ideas

**European Research Council** 

Newsletter of the European Research Council



To subscribe please click here.

2014 • #2 (June)





The core business of the ERC is to provide generous, long-term funding for top researchers with the best ideas to carry out their work in Europe. It funds bottom-up, frontier research, in the belief that there is a need to support and strengthen scientific excellence in Europe without expecting any immediate technological fall-out. The ERC does not make a difference between basic and applied research; it aims to fund scientific projects at the frontiers of knowledge, with excellence as the sole selection criterion. Funding this type of high-risk/high-gain research implies building the science base for future innovation.

The history of science shows very clearly that without this curiosity-driven, basic research, no research directed toward solving "real problems" would exist and neither would technological progress. It is basic research which has contributed to economic growth and human welfare throughout the history of humankind.

The high-quality investigator-driven research funded by the ERC is essential for industrial innovation to respond to global economic, environmental and societal challenges, although it often bears fruit only in the medium- to long-term. At the same time, some excellent ideas might have immediate or short-term commercial applications.

It is in this spirit that the ERC Scientific Council's <u>Working Group on Innovation and Relations with Industry</u>, under the chairmanship of Prof. Jens Rostrup-Nielsen, developed and launched in 2011 the Proof of Concept grant scheme, which allows ERC grant holders to find out as fast as possible if, from a commercial point of view, their research is going down a dead-end or whether it has the potential to attract private investors.

Currently there are two opportunities a year to apply; the next call deadline is on 1 October 2014. The current success rate lies at about 35% and the demand for the funding increases steadily every year.

The 178 Proof of Concept projects selected for funding so far treat topics ranging from innovative drug therapies and new biomaterials, to greener and cheaper industrial chemical substances, which reflects the richness of the ERC research portfolio. As an example, let me mention the development of floating seismometers to record signals generated by earthquakes in the world's oceans which complement the data recorded by land-based seismic stations. Another example is provided in this Newsletter. In this issue, you will also get a broader view on the links between curiosity-driven research and the industry, and hear what high-level business profiles have to say about the topic.

Enjoy reading.

Prof. Sierd Cloetingh – Member of the ERC Scientific Council Chairman of the ERC Working Group on Innovation and Relations with Industry

#### In this issue

2

- 3 > What's on Basic research meets industry
- 4 > Voices from the industry BP, Ericsson and Microsoft on ERC
- 5 > Marketable ideas Quantum research spins out start-up
- 6 > Research in the spotlight In awe of science at ESOF

- 8 > Widening participation ERC hits the road
- 9 > Going Global Asia takes centre stage
- 10 > Focus on Norway
- 12 > Did you miss this?

#### What's on

#### **Basic research meets industry**

At the European Business Summit, held in May in Brussels, policy-makers and industry personalities discussed the role of Europe in the global economy, and exchanged their ideas on how to boost EU economic growth. Not surprisingly, one reoccurring theme was the investment in R&I, thanks to which Europe can gain a competitive edge as an innovation leader. This is in line with the ERC's mission to fund excellent basic research, which in turn can bring solutions to societal challenges and strengthen the economy through scientific breakthroughs.

The speakers at the summit agreed that research is an essential ingredient for the modern economy. Not only does it improve the efficiency of existing solutions (in case of applied research), but it also helps define and develop the technologies of the future (basic research) - this is crucial for Europe to remain in the global top league of innovators.

Although the impact of frontier research is difficult to predict, it can sometimes deliver the jackpot. Unexpected discoveries that have revolutionised the industry and people's lives, include penicillin, the laser, stainless steel, lycra and the internet. Graphene, the 'wonder material' more recently discovered by ERC grantees Prof. Andre Geim and Prof. Konstantin Novoselov, is another shining example still on the rise.

#### **Risky business?**

At the European Business Summit, ERC President Jean-Pierre Bourguignon highlighted the need to push the frontiers of knowledge and to back young top talent in Europe to help them become the next generation of world-class research leaders. On the eve of the summit he also said that "the ERC plays a central role in supporting high-risk/high-gain science, which the private sector is less inclined to invest in as it cannot appropriate all the benefits". Frontier research also tends to be seen as a too risky investment for private companies, due to the unpredictability of its results.

