Research Foundation - Flanders

31 March 2016

dr. Hans Willems
Director Research Affairs

dr.ir. Isabelle Verbaeys
Head International Affairs
Primary responsibility of Communities/Regions

**Communities:** Education and basic research

**Regions:** Economy and applied research

**Federal:** Thematic programs including marine, space, and polar research (e.g. Station on Antarctica), federal scientific institutions
Main Research Performing Centers

World-Class Universities:

- Ghent
- Antwerp
- Hasselt
- Brussels
- Leuven

Leading Strategic Research Centers:

- VIB
- iMinds
- IMEC
- Vito
Facts about Flanders

- Population: ca. 6.410.705 (on 01/01/2014)
- Number of R&D personnel (2013): ± 41.806 (or 0,65% population – 1,41% working force)
- Number of scientific papers: ± 1% world, or 22,19/10.000 inhabitants
- Number of EPO-patent applications (2011): 230,5/million inhabitants
- R&D-investments: ± 2,58 % GDP (2013)

Source: STI in Flanders
Policy & Key Figures – EWI 2015
3% norm

R&D-intensity (GERD as % GDP): ±2.58% GDP (2013)

Source: Vlaamse Indicatorenboek 2015, p 23

Research Foundation – Flanders
Government Budget Appropriations or Outlays on R&D (GBAORD) in %GDP (2013)

Source: Speurgids 2015 Ondernemen en Innoveren, p 64
Research Foundation – Flanders
Publication Output per 10,000 Inhabitants

Source: Vlaamse Indicatorenboek 2015
(Science and Technology, Biological, and Medical Sciences)
Citation Frequency

Source: STI in Flanders Policy & Key Figures – EWI 2015

AGRI = Agronomy and Environmental Sciences
BIOL = Biology (at the organism and the supra-organism level)
BIOS = Life Sciences (general, cellular and subcellular biology, genetics)
BIOM = Biomedical Research
CLI1 = Clinical and Experimental Medicine (general and internal medicine)
CLI2 = Experimental Medicine II (non-internal)
NEUROS = Neurosciences
CHEM = Chemistry
PHYS = Physics
GEOS = Earth and Space Sciences
ENGN = Engineering
MATH = Mathematics

2002-2007
2008-2013
World Standard
Flemish Participation in FP7 (per GDP)

Source: Vlaamse Indicatorenboek 2015, p.65
Success Rates for Applications to Horizon 2020 per EU Member State

Source: Horizon 2020 – First results
© European Commission

Research Foundation – Flanders
1. Research mainly at universities

2. Bottom-up funding in all disciplines

3. Scientific excellence - Interuniversity competition

4. Transparent and equal opportunities

5. International cooperation

Research Foundation – Flanders (FWO)

www.fwo.be
Main FWO Funding Schemes

- Fellowships
- International Mobility
- Research Grants
- Research Projects

- Master
- PhD
- Postdoc
- Established researcher
Funding Schemes of FWO

• Funding for individual researchers
  • Pre- and postdoctoral fellowships including SB, bench fees and research grants
• Funding for research teams
  • Research projects including SBO and TBM, Big Science, Bilateral agreements, ...
• Infrastructure
  • Large and medium scale research infrastructure, Flemish Supercomputer Centre, ESFRI
• Supporting mobility, international contacts and collaborations
  • Travel grants, sabbatical leaves, scientific research communities, organisation of conferences in Belgium, international coordination actions, collaboration agreements, ...
• Attracting excellent researchers, active abroad, to Flanders
  • Odysseus, [PEGASUS]²
• Awarding scientific prizes
The Application Procedure

FWO E-Portal (www.fwo.be)

- Call
- Submission/eligibility check
- External referees (online)
- Expert Panels (30+1)
- (CIS)
- Board of Trustees

Duration workflow fellowships: < 5 months
Duration workflow projects: < 7 months

1 February
1 April
April/May
September/October
2 meetings/year in Brussels
Evaluation Procedure

- Excellence as main criteria
- International peer review
- Severe regulations to avoid CoI
- Feedback procedure

Evaluation panels:
- 30 discipline-specific Expert Panels
- + 1 Interdisciplinary Panel
- International Collaboration Committee (CIWC)
- Panel for International Collaboration (CIS)
In 2015 FWO invested:

- 220 million EUR
- Approx. 1,700 individual fellowships
- Over 1,360 projects

Budget 2016: 320 million EUR

- Basic Research: fellowships, projects, mobility, ...
- Strategic research (SBO/TBM/SB): 200 fellowships + projects
- Infrastructure
Budget Allocation 2015

- **Fellowships**: 53%
- **International contacts**: 2%
- **Research grants**: 1%
- **Research projects**: 1%
- **Administrative management**: 3%

- **Science & Technology**: 15%
- **Medical Sciences**: 25%
- **Interdisciplinary**: 13%
- **Social Sciences**: 15%
- **Humanities**: 15%
- **Biological Sciences**: 29%

Research Foundation – Flanders
Why internationalisation?

