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# **Innovation Grant-Youth (STDF-IGY) Future Technologies**

Science and Technology Development Fund

[www.stdf.org.eg](http://www.stdf.org.eg)

## **Call for Proposals**

**March, 2019**

## I. Introduction

The Science and Technology Development Fund (STDF) was established by the presidential decrees number 218- 2007 to strategically plan for the utilization of scientific research for economic and societal development. Within this mandate, this Innovation Grant (IG) is intended to support Egyptian innovators from the early stages of formulating concepts for novel technologies and new processes, to the stage of developing new technologies, processes and products.

## II. Grant Objectives

Future technologies are important in today's world because it serves many important aspects of modern society, like education, communication, business and scientific progress. Researchers worldwide have worked hard to improve technology consistently, to do various tasks, fast and effectively. Many nations have succeeded in building great infrastructure and achieve stupendous progress due to developing advanced technology. Nowadays, every nation strives to get the latest technology. Technological progress is vital in the fields of business, education, agriculture as well as health care.

Advanced technology developed by some of the best scientists and researchers in the world have totally changed the way businesses function. Machines have helped product manufacturing companies to produce quality products at low-cost and in huge quantities. This has increased their total turnover and the profit margins.

This grant is a fast track grant suggested to provide funding for research activities which contribute to the country's scientific research and technology development culture and infrastructure, and to improve the researchers' capabilities and the quality of research.

The objectives of the Innovation Grant include the following:

- Funding of a scientific innovation and its development till the development of prototype or product.
- Alleviating the technological risk in technology application.
- Supporting scientists with scientifically and practically established innovation.

- Supporting successful technologies to alleviate business and market risks.
- Enhancing and effectively transferring knowledge and technology to end-users, and building upon other STDF programs.

### III. Scope and Type of Activities

Under this call, “innovation” refers to:

- Technological product innovation: a new or improved product with considerably different characteristics from an existing one;
- Technological process innovation: adoption of new or improved production method, including methods of product packaging and delivery;
- New service or new method of service delivery.

The projects supported by this grant should be novel, unique, and clearly grounded in sound science and engineering principles, and offer reasonable potential for concrete applications of interest and value to the Egyptian economy and society.

This grant will:

- Support innovative research from all fields of future technologies;
- Promote leading-edge research that is linked to new ideas and concepts, and/or to the development of novel research instrumentation;
- Support technology development through prototyping or pilot-scale demonstration;
- Enhance technological innovation and improve competitiveness of the different economic sectors in Egypt;
- Provide wider access, extend and build partnerships, and strengthen links between academia and Industry; and
- Capitalize on excellent research opportunities that draw on the local, national, and international intellectual capital.

## IV. Grant Amount and Eligible Expenses

- A successful proposal will receive funding of up to **LE 1.5 million** over a maximum period of **three years**.
- Over estimation or under estimation of both budget and time will have a negative impact on the overall assessment of the proposal.
- Grant applications must include a justified detailed estimated budget in which all expenditures are given in Egyptian Pounds.
- Funding of selected proposals under this call is subject to availability of funds.

## V. Eligible Research Areas

- The grant covers projects in the field of the Future Technologies as follows;

<b>Engineering Sciences</b>	<b>Wireless sensor networks</b>
	- Sensor nodes
	- Optical sensors
	- Chemical sensors
	- Biosensor
	<b>Smart power grid</b>
	<b>Hybrid Vehicles</b>
	<b>Electronic Vehicles</b>
	<b>Intelligent buildings</b>
	<b>Robotics</b>
<b>3D printing</b>	
<b>Emerging Technologies</b>	<b>Environmental technology</b>
<b>Energy</b>	<b>Energy Harvesting</b>
	<b>High density batteries</b>
<b>ICT</b>	<b>Internet of things</b>
	<b>Cyber security</b>
	<b>Big data handling</b>
	<b>Monitoring</b>

## VI. Eligibility Criteria

The following eligibility criteria are applied on this grant:

- Any Egyptian researcher (PhD/MD holder) **age up to 40 years old**, affiliated to an Egyptian research entity (university, research institution/center...etc.) is eligible for funding in accordance with governing rules and regulations of governmental funding.
- The proposed innovation grant activities must be within the main areas mentioned above (Section III& V).
- The proposed activities shall be presented in the form of a well-planned project which addresses an important subject, and which has clearly defined objectives and desired outcomes, as well as a detailed methodology.
- The proposed activities are not funded by any other STDF funding grant or any other funding agency. Otherwise, the funded activities should be clearly stated and explained in the proposal.
- The budget must not exceed **1.5 Million L.E.**
- Research team members' age shall **not exceed 40 years old** and half of the research team members must be **up to 30 years old**.

The implementation period of the project must not exceed **36 months**.

## VII. Proposal Submission and Evaluation Process

All proposals must use the exact formatting requirements for the current call given in the relevant Application Form. All proposals must then be uploaded to the STDF website ([www.stdf.org.eg](http://www.stdf.org.eg)), to which registration is required. The proposals will be evaluated by independent experts, and STDF will ensure that the process is transparent, impartial and applicant-supportive. Proposals submitted to this grant will be subjected to two different levels of evaluation:

- i. Scientific and technical evaluation, and
- ii. Feasibility, validity and economical evaluation.

