Funding Opportunities for Young Researchers

Monique Smaihi
ERCEA

Firenze, 6 March 2013
Outline

Part 1 – ERC in FP7
  - Background
  - Grant schemes

Part 2 – Evaluation process

Part 3 – Data from previous calls

Part 4 – ERC and H2020
2007-2013: FP7 budget € 50.5 billion
ERC budget € 7.5 billion

- Co-operation (65%)
- Ideas (15%)
- Capacities (8%)
- People (9%)
- JRC non-nuclear (3%)

JRC non-nuclear (3 %)
Co-operation (65 %)
Capacities (8 %)
People (9 %)
Ideas (15 %)

Million Euro

<table>
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<tr>
<th>Year</th>
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<th>Capacities</th>
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What is ERC?

- Part of the 7th EU Research Framework Programme (IDEAS Programme)
- **Frontier research** projects
- **Excellence** as the only valid criterion
- No predetermined subjects (**bottom-up**); all science fields
- Support for the **individual** scientist
- Open to **researchers from anywhere in the world** willing to do research in Europe
Achievements of the ERC - so far (I)

ERC 2007-2013 - Total number of submissions (all calls = 40300 proposals)
Achievements of the ERC - so far (II)

- More than 3200 funded proposals (~60% of them StG)
- More than 480 different host institutions in 26 countries
- Average success rate ~12 %
ERC Funding Schemes
Freedom of the individual grantee

ERC offers independence, recognition & visibility

• to work on a research topic of **own choice**, with a team of **own choice**
• to gain true **financial autonomy** for 5 years
• to attract **top team members** (EU and non-EU)
• to move with the grant to any place in Europe if necessary (**portability of grants**)
ERC Grant schemes

Starting Grants
starters
(2-7 years after PhD)
up to € 2.0 Mio
for 5 years

Consolidator Grants
consolidators
(7-12 years after PhD)
up to € 2.75 Mio
for 5 years

Advanced Grants
track-record of significant research achievements in the last 10 years
up to € 3.5 Mio
for 5 years

Synergy Grants
2 – 4 Principal Investigators
up to € 15.0 Mio for 6 years

Proof-of-Concept
bridging gap between research - earliest stage of marketable innovation
up to €150,000 for ERC grant holders
ERC Funding Schemes
Who can apply?

Excellent Researchers (PIs)

- Any nationality, age or current place of work

In conjunction with a Host Institution

- Based in the EU or an Associated Country
Attractive features for researchers from outside Europe

Incentive:
- Additional “start-up” funding for scientists moving to Europe (EUR 500 000 for Starting and EUR 1 Million for Advanced grantees)

Flexibility:
- Grantee can keep affiliation with home institute outside Europe (“significant part” of work time in Europe)
- Team members can be based outside Europe
- Grantee can move within Europe with the grant
ERC Starting and Consolidator Grants

The applicant’s profile: “Am I competitive enough?”

- Potential for (StG) or demonstrated research independence (CoG)
- At least one (StG) or several (CoG) important publications without the participation of PhD supervisor
- Promising track-record of early achievements
  - Significant publications
  - Invited publications
  - Funding, awards, prizes
ERC Starting and Consolidator Grants

The applicant’s profile: Eligibility

- At least 2 – 7 years post PhD: StG
- At least 7 – 12 years post PhD: CoG
- Extensions to this period are possible
ERC Starting and Consolidator Grants

Grant Size

- 1.5 M Euro (StG)
- 2.0 M Euro (CoG)
- 100% total eligible direct costs (salaries, equipment, etc)
Simple and flexible grants for researchers from outside Europe

Grantee must spend a “significant part” (min. 50 %) of the work time in Europe

**BUT** Grantee can keep affiliation with home institute outside Europe

Coming to Europe doesn’t mean burning bridges

**Example:** use of the flexibility
ERC Panel Structure

3 domains – 25 panels

Social Sciences and Humanities
- SH1 Individuals, institutions & markets
- SH2 Institutions, values, beliefs and behaviour
- SH3 Environment, space and population
- SH4 The human mind and its complexity
- SH5 Cultures and cultural production
- SH6 The study of the human past

Physical Sciences & Engineering
- PE1 Mathematical foundations
- PE2 Fundamental constituents of matter
- PE3 Condensed matter physics
- PE4 Physical & analytical chemical sciences
- PE5 Materials & synthesis
- PE6 Computer science & informatics
- PE7 Systems & communication engineering
- PE8 Products & process engineering
- PE9 Universe sciences
- PE10 Earth system science

