National PhD Welcome Day 2019

Research in Luxembourg
Research in Luxembourg

Luxembourg: COMPACT
• 602,000 inhabitants
• 1 University / 3 public research centers
• 2000 researchers in the public sector
• 1700 researchers in the private sector

Luxembourg: INTERNATIONAL
• 44.5% residents are non-Luxembourgers
• 80% of scientists are non-Luxembourgers
• Multilingual: F, D, GB
• Host of major European institutions
• Strong service sector
• High living standards
• Research is a Government priority
RESEARCH IN LUXEMBOURG

Luxembourg, a young research landscape

Luxembourg Public Investments in Public and Private R&D

[Graph showing Luxembourg Public Investments in Public and Private R&D from 2000 to 2018]
RESEARCH IN LUXEMBOURG
Luxembourg, a young research landscape

LUXEMBOURG RESEARCH HISTORY
TIMELINE
RESEARCH IN LUXEMBOURG

Luxembourg, a young research landscape

2018 European Innovation Scoreboard

- Innovation Leaders
- Strong Innovators
- Moderate Innovators
- Modest Innovators

SWEDEN
Innovation leader

Sweden is once again the EU innovation leader, followed by Denmark, Finland, the Netherlands, the United Kingdom and Luxembourg.

In particular areas of innovation, the EU leaders are:

- DENMARK
  human resources and innovation-friendly environment

- LUXEMBOURG
  attractive research systems

- FRANCE
  finance and support

- IRELAND
  innovation in SMEs, employment impacts, and sales impacts

- BELGIUM
  innovation linkages and collaboration

Since 2010, the innovation performance improved in 18 EU countries.
On the 120 hectares of grounds that once housed Luxembourg's largest steel foundry, a one billion € urban renewal project comprising about 20 new buildings, houses all major research and innovation actors. In its ultimate expansion, around 7,000 students and 3,000 teaching staff and researchers will be at work here.
Research in Luxembourg

- Maison de l’Innovation
- Belvaux site
Research in Luxembourg

Integrated Biobank Luxembourg (IBBL)

House of Biohealth

Maison des Sciences Humaines
What we do

We are the main funder of research activities in Luxembourg.

Entrusted with an annual budget of 90 MEUR, we fund projects and people in all public research institutions and also support research cooperation with Luxembourg-based companies.
### Luxembourg National Research Fund (FNR)

**Funding by career stage – funding schemes overview**

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<th>POSTDOC &amp; JUNIOR</th>
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<th>LEADING</th>
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<td>Block PhD grants</td>
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<td>Support for commercialisation of research results</td>
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<td>Support for knowledge &amp; innovation transfer</td>
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<td>Support for open access publishing of research results</td>
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<td>Support for research communication</td>
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<td>Support for promoting science to the public</td>
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**INTERNATIONAL MOBILITY**

- ATTRACTION Starting
- ATTRACTION Consolidator
- PEARL

**INNOVATION & KNOWLEDGE TRANSFER SUPPORT**

- BRIDGES
- JUMP (Pathfinder & Proof of Concept)
- KITS

**SCIENCE & RESEARCH COMMUNICATION SUPPORT**

- OPEN ACCESS FUND
- RESCOM
- PSP (Classic & Flagship)
Research in Luxembourg

FNR & International Cooperation

INTERNATIONAL COOPERATION

The FNR maintains an increasing number of collaboration agreements that secure funding of all research partners after a single evaluation of the joint research proposal.

FNR Bilateral

Currently, the FNR has 18 bilateral collaboration agreements with 13 countries worldwide.

FNR Multilateral

The FNR is partner in more than 10 international research networks offering multilateral research opportunities with over 35 countries for researchers based in Luxembourg.
Science in Society

PROMOTING THE EXCHANGE BETWEEN SCIENCE AND SOCIETY

EVENTS

WEB & MEDIA

TRAINING

FUNDING

ENCOURAGING FACE TO FACE EXCHANGE

PROMOTING SCIENCE ACTIVITIES IN LUXEMBOURG

PREPARING MULTIPLIERS FOR ENGAGING WITH THE PUBLIC

SUPPORTING PUBLIC ENGAGEMENT ACTIVITIES
Luxembourg strategy on PhD training

Gago-Biltgen paper
National Quality Framework for Doctoral Training

- Quality control
- Supervision
- Recruitment
- PhD training
- Dissemination of results
- Good practice in research
- Thesis assessment
Recommendations from external assessment

- **R1**: institutions have in place structures/procedures for the adequate handling and resolution of conflict situations
- **R2**: in each CET there is at least one member from a research institution abroad
- **R3**: an *individual PhD plan* is defined with the supervisor(s) at the onset of the PhD project, serving as support to all involved parties and being reviewed at regular intervals
- **R4**: institutions promote the *continuous development of supervision skills* and the exchange of good supervision practice
PhD training in the 19th and 20th centuries

• An academic qualification
• A PhD demonstrates the ability to conceive and lead a long-term research project
• Entry ticket to a live-long career in academia
The challenges of PhD training in the 21st century

From the 2010 Royal Society report “The scientific Century”
The challenges of PhD training in the 21st century

THE PLANS:

THE PLAN YOU TELL YOUR ADVISOR: “I'M GOING TO BE A PROFESSOR AT A MAJOR RESEARCH UNIVERSITY AFTER I GRADUATE.”

THE REAL PLAN: LOOK FOR CAREER ALTERNATIVES.

THE SECRET PLAN: BECOME A BAKER/ROCKSTAR/WRITER.

WWW.PHDCOMICS.COM