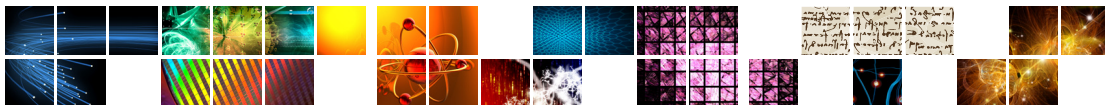


ideas

Newsletter of the European Research Council



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Anniversary
celebration

5erc

2007 - 2012

Years

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2012 • #1 (March)



Editorial by ERC President Helga Nowotny

In 2005, the ERC's Scientific Council met for the first time and on 27 February 2007 the ERC was officially inaugurated under the German EU Presidency with encouraging speeches by Chancellor Merkel and many others. We could not imagine then how many of the objectives articulated by our well-wishers would be reached so soon. On the path to success we had to overcome a few roadblocks, but I am absolutely confident that the recommendations of the Task Force provide for a robust governance structure for the future ERC. Now, five years later, it is time to take stock and to celebrate.

This issue will therefore be dedicated to our first five years. I invite you to join us on a journey through these thrilling times, right up to our recent anniversary celebrations. Some of the ERC's founding fathers will share their insights and views in this issue. Other personalities whose support was crucial will be featured through quotes. Of course, the ERC is a truly joint European venture and not everyone can be named here, but allow me to pay tribute to my predecessor Fotis Kafatos for his courage, dedicated commitment and hard work in the initial years; Ernst-Ludwig Winnacker as the indispensable mover and shaker in his function as the first secretary general, followed by Andreu Mas-Colell's infinite wisdom and humour; former DG for Research Achilles Mitsos for being the indefatigable driving force behind the ERC's realisation; Philippe Busquin and Janez Potočnik, who have both been unwavering in their support of the ERC as Research Commissioners; and Robert-Jan Smits as far-sighted and efficient director at DG Research at the time, who has understood and backed us from our early days. Throughout, Jack Metthey has been our "guardian angel". In addition, we are very grateful to many more individuals - from the Commission, the EU Member States and the European Parliament, from the scientific community and from the media alike - for their support in crucial moments.

We look forward to continuing the development of the ERC under 'Horizon 2020', with a nearly doubled budget, provided that the Commission's proposal is accepted. We are extremely fortunate to have Commissioner Maire Geoghegan-Quinn as, in her own words, "the ERC's greatest fan". Looking to the future, we are committed more than ever not to depart from the principle of "excellence only", as that would mean the end of the ERC. This is at the heart of our mission. Yet, we will go on with our efforts to make sure that scientists across Europe are informed and encouraged and that research systems are incentivised to continue to improve in quality. In the coming years, we also hope to make Europe a magnet for the best minds from anywhere in the world, which is why we recently embarked on a campaign, 'ERC goes Global', to raise awareness of our funding amongst top talent overseas.

We hope you will enjoy the reading.

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In a nutshell

ERC Milestones

- March 2004** European Council agrees on the need for a dedicated European funding scheme for excellent basic research
- April 2005** European Commission proposes the creation of a European Research Council, funded through the EU's Seventh Framework Programme for Research (FP7)
- July 2005** Identification Committee established to select first ERC Scientific Council
- Oct 2005** Scientific Council meets for the first time; Prof. F. Kafatos becomes its first Chair
- Feb 2007** ERC formally established in Brussels and launched in Berlin under the German EU Presidency; First Secretary General Prof. E.-L. Winnacker takes office
- April 2007** First ERC call for proposals: over 9000 applications received
- July 2009** ERC Executive Agency becomes autonomous
- July 2009** Thorough review of the ERC concluded by an independent expert panel
- June 2010** ERC has funded 1000 top researchers
- July 2011** Task Force conclusions on the future of the ERC
- Nov 2011** European Commission proposes a 77% increase of the ERC budget in the next Framework Programme 'Horizon 2020'
- Feb 2012** 'ERC goes Global' campaign launched to raise awareness worldwide
- 29 Feb 2012** ERC celebrates fifth anniversary in Brussels

