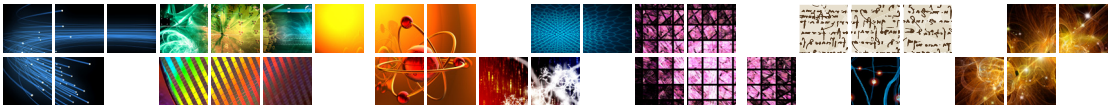
erc
ideas
Established by the European Commission
Newsletter of the European Research Council



What's new
ERC recommits to open access

Focus on Cyprus
ERC grantees starring at ministerial meeting

Research in the spotlight
Unravelling the mysteries of ageing

To subscribe please click here.

Editorial by Sir Tim Hunt

Dear reader,

In this issue of "*Ideas*", it is very timely to take a closer look at the question of open access.

In the olden days, open access to the scientific literature for me meant having keys to many departmental libraries in Cambridge, just as literature searches meant looking up citations rather than asking Google. That's all changed now, and like it or not, libraries are virtually unknown to the present generation of scientists. We expect to find everything online, wherever (and whoever) we are. And no one wants to pay €30 to access an article that turns out not to be what they were looking for.

This simple idea of open access has always been strongly endorsed by the ERC, which is prepared to pay for it, so that the research it supports can be read and understood by anyone, and provide the basis for further research. Accordingly, the ERC Scientific Council has approved the charging of open access fees to its grants, and will contribute to UK PubMed Central (soon to change its name to Europe PMC), providing a repository of, and access to, the enormous body of biomedical literature. This is an important marker of intent, but in other domains, we still have far to go. The physicists are well served by ArXiv, and we are considering contributing to their support, too. But what about the historians, sociologists and economists, to say nothing of the chemists and mathematicians? What about scholarly monographs? Will there still be libraries in which to consult these works, or should they from now on exist only as traces in the Kindle's memory? What about textbooks?

Behind the "simple idea" of open access lurk endless practical difficulties and fiddly details familiar to those of us who also stand on the opposite side of the publishing fence – I'm thinking of scholarly societies, which depend on the profits of journals for the support of their activities. It is taking longer than many people thought to change from the old system to the new, and the new rules are still far from settled. But it's clear which way the wind is blowing, and I welcome the new way of finding things out.

I hope you will enjoy our feature article on open access and other topics ranging from research on political conflict and on ageing, to Cyprus's first EU Presidency, and the ERC's widening participation efforts.

Sir Tim Hunt

Member of the ERC Scientific Council and Chair of its Working Group on open access;
Nobel Prize laureate in Physiology or Medicine 2001.

In this issue

What's new

ERC recommits to open access

Making research results freely available is the most effective way of ensuring that the fruits of publicly funded research are accessed, read and used in the future. In July, the ERC took a further step to strengthen its policy on open access.

When it comes to open access, the ERC aims to make the wide range of research results - including publications and raw data - freely available on the internet. The ERC has indeed been a strong supporter of this idea since its creation. In 2007, the ERC's Scientific Council lay down specific guidelines requiring that all peer-reviewed publications springing from ERC-funded projects are made available in open access. This stance was meant to ensure broad dissemination of research results and to allow scientists to draw on each other's work.

More recently, in July, the ERC announced that it is joining the open access repository service 'UK PubMed Central' (UKPMC). By doing so, the ERC hopes to encourage even more grantees to make their publications openly accessible. The ERC is the third European funder, following the Austrian Research Fund and the Telethon Italy, to join this UK-based open access repository service, which provides free access to over 2 million full-text biomedical research articles and over 26 million citations from PubMed and other sources. As the ERC joins the UKPMC, the service changes its name into the 'Europe PubMed Central' (Europe PMC). One of the main goals of this rebranding is to encourage other European funders of life science research to follow this example.

