



Human Frontier Science Program

Funding the Frontier

Prof. Dr. Ernst-Ludwig Winnacker
HFSP, Secretary General
Potsdam, July 17th, 2010



Human Frontier Science Program

- **HFSP is a global research funding organization**
- **It is supported by 13 countries and the European Union**
- **These countries are Australia, Canada, France Germany, India, Italy, Japan, Korea, Norway, New Zealand, Switzerland, UK and USA**
- **Since 1989 it has funded over 5000 scientists in over 60 countries**
- **Its instruments are postdoctoral fellowships and research grants**

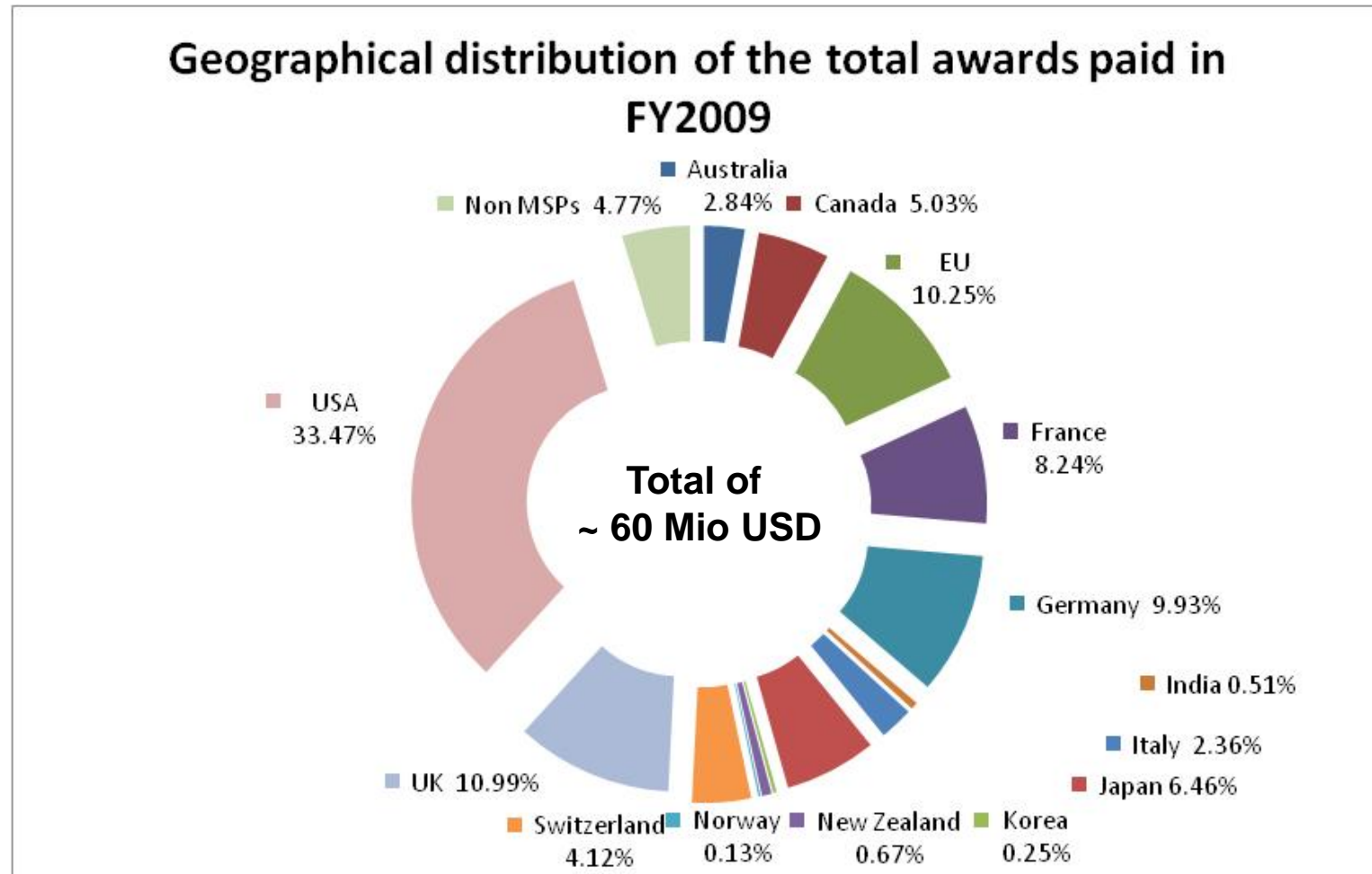


Human Frontier Science Program

- **Its goals are :**
- **Support for innovativ research into the „complex mechanisms of living organism“**
- **Encouragement or research that carries a potential risk of failure**
- **Promoting intercontinental collaboration**
- **Enabling early independence for researchers at the onset of their careers**

