



Human Frontier Science Program

Overview & Practical Guide for HFSP Fellowship Applications

Guntram Bauer
Director of Fellowships
April 2007



Outline


1. Where to start?
Agency or Foundation?
2. Getting to know YOUR funder(s)
The HFSP Fellowship Program
3. Preparing the application
Timing
The Proposal



Where to start?

Finding a host institution or supervisor!

- If this poses a problem your PhD advisor or other senior scientists in the department may be of help
- Use conferences to talk to scientists
- Visit labs to present your work
- Use scientific keywords in search engines to identify a starting point for extended searching and finding contacts
- Follow up searching literature databases (such as PubMed) using scientific keywords

 For a summary of how to use internet search tools you may refer to the article „Websites and searching for collaborators“ on the HFSP website



Where to start?

The search for the honey pot!

- Funding mechanisms are different depending on country, so are career opportunities and requirements
- The type of organization and/or host country may define your status
- Prestigious fellowship vs. grant-paid or employed postdoc!
- Consider existing differences in the program portfolio (continued career support, „return“ fellowships,...)
- Post-award support for fellows may differ (alumni, annual meetings, infrastructure access, journals, advanced training opportunities,...)

National agency or private foundation?



Where to start?

National research agency :

- Funding programs for many disciplines available („bread & butter“)
- Basic support for R&T in a country/region
- Trade off: universal career scheme (social sciences = life sciences = natural sciences?)
- Probably with higher number of awards per category or discipline than private foundations
- Less flexibility in use of funds (tax money)
- Financial support, i.e. Stipends reflect domestic/national salary regimes
- May be not the fastest...



Where to start?

Private foundation/trust:

- Often support a specific theme or niche („off the beaten track“)
- Program portfolio may change often (3-5 years)
- Target a highly specialized group of applicants (that e.g. is working on specific diseases)
- Funding volume is small and targeted!
- Prestigious, hence highly competitive!
- Stipends may be somewhat higher and allow more flexibility in the use of funds



Where to start?

To stay on the ball:

- Follow the news section in major scientific journals (building of new institutes, research initiatives by organizations or government agencies)
- Follow newspaper articles - science section – regarding changes in the research environment of the region/city (e.g. new endowments by foundations...)
- Lists of vacant positions may provide valuable information on new institutions/laboratories
- Contact the office for sponsored research in the university



Overview WWW listings



Where to start?

Get the big picture!

- Compare the funding pipeline of organizations as regards timing of parallel applications, accepting of awards from more than one funder, specific eligibility criteria,..
- Make a „cost-benefit analysis“ of different programs (family support, duration of fellowship, travel expenses, moving expenses, availability of follow-up support,...)
- Try to get in touch with previous or recent fellows of different programs



Get to know YOUR funder(s)

The devil is in the details!

- Familiarize yourself with the general philosophy or scientific scope of THE organization(s)
- Collect all relevant information for the fellowship program(s) that you want to apply for
- Study the application guidelines to make sure that you are eligible
- If there is only a slight doubt contact the appropriate office to receive written confirmation that you are eligible to enter the competition



Get to know YOUR funder(s)

How not to contact a funding organization!

„I have got your email from the internet and I am fanatically interested to communicate with your organization. Professionally, I am a young researcher working in horticultural crops production and management for more than 4 years. I would like to continue my PhD degree before 30. In this regard, your esteemed organization plays an important role to attain my dream. Would you please be good enough to let me know all the information.“

✉ Do not „mail bomb“ funding organizations!



Get to know YOUR funder(s)

Write to the point and be short!

“I am interested in applying for a HFSP Long-Term Fellowship... I understand from the guidelines that this fellowship can begin no earlier than 1 April [the following year] and that applicants must not have worked at their host institute for more than a year before the start date. I am concerned that technically these criteria may render me ineligible and would like to clarify this point before submission of my application.”



HFSP Fellowship Program


Member countries:

Canada, France, Germany, Italy, Japan, UK, USA, European Union, Switzerland

Australia and Republic of Korea (2005)

New Zealand and India (2006)

- Proposed at the Venice Economic Summit of the G7 in 1987
- All finance is 'public' – ministries or research councils (~ 54 Mill. USD p.a.)