ERC leadership over the years

First ERC President (2007-2010): *Prof. Fotis Kafatos*

First ERC Secretary-General (2007-2009): *Prof. Ernst-Ludwig Winnacker*

First Vice-Presidents: *Prof. Helga Nowotny (2007-2010) and Dr. Daniel Estève (2007-2011)*

First Director ad int. of ERC implementation structure/Executive Agency (2007-2010): *Jack Metthey*

Second ERC Secretary-General (2009-2010): *Prof. Andreu Mas-Colell*

Current leadership

ERC President: *Prof. Helga Nowotny*

ERC Secretary-General: *Prof. Donald B. Dingwell*

ERC Vice-Presidents: *Prof. Pavel Exner and Prof. Carl-Henrik Heldin*

ERC Executive Agency Director ad int.: *Pablo Amor*

Facts and Figures

> **Budget:** 7.5 Bio EUR (2007-2013)

> **Budget year 2012:** ca. 1.6 Bio EUR

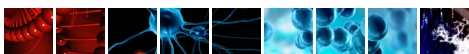
From 2007 to date:

> **Grantees funded:** over 2500

> **Submissions:** over 35 000

> **Budget allocated:** ca. 4 Bio EUR

> **Calls for proposals:** 8 closed and 3 ongoing





A glance back

From idea to success story

by William Cannell



© Jack Methley

With his vision and tremendous dedication, Dr. William Cannell was truly instrumental in the planning and setting up the ERC. He is currently an advisor in the European Commission's Research Directorate General. We asked him to give his perception on the genesis of the first pan-European funding organisation for excellent frontier research.

“The role of publicly funded academic research... has been misunderstood and neglected in Europe's science and technology policy. Experience in the USA suggests that the generous public funding of high-quality academic research is the source of major new technological opportunities, as well as an attraction for high-quality business activities in an increasingly globalised world. The European Union should consider establishing an agency to complement and compete with national agencies in funding academic research. Its success would depend on its capacity to identify and support exciting multi-disciplinary programmes of research and related training in promising fields rather than on its capacity to forecast or demonstrate specific applications.” (Oxford journal: Science and Public Policy, 6 December 2000)

Keith Pavitt's analysis, reflecting the vision of many in the scientific community, was well off the mainstream currents of thinking on research policy and European integration when these words were published in the year 2000, yet it closely corresponded to the reality of the ERC less than a decade later.

If this idea's time had come, it arrived through a realignment of perceptions, not only towards the view that the ERC was a vital component of a European

Research Area worthy of the name, but that a real opportunity existed to bring it into being. This happened in the early years of the century via intensive discussions bridging the worlds of science and politics. This led to a consensus on the main principles which should animate an ERC, and a tipping point came with the realisation that only the Commission could shoulder this endeavour via the EU budget.

Between 2004 and 2006 the task of the Commission was not only to initiate and manage the political debate, but in parallel to draw up the legal and administrative architecture for the ERC and turn it into the practical reality; of an independent scientific council, on the one hand, and organisation, staff, offices, processes, procedures etc. on the other.

The third stage of the ERC's development started in 2007 with the launch of the Seventh Framework Programme, of which the very first call for proposals was for the ERC's first Starting Grant competition. The subsequent years saw a massive build-up in the ERC's visibility and influence, in its scale of organisation and funding, and in the professionalisation of its operations, as well as the transfer of activities to an autonomous executive agency.

The reality of the ERC, so faithful today to its founding vision, demolishes the archetype of the EU as slow-moving, compromise-ridden and bound by bureaucracy. It represents, on the contrary, a radical departure from the traditional construction of European research policy - in the sole focus on excellence, in the total independence of scientific governance, in the autonomous management structure, and in the novel concept of European added value.

The ERC has fostered equally radical shifts both in the broad construction and fine detail of EU research and innovation policy - for example, in the interplay between forces of competition and collaboration, the policy interactions between Member States and the EU, the management culture of EU programmes and, most vitally, in the complete transformation that has taken place in the relationship of trust between the scientific community and the European Commission.



Interview with...

Lord Patten of Barnes



Lord (Chris) Patten of Barnes, CH, former European Commissioner for External Relations and currently Chancellor of the University of Oxford, had a role in the ERC's inception as Chair of the first Identification Committee. Established in July 2005, it was charged with selecting the first members of the ERC's Scientific Council, which met

for the first time a few months later, in October 2005.

