The European Research Council

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Established by the European Commission

ERC
in the
European Research Landscape
with a view on
Portugal

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What is ERC?

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European Research Council

- An autonomous pan-European funding body set up by the EU in 2007 **led by scientists** after a long struggle
- **Mandate:** to encourage the highest **quality research** in Europe through competitive funding of **frontier projects**
- Funded through the EU Framework programmes for Research and Innovation
- For the period 2014-2020, **Horizon 2020**

The Importance of Basic Research

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Research and Innovation

- A **linkage** whose importance has grown in the last years because of the role attributed to **innovation** in **competitiveness**
- **Existence** of a number of short circuits between some results belonging to **basic research** that quickly **triggered** some new **economic** activities
- This **a priori non focused** financing of research has been done in the past in the US typically by **DARPA** and DOE
- Presently, the best example is given by **Korea**, and the **huge investments** made there in **basic research**, by lack of tradition and under the **pressure of its high-tech industry** anxious to make it for the next major round of innovation.

What is ERC?

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A **bottom-up, individual-based, pan-European competition** with **host institution** in the **EU** or in an **Associated State.**

Strategy

- Support for **individual** scientists – no networks!
- **International** peer-review
- **No predetermined subjects** (bottom-up)
- Support of **frontier research** in **all fields of science and humanities**

Legislation

- Scientific governance by an independent 22-member **Scientific Council**, which has **full authority** over **funding** and **evaluation**
- Support by the **ERC Executive Agency** (autonomous)
- Only criterion: **quality of research** aiming for **excellence**

What is ERC?

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The European Commission

- Provides financing
- Guarantees autonomy of the ERC
- Assures ERC's integrity and accountability
- Adopts annual work programmes

The ERC Scientific Council

- 22 members who are active researchers in their communities
- Appointed by the Commission
- Establishes overall scientific strategy
- Controls quality of operations and management
- Ensures communication with the scientific community

The ERC Executive Agency (ERCEA)

- Executes annual work programme
- Implements calls for proposals
- Organises peer review evaluation
- Establishes and manages grant agreements with Host Institution
- Administers scientific and financial aspects
- Carries out communications activities

ERC Funding Schemes

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Starting Grants

starters
(2-7 years after PhD)
up to € 1.5 Mio
for 5 years

Consolidator Grants

consolidators
(7-12 years after PhD)
up to € 2.25 Mio
for 5 years

Advanced Grants

track-record of
significant research
achievements in the
last 10 years
up to € 3 Mio
for 5 years

Proof-of-Concept

bridging gap between research - earliest
stage of marketable innovation
up to €150,000 for ERC grant holders

ERC in European Funding of Research

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- **Support** to **investigator-driven frontier research** through a **bottom-up**, **pan-European competition** in **all fields** of **science** and **humanities**

- **Evaluation**: based strictly on the **quality** of the **research proposal** and of the **principal investigator**

- **Scientific governance**: independent **Scientific Council** of 22 members with **full authority** over **funding strategy** and on the **choice of the evaluators**

ERC after 7 Years

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- **4 500 researchers** funded (65% are at an **early-career** stage);
  64 nationalities represented (EU has **28**!)
- **Highly competitive** (average success rate tending to 10%)
- Grants located in almost **600** different institutions in **29** countries
- **50%** of grantees in **50** institutions
- **Benchmarking** effect: impact on national programmes and agencies; national funding for best "runners-up"
- **Efficient** and **fast** grant management
- **Highly recognized** by the research community beyond Europe

Priority to Young Scientists

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Developing a New Generation

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On average each ERC project team has six members.

2/3 of team members are in the initial phase of their career.

