

INDIAN-ISRAELI JOINT RESEARCH COOPERATION

Call for Project Proposals

2020-2022

(Last Date of **Submission**: 5th December, 2019)

A. AREAS OF COOPERATION

The Department of Science and Technology, Government of India-(referred to as “DST”) and the Ministry of Science and Technology of State of Israel (referred to as “MOST”) are providing financial support for joint research activities carried out by Indian and Israeli researchers. Indian-Israeli research teams are hereby invited to submit joint research proposals on:

1. **Advanced materials for next gen solar energy utilization and energy storage**

Renewable energy research is required for finding new, efficient, environment friendly and sustainable energy sources to replace fossil fuels such as oil, coal and natural gas. Advancement in this field will reduce pollution, greenhouse effect and climate changes. The call will focus on development of advanced materials for conversion of energy from sunlight into electricity and development advanced materials for energy storage.

2. **Quantum devices And Quantum Technologies for sensing imaging and communication**

B. MODE OF COOPERATION

Cooperation may take the form of:

- Joint research project activities where interdependent subprojects of a single project are conducted in the Indian and the Israeli laboratories;
- Complementary methodological approaches to a common problem;
- Joint use of research facilities, materials, equipment and/or services by cooperating scientists;
- Joint planning of research and evaluation of results.

C. LEVEL OF FUNDING AND PROJECT DURATION

The maximum funding available for all research projects approved under this Call is **Rs. 4 crore** for the Indian side and **4,000,000 NIS** for the Israeli side, for the two year period. The allocation for each specific research proposal that is approved will be up to **400,000 NIS** on the Israeli side and Indian side would provide fund to all the approved S&T activities under the project for the two year project period.

It is the intention of the program's sponsors to support **approximately 10** joint projects. However, the final number of projects to be sponsored will be determined based on such factors as scientific merit and budgetary considerations. Research projects should be planned on a **two year basis with extension until the end of 2022** Contracts\sanction orders will be signed for the implementation of the project accordingly.

Funding for the approved projects is subject to the approval of the State budget and availability of funds in both countries for 2020.

D. ELIGIBILITY

1. Projects must be conducted by collaborating Indian and Israeli scientific research teams.
2. Each research team must be led by a Principal Investigator from each country.
3. Terms regarding the Principal Investigator:

3.1. In India –

The Principal Investigator (PI) and other investigators should be scientists/ faculty members working in regular capacity in UGC recognized Universities/ Deemed Universities/ Academic Institutes and National Research & Development Laboratories/ Institutes. It is preferred that a member of the project team may be designated as Co-PI.

3.2. In Israel –

The Principal Investigator will be a staff member of an Academic Institution and should have a Ph.D. or an M.D. degree; or a professor emeritus (one who continues working on research in his previous academic institution)

For the purpose of this Call the definition of an "Academic Institution" is as follows:

- i. An accredited institution of higher learning in Israel, according to the Council for Higher Education Law, 1958.
- ii. A Research Institute recognized as such by the Israel Science Foundation (ISF).
- iii. A Research Institute which is a nonprofit organization.
- iv. A Research Institute which is a government company or a governmental unit.

For the purpose of this Call the definition of a "Research Institute" is a research institute whose significant portion of activity is the advancement of cutting-edge scientific knowledge, possessing appropriate infrastructure and equipment, and employing researchers who, inter alia, publish articles related to their research in leading scientific journals in the world, and who present their research at international symposia.

Industrial partners are allowed to participate in research teams, as long as they are headed by Principal Investigators from an academic institution.

4. Each Principal Investigator and affiliated Institution is accountable to DST or MOST, respectively, for the execution of the project.
5. Each project will include exchange visits of the cooperating scientists, both senior and young ones, in accordance with the needs of the joint research program.
6. Proposals for which funding is approved, which include experiments with animals, must, before the project can commence:
 - 6.1. In Israel: submit the approval of the relevant Council for Animal Experimentations.
 - 6.2. In India: get the necessary approvals are from the competent authority in India.