We spoke to Lord Patten about this very early chapter of the ERC.

Please tell us about this initial stage and about your aspirations for the ERC. How do you view the outcome five years later?

Not long after I left my job in Brussels as the European Commissioner for External Affairs, I was asked to go back to chair a committee to organise the establishment of the European Research Council. I was in two minds about whether or not to accept this commission. First of all, the other members of the organising committee were extremely distinguished academics. I know about the politics of Europe and of university financing, and I have written some books. But none of that qualifies

me as an academic. Secondly, I was not certain that European Ministers would support the proposals we put forward. After all, Europe has been pretty laggard both in reorganising its budget and in focusing more resources on high quality research and development.

But it was this, paradoxically, that persuaded me to accept the invitation. European countries have fallen well behind the United States in funding higher education and the research which is largely based on it. Moreover, we will face in the next few years increasing competition as funding of scholarships rises in Asia. We will also have to take account of the greater impact which Americans, and others, are able to achieve through the targeting of their research investment.

In the event, to my surprise, the proposals we put forward for the establishment of the European Research Council were generally accepted and it has made a fine start. It was particularly important to get a decent head of steam behind its funding and to ensure that the allocation of money was determined by high level academics and researchers, rather than reflecting the pressures of politics. I congratulate the members of the Council and those who have supported it in Brussels on what has been achieved. My only caveat is that we need to do even more by channelling a bigger part of Europe's budget into research and our universities. That is not only the right way of ensuring our longer term competitiveness, but is also crucial to the social and cultural vitality of our continent.

José Manuel Barroso

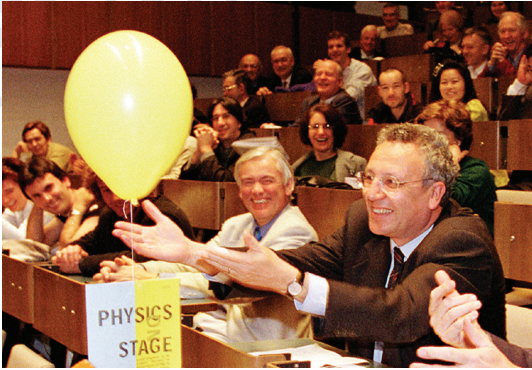
President of the European Commission - 29 February 2011, ERC fifth anniversary in Brussels

"It is wonderful to see that the ERC has become such a remarkable story for Europe in such a short time. [It] plays a key role in stimulating competitiveness and growth [...]."



Interview with...

Philippe Busquin



As European Commissioner for Research from 1999 to 2004, Philippe Busquin's support for creating a European Research Council was crucial at the time when the first seeds were sown. His successors - Janez Potočnik and currently Máire Geoghegan-Quinn – enthusiastically built on his work.

We asked Mr. Busquin about his views on the ERC around its current milestone.

What made you such a strong ERC supporter ?

There were two main reasons for this. Firstly, I was convinced of the necessity of supporting basic research in Europe. The Treaty covers the funding of applied research related to companies, but did not allow the granting of projects that were carried out by either individual researchers or by scientific teams from the same country. It was necessary to diversify the European research instruments through the European Research Area, which was the basis of my policy since the Lisbon Summit in 2000. We had to recognise the excellence of individual researchers.

The second reason was the need for visibility and recognition at a European level of the excellence of the best researchers. Cultural and linguistic differences mean that scientists are not always recognised beyond the borders of their own countries. The idea of being “united in diversity” helps to limit the brain drain of young scientists and to promote European research excellence among them. The new Lisbon Treaty recognised the European Research Area and thus consolidated this approach.

What is the ERC's impact on the European research landscape and what are your hopes for the future?

The quality of the ERC-funded projects and the independence of the selection process, based only on scientific excellence, have made the ERC an indispensable European organisation. At the ERC's recent fifth anniversary celebrations, the diversity and quality of the ERC projects was clearly demonstrated. The grantees expressed with great enthusiasm the beauty of science and their passion for research. They are role models for young Europeans who through them could be encouraged to choose scientific studies.