 For more information about HFSP please refer to the article „Science without borders – Support for basic research in the life sciences“ on the organization's website



Scientific Scope of HFSP Programs

Basic research into the complex mechanisms of living organisms with the general objective to support original and **innovative** projects investigating interactions at the molecular level up to systems biology

HFSP Statutes, Art. 3:

...Importance is attached to scientific merit, **internationality**, especially **intercontinentality**, and **interdisciplinarity** in implementing the program activities.

The scientific scope sets out the selection criteria of HFSP and defines research that is not supported



Not funded...

- Applied research...
- ...in particular pharmaceutical, clinical or biomedical projects (drug development, diagnostics, therapy)
- Agricultural production & yield, bioremediation
- Population studies, ecology
- Systematic “~omics” projects
- Research in for-profit institutions*

*May be partners in a research grant team but receive no HFSP funds



HFSP Scientific Programs

Individual Fellowships

- Long Term Fellowships*
- Cross Disciplinary Fellowships*
- Career Development Awards*
- Short Term Fellowships

* Special programs for young scientists

Research Teams

- Program Grants
- Young Investigator Grants*

HFSP support begins at the postdoctoral level!



HFSP Fellowship Program

From the guidelines...

...to support advanced **training of postdoctoral researchers in an interdisciplinary context**. A broad **training in more than one research area** enables outstanding young researchers to **make significant contributions** to advance our understanding of fundamental biological processes

Long-Term Fellowships

for applicants with a Ph.D. in the life sciences who are **expected to broaden their horizon by moving into a new research area** that is different from their doctoral studies or previous postdoctoral training...

Cross-Disciplinary Fellowships

for applicants with a Ph.D. in physics, chemistry, mathematics, engineering, material sciences or computer sciences who wish to gain research experience in the life sciences **in proposing a significant change in discipline** ...



Conditions and Support

- Preliminary data are not required (Remember the „I“ words)
- Applicants must have at least one original research publication as lead-author in an international peer-reviewed journal (discipline dependent)
- Application to work in a NEW country (not more than 12 months of previous research experience)
- Applicants **from a member country** can hold a fellowship in a laboratory anywhere in the world
- Applicants **from non-member** country must apply to work in a HFSP member country

Since 1990 HFSP has supported awardees from >60 countries!



Conditions and Support

- Application within 3 years after obtaining the PhD (except for career breaks)
- Tenure of up to 3 years; the 3rd fellowship year can be used for repatriation to home country and can be deferred for up to two years
- Up to 3 months paid parental leave and **as of 2007 a child care allowance!**
- Repatriating HFSP Fellows are eligible to apply for a HFSP CDA

Each year applicants from about 30-35 different countries apply for HFSP fellowships!