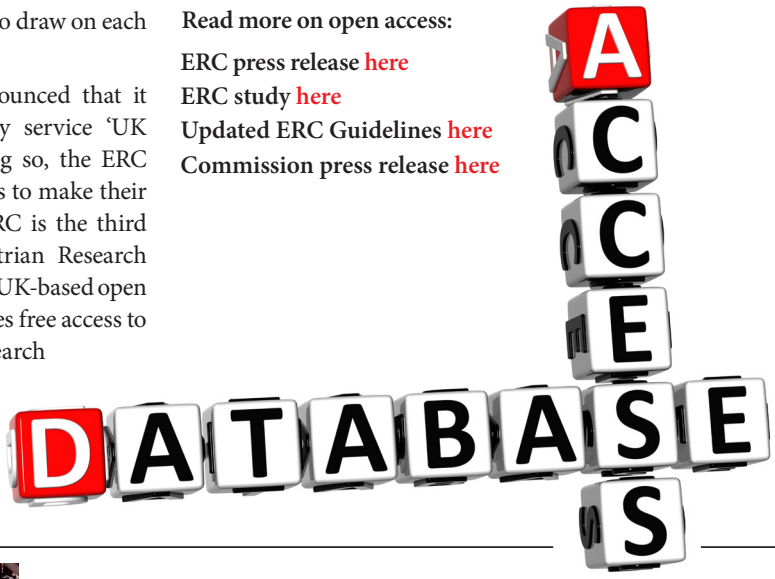
The ERC has also made an analysis to gage the public accessibility of the outcomes of ERC-funded research. The study, based on a sample of 600 journal articles, shows that the ERC is doing relatively well. By now, over 62% of journal articles built on ERC-funded research are published in open access. Yet, the share of articles varies across research domains, with close to 70% in Life Science, 65% in Physical Sciences and Engineering, and around 50% in Social Sciences and Humanities.

This summer, the ERC Scientific Council has also updated its Open Access Guidelines for ERC grantees; urging them to make their publications available in discipline-specific repositories. As since 2007, grantees have to make all papers and monographs based on research supported by the ERC publicly available no later than six months after they were published. Open access fees can be covered through the ERC grants as eligible costs of projects.

This comes at a time when public authorities are stressing the importance of open access in maximising the returns of investments in research and development. Recently, the European Commission announced its measures to improve access to scientific information produced in Europe.

Read more on open access:

ERC press release here
ERC study here
Updated ERC Guidelines here
Commission press release here



Widening participation

ERC hosts Polish guests

The National Science Centre (NCN), a Polish research funding body recently set up based on the model of the ERC, visited the ERC Executive Agency in Brussels to exchange experiences, and to discuss funding schemes and aspects of selection processes.

The results of the first ERC competitions hinted a demand for increased investment in basic research in Poland, a nation with a rich scientific past. This prompted the creation of a national executive agency dedicated to funding basic research.

The NCN was set up in 2011, only four years after the ERC was launched. As a younger sister of the ERC as it were, the NCN was created to foster pioneering research in Poland. Drawing on the tradition of Polish classical music (composer Frédéric Chopin is but one prominent example), the NCN named its main funding schemes 'Preludium', 'Maestro' and 'Harmonia'. Its budget for 2012 is €214 million, which will fund more than 2000 projects.

When meeting at the ERC's headquarters in June, both funders exchanged best practice experiences. While the ERC selects projects on the sole basis of excellence, in Poland additional requirements include for example the applicants' scientific achievements. The meeting, chaired by Jose Labastida, Head of the ERC Scientific Management Department, was the follow-up of a weeklong training of a group of NCN's staff at the ERC Executive Agency last year.

"*The visit in Brussels helped us gain a new perspective on our everyday activities, but also was a source of inspiration for our future actions*" - commented Malwina Jabczuga-Gębalska from the NCN.

One of the NCN's priorities is to support doctoral and pre-doctoral researchers and to give them excellent conditions to develop their careers. By doing so, the NCN is growing a new generation of Polish excellent scientists, who will later be able to benefit from the ERC funding opportunities.

