هيئة تمويل العلوم والتكنولوجيا والإبتكار
Science, Technology & Innovation Funding Authority

Science, Technology & Innovation Funding Authority
www.stdf.org.eg

Guide for Applicants

Basic Sciences Research Grants

Chemistry – Mathematics – Physics

November (2020)

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Basic Sciences Research Grants (Objective)

Basic Science Research Grants are directed towards individual researches and group of researchers who are willing to participate in research in Chemistry, Mathematics, and Physics. It is expected that the funded research work will be directed towards innovative and cutting-edge fundamental research in these three areas.

The **Basic Science Research Grants** scheme is established in response to the needs of researchers in Egypt. Under this scheme, grants can be awarded for research projects in **Chemistry, Mathematics** and **Physics** either to individual researchers or to research groups. The objective of this call is to advance fundamental research work in Egypt and to identify and support existing endogenous expertise in basic and theoretical sciences.

The **Basic Science Research Grants** program aims to:

- Reinforce and promote theoretical research in basic sciences in Egypt;
- Strengthen Egypt's endogenous capacity in theoretical and fundamental basic sciences;
- Reduce the exodus of scientific talents and reverse brain drain by attracting talented Egyptian expatriates;
- Grow an ecosystem that will encourage the progress of Basic Science research in universities and research centers;
- Build and sustain units of scientific excellence in Egypt capable of achieving a critical mass of highly qualified and innovative theoretical scientists, whose work over time can be employed to address real-life challenges facing Egypt.
- Encourage multidisciplinary and cross-institutional theoretical research work.

Research Topics

Mathematics

1. Analysis
2. Combinatorics
3. Data Science
4. Graph Theory/Topology
5. Logic
6. Mathematical Physics
7. Mathematical Statistics
8. Modern Algebra
9. Number Theory
10. Optimization
11. Probability Theory/Stochastic Processes
12. Symbolic Computations

Chemistry

1. Materials Chemistry
2. Nano-Fabrication
3. Green Chemistry
4. Molecular Machines

5. Catalysts – A New Generation
6. Carbon and Nano-Structures for Energy Harvesting and Conversion

Physics
1. Particle Physics
2. Gravity and Cosmology
3. Astrophysics
4. Condensed Matter Physics
5. Nuclear Physics
6. Plasma Physics.
7. Nonlinear Optics
8. Quantum Computing and Quantum Information
9. Biophysics
10. Subwavelength Artificial Structures (including photonic and plasmonic materials)
11. Pule-Shaping and Ultra-Short Laser Pulses

II.1 Eligibility Criteria

An applying research team must be led by a distinguished researcher who is an Egyptian citizen and is affiliated with an Egyptian research entity (universities, research centers/institutes.. etc.). He/she should also hold a PhD degree and have to show good research experience (a high h-index for the PI is a favorable indication. In addition, other bibliometric indices may be considered). The research team operating within an Egyptian university or a research institution should consist of a Principle Investigator (group leader), plus at least another PhD-qualified researcher and a number of doctoral and master graduate students. For groups associated with universities including undergraduate students as researchers in their team is encouraged.

II.2 Submission Process

All applications must be uploaded on STDF website (www.stdf.org.eg) to which registration is required. Applicants are invited to submit proposals in the specified research areas of this call. The detailed proposal should be drafted according to the template and guidelines for preparing STDF proposals. Generally, the proposal should include the following sections:

- Cover Page
- Research team (Annex 1: Research team Information Table - Annex 2:CV of the principle investigator (PI) and all other members of the research team)
- Abstract written in English and Arabic
- Introduction and background information
- Objectives of the proposed work
- Description of the proposed research work including the methodology to achieve its objectives
- Evidence of former contributions of members of the research team to the proposal's topic. This may include a list of relevant publications of team members in the last five years
- Budget table (Annex 3: Budget format)
- Budget justification.
    - o Facilities, software and equipment needed
    - o Travels if needed.
    - o Cost of organization of schools, workshops and related activities

- Expected outcomes
- References
- Appendices (any additional documents)
- Acknowledgement form)
- Institutional endorsement letters

Together with the submitted proposal, it is preferred for the applicants to enclose:

- A list of five internationally recognized scientists in the field of the proposed research.

II.3 Budget Estimation

A grant of 2,000,000 -3,000,000 Egyptian Pounds is awarded to the accepted project in order to cover all costs required to accomplish the project during its entire period. The amount of fund depends on the specific areas of the call (Up to 2 Million for the mathematical projects and up to 3 Million for projects in the areas of chemistry or physics)

The period of the project is from two to three years. The full proposal must include a detailed budget in which all prices are given in Egyptian Pounds. Over estimation of the budget will be considered in the evaluation process. The applicants may refer to Annex 3 of the full-proposal: Budget format.

II.3.1 Eligible costs (Allowable)

The eligible direct costs for the research are the costs identified as specific costs directly linked to the performance of the research.

II.3.2 The Incentives of Team Members

Monthly incentives are granted to members of the research team, based on their role/assigned tasks and time dedicated to the project in accordance with STDF internal rules and regulations. Because of the theoretical nature of the topics included in this call, it is expected that half of the total budget could be used as incentives for members of the research team.