Change in Research Area

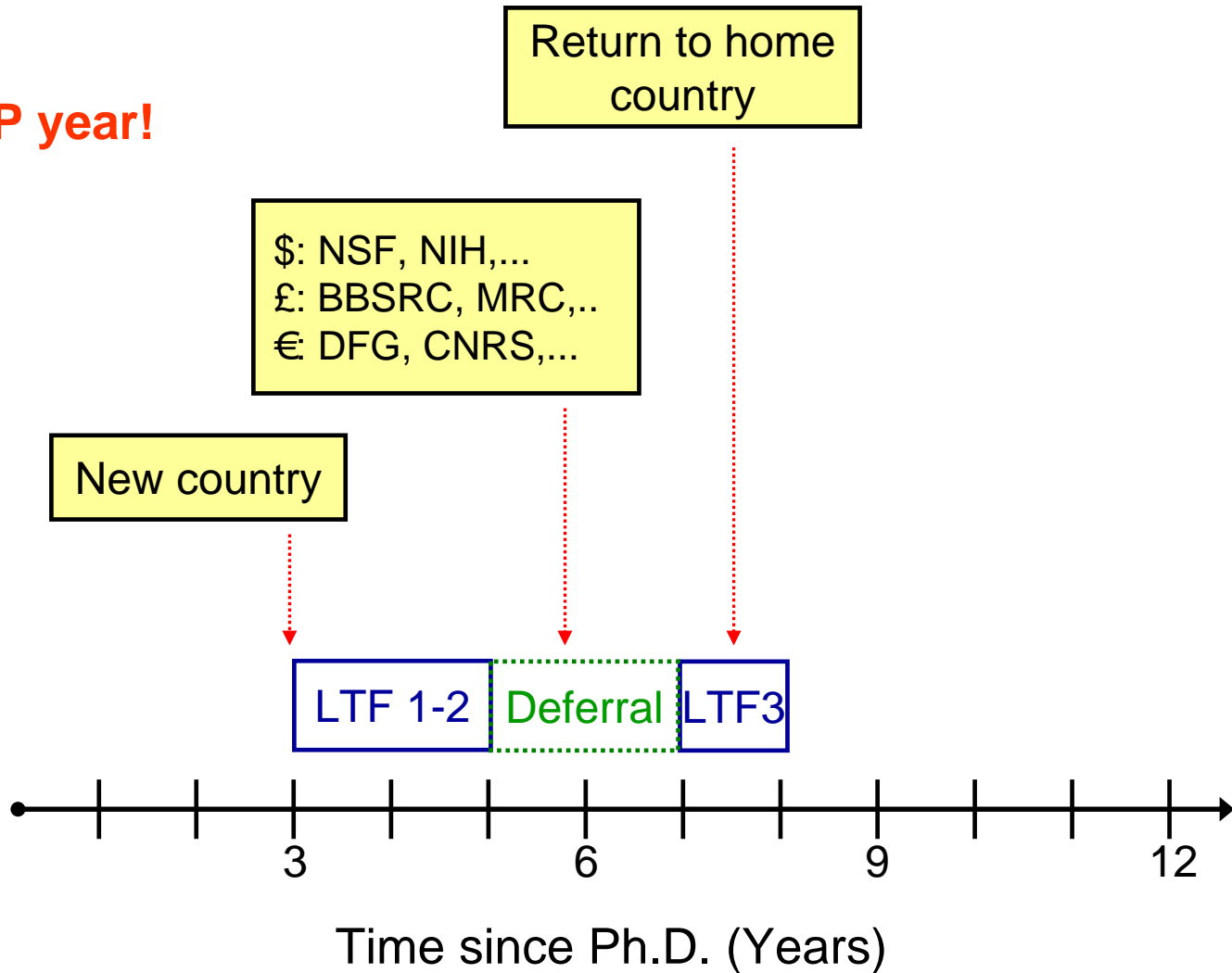
To be ranked outstanding an applicant must consider a simultaneous change in research topic, study species/system and technology!

- Genetics to structural biology
- Cellular neurobiology to systems neuroscience
- Genetics to computational analysis of genetic networks
- Chemistry to molecular biology
- Physics and engineering to cell biology
- Computer science and math to computational biology