Business representatives, however, recognise the need for beyond state-of-the-art research to keep Europe's competitiveness. In line with this view, the <u>European</u> <u>Round Table of Industrialists</u> – that brings together some of Europe's biggest companies such as Airbus Group, Inditex, L'Oréal, Nokia or Royal Philips – last year signed a joint letter with the ERC. It urged European leaders to support basic research and approve the €80 billion budget of the Horizon 2020 programme. They argued that "*it will lay the foundations for growth in Europe*", as "*discoveries and technological progress will produce new products, processes and services, and new industries will be created in their wake*".

#### On the global arena

The importance of research is certainly also acknowledged by policy-makers and business leaders at the global level. The World Economic Forum (WEF) in Davos - a key platform for leaders from governments, business, civil society and academia to discuss the most pressing global issues – has been a way for the ERC to bring in science into the debate at this level. Since 2012, the ERC has steered attention to innovative research and forged relations to the industry there. The ERC will also attend the next WEF meeting, "Summer Davos", in September in Tianjin, China.

As alluded to in the editorial of this issue, the ERC also set up a special working group on innovation and relations to business to put this matter at the forefront – one step towards helping basic research meet industry.

#### Getting new ideas to market

In 2011, the ERC launched a top-up funding scheme to help ERC grantees bring the results of their projects to market. These Proof of Concept grants, worth up to €150,000 each, can cover costs of activities such as technical validation, market research, establishing intellectual property rights, or investigating commercial opportunities. Last year, some of these grantees took part in an event organised by <u>Science|Business</u>, where they pitched their ideas to R&D executives and venture capitalists. The <u>next edition</u> will be held on 4 July.

### Voices from the industry

#### **BP, Ericsson and Microsoft on ERC**

What is the impact of frontier research on the economy, and how do business leaders see the role of the ERC in funding it? Read what representatives

from three multinational enterprises - BP, Ericsson and Microsoft - have to say about the relations between curiosity-driven research and industry.

#### David Eyton, Group Head of Technology, BP



"Truly excellent science is hard to identify in prospect and requires world class capability, both people and equipment – and the European Research Council has proven itself to be highly adept in supporting this kind of research. As a society, we face monumental challenges: economic growth, sustainable and affordable energy, climate and environmental protection, to name a few of many. In solving these problems, good implementation of what we already know will be important; but we will also need breakthrough ideas, that change the way we even think about the problems. That's what great science provides, and that's what the ERC funds – with open, peer-reviewed competitions on a continental scale that only the best can win. If we didn't already have the ERC, we'd need to invent it."

#### Leif Johansson, Chairman of Ericsson and AstraZeneca plc.

"Faced with increased global competition, higher energy and raw material costs, the European industries competitive edge will more than ever need to be built on research and innovation to safeguard the transition into higher-tech and higher-value added activities. We need to foster excellence in research. Basic research is the backbone for most research carried out in industry and also for ensuring that we have access to outstanding talents. Europe's future can only be built on its brains. To secure this, public funding of basic research is crucial both on an EU level as well as on national levels. Horizon 2020 with its three pillars and its strong focus on excellence in which the ERC plays a crucial role is an excellent example of a strong and forward looking initiative."



AstraZeneca Global



## Prof. Andrew Blake FRS FREng, Microsoft Distinguished Scientist, Laboratory Director, Microsoft Research Cambridge

"Investments in basic, curiosity-driven research can lead to breakthroughs that open up new and unexpected opportunities, and potentially market-changing innovations. Universities and public research institutions are uniquely positioned to take on basic or pure research with no immediate commercial product in mind – research that most companies would be unlikely to tackle but that has the potential to be transformative. That's precisely what the ERC is doing, and as such supporting basic research through the ERC is an excellent investment for Europe."

#### Marketable ideas

#### Quantum research spins out start-up

The last few years have unveiled an array of remarkable advances in science and technology. Although much of this can be traced back to applied research efforts, many commercially successful inventions also come from research conducted out of pure scientific curiosity. Markus Aspelmeyer, ERC grantee and Professor of Physics at the University of Vienna (Austria), shows us yet another example: a project that started with a focus on fundamental scientific questions and ended up generating an unexpected technological innovation. Together with Dr Garrett Cole, an expert in microoptics and micromechanics, he founded the start-up Crystalline Mirror Solutions (CMS). The company manufactures high-performance mirrors for optical precision measurement, with applications in advanced navigation systems, broadband communications, and trace gas sensing.