To widen the participation and increase the success of researchers from Central and Eastern European countries is one of the current challenges of the ERC.

Visit the **NCN website**

Spreading the word to talent in Bulgaria

© Courtesy of Dana Branzei

"There is no substitute for passion and hard work", says Dr Dana Branzei, Romanian ERC Starting grantee based in Italy, who just came back from ERC workshops organised in Sofia and Varna in September. Their goal was to inspire the best scientists there to compete for ERC funding.

From your point of view, why should researchers apply for ERC funding?

The ERC is renowned for its "excellence only" criteria of funding. Receiving an ERC grant is therefore an acknowledgement of one's preeminence in a specific field. Because the ERC funding is provided for five years and brings substantial support, the Principal Investigator has the privilege of focusing on research rather than on various small grant applications.

What type of tips did you give the researchers you met in Bulgaria?

To do your best and look your best. There is no substitute for passion and hard work. Being knowledgeable, enthusiastic, daring and willing to dedicate the time it takes to become great, are some of the insights that drive me at all times. My presentation was a testimonial of my ERC experience; I also highlighted some key points for writing and presenting a good research proposal.

What is your research project about?

The ERC project is focused on investigating the mechanisms of DNA damage tolerance in eukaryotic cells, their impact on genome integrity and regulation. We are using three model systems and multiple experimental approaches. Our work reveals a link between damage tolerance and SUMO/Ubiquitin-mediated protein translational modification, chromatin architecture and DNA topology.

Going global

Connecting young U.S. talent to ERC grantees and their teams

© EC Audiovisual Services

The U.S. National Science Foundation (NSF) and the ERC have decided to cooperate to bring the best researchers together and encourage 'brain circulation'. The agreement signed in July between the European Commission and the NSF, will help early-career NSF researchers to spend some time in Europe and join the teams of ERC grantees.

According to this new initiative, young NSF scientists can be part of ERC-funded teams for six to twelve months. They will be supported by the ERC grant in the same way as any other team members, whereas the NSF will cover their and their families' travel costs. All ERC grantees can participate in this programme on a voluntary basis and invite U.S. researchers to their teams.

The agreement was officially signed during Euroscience Open Forum (ESOF) on 13 July in Dublin by the European Commissioner of Research, Innovation and Science, Máire Geoghegan–Quinn, and NSF Director Dr Subra Suresh, in the presence of ERC President Prof. Helga Nowotny (see the picture).

Commissioner Geoghegan-Quinn said that "*this agreement is a great addition to the strong transatlantic cooperation in the field of research, and recognition of the strength of the ERC brand just five years after its founding*". To this, NSF Director Dr Suresh added: "*Connecting U.S. and European researchers with shared interests and complementary strengths will advance the frontiers of science and engineering and address societal challenges*".

President Prof. Nowotny also spoke at the signing ceremony underlining that '*the ERC is very pleased about this new initiative, which can stimulate young talent in the U.S. to gain experience in Europe.* She added: "*This agreement is a first, but we have indications that more countries may follow suit, and the ERC welcomes this*".

To read more, click here

ERC grantees share their insights at Annual Meeting of the New Champions

As every year since 2008, the World Economic Forum brought together the best scientist and scholars under the age of 40 to take part in the "Annual Meeting of the New Champions" (dubbed the Summer Davos). In this year's edition, which took place in Tianjin, China, from 11 to 13 September, three ERC grantees were among the bright young minds, from around the globe, representing academia, civil society, business, government and media alike. They fed the debate with pioneering and wise ideas to help global growth and competitiveness in these challenging times.