7. Proposals for which funding is approved, which involve human beings, must, before the project can commence:

7.1. In Israel: submit the approval of the relevant Helsinki Committee.

7.2. In India: get the necessary approvals are from the competent authority in India.

D1. ADDITIONAL PROVISIONS

It is required that the Indian and Israeli research teams and their institutions enter into agreements regarding intellectual property rights prior to the start of collaborative activities.

D2. SUBMISSION OF RESEARCH PROPOSALS

For Indian research teams:

- The Indian researchers can download the proposal formats from websites www.onlinedst.gov.in and should submit completed application form and all relevant information through **e-PMS portal of DST**. Proposals must be submitted to DST through the **e-application system** provided at www.onlinedst.gov.in **by Thursday, December 5th, 2019**.
- Indian Applicants are also requested to send **three** hard copies to DST (Dr. Ujjwala T. Tirkey, Scientist 'F'), DST 5th December 2019 through proper channel.
- It should be ensured that application with **identical title** has been submitted by his / her Israeli counterpart to MOST by due date.
- Proposal not submitted through either ePMS portal or hard copy by due date will not be considered. DST will not be liable for any postal delay.

For Israeli research teams:

Israeli Principal Investigators should submit proposals in English by email using the attached Application Form to the following email address: India@most.gov.il (in "pdf" format duly signed, along with a working copy in "doc" format without signatures). **The proposals must actually reach the above mentioned email address by Thursday, December 5, 2019 at 15:00** (local Israel time), **and will not be accepted under any circumstances after the specified date and hour.**

Because of technical constraints, an email over 20 megabytes will not be received. If the email and its attachments exceed 20 MB, it must be split. The proposals should be written in the following fonts – for sections in Hebrew- Ariel 11, for sections in English- Times New Roman 11, minimal space between rows -1.5. Shortly after submitting the email the applicants should receive an automatic reply acknowledging its receipt. If an email confirming receipt is not received, the applicant must approach MOST contact persons detailed below to make sure the email was duly received. **It is solely the sender's responsibility** to receive confirmation that the email was received, whether by automatic reply or personal confirmation. As technical problems are possible, **it is strongly recommended to submit the application well in advance of the application deadline.**

A valid project application consists of the Application Form **duly filled in and signed**, together with all the necessary application documents required from each side of a joint research team, submitted

respectively to DST and MOST. **If the applications are not duly received by both DST and MOST by the date and hour indicated above, the project will not be accepted.**

A valid project application consists of all the required application materials from BOTH sides.

D3. Gender relevance (for the Israeli side only)

The researchers should describe the gender relevance of their topic (if relevant).

Please note that this question does not refer to gender balance in the teams in charge of carrying out the project but to the content of the planned research and innovation activities. Sex and gender analysis refers to biological characteristics and social/cultural factors respectively. For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to: http://ec.europa.eu/research/swafs/gendered-innovations/index_en.cfm?pg=home

E. FUNDED EXPENSES

Funding provided within this Call is intended to enhance cooperation between the Indian and Israeli participants in a joint research project. Funding will therefore be provided mainly in support of collaboration activities and of local research necessary for the collaboration.

For Indian research teams, funding can be provided by DST for the following types of expenses:

- (1) Stipend or salary for JRF/SRF/RA etc. (as per DST norms).
- (2) Mutual visits of the cooperating scientists both senior and young ones in accordance with the needs of the joint research project. The sending party covers the travel costs and the receiving party covers the accommodation and local costs up to duration of a month. The travel and existence costs should be integrated in the projects budget.
- (3) Joint scientific events (workshops / seminars under the project, if required).
- (5) Minor equipment, consumables not exceeding Rs 2 Lakhs, and minor accessories.
- (6) Overhead costs as per DST norms.

For Israeli research teams, funding can be provided by MOST for the following types of expenses:

- (1) Stipend or salary for PhD students, post-doctoral fellows, technicians and/or laboratory workers (i.e. a temporary position up to 2 years) retained specifically for the purpose of the project, not including salaries for permanent staff and PI's;
- (2) Consumable Materials. In case they exceed 1,000 USD, a detailed explanation regarding their necessity and quantities is required ;
- (3) Small scale equipment which is only needed for the specific research project; MOST will enable purchase of computers or laptops only in special cases in which the computer or laptop is part of the research project or are of unique capacities needed for the specific research

- (4) Mutual visits of the cooperating scientists both senior and young ones in accordance with the needs of the joint research project. The sending party covers the travel costs and the receiving party covers the accommodation and local costs up to a duration of a month. The travel and existence costs should be integrated in the projects budget.
- (5) Overhead expenses up to 15% of the total amount of the research project inclusive of the funds provided on the basis of this Call.