So far, the most accurate measurements of time and space are based on laser light that is bounced back and forth many times between reflecting mirrors, or "optical cavities." In his ERC Starting grant project, Prof. Aspelmeyer used such cavities to observe and control the quantum nature of mechanical oscillators, of only a few micrometre-size (which equals to one millionth of a meter), the largest objects employed thus far in quantum experiments.

In 2011, the group applied for an ERC Proof of Concept grant to study how these micro-mechanical systems could be scaled up for use as optical coatings. Prof. Aspelmeyer explains: "At that point, we realised that we had discovered a new mirror technology. We had developed a fabrication process that enabled high-reflectivity monocrystalline semiconductor films to be used as optical coatings. Based on our work with the micromechanical devices, it was clear that this unique combination could drastically improve the quality of optical precision measurements". He adds: "Compared with current mirror technologies, our experiments demonstrated that crystalline coatings enable much more accurate measurements of time and space".

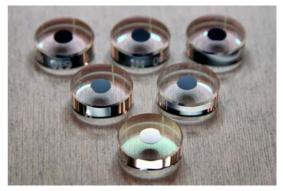
These results drew the attention of several research institutes worldwide, including laboratories developing gravitational wave detectors and optical cavities for ultrastable laser systems. Contacts have also been established with industrialists and the spin-off company is now commercialising its coating process with strategic partners.

Both researchers are confident that their technology will be deployed in various commercial applications, e.g. for navigation systems, aerospace or broadband communications. The new mirror technology can offer enhanced data rates through improved timing and more stable frequency references, and portable stabilised laser systems for both basic science and advanced commercial endeavours.

Referring to their start-up founded in 2012, Prof. Aspelmeyer says: "The early support through a Proof of Concept grant made financing of our first prototypes possible. The grant helped to cover the initial costs of this ambitious project – funding which is absolutely crucial when starting your own business." Dr. Cole adds: "After a year and a half, we have a research budget of  $\in$ 1.5 million and orders from nearly 20 groups worldwide. With this promising start, we envisage a bright future and are currently recruiting engineers in Europe and the US, eager to join this rapidly growing high-tech start-up".

Today, CMS is in a unique position globally as the sole provider of this groundbreaking optical coating technology.

Listen to the podcast.



Set of six 15-mm diameter cavity end mirrors with bonded 5-mm crystalline mirror discs



#### Research in the spotlight

#### In awe of science at ESOF

In its effort to promote frontier research, the ERC will participate in the <u>Euroscience Open Forum</u> (ESOF) - this time with a bigger delegation than ever before. This event, which showcases the latest advances in science, kicks off on 21 June in Copenhagen, Denmark. Under the theme 'Science Building Bridges', over 40 ERC grant winners will present their research.

Some 5,000 participants are expected at ESOF, Europe's largest general science event. For six days, the best researchers will share the latest scientific breakthroughs with the audience. Nobel laureates (including two ERC grantees), research leaders and innovators will attend, as will policy-makers, such as Commission President José Manuel Barroso and EU Commissioner Máire Geoghegan-Quinn.

The ERC will be represented by its President, Prof. Jean-Pierre Bourguignon and three ERC Scientific Council members; ESOF2014 Champion <u>Prof. Klaus Bock</u>, <u>Prof.</u> <u>Prof. Nils Chr. Stenseth</u> and <u>Isabelle Vernos</u>.



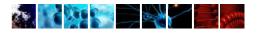
© ESOF 2014

ESOF2014 Champion Prof. Klaus Bock

Together with former President of Latvia Vaira Vīķe-Freiberga, Prof. Bourguignon will speak in a <u>plenary</u> <u>session</u> on the ERC's impact on career paths. He is also a speaker in a <u>session</u> on doctoral education in Europe. Prof. Vernos will <u>debate</u> women in science and Prof. Bock will for instance take part in a <u>workshop</u> on the EU-Russia partnership in research and innovation. The ERC has organised, with EURAXESS and Marie Skłodowska-Curie actions, a <u>presentation</u> on funding opportunities for researchers in Europe. In this edition of ESOF, the ERC will participate in more scientific sessions and with more speakers than ever before. Around 40 ERC grantees are to present their research in seven sessions. Ahead of the event, Prof. Bourguignon commented: "ESOF is a wonderful platform to bring science to a wider audience. I am glad that, this year, so many ERC grant holders can contribute to this effort and feed the forum with exciting discussions on high-level science. It is a privilege for the ERC to contribute to Europe's rich scientific heritage with stimulating new ideas."