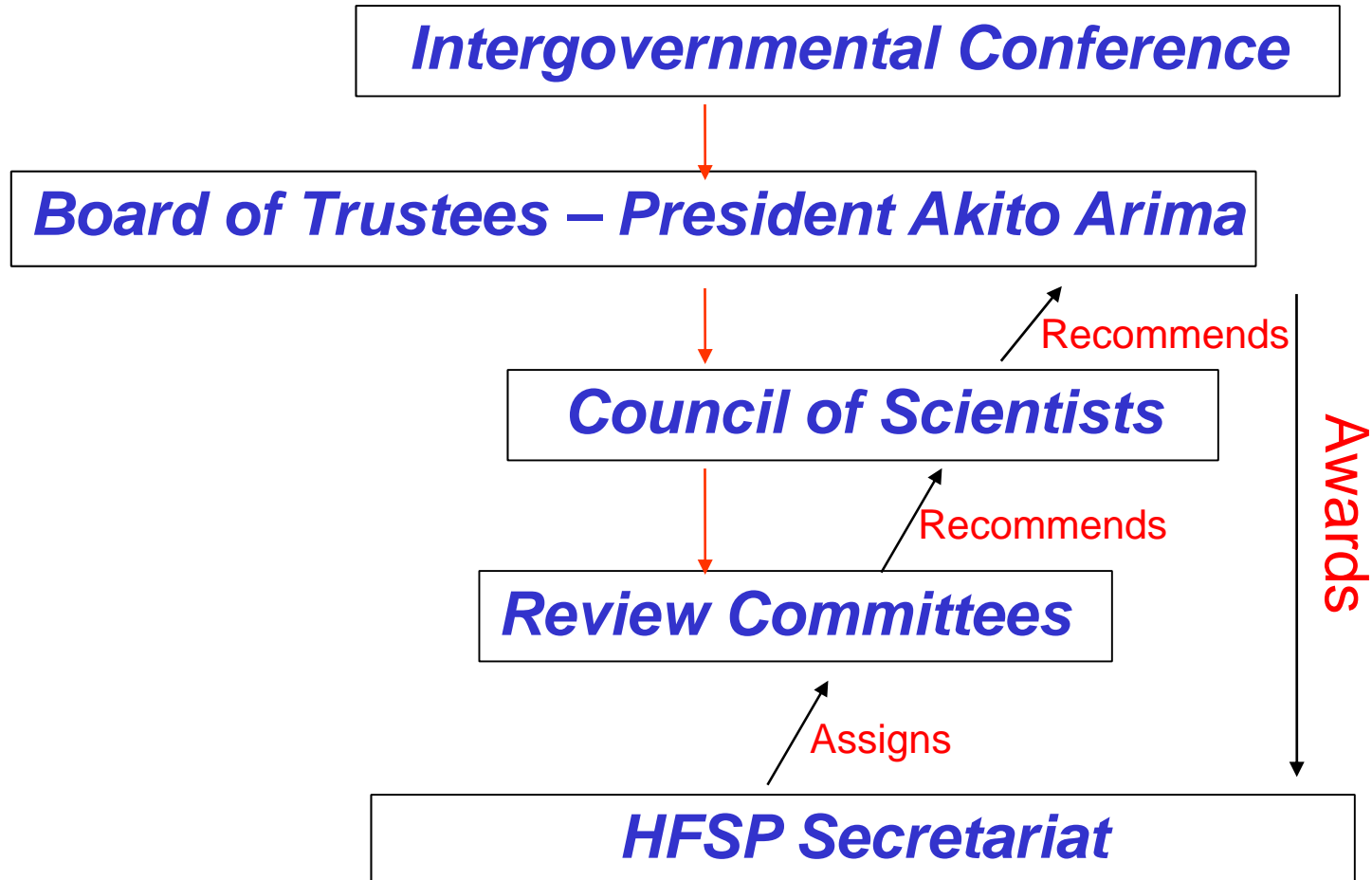


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HFSP Governance





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Former Prime Minister Nakasone



Prof. Akito Arima





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HFSP Secretariat





Human Frontier Science Program

What are the Human Frontiers tomorrow ?

“I never think of the future, it comes soon enough.” (Albert Einstein)

„Offline doesn't exist anymore. You wanna fish where the fishes are !“

(Tim Kring, creator and producer of „Heroes“)

„You can't move fast enough. You have to be willing to innovate „

(Owen van Natta, CEO of „MySpace)



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What are the Human Frontiers tomorrow ?

- **The Life Sciences pose ever more challenges and opportunities**
- **Interdisciplinarity is a necessary condition for progress in the life sciences but not a sufficient one. Only combined with excellence and risk-proclivity does it define a frontier**
- **Novel technologies, like the DNA-sequencing revolution, the improvement of imaging tools or the new developments in light-microscopy constantly redefine the field**



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What are the Human Frontiers tomorrow ?

- The relationship of mathematics and biology, unlike the one between mathematics and physics, is only in its infancy
- Systemic, synthetic and quantitative approaches to biology thus require additional breakthroughs, in mathematics, in information theory, in high-throughput chemistry and in the computer sciences
- The science of genetics is on a continuing track of unimpeded success



HFSP Scientific Programs

- **Collaborative Research Grants**
 - intercontinental collaborations between 2-4 labs,
~ 30-35 grants per year; 250-450 T USD per year
- **Postdoctoral Fellowships**
 - For life scientists and scientists in other fields (chemistry, physics, mathematics, computer sciences) to obtain postdoctoral training abroad in biology
 - Tenure up to three years, third year can be used to return to home country and can be deferred for up to two years



HFSP Scientific Programs

- **Career Developments Awards (CDAs) enable former Long-Term Fellows to establish their own independent research team**
- **CDAs provide 300.000 USD of support over three years**
- **Since 2003 157 junior scientists have received the award**

