

European Research Council (ERC) Rationale and Plans

***Investing for Excellence:
The Heart
of European Science Policy***

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Does Europe Need Pioneering Research?

- **Yes, an essential part of our culture**
- **What will be our future competitive advantage?**
 - *Ageing and shrinking population?*
 - *Labour and Social Security costs?*
 - *Cheap mass production and services?*
 - *Natural resources?*
 - *Capital accumulation and management?*



Europe Can Only Compete Through Knowledge

- **Leadership in Science, the Endless frontier**
- **The Knowledge Triangle:**
Education / Research / Innovation
- **Investment in Excellence is imperative,
not an option**



To Remain Vibrant, Europe Must

- **Generate, Attract and Retain Top Talent**
- **Integrate and Internationalize our Efforts**
- **Encourage and Trust the Young**
- **Create Attractive Career Paths**
- **Create Competitive Champions League**

(by merit only, as in football)



The Roadmap to the ERC

- **Should Europe Invest in Fundamental Research?**
- **Mobilization of the Scientific Community:
ELSF (EMBL, EMBO, FEBS)**
- **Stockholm Meeting (Royal Academy)**
- **Copenhagen Meeting (Danish Presidency)**
- **Do We Need a European Research Council?**
- **Surprising Unanimity: YES!**
- **ISE Manifesto (Science Vol. 305, 6 August 2004, p. 1327)**



Post-WWII European Integration in Science

- **The Intergovernmental System:**

- *CERN*
- *EMBO/EMBC*
- *EMBL*
- *ESO*
- *ESA*
- *Variants: ILL, ESRF, JET/EFDA*

- **The EIROForum Collaborative**



The Birth of the European Research Council

The ERC is:

- A logical development of the European Research Area
- Securely anchored in European legislation

but at the same time.....

- A revolutionary development



An Idea Whose Time Has Come

- **Engaging the Research Communities:
from ELSF to ISE**
- **Key Political Support:**
 - **Philippe Busquin & ERA**
 - **Jose Mariano Gago: Lisbon Agenda, ISE**
 - **A. Mitsos (Added Value Argument):**

Competition for Excellence at European Level



Key Decisions in Constructing the ERC

- **Commissioner Potočník:**

Arms-length nomination of the ERC Scientific Council

- **The Immediate ScC Decisions:**

Develop the Structures and define the Strategy in time, to implement the ERC upon the formal co-decision:

Agreement Commission, Council of Ministers, Parliament

- **Elect the Chair and Vice Chairs**

- **Overcome the ScC/Executive Agency split:**

Establish ERC Board, Recruit a Secretary General

- **Towards an Autonomous, Integrated ERC**



The ERC Strategy, 1

- **Focus on essentials, obvious gaps in Europe**
 - *Opportunities and independence for young scientists*
 - *Individual frontier research programmes (ca. RO1s)*
 - *Significant funding to make a difference*
- **Keep it simple**
 - *All fields of science and scholarship are eligible*
 - *Excellence is the sole criterion*
 - *Research results are the only deliverable*
 - *Select Referees & Evaluation Panels by excellence*



The ERC Strategy, 2

- **Keep it flexible**
 - *Review panels to judge investment levels*
 - *Researchers can rebudget*
 - *Grants are portable*
- **Trust the dynamic of science**
 - *Interdisciplinarity is encouraged*
 - *Excellence attracts excellence*
 - *The effects of critical mass*
 - *From individual to institutional excellence*



ERC's Central Strategy: See <http://erc.europa.eu> First Major Funding Programme

ERC Starting Independent Researcher Grant (ERC Starting Grant)

- *The only programme to be funded in 2007*
- *Ca. 300 M€, 200 grants @ 1.5M€ for 5 years*
- *i.e. 200 new investigators p.a., ca. 1400 in 7 years*

Sole selection criterion: Excellence of person & proposal

- **Eligibility:**
 - *≤ 8 years since Doctorate + 3yrs for service*
 - *Newly established or offer of position*
 - *Within EU or Associated States*
 - *No nationality criterion*

3 Rs: Recruit, Repatriate, Retain TOP TALENT



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ERC Advanced Investigator Grant (ERC Advanced Grant)

- *Start up in 2nd year, yearly thereafter*
- *Annual budget minus ERC Starting Grants*
- *From ca. 600 M€ to ca. 1 billion €/year*
- *ca. 200/500 grants of 3M€ committed each year*
- **Sole selection criterion: Excellence of proposal & track record**
- **Eligibility:** (a) *investigators at all career stages in Europe*
(b) *No age limit or nationality criterion*
(c) *The 3 Rs*



Examples of Panel Structure

- **SH1 - Individuals and organisations:** economics, management, demography, geography, urban and environmental studies.
- **PE3 - Condensed matter in physics and chemistry:** Condensed matter (structure, electronic properties, fluids,...), statistical physics, nanosciences, reactions.
- **PE8 - Earth system science:** Physical geography, geology, geophysics, meteorology, oceanography, climatology, ecology, global environmental change, biogeochemical cycles, solar planets, natural resources management.
- **LS2 - Genetics, genomics, bioinformatics and systems biology:** Molecular and cell genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology.