Participants in the ERC sessions will hear about fascinating topics. For instance, Starting grantee Prof. Emmanuelle Javaux, from the University of Liège (Belgium), seeks to identify traces of life on Earth some 3.5 billion years ago. She is studying fossils from Central, South, and Western Africa, as well as Australia, China, Russia and the US, to determine their state of preservation and provide us with answers to some fundamental questions: how did Earth become the only habitable planet in the solar system? What are the odds to find another Earth-like planet outside the solar system? How can our hunt for new planets help to understand the major steps of evolution of life? By examining 1.5 to 3.2 billion years old cells under her microscope, Prof. Javaux hopes to develop a chronology of these major stages and understand the patterns of biological evolution and the rise of more complex forms of life on Earth.

Another Starting grantee speaking at ESOF is **Dr Jennifer Lyn Baker** from the Institute of Preventive Medicine in Frederiksberg (Denmark). She explores the relations between childhood obesity and the risk of developing cancer in adulthood. Persons with a greater body size may be more likely to get cancer due to the bigger number of proliferating cells within their bodies. In her project, Dr Baker sheds light on how factors such as weight, height and pubertal timing can be associated with a risk of cancer in adulthood. Some preliminary results obtained on over 370,000 children born between 1930 and 1989 showed that obesity can be related with 14 different forms of cancer during adulthood, including breast, liver, prostate and thyroid cancer.



Tackling global epidemic outbreaks is another challenge for public health policy. Starting grantee **Dr Vittoria Colizza** from Fondazione Istituto per l'Interscambio Scientifico (Italy) has developed a computational tool to predict future viral outbreaks. With a multidisciplinary team composed of mathematicians, statisticians, epidemiologists and computational experts, she collects and analyses massive datasets on historical epidemics with which she develops computational models based on sophisticated algorithms. Dr Colizza was also able to test her method in real-life situations with e.g. the outbreak of the 2009 H1N1 pandemic swine flu.

In an ERC session on urbanisation, design and quality of life in cities, Advanced grantee **Prof. Rob Imrie** from Goldsmiths College (UK), will discuss the need for a

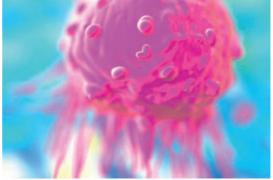


Prof. Javaux studies fossils to understand how the planet Earth has become habitable

more inclusive designed world for people with special needs. At the heart of his project is the concept of "Universal design" (UD), which can shape the design of new housing, workplaces, schools or kitchenware. One of his goals is to map and understand the practice of UD in several EU countries, Japan and the US. The results of his case studies in Ireland, Norway and the UK can help policy-makers and architects to facilitate independent living and equity of access for disabled people.

Learn more about some <u>ERC research stories</u> at ESOF and <u>watch videos</u> with ERC grantees (click on 'Projects' tab).

View the full ERC programme at ESOF.



Dr Baker found out that childhood obesity can be related to breast cancer



Dr Colizza develops global models to forecast epidemics



Prof. Imrie explores how disabled people can live independently



ERC hits the road



The EURAXESS bus in front of the University of Warsaw, Poland

29 cities in 22 countries visited in two months, and over 100,000 people reached – that is the outcome of the road show organised by EURAXESS. This two-month campaign started in Brussels on 3 March with the goal to promote scientific career opportunities amongst young researchers across Europe. The ERC joined one part of the journey: it hopped on the bus in Poznan, then moved on to Warsaw and Wroclaw in Poland and ended in Prague, the Czech Republic.

One of the ERC's priorities is to ensure that promising talent, particularly in EU Member States less present in the ERC calls, is aware of the funding offered. The EURAXESS roadshow was therefore a perfect opportunity to present the ERC funding schemes to possible future candidates in Poland and the Czech Republic, where the numbers of ERC applications are still low. In all ERC core funding schemes from 2007 to 2013, there have been 683 submissions from researchers in Poland and 344 in the Czech Republic. As a comparison, the numbers in the biggest EU Member States are 7,150 in the United Kingdom, 5,354 in Italy and 4,702 in Germany. Looking at a country with a population size quite similar to that of Poland, the figure for Spain is 3,540. As for the Czech Republic, population-wise it can be compared to Portugal, with 649 proposals in all calls.