For Indian and Israeli research teams: Each budget item or expenditure for which reimbursement is requested must conform to the respective national rules of each researcher.

F. MUTUAL VISITS

Participating researchers are encouraged to spend an extended period of time visiting their counterparts' institutions. **The DST and MOST emphasize the importance of exchange of graduate students and post-docs for 2-4 months in the laboratories of the other partner.**

So long as such visits are an integral part of the research collaboration, international travel and living expenses for researchers visiting abroad should be included in each research team's project budget. The visits must take place in India or in Israel only. Visits to third countries will not be financed by project funds. **The costs of flights will be covered by the sending side, and accommodation will be covered by the hosting side. Other expenses will be covered by the sending side.**

G. PROPOSAL REVIEW

After the proposals are evaluated by each of the ministries separately, DST and MOST will jointly decide which projects will be funded and allocate the appropriate amount of funding based on the results of their independent evaluation and ranking.

Proposals will be evaluated in accordance with the following criteria:

- **Scientific level** - Scientific and technological excellence (20%)
- **Innovation** - novelty and creativity of the research in light of existing knowledge and as related to this call for proposals (20%).
- **Methodology** – The concepts, analysis, and methodology should be adequately developed, well integrated, reasoned and implemented in order to achieve the goals of the project (20%)
- **Applied aspects of the proposal** - The proposal should have applied aspects. The proposers should describe and explain the expected impacts of the study? (Development of new scientific and technological directions, new products and applications) 10%
- **Ability to perform the research** - The Principal Investigators should have the experience, appropriate expertise and ability to manage the collaboration and carry out the project's goals within the three-year project period (15%)
- **Extent of collaboration**- The level of cooperation and synergy between the Indian and Israeli researchers. (15%)

For the Israeli Side

The Israeli researchers are required to submit a list of four reviewers from Israel and four overseas reviewers as potential evaluators of the proposal. (Please specify the name of the reviewer, the institution, e-mail, telephone). Do not include reviewers who meet one or more of the following criteria:

- i. Researcher from the Department of the Principal Investigators (in all research groups).
- ii. Former supervisor or student of the Principal Investigators (in all research groups).
- iii. Research partner in the present or past of the Principal Investigators (in all research groups).
- iv. Associate researcher for an article or any other publication relating to a research proposal.

In addition, one may attach an application to MOST which includes a list of reviewers that the ministry should refrain from approaching them -(up to three reviewers). Please include this list after the list of the recommended reviewers.

H. CONTRACTS, PAYMENTS AND REPORTS

1. The expected starting date for approved projects is **June 2020**. The expected completion date is two years after the starting date of the approved projects.

2. Contracts / sanction orders.

Upon approval of a particular project, separate contracts will be signed between MOST and the institution of Israeli Principal Investigator.

Sanction orders will be issued by DST for implementation of Project.

3. In principle, the project period is **two years**. However, DST and MOST reserves the right not to fund a second year of research for scientific-professional, administrative, budgetary or policy reasons.

For Israeli researchers: An application for the continuation of research funding for the second year must be submitted by the institution of Israeli Principal Investigator to MOST on the appropriate forms at least two months prior to the end of the first year. An annual scientific report must be appended to each application.

4. Payments

Payments will be made by DST and MOST to the institution of each Principal Investigator, respectively, and, in keeping with the provisions of the contracts referred to above, according to the regulations and practices in force in each country.

5. Reports

a) Financial Reports

Financial reports will be submitted to DST or MOST, respectively, by the institutions of each Principal Investigator as specified in the research contract.

b) Scientific Reports

Within three months after the conclusion of the project each Principle Investigator will submit a full final report to DST or MOST, respectively, in accordance with the contract or the regulations in

force in his/her country. The Principal Investigators will also submit a joint summary of the final report both to DST and MOST in English.