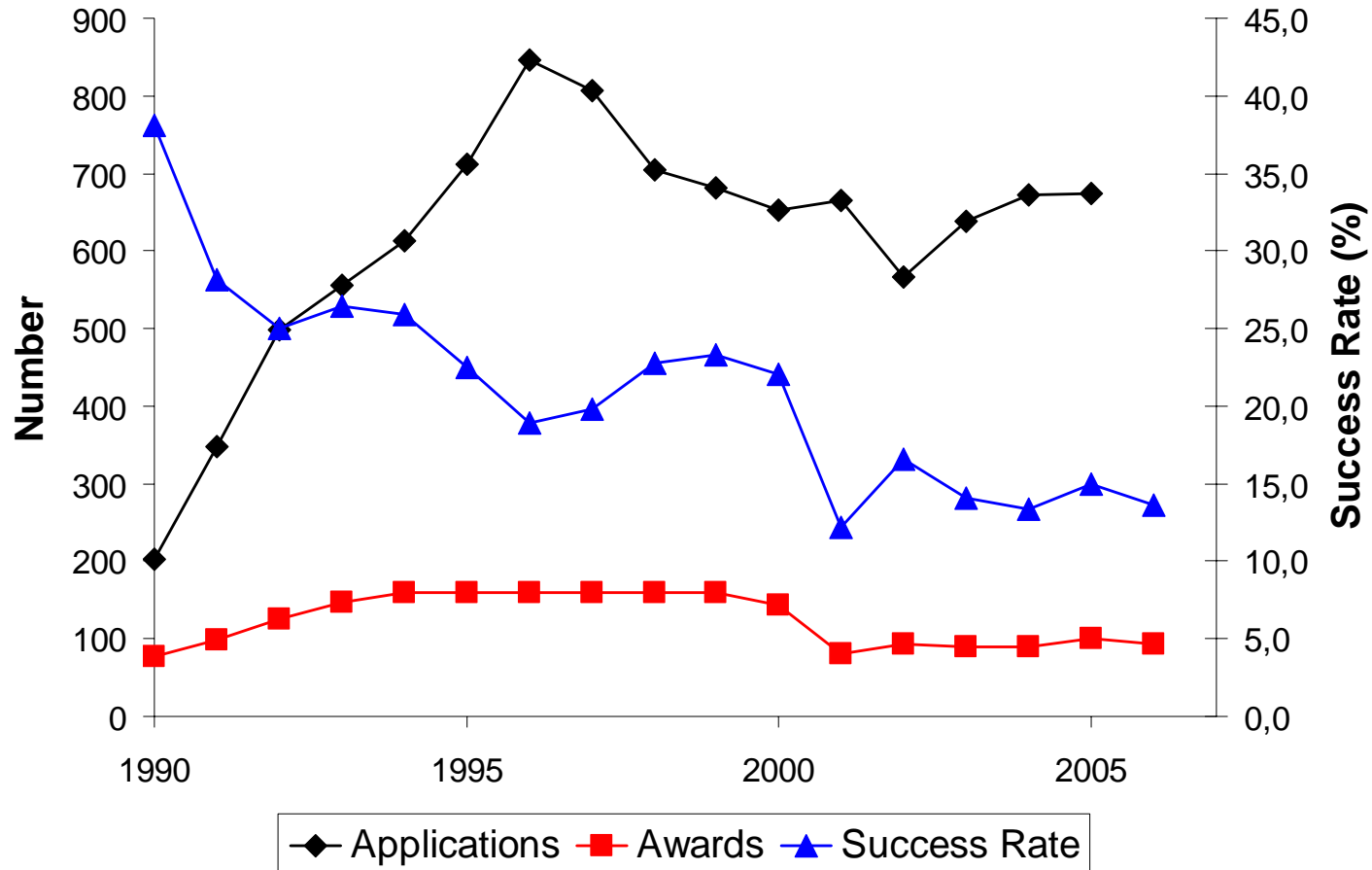
HFSP „Early Career Support“

How to use
the third HFSP year!





Application Statistics





Review Process Fellowships

- Submission of applications (**September**)
- Triage (5-10%)
- **Deadline for last minute update of publication list (December)**
- Expert evaluation of each application by two RC members
- Ranking and recommendation of short listed applications for discussion at Review Committee meeting (**January**)
- Recommendation by Council of Scientists (**early March**)
- Final award decision by Board of Trustees (**late March**)

Long-Term and Cross-Disciplinary Fellowships are reviewed as separate groups by the same committee!



Preparing the application

Some data
about timing of
job applications
(% respondents from
a questionnaire)