During the campaign, with the help of <u>National Contact</u> <u>Points</u> (NCPs) and EURAXESS local correspondents, the ERC organised information sessions at universities in the four cities visited to explain its funding schemes and the application process. The ERC info events were a good occasion to talk directly with PhD and postdoctoral students, and to get a grasp of the reasons for the low application rates. According to these discussions, some of the factors that seem to have played a role in those two countries are for instance language issues, low numbers of publications in international peer reviewed journals, and insufficient administrative support.

Despite the ERC's past campaign in the newer EU Member States and substantial efforts made by the NCPs, the lack of awareness about the ERC schemes is still a challenge here.

After this useful tour, the ERC may organise a specific workshop with the NCP's from newer EU Member States to come up with possible solutions to the challenge in these countries.



Commissioner Máire Geoghegan-Quinn and Director-General Robert-Jan Smits launched the campaign in Brussels

#### Support for researchers in motion



EURAXESS is a European Commission platform for scientists interested in pursuing their career in Europe. It provides information on job and

funding opportunities, as well as support services for researchers reallocating to Europe.



#### Going Global

#### Asia takes centre stage

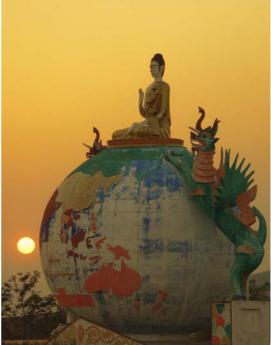
These months, Asia is in the spotlight as researchers and academics from all over the world gather for various meetings there. From the Global Research Council assembly in China, to the summit of renowned sociologists in Japan and the world's most important congress of mathematicians in South Korea - the ERC is heading East.

The third Annual Meeting of the <u>Global Research</u> <u>Council</u> (GRC) gathered some 70 heads of research funding bodies worldwide in Beijing, China, in late May. This year's edition was hosted jointly by the Chinese Academy of Sciences, the Natural Science Foundation of China (NSFC) and the Natural Sciences and Engineering Research Council of Canada (NSERC). The participants, including ERC President Prof. Jean-Pierre Bourguignon, met to discuss the implementation of the <u>GRC Action Plan for Open Access to Publications</u>, and to endorse a high-level statement for principles for shaping the future, "supporting the next generation of researchers". (See interview with the ERC President on p. 9 in <u>Euraxess</u> <u>newsletter</u>.)

The ERC also attended the two previous annual meetings of the GRC. The first one was held in the US in 2012, where the Global Research Council was launched, as a virtual organisation with no permanent secretariat, with the purpose of improving communication and cooperation amongst funding agencies and to assess mechanisms that support the research community worldwide. The second summit took place last year in Germany, and next year, the leaders will gather in Japan.

From 13 to 19 July, Japan will also be in the limelight, as the <u>XVIII ISA World Congress of Sociology</u> will be held in Yokohama. Scholars in this field will discuss the theme "Facing an Unequal World: Challenges for Global Sociology". Prof. Michel Wieviorka, member of the ERC Scientific Council and former President of the International Sociological Association (ISA), is a speaker in a session with other former ISA Presidents; they will reflect on the past and future of sociology. The ERC is also holding information sessions on its funding schemes at the conference and at the ERC booth. (See more information <u>here</u>.) The last stop in Asia this summer will be the **International Congress of Mathematicians** (ICM) in Seoul, South Korea, from 13 to 21 August. This is the largest international event in the mathematics community, taking place every four years. It is set to gather the greatest minds in this discipline to reflect on the state of affairs in mathematics. The ERC will be represented by President Bourguignon and Vice-President <u>Pavel Exner</u>, both renowned mathematicians. Besides exchanging views on the most recent trends in his profession, he will join a forum on R&D funding programmes. ERC information sessions will also be organised to explain the ERC's core objectives.