Additional interim progress reports may be required, according to the practices and regulations of each country, as specified in the research contracts.

In Israel: An interim scientific report must be submitted to MOST two months prior to the end of the first year of the project, together with the application for continuation of research funding (see Paragraph 3 above).

I. SPECIAL PROVISIONS REGARDING THE ISRAELI APPLICANT

All procedures and activities under this Call or the projects approved hereunder, including the eligibility of institutions via which applications must be filed, are subject to the standard MOST Standard Contract for Scientific Projects (referred to hereinafter as "the standard terms").

Applicants are required to familiarize themselves with the standard terms before filing an application under this Call; filing an application constitutes a declaration that the applicant has done so and agrees to be bound by the provisions thereof.

J. SPECIAL PROVISIONS REGARDING THE INDIAN APPLICANT

All procedures and activities for the Indian applicants must be conformed to the Indian notification, regulation and legislation.

K. INFORMATION:

INDIA: Dr. Ujjwala T Tirkey Scientist 'F' Room No. 19 B International Bilateral Cooperation Division Department of Science & Technology Technology Bhavan New Mehrauli Road, New Delhi-110016 Ph. 011- 26864642, 26590377 ujjwala@nic.in	ISRAEL: <u>On administrative matters:</u> Mr. Eitan Tee Deputy Director General for Planning & Control Tel: 02-5411170/173/829/800 E-mail: eitanT@most.gov.il Mrs. Yehudith Nathan International Relations Tel: 02-5411145 E-mail: Yehudith@most.gov.il <u>On Scientific matters:</u> Advanced materials for next gen solar energy utilization and storage: Dr. Ela Strauss Director, Division of Chemistry, Materials Energy and Nanotechnology Tel: +972-2-5411136 E-mail: elas@most.gov.il Quantum devices for sensing imaging and communication: Dr. Fadil Salih Director for Applied Mathematics and Physics
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	Tel: +972-2-5411816
	E-mail: fadils@most.gov.il

Note: Giving false or misleading information is a serious offence.

Please note that on the Indian side applicant already implementing two projects funded by the International Division of DST is not eligible to submit the project against this call.

Guidelines for Proposal Submission

- The deadline for the submission of proposals is **5th December, 2019**.
- The Indian researchers can download the proposal formats from website www.onlinedst.gov.in after registering themselves (if applying for the first time) and should submit completed application form and all relevant information. Proposals must be submitted to DST through the e-application system provided at www.onlinedst.gov.in. Indian Applicants are also requested to send two hard copies to DST by **5th December, 2019** through proper channel. It should be ensured that application with identical title has been submitted by his / her Australian counterpart to AISRF by due date.
- Please remember to upload 6 documents before “SUBMIT” the final proposal. So make it ready (in the formats given below) before submitting.
 - i. Biodata of the PI (in pdf, Max size 800kb)
 - ii. Conflict of Interest (in pdf, Max size 800kb)
 - iii. Certificate from PI (in pdf, Max size 800kb)
 - iv. Endorsement from Head of the Institute (in pdf, Max size 800kb)
 - v. Complete proposal (in pdf with max size 5mb)
 - vi. Complete proposal (in doc with max size 5mb)
- Proposal submitted only on one side will not be considered.
- Australian Principal Investigators need to submit proposals with a matching joint research project plan to AISRF simultaneously. Australian Researchers are requested to contact AISRF for their application submission period, documents to be submitted etc.
- Soft copies of the proposal should be sent to ujjwala@nic.in and hard copies of proposal should be submitted to the following address:

Dr (Mrs) Ujjwala Tripti Tirkey,
Scientist 'F'/Director, Room No. 19-B, S&T Block I,
International Cooperation (Bilateral), Department of Science and Technology,
Technology Bhavan, New Mehrauli Road, New Delhi 110016
Tel: +91 (0)11 2659 0377; +91 (0)11 2686 4642 ; Email: ujjwala@nic.in.

**For application format, please see
International Cooperation (Bilateral) at**

<https://onlinedst.gov.in/Projectproposalformat.aspx>