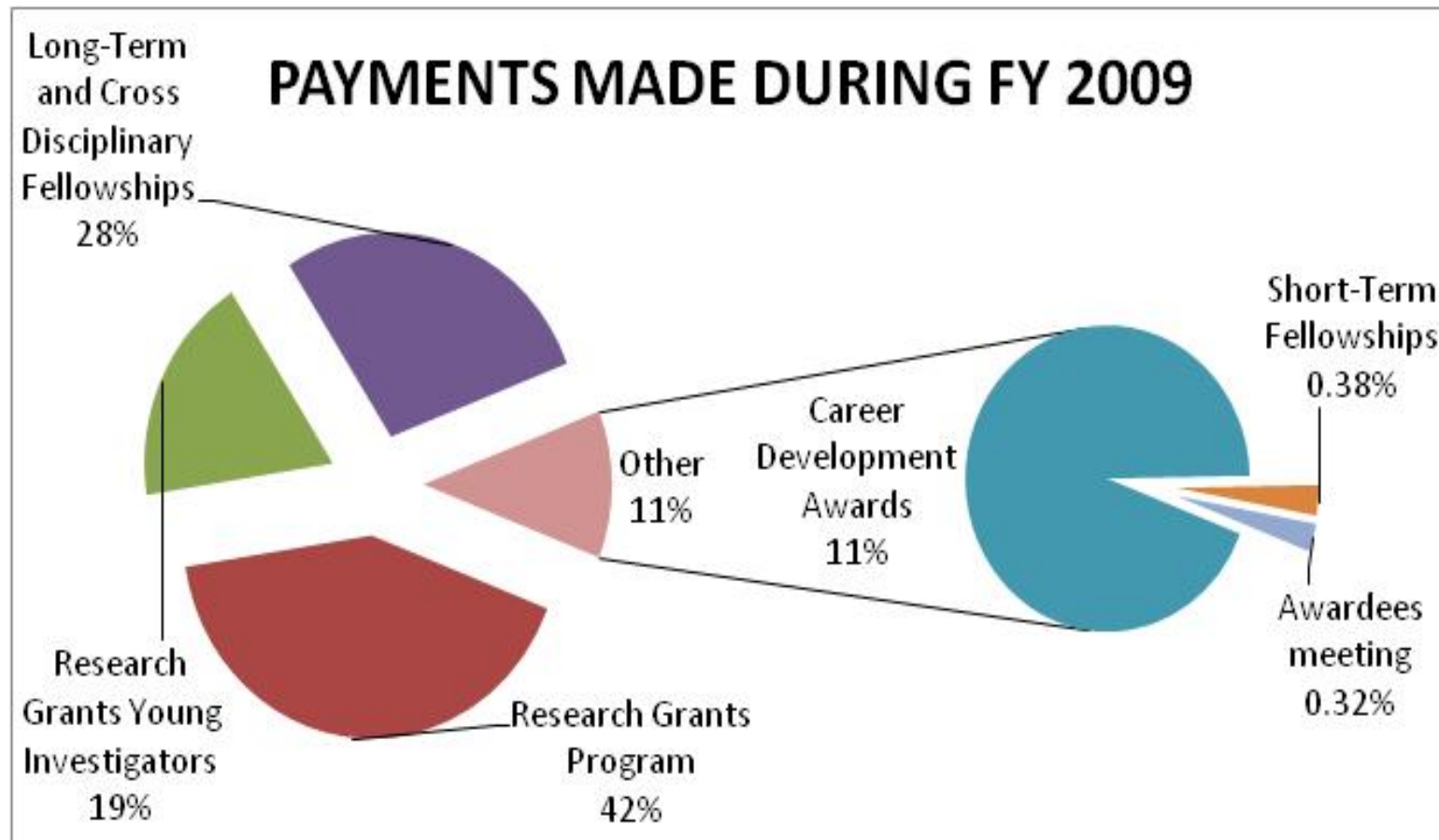


HFSP Geographical Distribution of awards

- **46% of the total amount of awards in 2009 went to awardees in Europe**
- **38% to awardees in North America (34% in the US)**
- **11% to awardees in the Asia-Pacific region (6.5% in Japan)**
- **5% to non-MSPs**