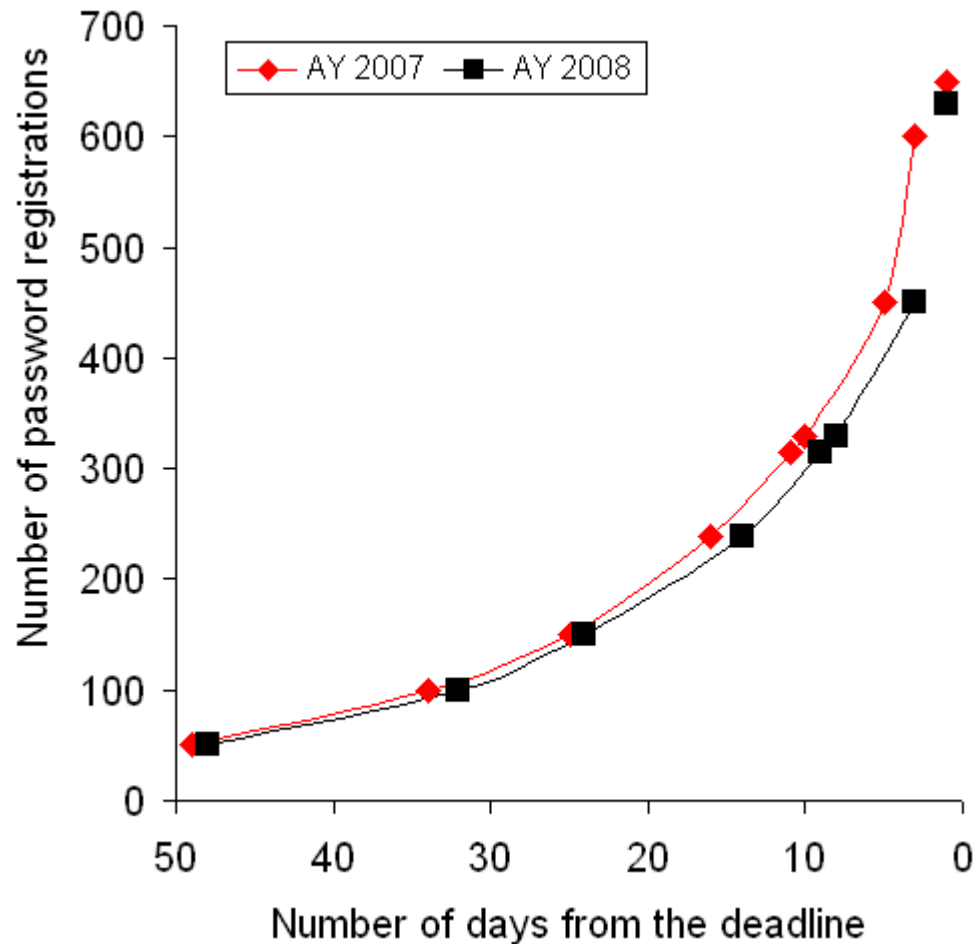
Start of job search by graduate students			
	Before	At	After
Country	Graduation		
Italy	16	42	42
France	18	18	64
Spain	24	34	43
Austria	31	38	31
Netherlands	42	37	21
Finland	44	40	16
Germany	48	33	19
UK	48	23	29
Czech Republic	48	26	26
Sweden	54	33	14
Norway	63	23	14
Japan	97	2	1

Source: "Careers after higher education: A European Research Study" (CHEERS)



Preparing the application

Scientists are creatures of habit!



Password registrations
for HFSP research grant
applications in 2007 and
2008



Preparing the application

Timing

- To avoid funding gaps, do not wait until after graduation!
- Knowing your future affiliation in advance leaves more time to search for funding and for writing applications!
- Ask your host P.I. about the availability of special funding initiatives in the host country/institution for your field of research
- Select and inform scientists who contribute reference letters about the procedure (e.g. submission via email or online), the deadline **and** the required information!

HFSP will introduce structured reference letters for AY 2008!