In my view the budget of the next Framework Programme ‘Horizon 2020’ must increase: if Europe wants to continue to play a significant role in research and innovation in our globalised world, we must invest in top quality researchers who are now needed more than ever. I also hope that the ERC will set an example and stimulate different European countries to increase their investment in research and meet the objective of 3% of GDP.

Angela Merkel

Chancellor of Germany - 27 February 2007, ERC Launch event in Berlin

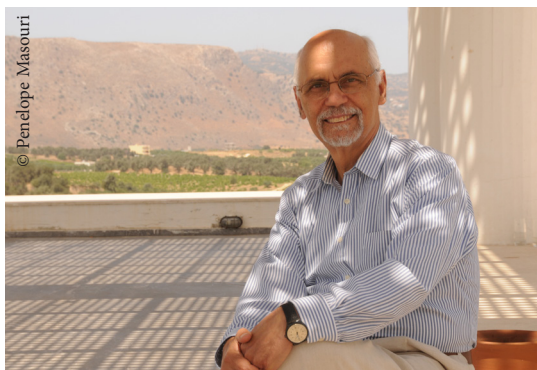
“The ERC could become a Champion's League for research and we have to accept that research needs autonomy and freedom.”





Interview with...

Fotis Kafatos



© Penelope Masouri

As the first President of the ERC and Chair of its Scientific Council, Professor Fotis Kafatos, a renowned immunologist at Imperial College London, put his distinct mark on the organisation. Under his skillful and dedicated leadership, the ERC was steered through its most intricate phase. Here he shares some insights with us.

How did you experience those early years?

Even before we established the ERC, I was deeply involved in a collaborative attempt to shift the focus of European research funding from nationality to excellence. The creation of the ERC as a pan-European source of funding for excellent research, not only in natural sciences but also in the humanities and social sciences, gave us the opportunity to do just that. I was tremendously excited and committed to it, and others — the Portuguese Minister Jose Mariano Gago, Commissioner Philippe Busquin, Lord Patten, Peter Gruss of the Max Planck Society, Ernst-Ludwig Winnacker and many more — provided absolutely

crucial initiative and support. The amazing thing is that we could move so quickly. The moment the Scientific Council came together we all went straight to work on the planning process, even before we had been properly appointed. We all saw the ERC as a chance not to be missed.

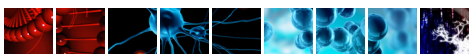
How has the ERC fared so far and has its call for “excellence only” been lived up to? What are its future prospects?

From the start, we were clear that competition on the sole basis of excellence, independent of political considerations, is the surest way to release human creativity and thus to promote fundamental advances at the frontier of knowledge. I think people understand this, even if they are disappointed when their institution or region does not receive the recognition they think they deserve. People understand that the breakthroughs from ERC projects will benefit everyone and that the standard that these projects set, creates a benchmark for quality. The researchers and projects the ERC has supported are genuinely world-class. So, yes, I do believe that the ERC has delivered on this promise.

A major challenge for the future will be to attract brilliant people to Europe. ERC funding is available to researchers of any nationality, in any part of the world, provided that they do at least half of their ERC-supported work in Europe. This opportunity should be made known to excellent researchers world-wide. We should be attracting the best, in order to make European research, as good as it can be.

Janez Potočnik - Former European Commissioner for Science and Research
(currently Commissioner for Environment) - 24 September 2009, ERC Executive Agency inauguration, Brussels

“By creating open and direct competition for funding between the very best researchers in Europe and in the world, the ERC will enhance aspirations and achievements.”





Interview with...

Ernst-Ludwig Winnacker



Professor Ernst-Ludwig Winnacker, distinguished biochemist and former President of the German Research Foundation (DFG), took office as the ERC's first Secretary General in 2007. As the Scientific Council's representative in Brussels, he quickly became highly esteemed by the ERC staff, and with his great commitment helped the Agency through its fairly challenging start.

Professor Winnacker here gives an account of this fledgling period and more.

What was your role in the ERC?

My task as first Secretary General of the ERC was to represent the Scientific Council in the ERC's Brussels office and to ensure that the standards of scientific excellence set by the Scientific Council were put into practice. We started from scratch. Everything was done for the first time and the tension in the corridors

of the office space in Madou Tower was palpable. Several times during my short tenure of 30 months, the existence of the ERC teetered on the brink, because of fundamental differences between the Scientific Council and the Commission administration. In the end, reason and persistence prevailed, and the ERC became the flagship of the Commission's seventh Framework Programme. The ceremony for the ERC's fifth anniversary is thus well deserved.