Assessments will be undertaken by independent scientists, industrialists, economists, and policy makers with special expertise in technology development. Applicants have to note that, if a proposal passes the scientific and technical evaluation, the PI of the proposal might be required to deliver a PowerPoint presentation of the proposal in front of a panel.

The **selection criteria** will be as follows:

- Novelty; the quality of the idea that makes it a new or unique approach.
- Technical merit; the soundness of the scientific and engineering principles on which the idea is based.
- Feasibility and validity.
- Potential impact; expected future impact on Egypt's innovation power, industry, economic development, and/or socioeconomic situation.
- Society and market need.
- An applied research plan with clear objectives, milestones and expected measurable outcomes.
- Governmental and/or private sector collaboration and investment interest.
- A track record of success in the field for the applying institution(s), the PI and the project team.

## VIII. Timetable

Launching date of the call: 19<sup>th</sup> of March, 2019

Deadline for application: 20<sup>th</sup> of April, 2019- 12:00 am

## IX. For inquiries:

Science and Technology Development Fund - STDF

Ms. Marwa Alaa; Program coordinator of the STDF-IG-Youth fellowships

E-mail: [marwa.alaa@stdf.eg](mailto:marwa.alaa@stdf.eg)

## X. Payment of Funds

When a project is approved by STDF, a funding contract will be signed by STDF, the Principal Investigator (PI) and the legal representative of the endorsing institution/center/university.

The budget will be disbursed on subsequent installments. The first installment will be disbursed at the beginning of the project. The following installments will be paid after the receipt and approval of the technical and financial progress reports.

The disbursement of the final installment of the project (10% of the budget) is conditioned by the delivery of the outputs mentioned in the proposal in the scheduled time (such as know-how (patent), product(s), prototype, Impacted International journal articles ...etc.) and subject to the internal rules and regulations of STDF.

## XI. Project Monitoring and Follow-up

### **Technical progress reports:**

Semi-annual progress reports should be submitted by the PI during the execution of the project, starting after 6 months of project start date. In general, all technical reports should be written using the standard STDF templates.

In cases where modifications in the research team and/or original work plan are necessary, such modifications must be pre-approved by STDF, and the progress reports should include a modified (updated) Gantt chart that takes the approved modifications into consideration.

### **Final Report and Achievements Report:**

Within one month following the official end date of the project, the “Final Report” together with an “Achievements Report” must be submitted, using the standard STDF templates for “final reports” and for the “Achievements Report”.

### **Evaluation of technical reports:**

All submitted reports are evaluated by STDF, and feedback is sent to project’s PI and host institute.

In the event of receiving a progress report that is rejected by evaluators, STDF has the authority to impose additional follow-up reports (totally independent from the regular progress reports stated before). In the event that the evaluators

of progress reports give a justified recommendation to terminate the project (for reasons including scientific misconduct by the PI, plagiarism, lack of seriousness, etc.), STDF reserves the right to terminate the project, in which case STDF will recover all funds and expenses paid prior to the project termination date.

### **Financial reports:**

According to the financial regulations of the government of Egypt, a financial report for the project must be submitted every three months. Copies of all expenditure vouchers must be attached. The reports, as well as all the attached expenditure vouchers, must be signed and stamped by the official seal of the endorsing institution.

## **XII. General Terms and Conditions**

The following terms and conditions apply to the grant:

- All proposals must be uploaded to the STDF website, proposals submitted by e-mail or sent 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 automatically deem the proposal ineligible.
- All proposals MUST be in English Language, Arabic is allowed only for proposals in the fields of Humanities and Social Sciences.
- 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).
- 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 IPR rules and regulations in addition to STDF code of ethics are applied on all relevant cases.
- 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 institution has to be specified.
- Extending a project's duration is prohibited, only under very strict justified conditions shall STDF allow any 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 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.

### XIII. Ethical Rules:

Applicants to STDF are expected to maintain a high level of scientific honesty and integrity in all aspects of their work. Applicants are expected to refrain from plagiarism, i.e. "the act of taking credit, or attempting to take credit, for the work of another" (quoted from the publication ethics policies for medical journals, at [www.wame.org](http://www.wame.org)). Applicants are also expected to avoid self-plagiarism or multiple submission of the same content in more than one document. Multiple reporting of the same data or results in various projects is also considered self-plagiarism and is strongly discouraged. Fabrication of data or results, or suppression of unexpected results is not accepted by STDF. STDF expects all research activities involving human subjects to strictly follow the bio-ethical guidelines.