Life Sciences
- LS1 Molecular & structural biology & biochemistry
- LS2 Genetics, genomics, bioinformatics & systems biology
- LS3 Cellular and developmental biology
- LS4 Physiology, pathophysiology & endocrinology
- LS5 Neurosciences & neural disorders
  - LS6 Immunity & infection
- LS7 Diagnostic tools, therapies & public health
- LS8 Evolutionary, population & environmental biology
- LS9 Applied life sciences & biotechnology

Each panel:
Panel Chair and 10-15 Panel Members
Outline

Part 1 – ERC in FP7
- Background
- Grant schemes

Part 2 – Evaluation process

Part 3 - Data from previous calls

Part 4 – ERC and H2020
ERC Grants: how does it operate?

Submission, evaluation and selection

1. Submission of full proposals

2. Eligibility check

3. Step 1 (remote) evaluation on the basis of section 1 of proposal* by panel members

4. 1st Panel meeting

5. Proposals passing to step 2

6. Individual assessment of full proposal by panel members & referees

7. AdG: 2nd Panel meeting

8. StG, CoG: 2nd Panel meeting incl. interviews of applicants

9. Proposals selected for funding

10. Communication to applicants

*: Communication to applicants
Submission of proposals

Single submission

- one deadline per Call
- to a targeted panel
- electronically only
- proposals have two parts:
  - Part A: administrative forms
  - Part B: scientific proposal itself

Complete information: Guides for Applicants
Proposal Structure – Part B

- **Part B1 = 'The PI'**
  - Extended synopsis (5 pgs)
  - CV (2 pgs)
  - Early achievement track-record (2 pgs)

- **Part B2 = Full Scientific Proposal** (15 pgs)
  - Ethical Review information (where appropriate)
  - Separate additional documents:
    - Host Institution Support Letter
    - Copy of PhD document
    - Documents to prove extension to the eligibility window
Preparing an application (1)

- Allow sufficient time to prepare your application
- Talk to the Grants Office
- Your Profile
  - Major accomplishments; capacity and creativity; competitive edge; independence
  - Be accurate
  - Caution: assert; do not sell
Preparing an application (2)

- Scientific proposal (15 pages) with an extended synopsis (5 pages) and an abstract
- State-of-the-art is not enough
- Explain ground-breaking features, high-risk/high-gain balance
- Have alternative strategies to mitigate risk
- Justify the use of your resources
Preparing an application (3)

- Follow the formatting rules and page limits
- Proof-read the proposal well
- Have all your documentation ready in time
- Submit in advance of the deadline
Who evaluate the proposals?

- **Panel members**: typically 600 / call
  - High-level scientists
  - Recruited by ScC from all over the world
  - About 12 members plus a chair person

- **Referees**: typically 2000 / call
  - Evaluate only a small number of proposals
Possibility to exclude reviewers

- Up to three persons

- Reason for exclusion must be specified:
  - Direct scientific rivalry
  - Professional hostility
  - Similar situation which would impair or put in doubt the objectivity of the potential evaluator

- Any independent expert, including panel chair, panel members

- The concerned persons will be excluded from the evaluation of the proposal assuming that the ERCEA is still in a position to evaluate the proposal properly
Excellence as sole criterion, to apply to:
Research Project
- Ground breaking nature
- Potential impact
- Scientific Approach

Principle Investigator (PI)
- Intellectual capacity
- Creativity
## Feedback to Applicants

### Scoring system

**End of Step 1:**

<table>
<thead>
<tr>
<th></th>
<th>Proposal is of sufficient quality to pass to Step 2 of the evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Proposal is of high quality but not sufficient to pass to Step 2 of the evaluation</td>
</tr>
<tr>
<td>B</td>
<td>Proposal is not of sufficient quality to pass to Step 2 of the evaluation. The applicant may also be subject to resubmission limitations in the next call. Consider before applying!</td>
</tr>
</tbody>
</table>
Outline