The theme this year was highly topical - "*Creating the Future Economy*". The ERC-funded scientists shared their insights in several workshops, including the unconventional 'IdeasLab' session with Nature Magazine. Coming from various backgrounds - physics and electrical engineering, mechanics and natural materials, chemistry and energy efficiency - Xile Hu (École Polytechnique Fédérale de Lausanne), Jeremy O'Brien (University of Bristol) and Nicola Pugno (Politecnico di Torino) were joined by ERC Scientific Council member Prof. Alain Peyraube, who commented: "*The ERC grantees made very valuable contributions to the debate that I hope will help stimulate the global economy.*"

For more information, click here

Focus on Cyprus

ERC grantees starring at EU ministerial meeting in Nicosia

Following Denmark's EU Presidency in the first half of the year, in July Cyprus took over, which is a first for this country that joined the Union in 2004. It was also the first time ever that ERC grantees were invited to speak to the EU research ministers, as they gathered for the informal Competitiveness Council in Nicosia on 19 July.

Two ERC-funded researchers from the University of Cyprus - Starting grantee Dr Marios Avraamides and Advanced grantee Prof. Marios Polycarpou – took centre stage during the researcher ministers' lunch gathering. They both highlighted the benefits of their ERC grants and insisted on the need for EU Member States to invest in frontier research, especially in the current economic climate.

The grantees also spoke about their research projects, on cognitive psychology and spatial memories, and on the improvement of critical infrastructures such as telecommunications or transport systems, respectively. The presentation was followed by an exchange of views on the ERC's mission and activities, and its future. According to the grantees, the ministers took great interest in both their research projects and the impact of the ERC funding at national level.

The ministerial meeting - chaired by Cyprus's Minister of Health, Dr Stavros Malas, and attended by EU Commissioner for Research, Innovation and Science Máire Geoghegan-Quinn - focused on a future research partnership with the Mediterranean countries and on the simplification of EU funding models for research programmes under "Horizon 2020" (2014-2020).

During the Cyprus EU Presidency, which runs until the end of this year, the ERC's Scientific Council will hold a plenary session on 4 and 5 October 2012 in Limassol, the second largest city of the country, where several universities and educational institutions are based.

Marios Avraamides and Marios Polycarpou reported back to us:

© Courtesy of M. Avraamides

What caught the ministers' attention most?

Dr. M. Avraamides:

"My ERC project is about understanding how the brain forms, maintains and uses spatial memories, either when we reason about our immediate environment (for instance finding the keys in one's apartment) or when we retrieve information from more distant places (such as recalling a route within a city). This research has important applications for daily life, such as the design of innovative navigation systems for blind people. What ministers seemed to like the most, was that the ERC funding helped me to recruit top scientists from outside the EU (one from the US and one from Canada), but also to keep Cypriot researchers in Cyprus who, without this grant, would have moved elsewhere to pursue their careers. My grant also allowed me to obtain equipment for experiencing highly realistic virtual environments. It enabled me to build new collaborations with other labs and institutes, which has proven to be an essential step forward in my career."

© Courtesy of M. Polycarpou

What message would you like to pass to researchers in Cyprus?

Prof. M. Polycarpou:

"When you grow up in a small country like Cyprus, it is natural to look up to opportunities offered by universities in bigger countries like Germany, France, the UK or the US. But, it is important for young researchers to realise that even if they are based in a small country, they can compete and be successful in the ERC calls. As long as you are creative and work hard, you can pursue excellent research from anywhere in Europe! The ERC is unique in the sense that it encourages bottom-up creativity in science; and investing in research is about investing for the future".

CY 2012 EU

Cyprus and the ERC

> To date, 5 ERC grantees are based in Cyprus, representing a total funding of over €6.7 million
> 2 projects are in the field of Social Science and Humanities, 2 in Physical Sciences and Engineering, and 1 in Life Sciences
> 3 project are supported by Starting Grants and 2 by Advanced Grants
> 3 ERC grantees of Cypriot nationality are based outside Cyprus
> The Cypriot Research Promotion Foundation (RPF) supports candidates who passed the ERC quality threshold but were left without funding due to budgetary constrains
> 7 Cypriot scientists are serving as panel members or reviewers in the ERC evaluation of proposals and the selection of grantees
> The ERC National Contact Points in Cyprus is Anna Maria Christoforou from the Research Promotion Foundation

Research in the spotlight

Unravelling the mysteries of ageing

'I'm not here to make your life longer, but I would still like to play tennis when I'm 78', said ERC grantee Prof. Paul Stewart to illustrate the aim of his research at Euroscience Open Forum (ESOF) 2012 held in Dublin. He was one of the four ERC grantees who presented their projects at the ERC's scientific session shedding light on the topic of ageing from various scientific vantage points.

