



Ministry of Science,  
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ISRAEL



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## INDIAN-ISRAELI JOINT RESEARCH COOPERATION

### Call for Project Proposals

### 2017-2019

#### A. AREAS OF COOPERATION

The Department of Science and Technology, Government of India (referred to as “DST”) and the Ministry of Science, Technology and Space 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:

#### **Big Data Analytics in Healthcare** **Security in Cyber Space**

##### **1. Big Data Analytics in Healthcare:**

Advantages to healthcare:

Clinical operations: Comparative effectiveness research to determine more clinically relevant and cost-effective ways to diagnose and treat patients.

Research & development: 1) predictive modeling to lower attrition and produce a leaner, faster, more targeted R & D pipeline in drugs and devices; 2) statistical tools and algorithms to improve clinical trial design and patient recruitment to better match treatments to individual patients, thus reducing trial failures and speeding new treatments to market; and 3) analyzing clinical trials and patient records to identify follow-on indications and discover adverse effects before products reach the market.

- *Public health*
- *Evidence-based medicine*



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- *Genomic analytics*
- *Device/remote monitoring*
- *Patient profile analytics*

Sources and data types:

- *Web and social media data*
- *Machine to machine data*
- *Big transaction data*
- *Biometric data*
- *Human-generated data*
- *Medical imaging data*
- *Genetic data*

## 2. Security in Cyber Space

### 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 **4,000,000NIS** for the Israeli side, for the two year period. The allocation for each specific research proposal that is approved will be up to **400,000NIS**



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on the Israel 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 2019** . Contracts\sanction orders will be signed for the implementation of the project accordingly.

It is the intention of the DST and MOST to issue a special Call for Proposals during the second year to the ten approved projects for an option of a third year with additional budget. Only a limited number of the top performing projects will be approved with an annual budget of up to \$50,000 per project per side.

**Funding for the approved projects is subject to the availability of funds in both countries for 2017.**

#### **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)



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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 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 from the competent authority in India.



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## **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: by 5.1.2017.

Project proposal is to be submitted through e-mail to [ujjwala@nic.in](mailto:ujjwala@nic.in) (preferably in MS Word format in one file indicating file name as PI name & area code) as well as by Post (3 copies) in the prescribed format on or before the given deadline (5<sup>th</sup> January, 2017), through proper channel to :

Ms Ujjwala T Tirkey, Scientist 'F', International Division (Bilateral), Department of Science & Technology, Room No. C-2, Technology Bhavan, New Mehrauli Road, New Delhi-110016.



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### 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](mailto: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 abovementioned email address by Thursday, January 5th , 2017 at 24:00** (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 20MB, it must be split. 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.**

**In addition**, Israeli Principal Investigators **should send also 2 hard copies** of their proposals by **Wednesday 11th** to the following MOST address:

**Mr. Avi ANATI**

Deputy Director General for Planning and Control

Ministry of Science, Technology and Space

"Call for Proposals for Israel-India 2017-2019"

Clermont Ganneau St., Begin Government Offices

Building 3, 3<sup>rd</sup> Floor, Room 309

Jerusalem



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

### **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) International Travel by economy excursion class for the Indian scientists visiting Israel under the project. Accommodation charges in Israel will be provided by the Israeli side.
- (3) Joint scientific events (workshops / seminars under the project, if required).
- (5) Minor equipment, consumables, 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) Travel expenses of the Israeli researchers and visiting costs for the Indian partners. Accommodation charges in India will be provided by Indian side.



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(5) Joint seminars and workshops;

(6) 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 program sponsors separately, DST and MOST will jointly decide which projects will be funded and in what amounts based on the results of their independent evaluation and ranking.

Proposals will be evaluated in accordance with the following criteria

1. Conformity of research area of this Call

2. Capability of Principal Investigators

The Principal Investigators should have the experience, appropriate expertise and ability to manage the collaboration and carry out the project goals within the three-year project period.

3. Significance and potential impacts of the project





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Proposals should include the explanation of significance of the problem being addressed and the potential impact of the proposed approach on solving it.

#### 4. Scientific merit

The project should have originality and novelty in the research area.

#### 5. Clarity and quality

The proposal should explain clearly and have an enough quality about the research topic, research objectives, methodology, and detailed program.

#### 6. Feasibility

The plan for research and mutual visits should be feasible.

#### 7. Practical applicability

Achievement should have innovative aspects and the specific advantages compared to other existing technologies.

#### 8. Synergetic effect

The project should have synergy as joint research activities between Japan and Israel.

#### 9. Effectiveness and continuity of the exchange

The proposal needs to contain activities to enhance sustainable research exchange. Relevant examples include:

- Fostering young researchers through exchanges.
- Sustainable development of the initiated knowledge exchange
- Expanding the international research networks over the research project
- Improving the presence of Japanese or Israeli science and technology respectively in the counterpart country.
- Exchange each knowledge, know-how and skills of one partner can maximize the utilization of the other partner's unique applications.

#### 10. Justification of project budget

## **H. CONTRACTS, PAYMENTS AND REPORTS**

1. The expected starting date for approved projects is May 2017. The expected completion date is two years after the starting date of the approved projects.



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## 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 Principal 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).



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## **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 Procedures Regarding International Collaborative Scientific Projects and Scholarships Funded by MOST and to the MOST Standard Contract for Scientific Projects (both documents 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:**

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## ISRAEL:

### **On administrative matters:**

Mr. Avi Anati

Deputy Director General for Planning & Control

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### **On Scientific matters:**

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#### **Big Data Analytics in Healthcare:**

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