Postdoc World

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PhD Career Workshop
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What is postdoctoral research?

Research by someone who has completed doctoral studies.

Then there is a
- Postdoctoral Research Fellow (fanciest..)
- Postdoctoral Research Associate
- Postdoctoral Research Assistant
- Postdoctoral Research student
- Postdoctoral Research Coffee Preparator (least fancy)

Conducted at a different lab then the lab that awarded PhD

Between 1-18 years (average is 2-3)

Connected to some PI (Principal Investigator)
Why a postdoc?

Essential for academic career:
KTH (since 2011): To become a assistant professor you have to do a Postdoc at a different lab

The big choice: Academy or Industry
If not sure: Do a Postdoc! (then you probably know)

Last chance to get your hands dirty:
Write a DNS code or setup experiments
Change topic and be brave
Write a Science paper (In 1999, 25% of first authors in Science were postdocs)
If you have one paper only (in Science), then publish 10 JFM’s
Typical postdoc

- Single
- No children
- Many publications from PhD
- Supervisor with big name
- University with a big name
- Works until midnight

“Just work till midnight, you need to relax too”
My experience

One year in Italy – Genova as a Marie Curie Fellow

Scientific Output:
- Wrote a DNS Code
- 1 PRL Paper
- Life-long collaborators
- Organization of a different lab
- Different working atmosphere
- Many new ideas...
How to find funding?

Ask the host
Find who got ERC advanced/consolidator/starting grant
Find who works at EPFL, Cambridge, ETH (proper employment)
Most places (US, Sweden, Spain, Italy, France) stipends (unfortunately)

Get your own (gives independence)
EU: Marie Curie Fellow
VR: Postroc
Stipend: Svenska-Amerikanska stiftelsen, Göran Gustafsson,...
Marie Curie Intra-European Fellowship for Career Development

**Eligible:** PhD from a EU country* going to another EU country

**Mobility criterion:** no more than 3 months spent in host country

**Period:** 12-24 months

**Call:** once per year (last time 14th August)

**Salary:** extremely good
- Monthly allowance (€5000/month)
- Mobility allowance (€1000/month)
- Contribution to promote mobility (€800/month)
- Contribution to overhead (€700/month)

http://ec.europa.eu/research/mariecurieactions/

*also some Associated States, like Norway, Switzerland, etc.
LIFE CYCLE OF AN IEF

Stage 1
Proposal Preparation
5 months

Stage 2
Proposal Evaluation
2 months

Stage 3
Negotiation and Selection
2 months

Stage 4
Grant Agreement Preparation
2 months

Stage 5
Start of work and training/research programme
12-24 months

Publications of the call
Deadline
NOMINATION OF REFEREES
INDIVIDUAL EXPERIENCED RESEARCHER
HOST ORGANISATION
JOINT PROPOSAL

Eligibility checked
Successful

EVALUATION (PEER REVIEW)

UNSUCCESSFUL

NEGOTIATION

COMMISSION DECISION

SIGNATURE OF GRANT AGREEMENT BETWEEN HOST ORGANISATION AND THE RESEARCHER

PRE-FINANCING TO HOST ORGANISATION

SIGNATURE OF GRANT AGREEMENT BETWEEN HOST ORGANISATION AND THE RESEARCHER

START OF WORK

MONITORING BY RESEARCHER SERVICES

MID-TERM RESEARCH REPORTING

FINAL REPORTING

COMPLETION OF PROJECT

FOLLOW-UP OF CAREERS OF RECRUITED EXPERIENCED RESEARCHERS, DISSEMINATION OF RESULTS AND BEST PRACTICE

Must have your PhD degree
Earliest start is 6-8 months after deadline
MC: Who decides and how

8 different panels
- Chemistry, Science and Engineering, ...
- Evaluators are not fluid dynamicists

What to they look at:
- CV (25% Weight)
- Implementation (15%)
- Training (15%)
- Impact (20%)
- Research quality (25%)

75 % of weight is CV independent

Have to score above threshold.