One of Europe's greatest challenges is its ageing population; a result of increased life expectancy and a lower birth rate. The research community is currently making a great effort to contribute to a better understanding of the mechanisms behind ageing, as well as age-related diseases. The ERC grantees who spoke in the session, tackle questions ranging from the contribution of genes to the poor health condition of ageing populations, to the differences in longevity between the sexes.

Prof. Paul Stewart, Advanced grantee from the University of Birmingham (UK), focuses his research on bodily changes that occur with age, such as weight gain, thinning skin, or reduction of muscular mass, and the resulting diseases, such as diabetes, obesity or osteoporosis. In particular, he investigates how excess of cortisol, a steroid hormone, can contribute to speeding up degenerative symptoms of ageing. By better understanding the process of ageing, he hopes to find out how to improve health conditions as we get older.

The molecular mechanism of ageing is the angle that Dr **Björn Schumacher**, Starting grantee at the University of Köln (DE), takes to explore the topic. In particular, he examines the role of DNA damage in age-related diseases, for instance Parkinson's or Alzheimer's, with the ultimate goal of identifying novel preventive therapies.

ERC Starting grantees Dr **Alexei Maklakov** from University of Uppsala (SE) and Dr **Virpi Lummaa**, University of Sheffield (UK) take the evolutionary approach towards ageing. While both study the causes and consequences of the difference in life expectancy between men and women, their methods differ significantly.

To understand these variation in life expectancy, Dr Maklakov has developed a series of experimental evolution studies with the seed beetle. The first results of the project show that genetic conflict prevents the sexes from attaining lifespans that maximise their relative fitness: while males live longer than necessary to maximise their fitness, the correlation is opposite for females.

At the heart of Dr Lummaa's research is tracing the reasons behind women's longevity. She uses unique demographic data recorded by the Lutheran Church in Finland since the 18th century, covering ten generations and about 80,000 individuals altogether. Based on this, Dr Lummaa's research reveals that the gains of becoming a grandmother could explain women's longevity. Such gains were not evident for men, indicating that selection on lifespan could be different between the sexes in at least some human societies.

The scientific session on ageing was an opportunity for the grantees to look at the mysteries of ageing and discuss some of its aspects with the audience. It was also a chance to reflect on their research from an interdisciplinary perspective, and exchange experiences with fellow researchers in a field of immense importance to society.

Interview with...

Prof. Eliana La Ferrara - Understanding the roots of conflicts


© Paolo Tonato

ERC Starting grantee Prof. La Ferrara, from Bocconi University in Milan, is studying the economics of conflict in developing countries. Around the UN International Day of Peace (21 September), we spoke to her on her project that integrates economics with political science and sociology to identify tools that can be used to prevent conflicts.

What are the key questions addressed in your project?

During the last two decades, many developing countries have experienced violent conflicts that have enormous costs in terms of human lives, but also economic resources. In the mid-1990s, one in three African countries was involved in a civil war. I am interested in understanding the roots of these conflicts. My research uses the tools of economics, theoretical modelling and empirical analysis, to identify the causes of such conflicts and assess their consequences. This domain of research includes analysing not only violent conflicts, but also social clashes, cultural divisions or conflicts over the control of natural resources.

You chose to focus on mechanisms triggering conflict at sub-national level. Why?