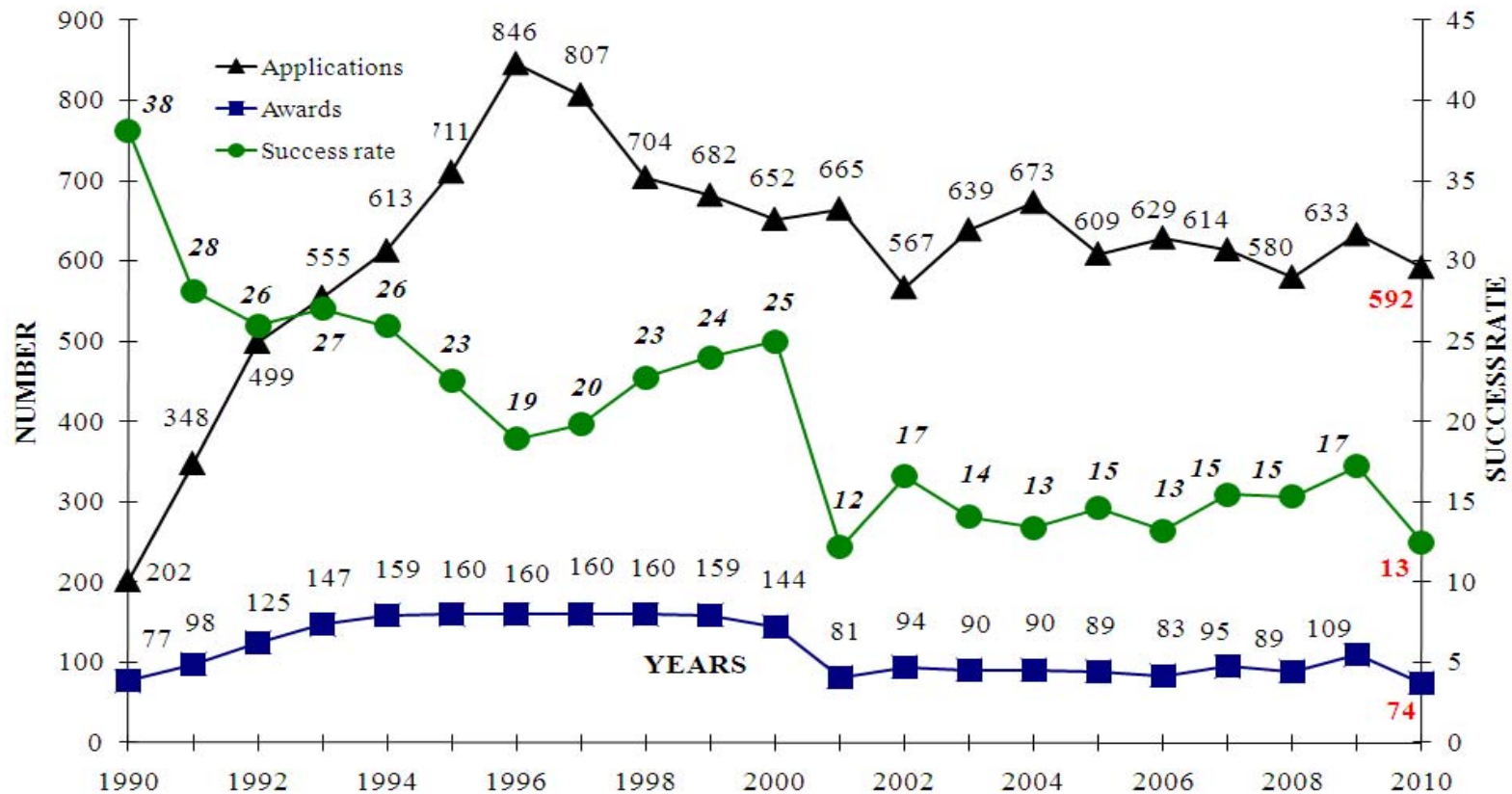
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