HFSP Research Grants Guidelines for applicants Award year 2021

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Overview

The aim of the Program is to promote, through international cooperation, basic research focused on the elucidation of the sophisticated and complex mechanisms of living organisms for the benefit of all humankind.

The Human Frontier Science Program Organization (HFSPO) develops and implements the Program.

The Program aims to complement, not duplicate, the frontier life science programs of the countries that provide HFSPO financial support.

HFSPO attaches the highest importance to novelty, scientific merit, internationality, and interdisciplinarity.

Emphasis is placed on building new collaborations that bring together life scientists and scientists from other disciplines such as physics, mathematics, chemistry, computer science and engineering, including the development of early career frontier scientists.

The Program supports potentially transformative proposals that address important problems at the frontiers of the life sciences, or barriers to progress in the life sciences. Projects should challenge existing paradigms by using novel approaches and techniques. Applications for high-risk/high-reward projects are particularly encouraged.

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

1. Research Grants

1.1. Distinguishing Features of the HFSP Research Grant Program

The Human Frontier Science Program (HFSP) is a unique program that supports **innovative** basic research into **fundamental** biological problems with emphasis placed on **novel** and interdisciplinary approaches that involve scientific exchanges across national and disciplinary boundaries.

Awards are made to international (preferably intercontinental) teams of 2 to 4 members. HFSPO encourages projects that are at the frontiers of knowledge and therefore entail risk (see <u>2.2.d</u> below). The participation of scientists from disciplines outside the traditional life sciences such as biophysics, chemistry, computational biology, computer science, engineering, mathematics, nanoscience or physics has made biological research increasingly quantitative and will continue to do so. Such collaborations have opened up new approaches for understanding the complex structures and regulatory networks that characterize living organisms, their evolution and interactions.

To stimulate novel, daring ideas and innovative approaches, preliminary results are not required in research grant applications. The HFSP places special emphasis on encouraging scientists early in their careers – this is expressed both in the establishment of a special Young Investigators' Grant and in encouraging scientists early in their careers to participate in the Program Grants. Applicants are expected to develop **new** lines of research through the collaboration. The Program aims to complement, not duplicate, the frontier life science programs of the countries that provide HFSPO financial support.

1.2. Guidelines for applicants

These guidelines provide the essential information necessary to submit a **research grant** application for the **award year 2021.** You should pay particular attention to the types of innovative projects that fall within the funding scope of the HFSP, and to the aims of the Young Investigators' and Program Grants (for details see below). See also '<u>Writing a letter of intent</u>' for tips.

You must first submit a **"letter of intent"** to apply for a grant. **To submit, you must connect to our HFSP extranet site** (see <u>item 8</u>) **and obtain a reference number LIXXXXX/2021 by March 19th 2020.** The deadline for receipt of this letter, also submitted via the extranet site, is **March 30th 2020** for awards to be announced in March 2021. You will be notified early July 2020 whether you are invited to submit a full application, with a deadline mid-September 2020. More details are provided in <u>item 8</u>, "How to Apply".

Projects will be pre-screened upon reception by a small *ad hoc* scientific committee for their innovative nature, the novelty of the combination of expertise proposed in the field and their international, preferably intercontinental, nature. Any project that does not meet these requirements or those of section 2.2 will not be sent for review and the Principal Applicant will be informed as soon as possible after the submission date.

HFSP is a signatory to the San Francisco Declaration of Research Assessment (DORA) which we consider to be an incentive to evaluate research proposals on the basis of their content and not solely by the criterion of Journal Impact Factors (JIF). Reviewers at all stages of the HFSP grant application process are advised that they should consider the quality of the research published and/or proposed in an application. While productivity may be an important factor, the assessment will be based on the content of articles and not the JIF. Furthermore HFSP reviewers are asked to consider the influence of candidates' publications (including preprints deposited on public servers) in advancing knowledge in a given field (or throughout biology).