Part 1 – ERC in FP7
  - Background
  - Grant schemes

Part 2 – Evaluation
  - Evaluation process
  - 2013 Deadlines

Part 3 - Data from previous calls

Part 4 – ERC and H2020
## ERC Competitions 2007-2012

<table>
<thead>
<tr>
<th></th>
<th>Total number of applications</th>
<th>Evaluated*</th>
<th>Funded</th>
<th>success rates**</th>
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<td><strong>Starting Grant</strong></td>
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<tr>
<td>2007</td>
<td>9.167</td>
<td>8.787</td>
<td>299</td>
<td>3.4</td>
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<tr>
<td>2009</td>
<td>2.503</td>
<td>2.392</td>
<td>245</td>
<td>10.2</td>
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<td>2010</td>
<td>2.873</td>
<td>2.767</td>
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<td>2011</td>
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<td>486</td>
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<td>2012</td>
<td>4.741</td>
<td>4.652</td>
<td>566</td>
<td>12.2</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>23.364</strong></td>
<td><strong>22.603</strong></td>
<td><strong>2.032</strong></td>
<td><strong>10.7</strong></td>
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<tr>
<td><strong>Advanced Grant</strong></td>
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<tr>
<td>2008</td>
<td>2.167</td>
<td>2.034</td>
<td>282</td>
<td>13.9</td>
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<tr>
<td>2009</td>
<td>1.584</td>
<td>1.526</td>
<td>245</td>
<td>16.1</td>
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<td>2010</td>
<td>2.009</td>
<td>1.967</td>
<td>271</td>
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<td>2011</td>
<td>2.284</td>
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<td>301</td>
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<td>2012***</td>
<td>2.304</td>
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<td><strong>Total</strong></td>
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<td><strong>10.041</strong></td>
<td><strong>1.412</strong></td>
<td><strong>14.2</strong></td>
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<tr>
<td><strong>Proof of Concept</strong></td>
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<tr>
<td>2011 - 1&amp;2</td>
<td>151</td>
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<td>143</td>
<td>120</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>294</strong></td>
<td><strong>259</strong></td>
<td><strong>111</strong></td>
<td><strong>43.3</strong></td>
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<tr>
<td><strong>Synergy Grant</strong></td>
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<tr>
<td>2012</td>
<td>710</td>
<td>697</td>
<td>11</td>
<td>1.6</td>
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* withdrawn and ineligible proposals not taken into account
** percentage of funded proposals in relation to evaluated proposals
*** selected

Data as of 21/01/2013
Over 3400 grants awarded after 10 StG and AdG calls
Highly competitive: Average success rate 12%
Success rates per country of Host Institution

ERC Starting Grant calls 2007-2012
ERC Advanced Grant calls 2008-2012

Success rates per country of HI

awarded/evaluated proposals (%)

25
20
15
10
5
0

France 16
The Netherlands 14
UK 14
Austria 13
Germany 13
Belgium 11
Denmark 11
Sweden 9
Estonia 8
Hungary 8
Spain 8
Ireland 6
Finland 6
Cyprus 5
Portugal 5
Latvia 4
Lithuania 3
Czech Republic 3
Bulgaria 2
Poland 2
Slovakia 1
Slovenia 1
Switzerland 23
Brazil 16
Israel 8
Norway 3
Iceland 2
Croatia 1
Turkey

*) First legal signatories of the first grant agreement taken into account
ERC grant distribution to countries of HI
ERC Starting and Advanced grant calls 2007-2012

Over 3400 projects have been selected, one fifth corresponding to women PIs.

*) Host institution refers to the organisation with which the first grant agreement was signed.
Nationals at home and abroad
ERC Starting and Advanced Grant calls 2007-2012

Nationality as last declared by the principal investigator

- Nationals Abroad
- Nationals in the Country

(PI nationality - EU member states and FP7 A.C.)
Mobility of researchers
ERC Starting and Advanced Grant calls 2007-2012

22 foreign grantees in Italy

133 Italian grantees abroad: UK (39), FR (23), CH (22)
Many grantees are young scientists

Starting Grant 2007-2012; Advanced Grant 2008-2011
### ERC panel members by country of HI and gender

**ERC Starting and Advanced grant calls 2007 - 2011**

<table>
<thead>
<tr>
<th>Country of Panel Member’s Host Institution</th>
<th>Number of assignments*</th>
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<tr>
<td>EU Member States</td>
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<td>FR</td>
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* no of instances that experts of a certain country of origin are being used

Averaged over the first eight ERC calls: **34%** of the ERC panel members were women.
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Relation with National Agencies I

Open Channel of communication without formalized relationship

- Exchange of information and good practices
  - Training of Officers from the Polish National Science Center
  - Regular visits and exchange of information with officials from national funding agencies

- ERC Annual Science Management Workshop Series
  - 2010: Best Practices in Schemes supporting young researchers
  - 2011: Assessing the performance of ERC funded projects
  - 2012: Impact of Research

- ERC participation in Global Science Forum
  - 2012: Peer Review Principles
  - 2013: Open Access & Research Integrity
Some funding agencies use ERC evaluation results in support of national initiatives in support of finalist projects in the ERC calls.