A wide literature exists on the causes of civil wars at national level but there is a lot of heterogeneity across countries, while our aim is to identify common triggers. In one of the projects, my co-authors and I artificially divided Sub-Saharan Africa in cells of around 100 km^2. We collected various data at this highly disaggregated level, especially on variables related to climatic shocks. This method gives a much richer picture of conflict occurrence and dynamics at the microeconomic level.

You also examine the behaviour of multinationals and foreign investors.

It is recognised that political instability is harmful for private investment, yet some businesses, not only the defense industry, may benefit from war. In my ERC project, I used event studies - a tool generally used in finance - to establish the link between conflicts and companies' stock market valuation. Part of my project proposes an innovative use of this methodology to detect the occurrence of arms embargo violations.

What would you say is your main finding after four years of research?

A main outcome is certainly the development of new indexes and methodologies. When my co-authors and I studied the role of diversity as a potential source of conflict, for example, we developed a new index to measure diversity which takes into account not only ethno-linguistic origin, but also educational background, employment status and other characteristics of individuals belonging to a specific population. This tool is not specific to Africa and can also be used in industrialised countries.

In our project on Sub-Saharan Africa, looking at a smaller scale allowed us to highlight common determinants of violent conflicts. We could show that the incidence of conflicts on this continent increases a great deal in areas particularly affected by climate changes, notably severe drought. We also found significant persistence of conflicts over time and large conflict spill-overs across neighbouring areas.

What would you recommend to researchers who plan to apply for an ERC grant?

Having been both an ERC grantee and a panel member, I would say that the first requirement to succeed is the quality of the project, in terms of methodology and innovativeness. But my personal advice to applicants is to choose a topic they are passionate about and to be ambitious enough to explore new and broad research paths.

Did you miss this?

Pablo Amor - Director of ERC Executive Agency

Since August, Pablo Amor is the official Director of the ERC Executive Agency (ERCEA), the body that implements the ERC activities. Pablo Amor joined the ERCEA in February 2009, first as Head of the Grant Management Department, and from January 2011 as ERCEA Director ad interim.

The ERC Executive Agency is based in Brussels and hosts around 370 staff.

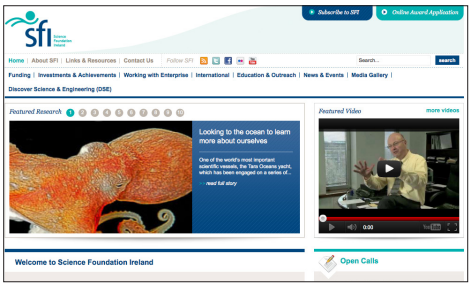
To find out more, click here

© Vivian Hertz

Starting Grants and Proof of Concept results

In the beginning of September, the ERC announced the researchers selected in its latest two funding rounds. In the fifth ERC Starting Grants call, ca. 536 scientists receive support of around €800 million in total. The demand for these highly-coved grants increased further this year. Also, 33 existing ERC grantees get the top-up funding 'Proof of Concept', to help them bring outcomes of their research towards the market. The second deadline of this call is 3 October 2012.

More on Starting Grants here
and on Proof of Concept here



© http://www.sfi.ie/

© Courtesy of NSC Taiwan

Ireland launches scheme to support ERC candidates

Researchers who were selected through the ERC's peer review, but not funded due to budgetary limitations, can now apply for 'resubmission grants' from the Science Foundation Ireland (SFI). This new funding is intended to support the scientists of any nationality placed on the ERC reserve list, provided that they will reapply for ERC grants with an Irish host institution. These SFI's grants will be awarded to scientists to improve their ERC project proposals. Ireland is the latest of the dozen countries to launch such a scheme.

Visit the SFI website

ERC goes to… Asia and Russia

After the launch of the 'ERC goes Global' campaign in Canada in February 2012, and visits to South Africa, Chile and Brazil earlier this year, the ERC went to Asia - Hong Kong, Japan, South Korea and Taiwan - in July, and then to Russia in September. The aim of the campaign, led by the ERC Secretary General, Prof. Donald Dingwell, is to foster relations and to encourage top talent around the world to come to Europe to do research.

