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## Press release

22 January 2013

### ERC funding of €680 million to 302 top researchers

**The European Research Council (ERC) is awarding €680 million to 302 senior research leaders in 24 different countries across Europe<sup>1</sup> in the latest competition for its prestigious 'Advanced Grants'. With up to €2.5 million per project, the funding allows these scientists to pursue their most ground-breaking ideas at the frontiers of knowledge together with their own teams.**

The projects selected cover a wide range of topics, such as the development of new models to explain certain physical phenomena like superconductivity, assessment of the advantages and limits of quantum devices, or exploring how economic actors form and change their beliefs about their environment and about each other by adding emotional and psychological features to existing models.

Commissioner for Research, Innovation and Science, Máire Geoghegan-Quinn said: "*The ERC continues to identify the very best researchers. ERC funding is leading to an increasing number of scientific breakthroughs and discoveries, as well as more publications in recognised scientific journals. Promoting frontier research at the highest level is vital for Europe's competitiveness, and this is why we have proposed to increase the ERC budget as part of our Horizon 2020 programme.*"

ERC President Professor Helga Nowotny commented: "*I am proud that the ERC succeeds in finding and funding the very best research leaders with the most creative ideas in Europe. This funding gives new impetus to frontier research, and will also allow these scientists to build their own teams. Advanced Grantees on average employ seven team members. Overall, estimates show that by the end of 2013 the ERC will have provided support to more than 15,000 doctoral and postdoctoral researchers as team members. The ERC thereby helps support a new generation of top scientists in Europe.*"

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<sup>1</sup> The EU Member States and the "FP7 associated countries" (Albania, Bosnia and Herzegovina, Croatia, Faroe Islands, Former Republic of Macedonia, Iceland, Israel, Liechtenstein, Montenegro, Norway, Serbia, Switzerland and Turkey)



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In this Advanced Grant competition, some 2,300 applications were submitted to the ERC, which is a slight rise from that of the last year (4.5%). The call budget of €680 million also saw a minor increase. The number of researchers selected for funding rose slightly, from 294 to 302, while the success rate continues to be stable at 13%.

The ERC grants target top researchers of any nationality who are based in, or willing to move to Europe. In this call, the selected candidates hold 32 different nationalities, with British, German, French, Dutch and Italian researchers being the most numerous. They will conduct their research projects in over 160 institutions across 24 different European countries. As the largest countries in the EU, the UK, France and Germany host the greatest number of successful candidates. However, the Netherlands, Denmark, UK and Cyprus (of the EU countries), and Switzerland and Israel (of the countries associated with the EU research programme), host the greatest number of successful candidates in relation to population size. This reflects the high quality of the research in these countries, which generally follows from long-term investment in research.

Of the senior scientists receiving grants in this call, 11 applied from outside the European Research Area, which is an increase from the last Advanced Grant call. The majority are Europeans returning to their home countries; most were based in the United States, one in Canada and one in Lebanon. There are three Americans amongst the selected scientists moving from the US to carry out their ERC-funded research at a Host Institution in Europe. In addition, 21 of the selected researchers hold a non-European nationality, but were already based in Europe.

Just over 15% of selected researchers are women, which is a rise from last year's 12%. The average age of the researchers to be funded is 51 years.

In this call, 45% of selected proposals were in the 'Physical Science and Engineering' domain, 37% in 'Life Sciences', and 18% in 'Social Sciences and Humanities'. The grantees were selected through peer review evaluation by 25 panels composed of renowned scientists from around the world. (For further information, see the statistics.)



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## Lists of selected researchers

The lists below show the proposals selected for funding. Some additional funds are expected to be confirmed, which will enable the ERC to support some more projects that are presently on a reserve list. The ERC website will subsequently be updated. Proposals placed on the reserve lists will only be published once their actual funding has been confirmed.

**List of all selected researchers by country** of host institution (in alphabetical order within each country group):

[http://erc.europa.eu/sites/default/files/document/file/erc\\_2012\\_adg\\_results\\_all\\_domains.pdf](http://erc.europa.eu/sites/default/files/document/file/erc_2012_adg_results_all_domains.pdf)

**Lists of selected researchers by domain** (in alphabetical order):

- Social Sciences and Humanities:  
[http://erc.europa.eu/sites/default/files/document/file/erc\\_2012\\_adg\\_results\\_sh.pdf](http://erc.europa.eu/sites/default/files/document/file/erc_2012_adg_results_sh.pdf)
- Life Sciences:  
[http://erc.europa.eu/sites/default/files/document/file/erc\\_2012\\_adg\\_results\\_ls.pdf](http://erc.europa.eu/sites/default/files/document/file/erc_2012_adg_results_ls.pdf)
- Physical Sciences and Engineering:  
[http://erc.europa.eu/sites/default/files/document/file/erc\\_2012\\_adg\\_results\\_pe.pdf](http://erc.europa.eu/sites/default/files/document/file/erc_2012_adg_results_pe.pdf)