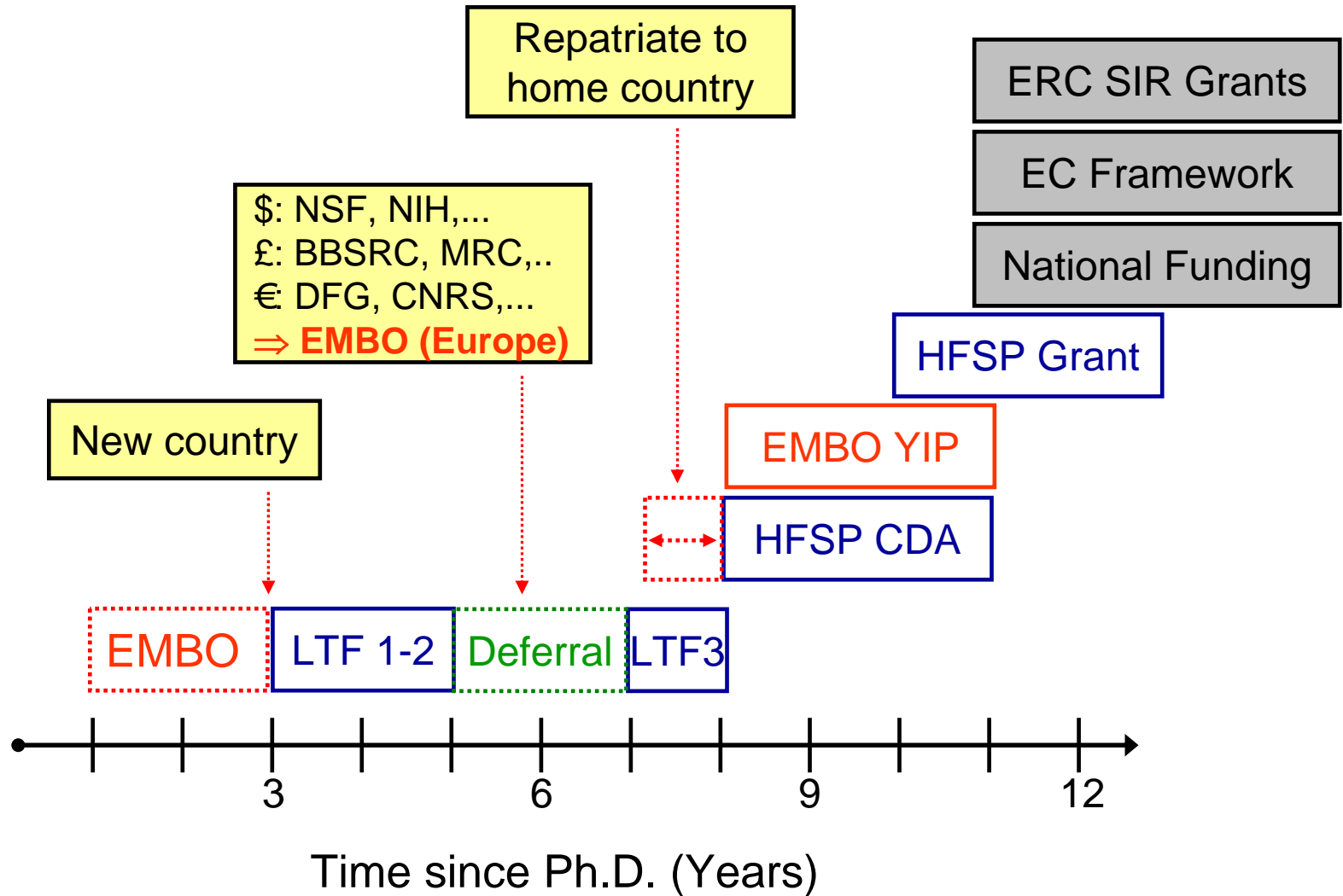
Preparing the application

Timing

- Monitor your correspondence
- Be able to respond to unexpected inquiries or questions from the funding organization
- Keep your CV updated all the time! Don't leave gaps!
- Should you plan to apply to several programs (try to) make sure that you remain in a position to choose!



HFSP „Early Career Support“





Preparing the application

Practical considerations

- Read abstracts of already funded projects (if available) before you start
- Ask previous or current fellowship holders for copies of their proposal
- **Never put all your eggs in one basket!** If possible save copies on or even work from a university/department server



Preparing the application

The Proposal

- There are limits to how often copy & paste works!
- Most programs have online submission systems in place eliminating the need to think about your proposal while being online!
- Tailor your proposal according to the specific objectives of the program
- Use the FAQ sheets (if available) as guidance
- Your application is reviewed by experts in the field but discussed and decided in a plenary meeting including scientists from different fields



For practical tips about grant writing please refer to the article “The Art of Grantsmanship” on the HFSP website



Preparing the application

The Proposal

- Abstracts and personal accounts are very important sources of information for high level scientific panels
- Don't pretend to be a Master of English if you are in fact not!
- Simple language & style can be very convincing
- Write your own original proposal (interview)
- Some aspects of fellowship proposals are required from all funding organizations in one way or another (abstracts of past and proposed research, abstracts of publications,...)