The true heroes of these early ERC days were the staff members who, against all odds, made this miracle happen, and who managed to stay on target even during the rockiest of times, for example when an avalanche of more than 9,000 applications was received in response to the first Starting Grants call in April 2007.

Since then, the ERC has come a long way; where do you see it in the global context and what are your hopes for the years to come?

Today the ERC has become the yardstick of research funding in Europe notwithstanding the excellent reputation of some of its national funding agencies. Wherever I visit universities, research councils or government officials, they proudly report on the number of ERC grants "they" have obtained. Europe is back on the world's research map.

I cross my fingers that this situation will prevail. I fully trust the Commission's leadership to make this happen.

Vaira Viķe-Freiberga - Chair of the ERC's 2009 Review expert panel (Former Latvian President)
- ERC Review Press conference, 23 July 2009 in Brussels

"The ERC is of evolving strategic importance to Europe and is already having a substantial positive impact on the European research scene."





Interview with...

Robert-Jan Smits



Robert-Jan Smits was the Director in charge of the ERC's establishment and certainly belongs to those who believed in the need for an ERC. Since its early days, he has been closely involved in the development of the organisation and remains a trusty supporter, nowadays as the Director-General of the Commission's DG Research and Innovation. We took the opportunity to ask him about the past and the future.

Could you please share some highlights from the ERC's earliest days?

In 2004, when the Commission was called on by the science community to build the ERC, there was neither a political agreement on the need for an ERC, nor did an outline exist of how it would operate and be funded. Gathering political support from the European Parliament and 25 diverse EU Member States was particularly challenging, not only because of the very substantial budgetary implications, but also because the ERC required a major rethink of the traditional assumptions underlying the Framework

Programme - for example support to individual teams rather than transnational consortia, the idea of independent scientific governance, and the investigator-driven approach, which involved no priority setting in advance. In parallel, we had to do all the legal and administrative engineering and the practical logistics, procurement, training, IT development and so on, and implement a major cultural change in our management approach. By early 2007, the ERC was up-and-running. It was time well spent!

How do you view the ERC in the next Framework Programme and beyond?

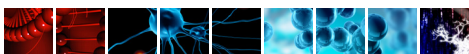
In 'Horizon 2020', the ERC will have a substantially enlarged budget. With something so successful and so much in demand, we need more of it! Frontier research is not a dispensable item in the current economic situation, but an investment which is critical to resolving the problems we face. Enhancements to the operation of the ERC will be introduced on the basis of recommendations from a Taskforce on the future of the ERC, which I chaired last year.

The ERC will be the core element of one of the main pillars of 'Horizon 2020', called "Excellent Science". This brings together the key components of our support to the science base under one heading; consolidating, expanding and making more coherent the various distinct activities which address the main concerns - skills, research, infrastructure, science-based innovation. The effectiveness of this package depends on the ERC retaining its distinct focus, which is support for individual research teams.

Jack Metthey - Former ERC Executive Agency Director ad int.

(currently Director, DG Research & Innovation) - 24 September 2009, ERC Executive Agency inauguration, Brussels

"We need your continued support to put the ERC satellite on the right orbit, to achieve our mission: firmly install the ERC as a world class frontier research organisation."





What's on

Celebrating 5 years of excellent ideas!



© Vivian Hertz

Five years after its launch, the ERC celebrated this milestone with a two-day event, which can be described as a blend of science, entertainment and debate. Between tasting the birthday cake, listening to presentations on the most spectacular ERC-funded projects and enjoying shows, the overarching theme was excellence.

Among the participants were high-level speakers from all the main EU institutions and many of the ERC's founding fathers. Together with guests from top research organisations from around the globe, they discussed the impact of the ERC so far and its future prospects. Media - including daily newspapers and specialised press – also attended and covered the event ([Press review](#)).

At the Brussels venue Albert Hall, tinted in orange for the occasion, ERC President **Helga Nowotny** asked policy makers to trust the ERC when it comes to “the usefulness of useless knowledge”, which can lead to unexpected discoveries. Citing the Chinese proverb “only dead fish swim in the mainstream”, she reminded the audience of the need for taking risks and underlined the importance of excellence in research.