Breaching the rules of research integrity will result in halting all research funding activities to the involved parties after thorough investigation and judgment by a specialized STDF committee. In addition, all proposals must abide by the following STDF rules:

#### **Multiple Submissions of a Project Proposal:**

At the time of submitting a project proposal to STDF, the PIs required to provide a statement (stamped and signed by his/her hosting institution) declaring that the submitted proposal has not been simultaneously submitted to STDF (neither under the same funding program, nor under any other STDF funding program) or to any other funding agency, and that the project proposal will not be re-submitted to STDF for funding (under the same, or any other STDF funding program), or to any other funding agency, until STDF has reached a decision to reject the original project proposal, and has notified the PI of its decision. The above restrictions apply to identical project proposals, as well as project proposals which have similar objectives, methodology, ...etc. as the current project proposal, and which may differ only in title and/or other minor details. The decision whether any two (or more) submitted project proposals are similar (and therefore constitute a breach of this condition) is solely the right of STDF.

In cases where STDF reviewers decide that, in its present form, the proposal cannot be recommended for funding, or that certain modifications are needed in order for the project to be considered for funding, the PI is allowed to re-submit the revised version of the project proposal only once (after making the suggested modifications, if any) in the subsequent cycle of the same funding program, or of any other STDF funding program. At the time of submitting the revised proposal, the PI is required to declare that an older version of the project proposal has

been previously submitted to STDF, and that the revised proposal is the only version of the proposal that is re-submitted for funding by STDF. Also, the revised proposal should include substantial modifications that scientifically distinguish it from the original proposal.

Failure to comply with the aforementioned conditions may result in a decision by STDF to ban any cooperation with the PI and/or the PI's institution.

### **Bioethical Considerations:**

Projects dealing with human subjects are required to satisfy the STDF requirements of bioethical aspects, and to comply with any other relevant laws. Such projects may include, but are not limited to, experiments on human subjects, testing of new therapeutic, preventive or diagnostic agents, handling human personal information, ...etc.

In such cases, it is mandatory that the PI presents an ethical clearance form approved from the ethical committee or institutional review board (IRB), before finalization of the project contracting process. In the case of absence of an IRB in the PI's institution, obtaining an ethical clearance from a national, regional or collaborating body will be subject to consideration and assessment by the STDF.

### **Bio-safety Considerations:**

Projects with bio-safety aspects, such as those dealing with genetically modified organisms (GMOs), should strictly adhere to the national bio-safety policies, which may require obtaining special permits and clearances from the relevant authorities.

### **Animal Protection Considerations:**

STDF strongly rejects the unnecessary exposure of animals to pain, distress or fatality during scientific experimentation. It is the responsibility of the PI and his/her institute that these principles are adhered to. In the case of unacceptable acts of cruelty against animals, the STDF has the right to immediately terminate/suspend the project activities, and to hold the PI accountable for such acts.

### **Obtaining Permits from Relevant Authorities:**

STDF has the experience that the processing of research proposals involving activities which require special permits from the relevant governmental (or otherwise) authorities may be delayed. In order to speed up the process of

handling the applications, the applicants are encouraged to obtain such permits before submitting their applications, and to include them in the project proposal. The following are examples of activities requiring approval from the authorities:

- Conducting surveys;
- Collecting data, or conducting any other research activities near the country's international borders, in the sea or on land;
- Sending genetic and biological resources outside the country;
- Ethical issues related to research on living matter (bio-safety, conservation of bio-diversity, research ethics, ... etc.);
- Involvement of or collaboration with foreign researchers in the research activities;
- Dealing with historical objects;
- Development of patents that may violate the intellectual property rights of other (existing) patent holders.

## XIV. Negotiation and Contract Signing

Negotiation and signing of the project's funding agreement will take place shortly after the announcement of the evaluation results. The intellectual property rights (IPR) issues will be a core part of the process and will be negotiated on a case-by-case basis.

Since the processing and evaluation of the submitted proposals entail significant expenditure of financial and human resources, it is highly discouraged for the PI to decline from continuation of the project after proposal submission. Requests asking for project discontinuation by the PI after proposal submission, following contract signing, or during the project life-time will be thoroughly investigated by STDF. STDF has the right to financial compensation and/or to impose a ban period on the PI from participating in STDF-related activities.

Moreover, the PI should clearly state in the proposal which of the following options he/she prefers in the unlikely event of his/her inability to complete the project:

- a- Discontinuation of the project; however, the PI should be aware that, if he/she chooses this option, all funds and expenses paid by STDF must be refunded to STDF upon termination of the project.

- b- Transferring all the PI responsibilities and rights (including IPR) to the Co-PI (if any).

## XV. Intellectual Property Rights (IPR)

It is usually expected that the applicant and the endorsing institution will conform to the STDF-IPR regulations, detailed as a separate document on the STDF website ([www.stdf.org.eg](http://www.stdf.org.eg)). However, due to the nature of the current grant, negotiations regarding the IPR of the project and the potential revenues expected from exploiting this IPR, will be subject to negotiation between STDF and the PI (or endorsing institution) of the project before contracting is finalized. Within this context, it is mandatory that the PI obtains STDF's approval before disclosure in any form (i.e. publication, scientific presentation in a meeting, public announcement, patent filing, ..etc.), of data, findings or conclusions reached as a result of conducting the project activities. This ensures the protection of the PI's IPR, as well as those of STDF.

In all cases, STDF should be acknowledged in any publication/conference presentation/public announcement, produced as a result of an STDF funded project.