Attracting Researchers to Europe

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Nationality of ERC project teams (PIs not included)

Analysis of 995 Starting and Advanced Grants

EU: 67%
Assoc. Countries: 12%
non-ERA: 18%
unknown: 3%

Most non-ERA from **China, US, India, and Russia**

53% of non-ERA team members "attracted" to Europe with the ERC grant (10% of all team members)

ERC Grants versus Top Publications

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*) Host institution refers to the organisation with which the first grant agreement was signed

ERC Grants versus Global R&D Effort

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ERC in *Horizon 2020*

The *Horizon 2020* Programme

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- **Principal components of *Horizon 2020*:**
  - Excellent science
  - Industrial leadership
  - Societal challenges

ERC in *Horizon 2020*

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- **Excellent science:**
  - **The European Research Council (ERC)**
    (budget under Horizon 2020: € 13.1 billion)
  - Future and Emerging Technologies
  - Marie Skłodoswka Curie Actions
  - Research infrastructures

Horizon 2020 Budget

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H2020 77 milliards d'euros
ERC 13,1 milliards d'euros

FP7 50,5 milliards d'euros
ERC 7,5 milliards d'euros

European Commission
Horizon 2020
European Union funding
for Research & Innovation

Changes and Continuity

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- **Essential features maintained:**
  - Same schemes, same principles, same selection procedures/criteria
  - Independent Scientific Council with full authority over funding strategy
  - Executive Agency with autonomous operation
- **Increased budget (€ 13.1 Bio for 2014-2020):**
  - More opportunities than ever for top research talents
- **Strengthening the Scientific Governance of the ERC:**
  - Strengthening the links between the Scientific Council and the Agency
  - 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

Forthcoming ERC calls

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ERC calls	Budget	Call Publication	Submission Deadline(s)
Advanced Grants ERC-2014-AdG	450 M€	17 June 2014	21 October 2014
Starting Grants ERC-2015-StG	430 M€	7 October 2014	3 February 2015
Consolidator Grants ERC-2015-CoG	585 M€	13 November 2014	12 March 2015
Advanced Grants ERC-2015-AdG	630 M€	10 February 2015	2 June 2015
Proof of Concept ERC-2014-PoC ERC-2015-PoC	15 M€* 20 M€*	11 December 2013 7 November 2014	DL2: 1 Oct. 2014 DL1: 5 Feb. 2015

*) full-year budget

Portugal and ERC calls

Evolution of Portuguese R&D intensity

Grant Distribution vs. R&D Expenditure

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Success Rates per Country of HI

European Commission

Horizon 2020
European Union funding
for Research & Innovation

*) First legal signatories of the first grant agreement taken into account

Success Rates versus Applications

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33 ERC Grants with HI in Portugal

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	AdG	StG & CoG		
University of Lisbon - Faculty of Letters	1			1
University of Lisbon - Institute of Molecular Medicine		4		4
University of Lisbon - Institute of Social Sciences		1		1
				(6)
New University of Lisbon - Faculty of Economy		1		1
New University of Lisbon - Faculty of Science and Technology	1	1		2
New University of Lisbon - Faculty of Social Sciences and Humanities		1		1
New University of Lisbon - ITQB		1		1
				(5)
University of Porto	1	1		2
University of Porto - Centre for Astrophysics		1		1
University of Porto - Institute for Molecular and Cell Biology		2		2
				(5)
Calouste Gulbenkian Foundation	1	4		5
Champalimaud Foundation	1	3		4
Technical University of Lisbon - Higher Technical Institute	1	1		2
University of Coimbra - Centre for Social Studies	1	1		2
Centre for Neuroscience and Cell Biology (CNC)		1		1
Technical University of Porto - School of Engineering		1		1
University of Aveiro		1		1
University of Minho	1			1
Grand Total	**8**	**25**		**33**

Current host institutions: data as of 21/08/2014

Portuguese Grantees Outside Portugal

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22/52 Portuguese grantees abroad: FR (7), UK (6), DE (3), 1 in AT, BE, ES, NL and SE.

4/33 grantees in Portugal from abroad: 1 each from BE, CH, NL and US.

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