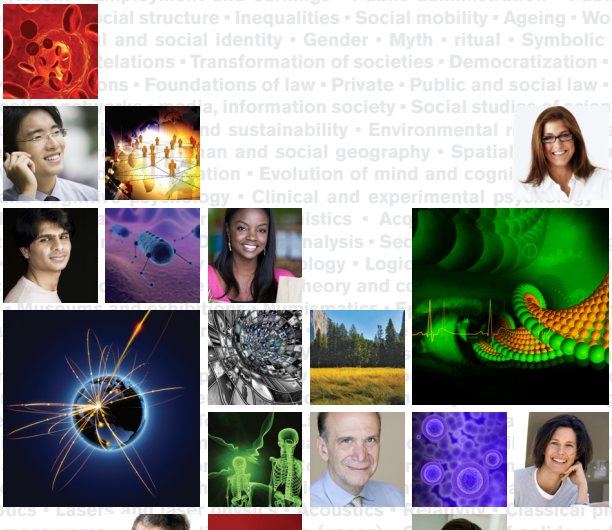
Excpected dates for the upcoming calls

Call for proposals	Publication date	Deadline	Funding
ERC 2012 Proof of Concept II (open only to ERC grant holders)	2 Feb 2012	3 October 2012	Up to €150 000 per grant
ERC 2013 Starting Grants	10 July 2012	17 October 2012	Up to €2.0 Mio per grant
ERC 2013 Advanced Grants	10 July 2012	22 Nov 2012	Up to €3.5 Mio per grant
ERC 2013 Synergy	10 Oct 2012*	10 January 2013*	Up to €15 Mio per grant
ERC 2013 Consolidator Grant	7 Nov 2012*	21 February 2013*	Up to €2.75 Mio per grant

* These dates are indicative only: for the exact official dates see the Participants' Portal
For further information: Please check the ERC homepage regularly.
Note that the previous 'ERC Starting grant' scheme has been divided in two:
- 'Starting grant': at least 2 and up to 7 years of experience after first PhD,
- 'Consolidator grant': over 7 and up to 12 years of experience after first PhD.
Also, as announced in July, there will be one single deadline for each call (no longer per domain).

ERC upcoming events

20/09/2012	Nature jobs Career Expo	London, UK	ERC workshop and stand
23 - 26/9/2012	15th European Congress on Biotechnology	Istanbul, Turkey	ERC workshop and stand
13 - 17/10/2012	Neuroscience 2012	New Orleans, USA	ERC workshop (2 grantees); ERC stand
05/11/2012	Conference 'Enhancing the Attractiveness of European Universities as a Destination for World-Class Researchers'	Barcelona, Spain	Opening/closing: ERC President H. Nowotny. Sessions: ERC SecGen D.Dingwell, Scientific Council member I. Vernos, grantees
09/11/2012	Falling Walls	Berlin, Germany	Host: ERC President H. Nowotny Grantees participate
14 - 18/11/2012	111th Annual Meeting of the American Anthropological Association (AAA)	San Francisco, USA	ERC workshop and stand
3-7/12/2012	American Geophysical Union (AGU) Meeting		ERC presentation at international session; ERC stand
6-7/12/2012	Destination Europe: Your Research & Innovation Opportunities		ERC in sessions and round tables



For comments:
erc-info@ec.europa.eu

European Research Council Executive Agency
16 Place Charles Rogier
BE-1210 Brussels
Belgium

ideas is a quarterly electronic newsletter published by the European Research Council.

The newsletter is available in English. Subscription is free. You can subscribe online by clicking here.

Next issue: December 2012

ERC National Contact Point in your country, click here.

To receive ERC News Alerts, click here.

European Commission

BRINGING GREAT **IDEAS TO LIFE**
http://erc.europa.eu

European Research Council
Established by the European Commission