



International

# Human Frontier Science Program

Organization

25<sup>th</sup> January 2023

## BGU In-House Info Session

"HFSP - New Call - Come Learn the Keys to Success."

So, why are we here, today ?

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The **Human Frontier Science Program (HFSP)** is a  
**Priority Funding Agency for**

The Planning & Budgeting Committee [ VATAT ]

↓↓

Ben-Gurion University of the Negev [ BGU ]

↓↓

Research & Development Authority [ RDA ]

↓↓

Should be for you as well !! [ U ]

## Competitive Agencies

as recognized by Planning and Budgeting Committee (PBC) – VATAT

1. Israel National Science Foundation (ISF) - הקרן הלאומית למדע
2. The Binational Science Foundation (BSF) - הקרן הדו-לאומית ישראל ארה"ב
3. The Ministry of Science, Technology and Space - משרד המדע, הטכנולוגיה והחלל
4. German Israel Foundation for Scientific Research and Development (GIF) - קרן דו-לאומית גרמניה ישראל
5. US-Israel Agricultural Research and Development Foundation (BARD)
6. National Institute of Health (NIH)
7. EU Framework Program - קרן האיחוד האירופי, מסגרות מו"פ בלבד
8. Ministry of Health - קרן המחקר של המדען הראשי במשרד הבריאות
9. Deutsch-Israelische Projektkooperation (DIP) - תכנית גרמניה/ישראל לשיתוף פעולה בנושאים בעלי אוריינטציה עתידית
10. Human Frontier Science Program (HFSP) - התוכנית לקידום מדעי האדם
11. Israel Cancer Research Fund (ICRF) - הקרן לחקר הסרטן בישראל
12. Deutsche Forschungseinschaft (DFG) - הקרן הגרמנית למדע

[https://in.bgu.ac.il/en/osr/Site%20Assets/Pages/Funding-Sources/Competitive\\_Agencies\\_Vatat.pdf](https://in.bgu.ac.il/en/osr/Site%20Assets/Pages/Funding-Sources/Competitive_Agencies_Vatat.pdf)

HFSP is a chance for . . .



and a chance for תוספת מחקר ב'

## So, how much money is “big money” ??

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HFSP grants are ‘fixed’ in terms of both **duration (3 years)** and **award amounts** . . . themselves based on annual payments to a ‘team’ based on number of participants in the team

Team of 2: **\$300,000** per year to the ‘Team’  
(total grant of **\$900,000** ➤ \$450,000 per researcher, avg.)

Team of 3: **\$400,000** per year to the ‘Team’  
(total grant of **\$1,200,000** ➤ \$400,000 per researcher, avg.)

Team of 4: **\$500,000** per year to the ‘Team’  
(total grant of **\$1,500,000** ➤ \$375,000 per researcher avg.)

\* Advantage (more money) for smaller-sized teams

\*\* No requirement for an ‘equal’ distribution of funds

\*\*\* A budget proposal is not required at any stage of the application process

# HFSP Research Grants 2024: Call for Letters of Intent

Designed to stimulate new research lines based on international scientific collaboration, the HFSP Research Grants supports hundreds of scientists worldwide every year. The period to initiate an application for the 2024 cycle will open end of January 2023 and ends on 21 March 2023. The deadline to submit the Letters of Intent is 30 March 2023.



## HFSP RESEARCH GRANTS

### CALL FOR LETTERS OF INTENT

AWARD YEAR 2024

Initiation: end January to 21 March 2023

**Submission Deadline: 30 March 2023**



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What is the **starting point** for an HFSP grant ?  
And what is the **ending point** ??

- The HFSP supports **innovative basic research into fundamental biological problems** that applies novel and interdisciplinary approaches
- To stimulate **novel, daring ideas and innovative approaches**,
- Successful applications will **entail risk** and aim to develop **novel lines** of research **different from the applicants' ongoing work**
- The **participation of scientists from disciplines outside the traditional life sciences** (e.g. engineering, physics, mathematics, or nanoscience) is a key requisite in HFSP grant applications
- **END POINT:** To fund projects with the potential to **extend the frontiers of the life sciences**



# Why the repetition ??

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HFSP has several freely available sources of information:

- Official Website <https://www.hfsp.org/>
- Guidelines for Applicants – Award Year 2024 (12-pages)  
<https://www.hfsp.org/sites/default/files/Sciences/Grants/LI%20Guidelines.pdf>
- Writing a Letter of Intent (“Tips”) (3-pages)  
<https://www.hfsp.org/sites/default/files/Sciences/Grants/Writing%20a%20letter%20of%20Intent.pdf>
- Research Grants – FAQ  
<https://www.hfsp.org/funding/hfsp-funding/research-grants#faq>
- Strategic Plan 2020 – 2022  
<https://www.hfsp.org/about/strategy/strategic-plan-2020-2022>
- Rejection Letter from Last Year

All say the same thing . . .  
with either identical or  
synonymous wording



There are a series of **“News”** and **I’s** which **Mirror** each other and are the basis of the repetition

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For you, as a BGU researcher, to be successful the HFSP is requiring you to:

- Submit based on a **new collaborative relationship**  
(Guidelines: that they will normally not have published original research together \*)
- Submit based on something **new in your own research**  
(Guidelines: must propose a project significantly different from their ongoing research)
- Submit based on something **new in the general pursuit of research**  
(Guidelines: The potential of a project to move the **frontiers** of life sciences and lead to a breakthrough is a major criterion in the review of HFSP research grants)



**HFSPPO promotes new research collaborations.** Therefore, the team members should not have collaborated before, they will normally not have published together and must propose a project significantly different from their ongoing research.

Co-authorship in scientific publications is generally considered the result of a past or present collaboration, which is contrary to the spirit of the Program. However, some joint publications may be considered acceptable, for instance a multi-author review summarizing the field or a joint publication in a different field resulting from a much earlier collaboration. Applicants will need to enter the number and titles of co-publications between team members in the application form to guide the review committee in their assessment. More than three co-publications are very likely seen as proof for an ongoing collaboration and strongly reduce the chance of funding.

# Distinguishing Features of HFSP Research Grants

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- **Innovative & Novel:** HFSP supports projects that challenge existing paradigms and extend the frontiers of life sciences by using novel approaches and techniques.
- **International:** HFSP supports novel international, **preferably Intercontinental** collaborations that involve scientific exchanges across national boundaries (**David: National -and- Cultural Boundaries \*** ).
- **Interdisciplinarity:** HFSP supports interdisciplinary research, and seeks the participation of scientists from disciplines outside the traditional life sciences (e.g., physics, computational biology, engineering, mathematics, nanoscience, psychology, etc.)
- **Team approach:** Think about how each partner will contribute? How will you plan the flow of ideas, materials, and results backwards and forwards between the partners?

# Bona Fide International, Preferably Intercontinental\*

There are 3 ways to get from Buffalo to Toronto by bus, train or car

Select an option below to see step-by-step directions and to compare ticket prices and travel times in Rome2rio's travel planner.

**RECOMMENDED**

Bus  
2h 45m

Train  
4h 17m

Drive  
1h 48m

**A** The distance from Buffalo, New York to Toronto, Ontario is:

**98 miles / 158 km** driving

**59 miles / 94 km** flying

75 - 120 →



Technically, fulfills the 'letter of the law' but does n\_o\_t fulfill the spirit

## What does HFSP expect from 'intercontinental' research'?

Different scientific communities have evolved different ways of tackling problems. HFSP expects international interactions, by creating new interfaces, to lead to innovative projects. Successful projects from all-European or North American teams are rare (on avg. 1 per year). Such teams have tended to submit conventional projects, better suited to national or regional funding agencies. [direct from FAQ]

# Scientific Scope

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HFSP funds projects in basic research studying fundamental problems on **ALL** organizational and trophic levels of life sciences.

Research projects may range from biological functions at the molecular and cellular level up to the level of biological systems, including cognitive functions.

All levels of analysis are supported: for example, studies on genes and individual molecules, intracellular networks, intercellular associations in tissues and organs, and networks underlying the complex functions of entire organisms, populations, or ecosystems.

Grant applications may take the character of exploratory or discovery grants that are based on ideas and concepts, and preliminary data are not required.

HFSP recognizes that such research inherently contains risks and therefore may not be supported by other funding schemes. Applicants are expected to address the risks and outline mitigation strategies allowing them to reach their goals.

## A few more Generalities (and then on to specifics . . . )

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HFSP promotes new interdisciplinary collaborations across the world. Therefore, team members are expected to have their labs in different countries. Researchers should not have collaborated before, and they should propose a project significantly different from their ongoing research.

This unique program invites highly novel collaborative projects, rather than those which are scientifically solid but not of a “Frontier” character. Applicants are asked to take this “caveat” seriously to avoid disappointment.