Eligibility requirements for applicants: The Principal Applicant of a Research Grant must have a laboratory in an HFSPO <u>member country</u> (with the exception of HFSP Career Development Awardees – see section 4.2.). All team members are expected to direct a research group (however small) and must have a doctoral degree (PhD, MD or equivalent). The HFSP award is not intended to create scientific independence, this is a decision of the research institute prior to the application. Team members must be able to determine the course of the HFSP-funded project and have freedom to administer the grant award.

Two kinds of research grants are available, the **Young Investigators' Grants** and **Program Grants**. The following guidelines apply to both unless stated otherwise.

Contact for correspondence: grant@hfsp.org

2. Scientific scope

2.1. General areas of support

Research grants are available for projects concerned with basic approaches to understanding the complex mechanisms of living organisms. The HFSP funds novel collaborations that bring scientists with distinct expertise together to focus on problems at the **frontiers** of the life sciences. The innovative aspect of the project is a major criterion in the review of HFSP research grants (see <u>annex</u> – Key to scoring for Review Committee members). A brief explanation of the contributions of the different disciplinary expertise should be provided in the summary which will be used in guiding the review process.

2.2. Specific requirements

- a. Novel combinations of expertise are a major feature of HFSP-sponsored projects and those involving truly novel interdisciplinary collaborations will be given clear preference. Special conditions apply for Young Investigators (see <u>3.1.</u> below).
- b. Applicants are expected to develop new lines of research through the collaboration. Projects must be distinct from applicants' other research funded by other sources.
- c. The collaboration between all team members must be absolutely necessary to achieve the aims of the project. "Concerted action" programs, in which each team member performs a self-contained project under a general theme without extensive interaction with the other team members are not considered to be collaborative.
- d. Applicants should appreciate what HFSP means by 'risk'. It is not simply that « It's risky because it may or may not work ». A hand waving « but we hope it will », followed by a few vaguely described experiments, will not convince the reviewers. What is expected is that according to the team's calculations there is a reasonable chance that it will work (this is developed further in the FAQ sheet).

See also the <u>FAQ</u> sheet on the HFSP site for common reasons for rejection.

2.3. Research Areas

HFSPO funds <u>basic</u> life science research. HFSPO does <u>not</u> fund the following:

1. Projects of a purely applied nature. For example:

- projects of a primarily clinical and pharmaceutical nature are only considered if they allow new insights into fundamental biological mechanisms of disease;
- projects aimed at developing methods of diagnosis or treatment, including the search for potential drug targets or advanced trials of drugs under development;
- applied research in engineering, biotechnology, or nanotechnology, that does not address a fundamental biological problem;
- projects directly concerned with agricultural problems such as crop yield or breeding and environmental problems such as pollution.

2. Research aimed at developing novel methods or the study of analogs or models of biological activity <u>unless</u> these methods allow new biological questions to be answered in the context of the aim of the HFSP to fund fundamental research.

3. Observational projects or systematic screening approaches.

4. Large-scale data collection as such, unless there is a convincing rationale for the collection and detailed methodology for the data analysis; this includes the systematic multi-species-omic analyses of populations or ecosystems, which do not address a fundamental biological question of general interest. However, studies of the mechanisms of species-species interactions or their co-evolution <u>are</u> eligible.

5. Research in for-profit environments (but collaborations are allowed).

3. Types of award: Young investigators' and Program Grants

3.1. Young Investigators' Grants

These awards will be known as "Program Grants – Early Career" in future cycles (see "Recent changes" for explanation).

Specific features of the Young Investigators' Program.

General aims: It is to be expected that outstanding young scientists, in the initial period of their independent careers, are in a particularly good position to formulate innovative and fertile research projects. Typically, "Young Investigators" will have completed one or two periods of postdoctoral training and be appointed to staff independent positions that allow them to initiate and direct their own independent lines of research.

Recognising the challenge of establishing an independent research group at an early stage of a career, a special consideration will take into account the overall level of interdisciplinarity in Young Investigator applications. Newly appointed investigators will be expected to propose projects with team members having distinct expertise and coming from different disciplines of the life sciences (if not from outside the life sciences). Projects from more established investigators will preferably involve collaborations with scientists from outside the life sciences, as in the Program Grants. The Review Committee will be instructed to assess this when reviewing applications.