Preparing the application

From the HFSP online instructions:

Achievements and research goals

(maximum of 5,000 characters including spaces and punctuation)

This information will play an important part during the evaluation of your application.

Describe the research you have undertaken so far in your career and what you consider to be your most important research findings (state why). Specify your exact role for each publication where you are not the only author. Include your personal motivation and scientific goals. Describe how this fellowship will help you achieve these goals and how it will serve your professional perspectives.



Preparing the application

From the HFSP online instructions:

Intellectual contribution to the proposal and change in research direction:

(maximum of 1,000 characters including spaces and punctuation)

HFSP encourages applicants to propose a novel and innovative project that marks a significant change in research direction. Using the text box below comment on the originality and on your intellectual contribution to the study (was this originally your idea?) and describe the nature and degree of change in research direction (e.g. new techniques, change in study species/system). Clearly state how this fellowship experience will differ from your previous research experience and how this will serve your professional growth. This information will play an important part during the evaluation of your application.



Preparing the application

What makes a successful HFSP fellowship application?

- Successful completion of the previous research project as evident by at least one first (co-) author publication in an international peer-reviewed journal to which the candidate has made a significant contribution (reference letters!)
- Supporting reference letters by host P.I. and two referees
- A successful project...
 - is an original study that marks a clear departure from the previous research (change in research direction)
 - exposes the applicant to new theory (literature) and methodology
 - contains new elements (e.g. developing or learning new methods) that open a completely new approach to the research problem even if risky
 - is deemed to make a major contribution to the research field
- The research plan is feasible and described in sufficient detail



Preparing the application

Reasons for failure!

- Application stands in sharp contrast to fellowship guidelines
- Poor choice of project because
 - it is considered „standard“ despite its high level of sophistication
 - it merely represents a continuation of the PhD project (no change in research direction)
 - it „was given“ to the applicant by the host P.I. (lack of originality)
 - it is part of a larger consortium (EC type network) that would make it difficult to appraise a fellow's individual contribution
 - a fellow's contribution is not considered to be intellectually challenging
- The research plan is only vaguely described and/or other important sections are simply too short



Summary

- Start collecting information (bookmarks) on programs
- Devise a plan regarding timing, referees,...
- Finalize your choice as you approach graduation
- Precisely follow recommendations and guidelines
- Write simple and to the point



Submission Deadlines AY 2008

- **LT & CD Fellowships:**

Registration of password: **Thursday, 16 August 2007**

Submission deadline: **Thursday, 30 August 2007**

- Career Development Award: Thursday, 8 November 2007
- Short Term Fellowships: **Throughout the year**

Online submissions for all HFSP programs!



HFSP Journal

Frontiers of Interdisciplinary
Research in the Life Sciences

Scope

...to publish high quality recent developments in basic research in the area of life sciences over a wide range of organizational levels **using strategies or technologies from the more quantitative disciplines** (e.g. physics, chemistry, mathematics, engineering, or informatics).

<p>Arturo FALASCHI, <i>Editor-in-Chief</i> International Centre for Genetic Engineering and Biotechnology, Trieste</p>	<p>Mitsuo KAWATO ATR Computational Neuroscience Laboratories, Kyoto</p>
<p>Daniel P. KIEHART Levine Research Science Center Duke University, Durham</p>	<p>Marcelo MAGNASCO Center for Studies in Physics and Biology The Rockefeller University, New York</p>
<p>Peter H. SEEBERGER Department of Chemistry and Applied Biosciences, ETH, Zurich</p>	<p>Valerie FERRIER, <i>Managing Editor</i> HFSP Publishing, Strasbourg</p>

Further information available at <http://hfspj.aip.org>