- Improving Flemish research community’s international character (ERC prerequisite)
- Placing Flemish research in a broader perspective
- Coping with Flanders’ “smallness”
- Guarding our research quality through international evaluation and peer review
- Collaboration with other funding agencies
FWO Stimulates Internationalisation

- Wide range of funding opportunities to support and stimulate international mobility
- International peer review
- Open recruitment: European degree for predocs, no nationality restriction for postdocs
- Member of Science Europe / ESF/ Global Research Council
- NCP Horizon 2020 – Excellent Science, JRC, Societal challenge 6, ...
International Mobility Funding Opportunities

- Participation in international conferences
- Short and long stays abroad
- Organising international conferences
- Sabbatical leaves
- Scientific research networks
- Long list of exchange and cooperation agreements with different countries
Big Science
LARGE INTERNATIONAL RESEARCH FACILITIES

Programme to support research at large, international research facilities. In 2012, 6 projects have obtained funding: CERN-CMS, CERN-ISOLDE, ESRF-DUBBLE, Icecube, Spiral II and the Mercator Telescope.

Brain gain programme of the FWO to attract promising postdocs and top researchers to Flanders. To date, 59 researchers have received an Odysseus grant, which covers start up funding for 5 years.

BILATERAL AGREEMENTS
Agreements with several foreign institutions for joint funding of research and exchange projects

Programme of the FWO in cooperation with MSCA COFUND to attract excellent postdoctoral researchers to Flanders and increase international mobility of researchers in Flanders
### ODYSSEUS

- Attracting Top Scientists to Flanders - Universities suggest candidates
- Start-up funding to develop a research group or to set up a research line at a Flemish university

<table>
<thead>
<tr>
<th>Group I</th>
<th>Group II</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Internationally recognized leading researchers</td>
<td>o Researchers with the potential to grow to a leading position</td>
</tr>
<tr>
<td>o Budget: between € 400,000 and € 1,500,000 per year (max. 5 years)</td>
<td>o Budget: between € 100,000 and € 200,000 per year (max. 5 years)</td>
</tr>
<tr>
<td>o Permanent position at a university in the Flemish Community</td>
<td>o Postdoctoral fellowship at a university in the Flemish Community</td>
</tr>
</tbody>
</table>
Research Foundation - Flanders

calls for [PEGASUS]²

Marie Skłodowska-Curie fellows

APPLICATION DEADLINE
01/05/2016

APPLICATION INCOMING
= 3 years postdoctoral fellowship
  • from abroad to Flanders

APPLICATION OUTGOING
= 3 years postdoctoral fellowship
  • from Flanders 2 years abroad
  • 1 return year to Flanders

more information: www.fwo.be

[PEGASUS]² Marie Skłodowska Curie Fellowships

Prestigious Horizon2020 COFUNDed postdoctoral funding scheme

EU COFUND budget: € 6.372.000

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 665501.
3-year **INCOMING** fellowships:

- To attract excellent postdoctoral researchers to the Flemish Community
- To improve Flemish research and to stimulate internationalization of research

---

**Fellowship/employment contract with attractive salary**

- Full social security and occupational accident insurance, travel and repatriation insurance
- Annual bench fee of €4,000 for research, training and research-related travel costs.
- Mobility allowance and one-time return trip from/to Brussels
- Career support at the Flemish host university and participation in training activities

---

3-year **OUTGOING** fellowships:

(first 2 years abroad – third return year)

- To boost the career of postdoctoral researchers in Flanders by gaining international research experience
- To anchor the gained knowledge and expertise in Flanders
Bilateral Agreements

Exchange Agreements

Scientific Cooperations

Lead Agency Procedures

Bilateral Research Cooperations
Scientific Exchange and Cooperation Agreements

- Phased approach
- Establish concrete partnership between countries
- Exchange of best practices
- Exchanging researchers
- Step-up to further bilateral research cooperation

**Exchange agreements:**
- Czech Republic
- China
- Romania
- Slovakia
- Slovenia

**Scientific cooperation:**
- Japan
- Bulgaria
- Poland
- China
- Brazil
- Argentina
- France
- South Korea
- Taiwan
- Turkey
- Mexico
- Hungary
Bilateral Research Collaboration

- International collaboration in fundamental scientific research
- Agreements with partner organisations in non-EU countries (Research Councils, Government departments, ministries, ...)
- Selected countries / regions:
  - Québec
  - China
  - Vietnam
  - South Africa
  - Brazil
  - Ecuador
- Cooperation between equal partners
- Indicative annual budget: € 300 000 per country/region
Lead Agency Procedure

- One agency responsible for evaluation
- Transparent procedures / mutual trust
- Results accepted by all partners

- The Netherlands (NWO)
- Luxembourg (FNR)
- Austria (FWF)
- Slovenia (ARRS)