Formal eligibility requirements: **all** members of a Young Investigators' grant team must be within 5 years of obtaining an independent position (see below) but must have obtained their first doctoral degree (PhD, MD or equivalent) not longer than 10 years before the deadline for submission of the letter of intent. Exceptions may be made for periods of parental leave, compulsory military service or absence for medical conditions. Within the framework of the objectives of the HFSP and these formal requirements, the deciding factor in making awards will be whether the basic aim of the Young Investigators' program is fulfilled.

- a. A Young Investigator should be a project leader directing a research group. They must have full responsibility for the day to day running of their laboratories and will have full control of the HFSP funds. A scientist who has an established research theme with personnel (students and technicians) assigned to this theme may be considered independent. In such cases, written confirmation may be requested from the Head of Department that the applicant is able to carry out the research independently.
- b. "Postdocs" are not eligible to apply.

3.2. Program Grants

General aims: Program Grants are meant to allow teams of independent researchers to develop **new** lines of research through the collaboration. Priority will be given to new, innovative research projects. Preliminary results are not required. Applications including independent investigators early in their careers are encouraged.

Eligibility: all members of a Program Grant team must be in a position to initiate and direct their own independent lines of research. They must have full scientific and financial responsibility for their own laboratories (however small). "Postdocs" are not eligible to apply.

3.3. Features common to both Young Investigators' Grants and Program Grants

Amount of award: Teams will receive up to \$450,000 per year for the whole team depending on the size of the team (see <u>5.2.</u> below).

Interdisciplinarity: Two scientists, with widely differing expertise, from the same country may collaborate. However, they must be integrated into an international team (with emphasis on intercontinental collaborations – please see the <u>FAQ</u> sheet and <u>4.6.</u>) and will be considered as 1.5 team members for calculating the amount of the award. Such calculations are made only after the scientific review is completed and an award recommended. Two applicants from the same institution are strongly discouraged because of HFSPO's aim to promote new collaborations across the world. <u>All</u> team members, even those located in the same country, must be designated as co-applicants on the online form.

Applicants are strongly advised to be clear about the content of any proposed modelling contribution. Reviewers are expecting details of the mathematical methods and an appreciation of the limits of the proposed approach.

Review Procedure: Applications for Young Investigators' Grants and Program Grants will be reviewed in parallel but considered independently for funding. The final numbers of awards of Young Investigators' and Program Grants will be decided considering the proportion of applications received, the relative quality of applications in the two groups and the funds available.

4. Research Teams

In addition to the above special requirements for the Young Investigators' and Program Grants, the following conditions must be met by all grant applications:

4.1. Structure of research team

Scientists applying for a research grant must organize an "international research team" or "team".

The team is to be made up of "members", whereby one member of the team is designated as the "Principal Applicant" and the others as "Co-Applicants". For the rules on the country of team member affiliation, please see 4.5.

Only international research teams (with emphasis on intercontinental collaborations), not individual researchers, are eligible. HFSPO promotes new interdisciplinary collaborations across the world. Therefore, team members are expected to have their labs in different countries; they should not have collaborated before and must propose a project significantly different from their ongoing research.

HFSPO's mission is to promote new research collaborations. Normally therefore, the team members will not have published together. However, some exceptions may be considered acceptable by the review committee such as a multi-author review summarizing the field or a joint publication in a different field resulting from an much earlier collaboration. On the other hand, recent joint research publications on the principal topic of the application will be considered to demonstrate an existing or recent collaboration, unless the applicants can explain otherwise. You will need to enter the number of co-publications between team members in the application form to guide the review committee in their assessment. More than 3 co-publications will be scrutinised in all cases. Any omissions revealed in the course of the review process will lead to the rejection of the application.