This view was supported by the European Commission President **José Manuel Barroso** who, in the video message, described the ERC as “a beacon for excellence not only in Europe” and a great example of “doing more, better, faster”. He expressed his strong personal commitment to the ERC and called for the EU Member States’ and the European Parliament’s support for the proposed budget boost.

Commissioner for Research, Innovation and Science **Máire Geoghegan-Quinn** put the spotlight on the major achievements of the five-year-old and said it has become “one of Europe’s biggest success stories.” Representing the Danish Presidency, Research Minister **Morten Østergaard**, a fervent supporter of the ERC, also pointed to future challenges (see interview p. 15). The new Chair of the European Parliament’s ITRE Committee, **Amalia Sartori**, said she is confident that the ERC will have a key role in the coming ‘Horizon 2020’ Framework Programme.

Science with a pinch of fun

The ERC’s Executive Agency Director, **Pablo Amor**, assumed his role as master of ceremonies and summoned former ERC Secretary General





Ernst-Ludwig Winnacker and DG Research adviser William Cannell onto the stage to give their take on the past years. Tongue-in-cheek, they told the tale of the ERC in a most personal way, without shying away from the more thorny parts of the road.

During the evening celebrations, alongside the moderator Alex Taylor, former ERC Executive Agency Director Jack Metthey also took to the stage. With wit, he guided the audience through some highlights of the ERC's brief past, illustrated by pictures.

Amongst the shining stars of the evening were those who really matter to the ERC – the researchers! Some of the most talented ERC grantees gave colourful live demonstrations to the audience, reflecting the wealth of ingenious and cutting-edge research that the ERC is funding (more: p 12). As the icing on the cake, the evening ended with a dazzling light show with jugglers, allowing science and innovative entertainment to meet in perfect harmony.

Food for thought

Aside from this entertaining part of the programme, debates were organised on both days. Guest speakers from Brazil, India, Russia, South Africa and the US discussed “Excellence and brain circulation in the global scientific landscape”, led by ERC Secretary

General Donald Dingwell. This topic was particularly timely as the “ERC goes Global” campaign, one of the ERC's top priorities, started only two weeks earlier.

The second day was dedicated to scientific sessions, one in each domain – Physical Sciences & Engineering, Life Sciences and Social Sciences & Humanities – with nine outstanding ERC grant holders speaking and members of the ERC Scientific Council moderating. These discussions gave evidence of how the ERC can influence the global scientific landscape, address today's problems and overcome tomorrow's pressing societal needs.

The closing speech was given by **Robert-Jan Smits**, Director-General of the European Commission DG Research and Innovation. Having taken part in the ERC's journey from the start, he described it as one of the most interesting experiences of his career; both because of the people he got to know and the process itself. One of the lessons he learnt in the ERC was that when an “idea is strong and powerful enough, it cannot be stopped”.

The fifth anniversary festivities will continue throughout the year at the national level.

Watch some of the event [here](#)



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Research in the spotlight

Grantees on stage: as it happened



Marco Dorigo

The ERC's festive five year celebration was the occasion to showcase some of its grantees and their fascinating research in a lively fashion.

Advanced grantee **Marco Dorigo** (Université Libre de Bruxelles, Belgium) took to the stage to enlighten the audience about the workings of his research on artificial swarm intelligence systems. Such systems are found across the natural world, e.g. in flocks of birds, schools of fish, and colonies of ants. He uses heterogeneous robotic swarms that are made up of three types of robots; the 'eye-bot' is a spectacular flying robot that can scan its environment, while the 'foot-bot' can transport objects and the 'hand-bot' is able to overcome obstacles in its way, as shown to the audience with a cardboard placed on the platform. The robots rely on their continuous interactions with their environment to produce their collective, self-organised behaviour, allowing them to accomplish tasks which would be impossible had they acted alone. Marco Dorigo explained his captivating research both through prototypes on stage and by showing his award-winning video "Swarmanoid".

The robots' capacity to complete parallel tasks by working together has great potential for larger scale work; they could for example replace human workers in hazardous environments, perform rescue missions after natural disasters, or even conduct space exploration.