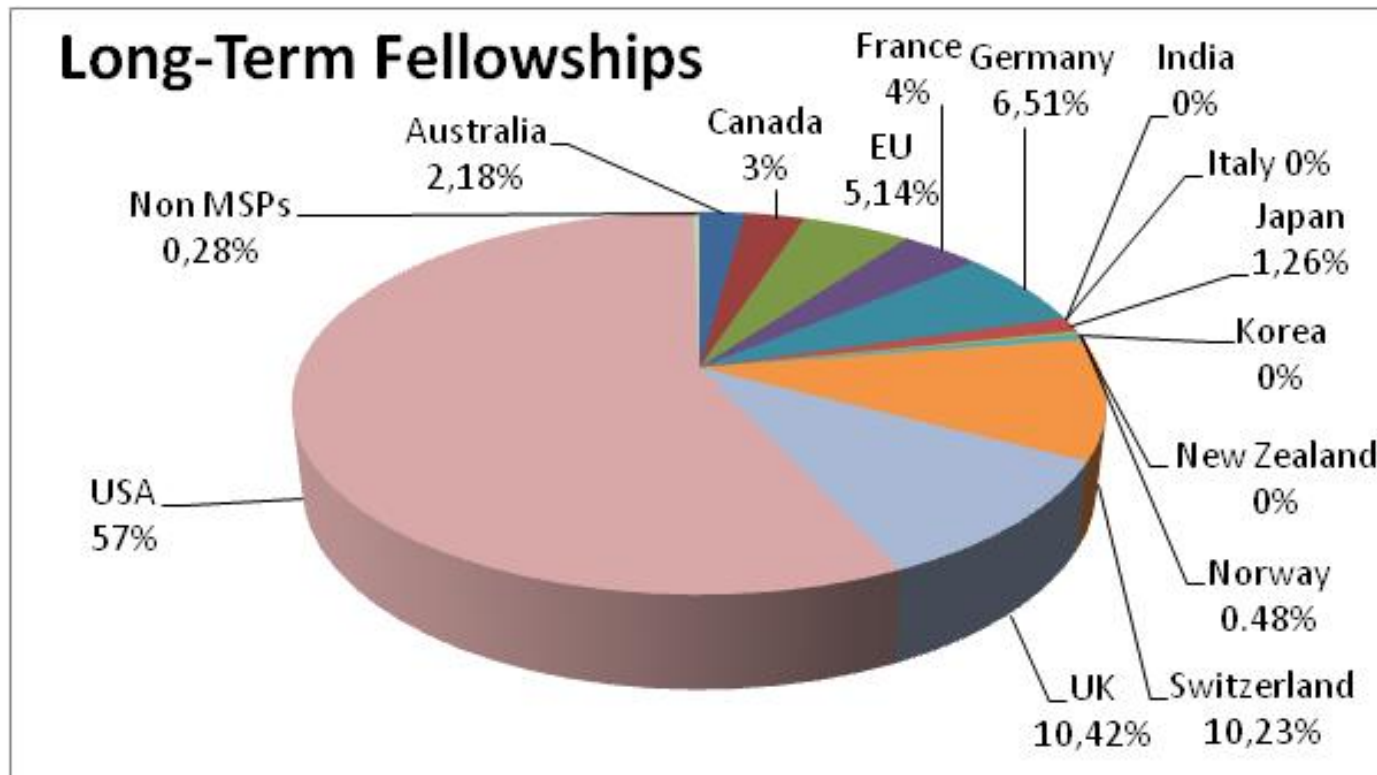
LONG-TERM FELLOWSHIP APPLICATIONS / AWARDS 1990-2010