4.2. Principal Applicant

The international team must designate one of its members as the Principal Applicant. The Principal Applicant must be located in an HFSPO member country (see 4.5.). However, current or former CDA awardees can also act as the Principal Applicant in an HFSP Research Grant irrespective of the location of

their laboratories as long as the team includes at least one Co-Applicant from an HFSP member country. The Principal Applicant will be responsible, on behalf of the team, for planning and coordinating the research. He/she will also act as the liaison with HFSPO and be required to submit annual budgets as well as progress reports. If, on the basis of those progress reports, the Principal Applicant considers that a team member is not contributing as planned to the project, then, in liaison with HFSPO, he/she may propose a reduction in that member's budget, or, exceptionally, ask them to leave the project. If a team member changes institute, the Principal Applicant will be asked to confirm that this move will not be deleterious to the project.

4.3. Affiliation

The Principal Applicant must be from a non-profit academic institution. The team may include members from for-profit organizations if their expertise is necessary for the project. However, team members from for-profit organizations may not receive any funds and will not be considered in calculating the amount of award. In the case of a two-member team with one member in a for-profit institution, the total award will be reduced to \$125,000 per year (see also item <u>5.2.</u>). All active appointments should be declared in the application form if an applicant has a dual affiliation in two different countries.

4.4. Number of team members

The number of team members should normally be 2 - 4 and no more than 4 unless a fifth member is clearly essential for the interdisciplinary nature of the project. However please note that teams of 5 members are rarely successful. Similarly, team "members" regrouping several independent investigators as a single component ("hidden partners" or "node"), thus forming a de facto consortium, are not eligible.

4.5. Country of Affiliation

The Principal Applicant representing the international team must be located in one of the HFSPO <u>member</u> <u>countries</u>. Co-Applicants can be located in any country.

For scientists in institutions that are classified as extraterritorial such as the EMBL (Grenoble/France, Heidelberg/Germany, Hinxton, UK or Monterotondo/Italy), ICPT or ICGEB (both in Trieste/Italy) the host country will be considered as its location. In the case of overseas campuses such as Max Planck Institutes (Jupiter/Florida or Nijmegen/The Netherlands), Nottingham University Malaysia or Monash University Malaysia, collaborations between different campuses of the same institution will not be eligible for HFSP support.

4.6. Internationality

- a. Clear priority will be given to intercontinental collaborations.
- b. A research project carried out within only one country is not eligible.
- c. At least one member of the international research team must have his/her laboratory in a country other than that of the Principal Applicant.
- d. Teams should normally have only one member with a laboratory in any one country unless an increase in the number of members from one country is clearly essential for the interdisciplinary nature of the project (see "Interdisciplinarity" in <u>3.3</u> and <u>5.2</u>. for the financial consequences of including more than one team member from any one country). Applications with most team members having their laboratories in a single country, e.g. 2/3, 3/4 or 3/5 members in the same country, are strongly discouraged and the need must be clearly demonstrated. In particular, teams with 2 members from the same institution will not be judged favorably (see <u>3.3 Interdisciplinarity</u>).
- e. When applicants have a double affiliation in different countries, both will be considered active and will be taken into account when calculating the budget for successful teams.

4.7. Concurrent applications

- a. No individual may be an applicant on more than one letter of intent in this review round. Please make sure that ALL applicants (either Young Investigators' Grants or Program Grants, as Principal Applicant or Co-Applicant) are aware of this rule. If anyone applies on two or more letters of intent (including a Young Investigators' Renewal see below), these will all be removed from the competition.
- b. Scientists cannot hold an HFSP Research Grant and an HFSP Fellowship at the same time.
- c. Holders of HFSP Career Development Awards may apply for HFSP Research Grants (see also <u>4.2.</u> above).

4.8. Renewals for Young Investigator teams

Renewals may be considered only for Young Investigator teams in their third year (or the period of a nocost extension) of a current award (currently awardees from 2016 and 2017). The Principal Applicants of the eligible Young Investigator teams will be contacted directly by HFSPO with the conditions and application instructions. This will be highly competitive and these applications will be considered in competition with the new full applications at the January meeting of the Review Committee. Such renewals are exceptional. This possibility may not be retained in future cycles.