Under the watchful eye of Danish Minister Morten Østergaard, Advanced grantee **Søren K. Moestrup** (Aarhus University, Denmark) explained the "ins and outs" of his Troja project. It aims to better target the delivery of drugs to diseased cells and to reduce the



Søren K. Moestrup

side-effects of drugs - one of the greatest challenges of modern healthcare. Currently, different prototypes of these novel drugs are being developed. Steroids are typical of the kinds of drugs he is working on because of their severe side effects, which he hopes to alleviate. This would mean that inflammatory diseases, infections or some cancers could one day be treated in a less painful and more efficient way. Building on his ERC grant, Søren Moestrup plans to establish contacts with biotechnology, pharmaceutical companies, and hospitals; the ultimate goal is to conduct clinical trials in the coming years.

He thanked the ERC for the support which helped him to translate basic research into applied research: it provides a testing ground to explore the wider applications of his findings for healthcare.

Next up was **Stéphanie Lacour**, a Starting grantee from the École Polytechnique Fédérale de Lausanne, Switzerland. The opportunities offered by the artificial skin of her Eskin project filled the audience with wonder. Drawing on skin's natural properties, she has created a soft, elastic and multifunctional sensor network within which electronic devices are embedded. These devices are designed to relay information to the central nervous system. She presented samples of her stretchable electronic skin, which mimics the properties of human skin: it expands and relaxes elastically, and provides sensory functions.

With her ERC grant, Stéphanie Lacour aims to manufacture sensory electronic surfaces that can conform to the human body. Her first application of this technology is a "smart glove", which could test the





efficacy of her prototype. This research may lead to the development of a surgical glove which would enhance feeling for surgeons while operating. Pushing her “futuristic” idea a bit further, she is now also looking at ways to produce tissue-like neuroprosthesis that would ultimately help to communicate directly with the nervous system, and allow amputees to recover their tactile sensations.

Stéphanie Lacour also mentioned that two-thirds of her team members were hired thanks to ERC grant and highlighted the flexibility of the ERC schemes.

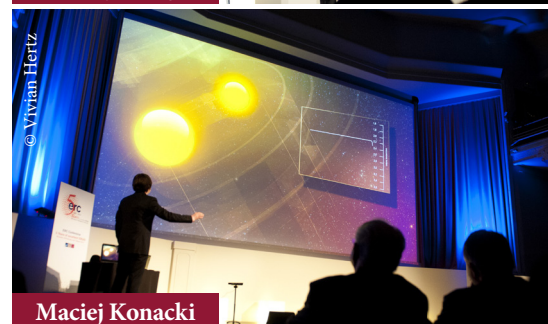
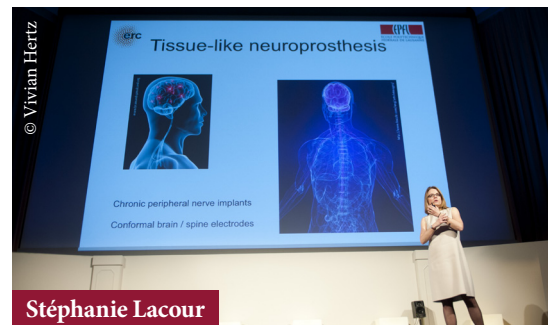
Then, Starting grantee **Cathy Craig** (Queen’s University Belfast, UK) presented her Tempus-G project in a very interactive way. She explained how the brain uses information picked up by the senses to perform an action and respond to situations; from everyday activities such as crossing the road or riding a bike, to the consequences of a car collision. She explores the possibility of using gaming technologies to create dynamic patterns of sensory information, both visual and auditory, to help people improve the way they control their movements. An exciting application of this balance training is its potential to help both elderly people whose balance decreases over time, and those suffering from neurological conditions (e.g. Parkinson’s).

The star attraction of the presentation was when she asked two volunteers from the audience to test their balance on the stage. They were asked to play “video games”, which involve moving in response to stimuli on the screen, and thereby assessing their movements’ performance. Cathy Craig also showed a short clip from a BBC film with people aged 65 to 93, whose balanced improved after they tested her new gaming technology. She also explained how her device can be commercialised: she was recently involved in a project for a sports company which wanted to know more about the characteristics of new footballs that would improve players’ performance.