Even first-rate scientists may fail if they simply “stick together” their successful individual ongoing research programs together as “parallel” projects, each of which are well suited to national funding programs, or if expected contributions are incremental, with little sign of synergy from the collaboration.

# Specifics and 'Mechanics' (How does it work)

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## HFSP Submission Process: 3-Stage

- 21<sup>st</sup> March 2023 (administrative registration via HFSP extranet site)
- 30<sup>th</sup> March 2023 (on-line submission of **Letter of Intent** [LOI])
- Mid-Sept. 2023 (submission of full application – by invitation only)
- Award notification at the end of March 2023 (when new LOI's are due)
- The research team decides on the starting date for the grant (informing the HFSP), and this should be no later than 1-Dec. 2024.

HFSP grants are 'fixed' in terms of duration – 3 years.



## Budgetary Matters:

Team of 2: \$300,000 per year to the 'Team'  
(total grant of \$900,000 ➤ \$450,000 per researcher, avg.)

Team of 3: \$400,000 per year to the 'Team'  
(total grant of \$1,200,000 ➤ \$400,000 per researcher, avg.)

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(total grant of \$1,500,000 ➤ \$375,000 per researcher avg.)

The funds provided by HFSP0 are to be used specifically to support the new international collaborative program described in the application  
(Purchase of equipment must be essential for the new collaboration which is proposed.  
Purchase of equipment to supplement current domestic programs is not allowable.)

Amounts include 10% for the institution to cover indirect costs

The overall research team decides on the allocation on a yearly basis  
(Does not have to be an 'even' split, but if the funds are distributed "very unequally among team members," an explanatory letter is required.)

HFSP funds may n\_o\_t be used for the investigators' own salaries [תוספת ב']

## Team Structure

Size: 2 – 4 members ➤ international & with “clear priority” for intercontinental

Restrictions: 2 members from the same institution are **ineligible**

Same country (disincentive):

Two team members from the same country . . . allowed only if this collaboration is **essential** for the **frontier and interdisciplinary character** of the proposed research. **In such rare cases** . . . will be considered as **1.5 team members**, for calculating the award sum.

Team must have a Principal Applicant (first among equals; correspondent with the HFSP; the one who allows others to access the proposal, etc.), located in one of the HFSP member countries . . . Israel is a member country

Co-applicants can be located in any country in the world (Someone from the life sciences actually once asked me where he could apply with a counterpart from Ethiopia, and I replied, “HFSP of course.” So, if anyone has a counterpart from Burkina Faso or Madagascar or Uruguay or Vietnam . . . now is your chance.)

## Eligible countries

Scientists from all countries may participate in the Research Grant and Fellowship programs. There are, however, some restrictions that affect applicants from non-member countries.

The **Principal Applicant** of a research grant must be from **one of the member countries** (see list below), but other team members may be from anywhere in the world as long as the teams fulfill the basic international requirements described in the guidelines.

### **The member\* countries are:**

**Australia**, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus (EU part), the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, **India**, Ireland, Israel, Italy, **Japan, Korea**, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, **New Zealand**, Poland, Portugal, Romania, **Singapore**, Slovakia, Slovenia, Spain, Sweden, Switzerland, the U.K., and the U.S.A.

\*These countries provide financial support to the HFSP either directly or indirectly (via the EC).

## Early Career Scientists (sotto voce: young)

HFSP places special emphasis on encouraging scientists early in their careers – via a special scheme for **Early Career** scientists and by encouraging scientists early in their careers to participate in the (regular) Program Grants.

Two kinds of research grants are available:

- Research Grants – Program [RG] (just means regular; default program track)
- Research Grants – Early Career [EC]

Formerly known as Young Investigator's Grants [YIG], these are meant to encourage outstanding scientists in the initial period of their independent careers, to formulate novel and promising research projects.

All members of an Early Career team must be:

- No more than 10 years from receipt of Ph.D. degree (LOI deadline)
- No more than 5 years from obtaining first independent position
- Exceptions for parental leave, compulsory military service, medical conditions, etc.
- Early Career teams can come from the Life Sciences, but based on distinctly different expertise
- No substantial difference in **success rate**

## Success Rates – for the HFSP “Across the board” Award Year 2023 (meaning last year; LOI deadline March 2022)

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### LOI Stage

- 596 Letters of Intent (LOI's) received
    - Initial Review by the Review Committee (all 596)
      - Top 30% advanced to the International Selection Committee (= 179)
  - 81 teams invited to submit full proposals
    - $81 \div 596 = 13 \frac{1}{2} \%$  (general chance of success for initial LOI submission)
    - $81 \div 179 = 45 \%$  (chance of success at the Int'l Selection Committee stage)
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### Full-Proposal Stage