4.9. New applications from previous awardees

- a. Scientists cannot hold more than one award at any one time. Those who are currently receiving support from an HFSP research grant (as Principal Applicants or Co-Applicants) are not eligible to apply for a second research grant. However, awardees from 2017 may apply for a new grant on condition that it does not start until after termination of the current award (which includes the approval of their final financial report), and that the project and team members are distinct from the current grant. Awardees from 2018 and 2019 are not eligible.
- b. Each applicant (Principal Applicant or Co-Applicant) who has been awarded an HFSP research grant (as Principal Applicant or Co-Applicant), since award year 2015, must provide information about the objectives and outcome of the former project, together with a statement of its relationship to the current application. Applications bearing a strong similarity to previous awards, either in team composition or topic of research, will be seen as renewals, and thus not considered eligible.

5. Budget

5.1. Use of funds

The research institutions in which the proposed research is to be carried out must provide the facilities and equipment necessary for members to carry out their proposed research. The funds provided by the HFSP are not intended to replace or supplement current domestic programs nor to provide basic institutional infrastructure. They are to be used specifically to support new international collaborative programs. However, if additional scientific equipment is essential in order to perform the joint collaborative research, this can be purchased using the grant funds. Additional scientific personnel must also be part of the new collaborative element.

5.2. Amount of award

a. The current mode of funding is as follows, but may be subject to revision before full applications are invited to take into account HFSPO's budget, \$250,000 for a team of 2; \$350,000 for a team of 3; \$450,000 for a team of 4 or more. These figures represent the amount awarded to the whole team per year for a period of 3 years.

- b. Two members from the same country will be considered as a single team member for purposes of calculating the award, unless they constitute an interdisciplinary collaboration in which case they will be awarded an amount equivalent to 1.5 team members (currently \$300,000 for a team of '2.5' and \$400,000 for '3.5' team members).
- c. In the case of a two-member team with one member in a for-profit institution, the total annual award will be reduced to \$125,000. In other cases, the for-profit member will not be included when calculating the amount of the award.

Important: The HFSP budget is determined in US dollars. While payments may be requested in another currency, the amount in that currency will be determined by the exchange rate against the US dollar at the time of each transfer (and thus may vary for each annual payment). HFSP reserves the right to transfer funds in local currency.

5.3. Tenure of Grant

Each grant is awarded for a period of three years.

5.4. Method of payment

In the event of an award being made, the distribution of funds will be decided by the team members. The funds will be transferred by the HFSPO to each team member's institute separately.

5.5. Financial reporting

Institutions are required to maintain complete lists of all expenditures from the HFSPO award. A financial report based on these lists will be required for the full three years of the award. This will be organised by the Principal Investigator at the end of the grant. In addition, all invoices, pay-slips, etc. must be retained for at least two years after the end of the grant period in case of audit. Reporting practices may be subject to modification during tenure of the grant if required by the HFSPO Board of Trustees or auditors.

5.6. Permissible expenses

Note that a budget proposal is **not** required at any stage of the application process. The following information is provided to allow applicants to see the scope of funding permitted in case an award is made.

5.6.1. Equipment

Purchase of equipment must be essential for the new collaboration which is proposed. Purchase of equipment to supplement current domestic programs is not allowable. Participating laboratories should already be equipped to pursue their current research. HFSP grants are not awarded to institutions but to individuals in an international collaborative research team; as a consequence, equipment purchased through the support of an HFSP research grant should follow the grantee in case he/she moves to another institution.

5.6.2. Materials and supplies

Costs of reagents, animals, disposables. Computer software necessary for the scientific collaboration is permissible, general office software may be included in <u>5.6.7.</u> (within the 10% maximum limit).

5.6.3. Services

Consulting services and computer services *specific to the project*, including rental fees (fees for computer or telephone networks may be included in the indirect costs see <u>5.6.7.</u>).

5.6.4. Salaries

The participation of additional personnel must be essential for the new collaborative research. Salary support or other direct remuneration cannot be allocated for the Principal Applicant or Co-Applicants or other faculty (including "summer salaries"). Salaries are allowable for research assistants (post-doctoral scientists, graduate students, technicians) but not for institutional staff such as secretaries, nor laboratory managers. The salaries shall be in accordance with the salary scales of the institutions concerned. These awards are intended to support research by trained personnel. They are not training programs. In consequence, while student stipends or salaries are allowed, **student tuition fees are not a permissible expense**.