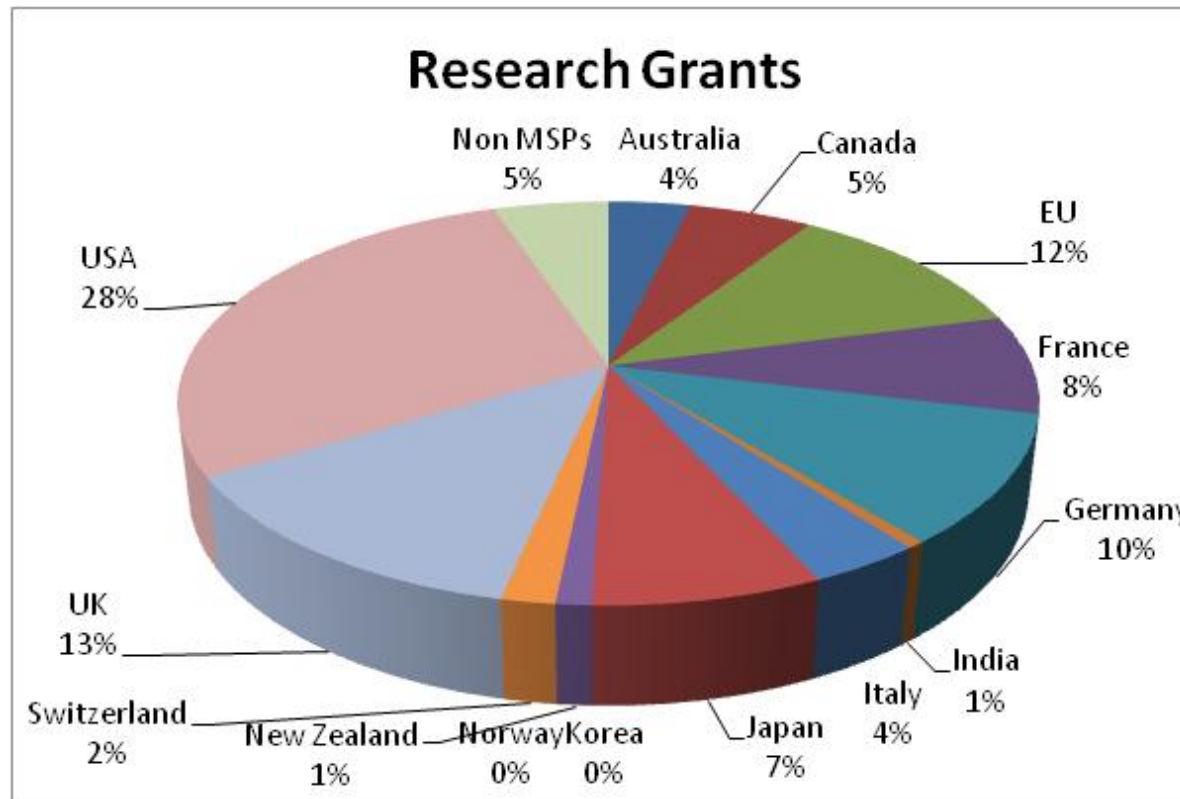
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Most fellowships are granted to awardees working in the US