II.3.3 Travel Cost

The cost of stay in other countries is calculated according to STDF rules and regulations. Justification for travel should be provided in the proposal. Training in one of the advanced universities in the field is allowed for up to three months.

II.3.4 The Cost of Equipment and Software

The allocated amount for the purchase of equipment and software should be utilized for the purchase of new equipment, software licenses and facilities (with up to 20% of the total budget) that are directly related and necessary to the research project. The budget format in the proposal should be signed and stamped by the PI host institution.

II.3.5 The cost of Organization of Schools and Workshops

The allocated amount will be based on a favorable description of this activity that should be directed towards the promotion of the area of research specified in the proposal. The details of the activities and their cost should be listed in the proposal.

II.3.6 Indirect Costs

A total of 5% of the total budget of the project excluding the cost of equipment might be allocated as indirect cost that are payable to the researcher(s) host institution (where the researcher(s) is/are conducting the research work). Such indirect costs are payable for the usage of facility and infrastructure of the host institution and could cover the cost and salaries of administrative work.

II.4 Evaluation Criteria

Generally speaking, the funds are awarded based on the following criteria:

- Proposal scientific/technological/innovative quality (shall involve, but not limited to the following: comprehensible writing, added value and novelty, relative scientific expertise of researchers, adequate methodology, budgeting and proper costing, project management;
- Potential for growing an endogenous knowledge in the proposed field that will place Egyptian researchers at the forefront of this particular area;
- The potential of establishing an internationally well recognized group capable of advancing cutting edge research in the topics specified in this call.

Upon the eligibility check phase, eligible proposals are technically evaluated for final decision. Evaluation of proposals is carried out by STDF with the assistance of national / international independent experts. STDF staff ensures that the evaluation process is transparent, robust and fair, and in alignment with its rules and regulations.

II.5 Payment Procedures

When a project is approved by STDF, a contract agreement will be signed between STDF, the principle investigator (PI), and the host institute. The budget will be disbursed as installments. The number of installments depends on the duration of the project. The first installment will be disbursed at the beginning of the project. The other installments will be paid after the receipt and approval of the progress reports.

The disbursement of the final installment of the project (10% of the budget) is conditioned upon the delivery of the outputs specified in the proposal in the scheduled time (such as high-impact publications, submission of articles to international journal, student theses based on the work specified in the proposal, presentations in renowned international conferences, organizing meetings...etc.) which should be highlighted in the final report. The payment of the final installment is subject to the internal rules and regulations of STDF and can cover only the indirect costs as well as the remaining incentives.

II.6 Follow Up
A- Technical Reports

Biannual technical progress reports should be submitted according to STDF progress reports formats. The final report of the project should be submitted no later than two months after the official end date of the project, and should follow STDF final report format. together with an Achievements Report.

All submitted reports are evaluated by STDF and a feedback is sent to the project's PI and host institute.

For rejected follow-up reports, STDF has the authority to impose additional follow-up and monitoring progress reports totally independent from the regular way.

If the submitted progress/final reports show that the team did not achieve the set objectives as specified in the original proposal and/or the team is performing poorly, STDF will take all measures in order to stop the project and recover the budget allocated.

B- Financial Reports

Two reports are requested every year (biannually) signed and stamped from the Institution as well as all the expenditure vouchers.

III.   General Remarks and Conditions

- All proposals must be uploaded to the STDF website, proposals submitted by e-mail or send as hard copies will not be considered.

- All proposals must use the exact formatting requirements for the current call given in the attached Application Form. Failure to adhere to the exact format required will result in rejecting the proposal.

- All proposals MUST be in English Language.

- The application must include a signed and stamped Endorsement letter from the institution's legal representative as shown in the Application Form.

- Same proposal should not be submitted in more than one grant. (Duplicate submission of the same proposal is not allowed).

- Each PI can only submit a maximum of two proposals until notified with the evaluation results of his/her submitted proposals.

- At any time, a contracted STDF project team member should only be participating in a maximum of 3 projects (or a maximum of 2 projects as a PI/Co-PI).

- DO NOT submit proposals previously funded either by STDF or any other funding agency. Proposals deemed to be funded by other grants will be disqualified & applicants will be banned from submitting proposals to STDF.

- Any publications delivered as a result of STDF funded proposals, should acknowledge STDF funding in the publication.

- STDF's intellectual property rules (IPR) rules and regulations in addition to STDF code of ethics are applied to all submitted proposals.

- Foreign partners are allowed in this grant only as consultants given that the relevant security approval has been obtained, and only consultants' fees are allowed for those partners.

- Equipment purchased using STDF funds must be made available to all Egyptian researchers, provided that the project work is not disrupted.

- If more than one institution is involved it has to be clearly stated which institution is in charge and the role of each partner institution has to be specified.

- Extending a project's duration is not allowed. Only under very strict justified conditions shall STDF allow project extension, and any request for project extension will affect negatively STDF future decisions regarding the performance of the research team members.

- Having members from different departments or research institutes in the same research team is allowed and encouraged.

- Conflict of interest should be avoided in any proposal application.

- All proposals will be evaluated on a competitive basis.