- 27 teams were awarded grants
  - $27 \div 81 = 33 \frac{1}{3} \%$  (standard procedure; one-third of full proposals are funded)
  - $27 \div 596 = 4 \frac{1}{2} \%$  (chance of success when you submit LOI)

[BGU submitted 15 LOI's with 2 advancing to the Full Proposal stage, and we are anxiously awaiting results]

## Rejection Letter (standard) from last year [LOI deadline of March 2022]

The letters of intent were first reviewed by members of the international HFSP Grant Review Committee, who evaluated the level of innovation, the interdisciplinarity and the team integration and whether or not this was building on a well-established collaboration rather than representing a **new project**.

Of the 596 letters of intent received, those rated in the top 30%, by the Review Committee were passed on to the smaller international Selection Committee, who invited 81 teams to submit full proposals. Your application was not among those in the top 30% and was thus not considered to be sufficiently competitive. Many excellent projects were **essentially a continuation** of the principal applicant's or the co-applicants' ongoing research.

For some projects, the committee considered that the **competence** of the applying team did not match the proposed project well enough, and for others, the focus seemed to be on **applied aspects more than a fundamental biological question**. Several projects seemed to propose a **combination of independent projects rather than a true team effort**.

Please note that the committee's decision is final. With its limited budget, HFSP really focuses on pursuing those applications that the selection committee deems to be **the most novel, daring, and promising future breakthrough**. Due to the large number of applications, HFSP can answer questions regarding these decisions only in exceptional cases.

## The Letter of Intent - Actual Make-up

*This may be useful for preparing text prior to the opening of the application site, or to see what is necessary without initiating an application (each component will have instructions on the application site).*

### TITLE and KEYWORDS

- a. Title (maximum 100 characters including spaces).
- b. Keywords (maximum 10). Include keywords for 1. Biological function, 2. Biological material, 3. Methods and instruments. If a keyword is missing from the list (on the ProposalCentral application site), you may add it by using the "additional keywords" box.
- c. Disciplines represented among the team members (maximum 10). Please choose from the list.

### RESEARCH PROJECT - **This is the most important page of the application.**

- d. **Abstract of overall project** (1200 characters, including spaces and punctuation). State clearly the aims of the team as a whole. Please provide a brief explanation of the contributions of the different disciplines.
- e. Each **team member should describe her or his subproject** (1200 characters including spaces and punctuation), with a clear indication of the role played in achieving the goal of the team as a whole. Use this space for the scientific contribution, do not repeat the CV here.
- f. How will the proposed research **advance/extend the frontiers in life science? Which aspects** of the proposed project **are especially unique and ground-breaking?** What is the **potential** of the research question, new methods to be developed and/or the combination of new disciplines **to lead to a breakthrough in answering a fundamental question in the life sciences** (1600 characters including spaces and punctuation).

**g. Interdisciplinarity and research collaboration/team integration**

(i) How is your team interdisciplinary (including new combinations of expertise)? How will the combination of expertise serve the purpose of your project

(ii) In which way is the collaboration essential for the success of the project? **What makes the team more powerful than the sum of the individual contributions?** How does the proposed research differ from the ongoing research of each team member (600 characters including spaces and punctuation)?

h. Key references related to the project (maximum 5, 1200 characters including spaces and punctuation) – these can include but are not restricted to own papers.

**Each member will also have to fill in a personal section** including affiliations, degrees, orcid ID, a short CV, and add up to 10 publications from the last 5 years. Please note that lists of prizes or other academic achievements are not requested in the CV, as the evaluation of applications will be mainly based upon the frontier natures, novelty, interdisciplinarity and internationality of the research.

The team will also have to **declare the number (if any) of co-publications between team members**, and provide full references for these. This will help reviewers to understand whether the collaboration is new or already ongoing.



## Possible to Check Grants from the Last Full Decade !!

<https://www.hfsp.org/awardees/awards>

### Information includes:

- Grant Title
- Participants – number of participants in the 'team'
- Participants – country & institutional affiliation
- Abstract – "clickable"

### Awardees

<b>Program</b>	<input type="text" value="Grant Awardees - Program"/>	<b>Award year</b>	<input type="text" value="2022"/> 2021 2020
<b>Country</b>	<input type="text"/>	<b>Nationality</b>	<input type="text"/>