Acceptance rate about 20%
MC: Who decides and how

### 2.1 IFF Funding Scheme 'Support for Training and Career Development of Researchers': Marie Curie Intra-European Fellowships for Career Development

<table>
<thead>
<tr>
<th>Criteria</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>5</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;T Quality (award)</td>
<td>Clarity and quality of the research training objectives for the researcher</td>
<td>Research experience **</td>
<td>Quality of infrastructure / facilities and International collaborations of host</td>
<td>Impact of competencies acquired during the fellowship on the future career prospects of the researcher, in particular through exposure to transferable skills training with special attention to exposure to the industry sector, where appropriate *</td>
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<tr>
<td>Training (award)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
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<td>Researcher (award)</td>
<td>5</td>
<td>5</td>
<td>1</td>
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<tr>
<td>Implementation (selection)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
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<tr>
<td>Impact (award)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>4</td>
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<tr>
<td>Threshold: 3, Weighting: 25%</td>
<td>Threshold: 3, Weighting: 15%</td>
<td>Threshold: 4, Weighting: 25%</td>
<td>Weighting: 15%</td>
<td>Threshold: 3.5, Weighting: 20%</td>
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<tr>
<td>Priority in case of ex aequo</td>
<td>Impact of competencies acquired during the fellowship on the future career prospects of the researcher, in particular through exposure to transferable skills training with special attention to exposure to the industry sector, where appropriate *</td>
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<tr>
<td>Research and technological quality, including any interdisciplinary and multidisciplinary aspects of the proposal</td>
<td>Relevance and quality of additional research training as well as of transferable skills offered, with special attention to exposure to the industry sector, where appropriate *</td>
<td>Research results including patents, publications, teaching etc., taking into account the level of experience</td>
<td>Practical arrangements for the implementation and management of the research project *</td>
<td>Contribution to career development, or re-establishment where relevant *</td>
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<tr>
<td>Appropriateness of research methodology and approach</td>
<td>Originality and innovative nature of the project, and relationship to the 'state of the art' of research in the field</td>
<td>Independent thinking and leadership qualities</td>
<td>Feasibility and credibility of the project, including work plan</td>
<td>Benefit of the mobility to the European Research Area</td>
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<tr>
<td>Timeliness and relevance of the project</td>
<td>Measures taken by the host for providing quantitative and qualitative mentoring/tutoring</td>
<td>Match between the fellow's profile and project</td>
<td>Practical and administrative arrangements, and support for the hosting of the fellow *</td>
<td>Development of lasting cooperation and collaborations with other countries</td>
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</tr>
<tr>
<td>Host research expertise in the field</td>
<td>Potential for reaching or re-enforcing a position of professional maturity *</td>
<td>Practical and administrative arrangements, and support for the hosting of the fellow *</td>
<td>Contribution to European excellence and European competitiveness regarding the expected research results</td>
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</tr>
<tr>
<td>Host research expertise in the field</td>
<td>Potential to acquire new knowledge</td>
<td>Potential to acquire new knowledge</td>
<td>Impact of the proposed outreach activities *</td>
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<tr>
<td>Quality of the group/scientist in charge</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
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** Any leave of absence in the research career of more than one year such as maternity/parental leave, sick or family care leave, military service, humanitarian aid work, etc. will be taken into account.
MC: How much work is it?

One full month once you have an idea (26-30 pages).

Host PI must spend one full week (think about this before you choose PI)!

Iterate 10 times with PI to converge the whole package.

[Show proposal]
[Show evaluation]
VR (Swedish Research Council) international postdoc

Eligible: PhD from a Swedish university not older than two years
VR (Swedish Research Council) international postdoc

**Eligible:** PhD from a Swedish university not older than two years

**Period:** 18-36 months (spend last part in Sweden, reintegration)

**Call:** twice per year (next one in Feb)

**Salary:** very good
- 900 000 kr/year in salary
- 150 000 kr/year project funding (traveling, etc)

Will be employed by a Swedish University but work abroad.
VR Life Cycle

1. Apply in Feb (or Aug)
2. Decision in June
3. Start in July

Acceptance rate 15%

Only one panel in Natural and Engineering Science

Often (but now always) external experts as evaluators

Weight between CV, proposal, host etc unclear (blackbox)
Preparation

Find a host university abroad

Find a host university in Sweden (tip: check overhead)

Write application mostly on your own (18-20 pages):
  – Summary
  – Popular science description (in Swedish)
  – Research programme (Appendix A)
  – CV/Scientific qualifications (Appendix B)
  – Publication list (Appendix C)
  – Administering organisation in Sweden (Appendix c6)
  – **Host institution abroad (Appendix c7, two pages)**
  – Description and justification (Appendix c8)
  – Signatures (Appendix S)

[Show proposal]
[Show evaluation]
Be careful of the Postdoc trench

Jumping from one postdoc to another until you are too old to get a academic position
General advice

Your first step towards independence!

Be brave: Choose a different topic!
- Go to seminars
- Talk to other senior colleagues than your supervisors
- Go to other sessions at APS

Plan one year before PhD defense
- find calls and deadlines
- plan to have your PhD fully done (certificate) before deadlines

Aim high: Harvard, Cambridge, Princeton

Don’t forget most important: nice location, nice beaches, good food