Asia, with power houses such as China, Japan and South Korea, is undoubtedly a major player in the global research landscape. It is therefore important for the ERC to nourish scientific cooperation on this continent, a path that it is already pursuing. Last year, the ERC signed an <u>arrangement</u> to make it easier for young talent from South Korea to join ERC research teams. Cooperation agreements with other countries in the region are in the pipeline.









The ERC Scientific Council regularly meets around Europe to discuss strategies and to stay in touch with the national research community. This week, the Council gathered in Oslo for its 46th plenary meeting; the first time in Norway.

On this occasion, the Norwegian Academy for Science and Letters and the Norwegian Research Council hosted an enlightening debate on research excellence in Norway, with amongst others the Norwegian Minister of European affairs, Vidar Helgesen, and the Research State Secretary, Dr Bjørn Haugstad, as well as the ERC leaders.

This was followed by a public ERC <u>event</u> at the University of Oslo where the ERC President and grantees were amongst the speakers. The event, attended by over 80 people, aimed to strengthen the ERC's visibility amongst researchers in Norway.

As an EU associated country, Norway takes part in Horizon 2020. It is an opportunity to reinforce Norway's international cooperation and to stimulate transfer of knowledge.

Although Norway is a champion in the field of R&I globally, the Norwegian Research Ministry has recently announced several initiatives to further improve the country's research landscape, including closer cooperation with BRIC countries and the establishment of a research funding review panel.

In February, State Secretary Haugstad met with the ERC President in Brussels to discuss ways to boost the country's ERC performance. In the ERC calls 2007 to 2013, around 600 applications came from researchers based in Norway, of which 41 were funded. In comparison, some 800 applications were submitted and 79 projects were funded in Denmark, a country with a similar population size.

In the ERC, 29 scientists from Norway serve as evaluation panel members. In January 2014, <u>Prof. Nils Chr. Stenseth</u>, the University of Oslo, became the first Norwegian appointed as Scientific Council member.

#### **ERC grants in Norway**

- > 41 ERC grantees are based in Norwegian host institutions, representing a total funding of around €80 million.
- > 16 researchers hold Starting Grants, 1 holds a Consolidator Grant and 24 hold Advanced grants.
- > 15 projects are in Physical Sciences & Engineering, 13 in Life Science and 13 in Social Sciences & Humanities.
- > 5 Norwegian ERC grantees are based outside Norway.
- > The Norwegian National Contact Points are <u>Ivar Horving</u> and <u>Magnus Kommandantvold</u> from the Research Council of Norway.

10

*i*deas • 2014 #2 (June)

#### Interview with

#### Norwegian State Secretary of Education and Research Dr Bjørn Haugstad



Marte Garmanr

# Are the ERC funding schemes important to researchers in Norway?

ERC grants are considered to be extremely valuable and highly prestigious amongst our researchers. Their benchmarking effect is significant and an ERC grant is a quality hallmark that helps further international

recruitment at the grantees' host institutions.

That said, the funding schemes do not seem to be as important in practice as we would have liked. The number of Norwegian applications is too low, especially in the Advanced grant scheme. Perhaps Norwegian researchers are too modest or not ambitious enough. Or perhaps the national funding is so generous that it crowds out applications for international funding? We have been warned against becoming too much of a fat cat...

## What is Norway doing to strengthen its success in ERC calls?

On 5 June the Government launched a new strategy for Norway's cooperation with the EU on R&I. We will improve our current incentives for EU participation, partly by way of advice from an expert government committee working on the general funding model for universities and university colleges.

As for the ERC, we have taken measures to, hopefully, make up for some of the weaknesses repeatedly reported in reviews of our applicants. For our young researchers, they point to a lack of both mobility and independence (too much co-publication with former Ph.D. advisers), insufficient experience as principal investigator, and inadequate skills in grant proposal writing. We do believe, however, that many of our young researchers are performing at the highest international standard, so this is a question of making better use of our potential and taking career development of young scholars more seriously. Thus we have introduced the two schemes "Young Research Talent" and "Independent projects mobility fellowship", and we continue to organise ERC proposal writing workshops.

When it comes to the experienced researchers, our success rates are more or less on a par with comparable countries, but the absolute number of applicants is too low. So besides our efforts to stimulate audacious and potentially groundbreaking research in general, mobilisation is a key issue here.