A new partnership between National Funding Councils and ERC.

- **BE Flanders**: FWO supports the best ranked PIs on the ERC-StG reserve list.
- **CY**: Research Promotion Foundation supported StG2009 finalists.
- **FI**: support scheme for finalists in reserve lists since 2009 calls.
- **FR**: ANR launched an initiative to support unfunded StG2007 finalists.
- **HU**: ANR launched an initiative to support unfunded ERC finalists of StG2007 and StG2009.
- **IT**: Call open to all unfunded StG2007 finalists.
- **LU**: FNR supports unfunded StG and AdG finalists since 2009 calls.
- **NO**: The Research Council supports unfunded StG finalists.
- **PL**: Support scheme for finalists of 2009 and 2010 calls. It might continue.
- **PT**: New national initiative in support of ERC finalists being developed.
- **RO**: opened support scheme for finalists in 2012.
- **SE**: support for unfunded finalists of StG calls since 2007.
- **SI**: Complementary scheme for unfunded finalists of 2010 calls.
- **ES**: support for unfunded finalists of StG calls since 2007.
- **CH**: SNSF launched an initiative to back unfunded StG2007 finalists.
- **BG**: Develops a scheme to financially support projects in the ERC reserve list.
- **CZ**: opened support scheme for finalists in 2012.
- **TR**: Considers a scheme to support unfunded ERC finalists.
- **CY**: Research Promotion Foundation supported StG 2009 finalists.
- **BG**: Develops a scheme to financially support projects in the ERC reserve list.
- **CZ**: opened support scheme for finalists in 2012.
- **PT**: New national initiative in support of ERC finalists being developed.
Relation with National Agencies III

New initiatives with funding agencies: ERC / NSF Agreement

Implementation Modalities

- U.S. scientists to be part of ERC-funded teams for six to twelve months.
- Selected researchers will be supported by the ERC grant in the same way as any other team member.
- All ERC grantees will be informed about this possibility and will be able to participate on a voluntary basis.
- NSF will solicit proposals from its CAREER (Faculty Early Career Development Programme of NSF) awardees and Post-doctoral research fellows for these opportunities.
- Travel costs for the U.S. scientists will be covered by the NSF.
- Their NSF grant will continue to run during their visit in Europe (in case of CAREER).
HORIZON 2020 structure:
- Excellent Science
- Industrial leadership
- Societal challenges
- EIT
- JRC

Excellent Science: reinforcing and extending the excellence of the EU’s science base and consolidating ERA to make EU’s R&I system more competitive on a global scale

- European Research Council (budget proposal under H2020: € 15 billion)
- Future and Emerging Technologies
- Marie Curie
- Research Infrastructures
Budget proposal under H2020

FP7 budget € 50.5 billion
ERC budget € 7.5 billion

H2020 budget € 88 billion
ERC budget € 15 billion

Co-operation
(65 %)

Capacities
(8 %)

People
(9 %)

Ideas
(15 %)

Societal challenges
(39 %)

Industrial leadership
(23.1 %)

Other Excellent science
(14.6 %)

EIT
(3.6 %)

JRC
(2.5 %)

JRC non-nuclear
(3 %)
ERC in FP7 and in H2020: Changes and Continuity - I

Essential features maintained

- Independent Scientific Council with full authority over funding strategy
- Executive Agency with autonomous operation
- Scientific excellence - the sole criterion on which ERC grants are awarded
ERC in FP7 and in H2020: Changes and Continuity - II

**Strengthening the Scientific Governance of the European Research Council**

- Merging positions of President of ERC and Secretary General
- Full-time President based in Brussels
- 3 Vice-Chairs elected from amongst the Scientific Council members
- Strengthening the role of Scientists in the Steering Committee of the ERCEA
Take-home message

Bottom up approach:
- ERC schemes are open to all topics, including Social Sciences and Humanities
- No thematic preferences
- Projects often inter-/multidisciplinary but this is not a requirement

Flexibility in terms of team structure and size/duration of project:
- Principal Investigator (PI) alone or multinational team - as justified by scientific needs
- Duration flexible (up to 5 years)
Testimonial
Support and service

Documentation, detailed statistics,…


ERC National Contact Points: inform, raise awareness and provide advice on ERC funding opportunities, application, follow-up

ERC helpdesk: dedicated email and phone line
Thank you for your attention!