**Statistics** (indicative):

[http://erc.europa.eu/sites/default/files/document/file/erc\\_2012\\_adg\\_statistics.pdf](http://erc.europa.eu/sites/default/files/document/file/erc_2012_adg_statistics.pdf)

## **Some examples of ERC projects selected for funding in this call:**

The **STRATEMOTIONS** project aims to develop an analysis of the interactions that exist between economic agents, who like any other human beings, are affected by emotions such as anger, anxiety or guilt. The idea is to establish new patterns of behaviours and discover how economic agents form and change their beliefs about their environment and about each other, by adding emotional and psychological features to the existing methodologies.

(Pierpaolo Battigalli, Bocconi University, Italy)

Due to their very high pH values and salt concentrations soda lakes are supposed to be hostile environments, but in reality they are populated by a large variety of bacteria. The goal of the **PARASOL** project is to obtain a better understanding of the diversity, physiology and ecological niche of sulphur bacteria in soda lakes, and the molecular mechanisms by which they adapt to extreme conditions. Apart from this, the results of the project can be used to improve the sustainable removal of noxious sulphur compounds from wastewater and off-gases, which is essential for a clean and healthy environment.

(Gerard Muijzer, University of Amsterdam, the Netherlands)

The **LOCATE** project will investigate the hunting dynamics of free-ranging wild predators and prey on the African savannah using state-of-the art tracking and motion sensing technology. The research team will also study how the terrain and vegetation affect ranging and hunting. The results from this work will provide new insights into the physiology and behaviour of wild animals as well as into environmental changes due to global warming and seasonal floods affecting their habitat.

(Alan Wilson, Royal Veterinary College, University of London, UK)

Bringing together computer sciences, physics and mathematics, the **MQC** project aims at addressing the advantages and limits of quantum devices. To that end, the research group will create new quantum algorithms and will establish the lower bound on quantum computing devices. They also envisage exploring the link between quantum information processing, physics and mathematics.

(Andris Ambainis, University of Latvia, Latvia)



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Many-body physics aims at the description and understanding of the properties of systems made of a large number of interacting particles (e.g. electrons). The current methods to study many-body problems are limited. The goal of the **SEED** project is to develop new theoretical and numerical approaches to analyze and predict the effect of interactions among electrons on the properties of materials. The results will provide a better understanding of condensed matter with strong electron correlations, enabling the optimization of materials, and maybe the discovery of novel physical effects. (Lucia Reining, Centre National de la Recherche Scientifique, France)

### Note to the editors

Set up in 2007 by the EU, the **European Research Council** is the first pan-European funding organisation for frontier research. It aims to stimulate scientific excellence in Europe by encouraging competition for funding between the very best, creative researchers of any nationality and age. The ERC also strives to attract top researchers from anywhere in the world to come to Europe. It funds young, early-career top researchers ('ERC Starting Grants'), already independent excellent scientists ('ERC Consolidator Grants'), and senior research leaders ('ERC Advanced Grants'). The substantial funding is awarded based on peer review evaluation and can amount to a maximum of €2 million for a 'Starting Grant', €2.75 million for a 'Consolidator Grant', and €3.5 million for an 'Advanced Grant'.

The ERC operates according to an "investigator-driven", or "bottom-up", approach, allowing researchers to identify new opportunities in any field of research. The ERC, which is the newest, pioneering component of the EU's Seventh Research Framework Programme ('Ideas' Specific Programme), has a total budget of €7.5 billion from 2007 to 2013. The European Commission has proposed a significant boost of the ERC budget to over €13 billion in the new framework programme "Horizon 2020" (2014-2020).

The ERC is led by the ERC Scientific Council, composed of 22 top scientists and scholars and the ERC President is Prof. Helga Nowotny. The ERC Executive Agency implements the "Ideas" Specific Programme and is led by Director Pablo Amor.

### ERC Advanced Grant in brief

- For well-established top researchers of any nationality/age, scientifically independent and with a recent research track-record and profile which identifies them as leaders in their respective field(s)
- Funding: up to €3.5 million per grant (normally up to €2.5 million)
- Calls for proposals: published annually in autumn with deadlines in spring

Currently, the 2013 Advanced Grant competition, which is the last one under Seventh Research Framework Programme, is at the early stage of the evaluation process and results will be available in the second half of this year.

### For more information

ERC Press Release on fourth Advanced Grant call (2011)

[http://erc.europa.eu/sites/default/files/press\\_release/files/press\\_release\\_adg2011\\_results.pdf](http://erc.europa.eu/sites/default/files/press_release/files/press_release_adg2011_results.pdf)

Some striking ERC-funded projects

<http://erc.europa.eu/success-stories>

ERC website

<http://erc.europa.eu>

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