#### What are the biggest challenges ahead?

There is room for increased ambition in Norwegian research and we work along several lines to enhance the quality. Amongst the main initiatives is a longterm plan for research and higher education, due in October, with six priority areas. It includes the development of more world-leading academic environments, underpinned by investments in cutting-edge research infrastructure.

## How ambitious is Norway in attracting foreign talent?

Norway is an attractive country for foreign researchers. During the last seven years we have seen a very positive development with regard to internationalisation at home and seem to attract the right people; the success rate of foreign ERC applicants in Norway is higher than that of nationals. We have a clear intention of building upon our strengths and continuing our efforts to attract foreign talent. Norway is a privileged country with institutions that offer good working conditions for researchers and a good work-life balance thanks to state-supported high-quality preschools for all. I believe that is one of the competitive strengths of Norwegian universities; the possibility of combining a family life with pursuing an academic career of some distinction. I would like to see even more foreigners making use of that opportunity.



#### Did you miss this?

#### Demand for ERC grants drops

In the 2014 ERC Starting Grant call 3,272 proposals were submitted; a 1.7% drop compared to 2013, which shows that the demand for Starting grants has stabilised. The results of this competition are expected to be published in the autumn. The 2014 Consolidator Grant call attracted 2,514 proposals. This is 31% less than in 2013, but at the same level as in 2012. The drop in demand for ERC funding is likely be the result of the stricter <u>resubmission rules</u> introduced by the ERC for this year's calls, and will bring up the success rates.

Read more here and here



#### Step by Step to ERC Grants

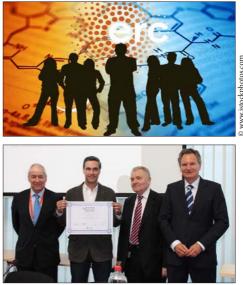
Do you want to learn about the ins and outs of the ERC selection process? Watch the recently published *Step by Step* video, which guides you through the ERC application procedure. The video informs about the three main funding schemes (Starting, Consolidator and Advanced grants) and gives details about the evaluation process. The ERC schemes are open for individual researchers from anywhere in the world, based in, or willing to come to, Europe. They offer long-term funding of high-risk/high-gain research projects.

Watch the video here

#### Scientists to decide who governs ERC

On 27 May, the European Commission announced the appointment of a new <u>Identification</u> <u>Committee</u>, which will select future members of the ERC's governing body, the Scientific Council. The Identification Committee is composed of seven distinguished scientists who will present to the Commission candidates for membership of the Scientific Council in 2015. The chair of the committee is Sir Leszek Borysiewicz, Vice-Chancellor of the University of Cambridge (UK).

#### Read more here



From left: P. Amor, M. Arruebo, J-P Bourguignon and R-J Smits

#### ERC celebrates 4000th grantee

On 6 June, the ERC marked the occasion of having funded 4,000 researchers. Dr Manuel Arruebo signed the grant agreement and presented his project at a small ceremony in Brussels. Amongst the guests was Commission Director-General for Research and Innovation Robert-Jan Smits, who gave an opening speech. The other speakers were ERC President Jean-Pierre Bourguignon and ERC Executive Agency Director Pablo Amor. Dr Arruebo works on biodegradable nanodrugs for patients in chronic pain.

Learn about the project in the <u>previous issue</u> (p. 9).







Future Calls

#### **CALENDAR OF ERC CALLS**

Grants open to researchers from anywhere in the world

| Call for proposals*                  | Publication date | Deadline        | Budget       | Funding                      |
|--------------------------------------|------------------|-----------------|--------------|------------------------------|
| ERC 2014 Advanced Grant              | 17 June 2014     | 21 October 2014 | €450 million | Up to €3.5 million per grant |
| ERC 2014 Proof of Concept<br>Grant** | 11 December 2013 | 1 October 2014  | €15 million  | Up to €150 000 per grant     |

\*Researchers who wish to apply to one of the ERC's calls can do so through the Participant Portal.

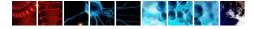
\*\*Calls open to ERC grantees only

There will be no calls for Synergy Grants in 2014. (The ERC Scientific Council will analyse the pilot phase of this new scheme before deciding on future calls.)

Note that there are new rules for re-submission of proposals. For details on these rules, please see <u>ERC Work Programme 2014</u> (pp. 18 and 19).