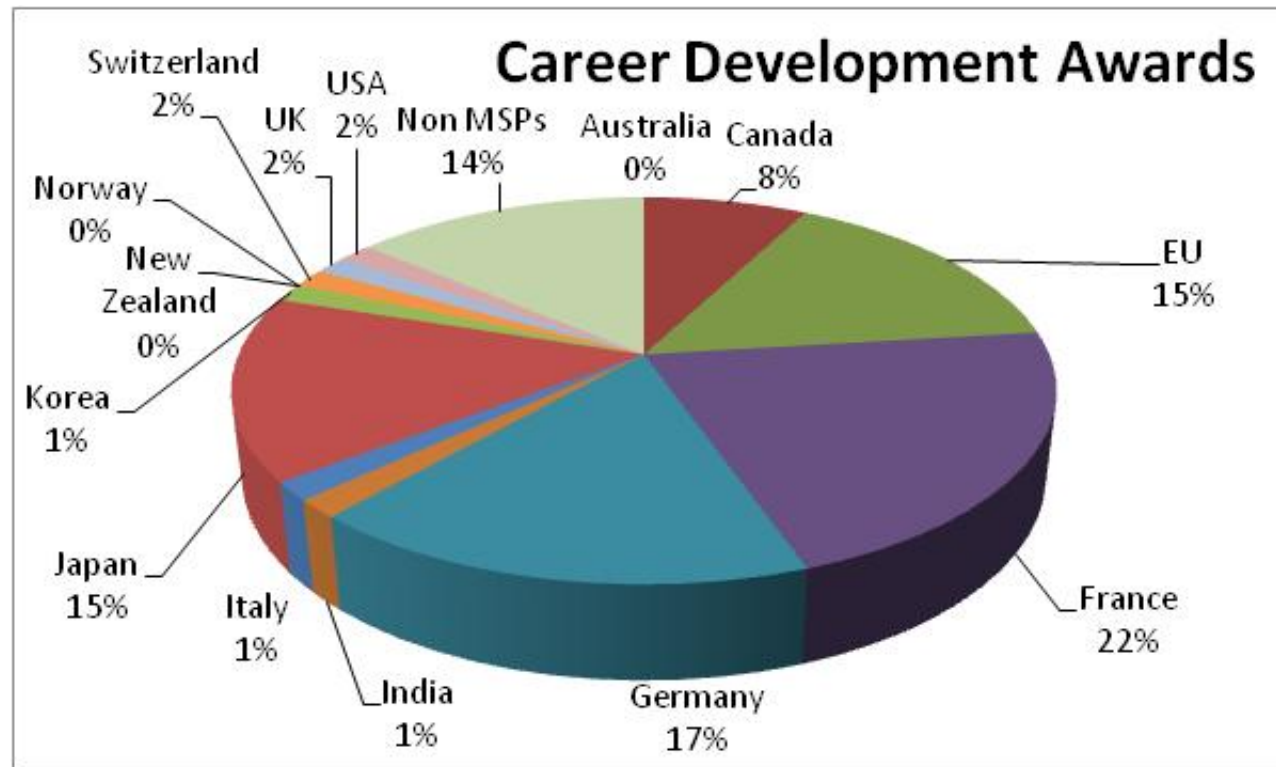
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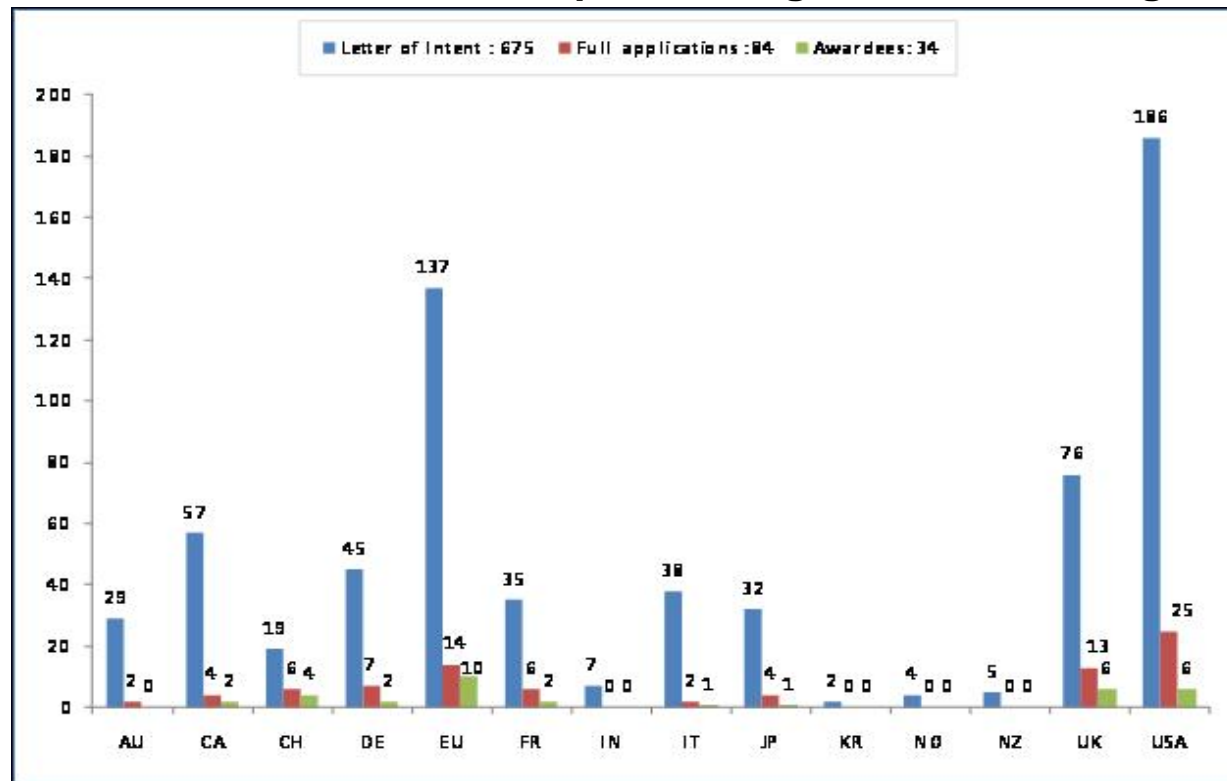
Most of the Career Development Awardees work in Europe and Japan





Human Frontier Science Program

Countries in which Principal Investigators are working





Human Frontier Science Program

HFSP Alumni Meetings

- All Fellowship, Grant and CDA awardees are invited
- Rotating since 10 years in different member countries, from
- 2001 – Turin, via Ottawa, Cambridge (UK), Hakone (JP), Bethesda (US), Paris, Brisbane, Berlin, Tokyo to
- 2010 Kerala, India and
- 2011 Seoul, Republic of Korea



Human Frontier Science Program

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