

Q.What are our chances of success?

A. From 2004 to the 2008 award year we received between 720 and 770 Letters of Intent (LoIs) each year. In the 2008 cycle, about 10% of these were considered by a small scientific committee to be inconsistent with HFSP's funding priorities (see below) and were eliminated from the competition. The other LoIs were each scored in detail by 2 members of the Review Committee (by mail) and about 30% of the LoIs submitted were then further scored by members of the Selection Committee who reviewed this group during a 3 day meeting in Strasbourg. The Selection Committee invited some 88 teams (c. 13% of the eligible LoIs submitted) to submit a full application. Of these we expect that slightly more than 30 projects will be approved for funding, which will represent 35% of the full applications and about 4.5% of the eligible LoIs.

Q. Is there a difference between Young Investigators and Program Grants?

A. In 2007 the final scores were essentially the same for both Young Investigators and Program Grants. However the percentage of novel, risk-taking, projects was higher in the former which was reflected in the overall success rate (9.3% vs 4.7% of the eligible LoIs). As there is no quota, the distribution will differ from year to year depending on the relative quality of the applications in the two categories. In assessing applications for Program Grants reviewers are instructed to bear in mind the age and research experience of the investigators and many successful teams include younger investigators.

Q. On what grounds were projects eliminated as inappropriate?

A. In the 2008 applications the most common reasons for eliminating projects remained that :

- they involved teams with very close expertise, all within the traditional life sciences
- they were centred on drug design or screening
- they were clinically orientated, and did not centre on the elucidation of a fundamental biological problem
- they were applied (food sciences, animal husbandry, forestry etc...) or approached only vaguely defined problems in ecology (pollution...).
- they were unfocussed "-omics" projects (transcriptome, proteome etc...), with little grasp of either the technical problems or the difficulty of the analyses involved
- they were clearly the continuation of ongoing collaborations
- the project had minimal significance for fundamental biological research

Q. And the others?

A. We received very many good to excellent projects that would clearly be financed by other sources. This was particularly the case for those examined in detail by the Selection Committee. However as HFSP's mission is to finance innovative and interdisciplinary research, many were eliminated as i.) they were essentially the direct extension of ongoing work, often with approaches being used simultaneously in many laboratories worldwide (lack of novelty) or ii.) they brought together conventional combinations of scientists from closely related disciplines (all neurobiologists, all structural biologists, all developmental biologists...) and thus failed to meet the criterion of interdisciplinarity. iii) they were thinly disguised consortium projects with multiple group leaders associated with each team member resulting in many more than four identified senior scientists. In general only one or two projects with 5 (or most exceptionally 6) senior scientists are invited to submit a full

application each year. See http://www.hfsp.org/PDF_Files/RG_Awardees_2007.pdf for examples of successful team composition (see also the following on team structure).

Q. How should I organize the structure of the research team (- avoid 'add-ons')

A. Reviewers pay particular attention to the proposed interactions between team members and you should build the strongest team possible making the most of the different backgrounds of the team members. If the basic rules for participation are respected (especially those of innovation, interdisciplinarity, internationality), proposals are judged solely on scientific excellence. You should avoid adding a partner because of his/her i. geographical location, ii. scientific discipline, iii prestigious name (or that of his/her institution), unless he/she is really an essential partner. Note that 'add-ons' are easily spotted ('...and partner 4, expert in bio computing, will analyze the results of the other groups...' - no details of the expected methods are given, or the sole justification for a partner is that he/she assures the intercontinental nature of the team). In addition, if an award is made, such partners are often difficult to integrate and may indeed be a source of problems for the PI in running the project (they don't feel involved, the prestigious partner is too busy to participate and leaves everything to a post-doc., etc.). In the case of projects initiated via a local interdisciplinary collaboration, it is essential that the other partners are real contributors and not just providing samples for analysis within an interdisciplinary center.

Q. What does HFSP mean by "interdisciplinarity"?

A. For HFSP, interdisciplinarity is the collaboration of biologists with scientists from other disciplines such as chemistry, physics, mathematics, computational sciences, nanoscience and engineering. Note that interdisciplinarity is a rapidly evolving concept: a novel combination of disciplines that allowed a significant breakthrough a few years ago will not be scored highly now if the same combination has become routine in the field. Past examples would be structural biology combined with routine functional studies or confocal imaging applied to developmental biology or cell biology. While the skills of non-biologists were essential to design and implement confocal microscopy and the treatment of images, much of this is now widely available (often commercially). The same is true for 'routine' bioinformatics particularly in the fields of neurobiology or immunology where these approaches are now part of the discipline. In these fields it would be expected that the computational component would also involve cutting edge science. In 2007 we heard the comment 'this is a routine molecular tweezers project'. In short, the use of 'off the shelf' tools would not be considered by the Review Committee as the mark of a truly innovative interdisciplinary project.

Q. And by 'local or national interdisciplinarity'?

A. To count as a national interdisciplinary collaboration, this must involve people from very different scientific backgrounds teaming up for a new project. A laboratory working on Wnt signaling in the frog teaming up with a laboratory from the same country working on Wnt signaling in mouse, fly, cell lines etc. is not interdisciplinary - the groups can participate but as a single team member. As a rule of thumb, if both teams publish in essentially the same journals this is unlikely to be considered an interdisciplinary collaboration by the review committee. In addition, in order to be considered as a local interdisciplinary collaboration receiving financing as 1.5 team members, scientists working in an 'interdisciplinary center' must propose a new collaboration. While HFSP wants to encourage interdisciplinary research, it will not support ongoing collaborations within such centers. In any event, scientists from other countries must participate in the team (and not just as a source of material - see above)..

Q. How does HFSP see the participation of engineers and bioengineers in applications?

A. From 2006 there has been a noticeable increase in the number of bioengineers participating in LoIs. However few of these reach the Selection Committee because they propose essentially applied projects. Engineers and bioengineers are encouraged to participate but the project itself must not be an applied project (see above – we received many applications in 2007 to develop surgical prostheses), rather their skills should be applied to a problem in fundamental biology. We also received enquiries from investigators in 'joint-venture' institutions that do not have 'not-for-profit' status because they receive both public and private funding. If institutional accounting is on a 'project by project' basis and there is no private support for this area of research, HFSP will consider financing such partners.

Q. One or more of my potential co-applicants is/are over 45 years old. Will this decrease our chance of success?

A. You may apply for a Program Grant at any age! Although the HFSP encourages applications from scientists in the earlier stage of their careers, the overriding questions considered will be (1) is the application novel? (2) are scientists from other disciplines being brought into the life sciences? (3) will the grant enable the team to develop a new line of research? (4) is the collaboration necessary to achieve the aims of the project?

Q. You state in the guidelines that applicants must have "an independent laboratory and an established record for independent research". I am just starting my first independent position and have a good publication record from my postdoc period, but have published with my supervisor. Am I eligible to apply for a Young Investigator's Award?

A. Yes. The aim of the Young Investigator's Program is to allow newly established scientists to collaborate in a novel, interdisciplinary project. Your ability to conduct the project will be judged on your track record, but we realize that at that transition stage you may have been publishing mainly with your postdoc supervisor. You should make the positions of the team members clear in the application in Item 5 ("Overview").

Q. I have a staff position in a department in e.g. Germany, Japan where the general direction of research is determined by the head of the department or research group. Am I eligible to apply for a research grant?

A. To apply for a research grant, you must be able to determine the course of the HFSP-funded project and have freedom to administer the grant award. In cases of doubt, HFSP reserves the right to obtain written confirmation from your head of department of your freedom to conduct the research independently.