Stay informed on the ERC website.

Candidates should apply with a host institution in an EU Member State or Horizon 2020 Associated country. (See further information on the <u>Participant Portal</u>.)



markets • Banking and corporate finance • Co studies • Strategy • Human resource mana Poverty • International trade • Economic geo dimensions of classification and cognition Ethnography • Globalization • Migration • Int • Legitimacy of governance • Legal systems • • International law, human rights • Communiand society • History of science and techno ecology • Geographical information system Urbanization and urban planning • Cities • 1

computational linguistics • Type Neurolinguistics • Use of languag • Lexicography • Terminology • Pa Education • Principles • Typologi palaeography • Visual arts • Perfect of art and architecture • Cultural archaeology • Prehistory • Proto Entangled histories • Global hist acconomic cultural and political b

Number theory • Algebraic and complex ge analysis • ODE and dynamical systems • Part aspects of computer science • Numerical an • Fundamental interactions and fields • Parti molecular obysics • Optics and quantum of

physics • General physics • Metrology and measureme properties of condensed matter • Thermal properties materials and transport • Lattice dynamics • Semiconduc • Nanophotonics • Nanomagnetism • Mesoscopic phys (condensed matter) • Phase transitions • Phase equil techniques • Molecular architecture and Structure • Electrochemistry • Electrodialysis • Microfluidics • Corbiological systems • Chemical reactions: mechanisms Radiation chemistry • Nuclear chemistry • Photochemist • Corrosion • Porous materials • Ionic liquids • Nanotubes sensors • Nanomaterials • Nanoparticles • Nanotubes chemistry • Coordination chemistry • Colloid chemistry catalysis • Characterization methods of materials • Mac



nalysis - Acq nalysis - Sec ology - Logic neory and co





stics - F ses) - S insport uperflui cs - Sof and technology - Policies - scienc and mediation - Social and industria nal planning - Population dynamics ons - Animal communication - Huma Formal - Cognitive - Functional ange of language: Psycholinguistics g and learning - language pathologie cc - Ethics and morality - Bioethics Literary styles - Textual philology anhusicology - History of music - Histor naeology - Archaeometry - Landscap temporary history - Colonial history

of ideas • Intellectual history • Social ge • Logic and foundations • Algebra s • Operator algebras and functiona isistics • Combinatorics • Mathem arics oplication of mathematics in sciegoe physics • Electromagnetism • Atuanic

assical physics - Thermodynamics - Non-II colids and liquids - Mechanical and acous f condensed matter - Electronic proper cs - Magnetism - Nanophysics: Nanoelect matter - Fluid dynamics - Statistical pa

sical chemistry • Nanochemistry • Spectroscopic and spectro lytical chemistry • Chemical physics • Chemical instrument Method development in chemistry • Catalysis • Physical chem and catalytic reactions • Theoretical and computational chem of materials • Solid state materials • Surface modification • The physical • Organic-inorganic hybrid • Superconductors • Materi is • Intelligent materials – self assembled materials • Enviro

Editorial Board: Massimo Gaudina, Madeleine Drielsma, Magdalena Kufrej Samantha Christey, Maud Scelo Scientific Council members: Pavel Exner, Danny Dolev, Isabelle Vernos

Thanks to: Prof. Andrew Blake, Dr Garrett Cole, David Eyton, Dr Bjørn Haugstad, Leif Johansson ERC Grantees: Prof. Markus Aspelmeyer, Dr Jennifer Lyn Baker, Dr Vittoria Colizza, Prof. Rob Imrie, Prof. Emmanuelle Javaux Christian Hut, Eliska Kolinkova, Ana Pais de Oliveira, Laura Pontiggia, Edward Smith

For comments: erc-info@ec.europa.eu European Research Council Executive Agency 16 Place Charles Rogier BE-1210 Brussels Belgium

The newsletter is available in English. Subscription is free. You can subscribe online by clicking here. Next issue: September 2014 For the ERC National Contact Point in your country, <u>click here</u>. To receive ERC News Alerts, <u>click here</u>.



Horizon 2020 European Union funding for Research & Innovation SUPPORTING BRILLIANT MINDS FROM ANYWHERE IN THE WORLD http://erc.europa.eu



European Research Council