5.6.5. Communication expenses

- a. Publication (costs of publication of research results including <u>open access</u> fees): article translations, mail etc...
- b. Express courier services.

5.6.6. Travel and per diem

- a. For individual team members and their laboratory personnel visiting other team members (domestic and foreign travel, per diem allowances for up to three months each year). This may also include joint meetings of team members and their laboratory personnel. Scientific advisors, exterior to the project, may also be invited to such meetings.
- b. Scientific meetings, or external training courses, related to the HFSP project (may include registration fees for scientific conferences).
- c. All team members are expected to attend a meeting of awardees organised by the HFSP in the final year of the award. Awardees are expected to cover travel and accommodation expenses for this out of the grant award.

5.6.7. Indirect costs (overheads)

No more than 10% of the direct costs of the award, at each research institution, may be used for indirect costs. These must be taken from the funds awarded; no further funds will be provided by HFSPO for indirect costs (overheads).

5.7. Impermissible expenses

5.7.1. Investigators' salaries

The Principal Investigator or Co-Investigators may not receive personal remuneration from an HFSP grant either in the form of a salary (even in part) or consultation fees.

5.7.2. Tuition Fees

While student stipends or salaries are allowed, student tuition fees are not considered a permissible expense.

6. Ethical considerations

Awardees must observe the highest ethical standards in conducting all research supported by the Program. The Awardee agrees to conform strictly to the national and institutional codes of practice, regulations and laws which govern the ethical conduct of scientific research in his/her own institution. Institutions must inform HFSPO if national or institutional codes of practice, regulations, or laws have been infringed in the performance of the award. The awardee also agrees not to undertake any research jointly with scientists in another country where experimental procedures which are forbidden in his/her own laboratories/institutions. Examples of national guidelines can be found via links on https://www.hfsp.org/Good-Scientific-Practice). HFSPO's policy on scientific misconduct is available on the HFSP website.

7. Intellectual property rights and publications

HFSPO will not claim any intellectual or commercial property rights that may be generated through the research it sponsors. HFSPO will not become involved in any dispute which may arise about the ownership of such rights. The assignment of any such rights (and any income arising from them) is to be determined by the procedures and regulations which apply in the laboratory/institution in which the research is conducted.

In considering the possible commercial importance of discoveries which arise from research sponsored by the Program, the awardee agrees that submission of manuscripts for publication of these discoveries in scientific journals will not be delayed for more than 45 working days after the manuscript is completed.

An acknowledgement of support by the Human Frontier Science Program must be included in all publications resulting from work carried out under the grant.

8. How to apply:

Deadlines:

- i. Compulsory initiation of a letter of Intent by obtaining a LIXXXX/2021 reference number by March 19th 2020
- ii. Submission of Letters of Intent: March 30th 2020

Please read the guidelines and the document <u>'Writing a letter of intent'</u> carefully to establish whether your project is clearly in tune with the requirements and emphasis of the research grant program.

You must first submit a letter of intent to apply for a grant, which must be done online as described below. The main steps in applying are as follows:

- The research team must designate one member as Principal Applicant, who will be responsible for final submission of the letter of intent. Note the requirement that the Principal Applicant must have his/her primary laboratory in a member country. See Item <u>4.3.</u> of the guidelines ("Research Teams") for more detail.
- 2. In setting up the team, the Principal Applicant must ensure that no team member is a Principal Applicant or Co-Applicant on another proposal (see Item <u>4.7.</u> in the guidelines). Failure to ensure this will result in all those applications being withdrawn from the competition.
- **3.** The Principal Applicant must obtain a 2021 reference application number on the HFSP extranet site (at the address https://extranet.hfsp.org/ this site will be accessible from mid-January 2020). The Principal Applicant will first have to set up a password (if not already in the HFSP database) that will give access to the online application form and further instructions concerning online submission (including the addition of the other team members). It is essential to obtain a 2021 reference number as soon as the team has seriously decided to submit a letter of intent. Team members can be modified up to the final submission date. An application number must be obtained by March 19th at the latest. Principal applicants already listed in the HFSP database (e.g. those re-applying from last year) <u>must</u> also obtain a 2021 reference number by March 19th.
- **4.** In all cases, the co-applicants must approve their participation via a link generated by the Principal Applicant before the application can be completed and submitted.
- **5.** The letter of intent must be submitted by March 30th 2020. No changes can be made to the letter of intent after final submission.
- **6.** The Principal Applicant will be notified by the beginning of July if the team is invited to submit a full application. The deadline for the full application will be mid-September 2020.

9. Technical tips

Tips for each section are given on the website itself. If new problems are reported to us, tips will be added to the relevant pages to help in the submission procedure.

Annex: Key to scoring Letters of intent for Review Committee members

For each letter of intent 2 Review Committee (RC) members are asked to score 5 elements.

- **1.** Interdisciplinarity (includes novel combinations of expertise for the field). This is an important criterion but low interdisciplinarity can be compensated for by a high level of innovation (next box)
- 2. Novelty/innovation important criterion
- **3.** Need for collaboration is international collaboration needed or could one group do it alone (or will they all work independently rather than as a team)?

Criterion	Score	Description
Interdisciplinarity, (includes novel combinations of expertise)	4	Team members have clearly different expertise which is a novel combination for the field (particularly including physical sciences).
	3	Team members with different expertise (particularly physical sciences) which may be novel or recent for the field.
	2	Team members with different skills but only within the life sciences (e.g. biochemistry, cell biology, genetics, molecular biology, structural biology, electrophysiology)
	1	Insignificant complementary expertise
Novelty/innovation	4	Highly original project employing novel techniques or approaches
	3	Original project employing different techniques or approaches
	2	Conventional project employing different techniques or approaches
	1	Conventional project
Need for collaboration	4	Question could not be approached without collaboration between all team members
	3	Clear collaboration with significant interaction that will enhance the success of the project
	2	Some existing collaboration between some of the team members
	1	Parallel projects without clear interaction

Guide for individual criteria

4. **Comments** (2 or 3 short sentences)

RC members are invited to cover any of the following points in their comments:

- Appropriate for HFSP

This is mostly treated in the \underline{triage} but RC members may signal any application that is 'not appropriate for HFSP'.

- Scientific significance, Ambitiousness, Team quality If team members have many joint publications (see <u>4.1.</u>), this should be indicated for the Selection Committee ('Existing collaboration?')

When choosing borderline applications for the Selection Committee, RC comments are the most critical element. Comments such as 'This is a burning question of general importance to our understanding of signaling pathways proposed by an excellent team', 'Really original, but risky – let's see a full application' or 'This is an average structure/function project proposed by a team of uneven track record' will both incorporate the essential of the above and will help the Selection Committee members in assessing the applications. If necessary, RC members are encouraged to write slightly longer comments.

5. Overall rating A to D

RC members then give an overall rating A - D as described below. Only applications that clearly fulfill the HFSP criteria are rated A. The percentages in the following table are guides, but **at most** 35% of all applications will be selected for the next step of review.

A	Clearly fulfils criteria for consideration in terms of scientific quality and true interdisciplinarity/novel combination of expertise – should represent the top 10% of the applications "appropriate to HFSP".
В	Definitely worth consideration – should represent at most 20% (i.e. $11^{th} - 30^{th}$ percentile)
С	Not the highest priority but worth consideration if numbers permit – should represent at most 20% (i.e. 31 st – 50 th percentile)
D	Not sufficiently high priority for further consideration – the bottom 50% or more

A highly innovative project that is low on interdisciplinarity should be scored B and flagged **'Outstanding** team and project - should be discussed by the Selection Committee'.

Based on the combined scores of the 2 RC members, 35% of applications are forwarded to the <u>Selection</u> <u>Committee.</u>