetic mean of the weighted points on the criteria</p> | <p><b>0,1</b></p> |
| <p><b>2.1.</b> Potential importance of expected results and acquisition of new knowledge, development of new approaches and technologies and / or their significance for solving current practical scientific / technical / social problems.</p>   | <p>0-5</p>  | <p>0.5</p>        |
| <p><i>Comments:</i></p>  |   |                   |
| <p><b>2.2.</b> Effectiveness and relevance of planned ways of publishing / using research results (expected professional publications, presentations at international scientific conferences, dissemination of research results to the public).</p>  | <p>0-5</p>  | <p>0.5</p>        |

|                  |                               |  |
|------------------|-------------------------------|--|
| <i>Comments:</i> |                               |  |
|                  | <b>Average weighted score</b> |  |

|  |   |            |
|--|---|------------|
| <p><b>3. Quality and realism of the proposed project implementation plan</b></p> <p>Within this section, the validity of the work plan and the clarity of intermediate goals, their logical sequence are assessed; clarity of the description of the planned tasks with the indication of concrete results which can be checked; consistency of complexity of tasks with their time frame; compliance of equipment and materials specified as necessary for the project implementation, implementation of its purpose and objectives; clarity of description of equipment and materials and adequacy of their price in the budget.</p> | <p><b>From 0 to 5</b></p> <p>The number of points on the aspect is calculated as the arithmetic mean of the weighted points on the criteria</p> | <b>0,3</b> |
| <b>3.1.</b> Validity of the work plan, compliance with the time frame of complexity of the formulated stages and tasks, clarity of intermediate goals, their logical sequence,   | 0-5   | 0.25       |
| <i>Comments:</i>   |   |            |
| <b>3.2.</b> Correspondence of material and technical base, equipment (available and planned) to the set task   | 0-5   | 0.25       |
| <i>Comments:</i>   |   |            |

|  |                               |      |
|--|-------------------------------|------|
| <b>3.3.</b> Balance and validity of the overall project budget   | 0-5                           | 0.25 |
| <i>Comments:</i>   |                               |      |
| <b>3.4.</b> Availability and validity of assessment of possible risks and anticipation of ways to prevent or resolve them. | 0-5                           | 0.25 |
| <i>Comments:</i>   |                               |      |
|  | <b>Average weighted score</b> |      |

|   |  |            |
|---|--|------------|
| <b>4. Scientific achievements of the project executors</b>  | <b>From 0 to 5</b><br>The number of points on the aspect is calculated as the arithmetic mean of the weighted points on the criteria | <b>0,4</b> |
| 4.1. Quality of publications of the project supervisor for the last 10 years.   | 0-5  | 0.3        |
| 4.2. Quality of publications of project executors for the last 10 years   | 0-5  | 0.3        |
| <b>4.3.</b> Balance of the team of executors: correspondence of the number of executors and the level of their qualification to the purpose and tasks of the project.                               | 0-5  | 0.2        |
| <b>4.4.</b> Participation of the project supervisor and executors in research programs funded by domestic and international organizations and institutions (including grants) for the last 5 years. | 0-5  | 0.2        |
|   | <b>Average weighted score</b>  |            |
|   | <b>Total project score: arithmetic mean of</b>   |            |



|  |   |  |
|--|---|--|
|  | <b>weighted points by aspects, multiplied by<br/>20</b> |  |
|--|---|--|

## IX. CONTACT INFORMATION

For information related to the call selection and submission of projects, please contact the Foundation's contact persons:

| Subject matter   | Contact department   |
|--|--|
| Questions on submission of projects in natural, technical sciences and mathematics | Department of grant support in the field of natural and technical sciences, mathematics and IT management of grant support<br><br>natsci.2021.01@nrfu.org.ua |
| Questions on submission of projects in biology, medicine and agricultural sciences | Biology, Health and Bioresources Grants Department<br>lifesci.2021.01@nrfu.org.ua  |

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For technical support, please contact e-mail address support@nrfu.org.ua

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*Note: These communication channels are open during working hours*

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## X. ADDITIONAL INFORMATION