Maciej Konacki, Starting grantee at the Nicolaus Copernicus Astronomical Centre of the Polish Academy of Sciences, closed the evening’s presentations in a lively style. Trying to answer the intriguing question of whether humans on Earth are alone in the Universe, he used the techniques of the Polish Oscar-nominated company “Platige Image”

to explain his Solaris project. In his presentation, he moved his arms as if doing the crawl, to control slides on the screen thanks to sensors.

He showed spectacular pictures of the Sun, the Milky Way and extrasolar planets. His project aims to understand binary star systems, i.e. where two stars rotate around a common centre. Maciej Konacki wants to observe the impact of eclipses in these systems and to trace with an unprecedented precision the structure and evolution models of stars. Borrowing references from Star Wars, he noted that in the past it was unthinkable to cross the oceans, to fly, to explore space. Today, we contemplate the possibility that other planets could harbour life too. This is precisely what he is investigating with the network of four telescopes his team have installed on three continents thanks to his ERC grant. He believes that we will have scientific evidence of life on other planets in the next 20 years.





Focus on

Denmark



Danish involvement in the ERC

- **Dr. Jens Rostrup-Nielsen** is a founding member of the ERC Scientific Council. He is adjunct professor at the Technical University of Denmark and affiliate professor at KTH Stockholm, and worked as Executive Vice President (R&D) at the Danish company Haldor Topsøe A/S.
- Some **86 Danish** scientists are serving as panel members or reviewers in the ERC evaluation process of proposals and the selection of grantees.
- The Danish National Contact Point is **Jan Corner-Walker** at the Danish Agency for Science, technology and Innovation in Copenhagen.

ERC Grants in Denmark

- > 46 projects have been selected for funding for researchers based in Denmark, representing a total of around € 79 million
- > 23 selected projects are in the Physical Sciences & Engineering domain, 19 in Life Sciences and 4 in Social Sciences & Humanities
- > 26 selected projects are Starting Grants and 20 are Advanced Grants
- > 12 grants were also awarded to Danish researchers based in other countries





Continuous support for scientific excellence

During its last Presidency of the Council of the European Union in 2002, Denmark played a key role in planting the first seeds of what has today become the ERC. After the initial Scandinavian involvement, other EU Member States were convinced one after the other. Now, exactly ten years later and as the ERC turns five, Denmark is holding the EU Presidency again and remains a keen supporter.

In his address at the ERC's recent fifth anniversary event, Danish Minister for Research, Innovation and Higher Education Morten Østergaard - currently President of the EU Council of Ministers for Research - made it clear that scientific excellence in Europe remains a strong priority for Denmark. The Danish Presidency will therefore hold a conference on **'Excellence Revisited - The Value of Excellence'** in Aarhus, Denmark, in April. This initiative will bring together policymakers, stakeholders, researchers, senior university administrators and students to exchange ideas on excellence. Prof. Helga Nowotny will give a keynote speech and a video with ERC grantees will be shown at this occasion.

Minister Morten Østergaard answers a few questions:

From the Danish point of view, what are the main achievements of the ERC after its first five years?

The ERC has been established and consolidated as an important part of the European Research Area. It seems impossible to establish a new Framework Programme in Europe without a strong and independent ERC pillar.



The ERC is one of the best examples of an integrated European Research Area and has brought a new dimension to "European added-value" by offering grants in pan-European competition based on the sole criterion of excellence. Furthermore, it contributes to researcher mobility as researchers can apply for ERC grants with a host institution in another country and grants can move from one institution to another, both within the same country and between EU countries.

This flexible approach contributes to creating a true European Research Area.

And what are the challenges ahead?

One challenge is to maintain and further raise the ERC's status as a highly respected funding organization. The ERC has been driven by its founding fathers the last ten years, but as new contributors will take over, this momentum needs to be maintained.

Moreover, I find it important to utilize the full potential of all researchers in Europe, both as regards the geographical and gender aspects. We must keep the application process simple as it is, and maintain excellence as the fundamental criteria. If we ensure this, and strengthen the collaboration with the national research councils, we can improve the quality, objectivity and relevance of knowledge, technology and innovation for the benefit of society.





Highlights – Did you miss this?

300 senior top researchers supported “ERC goes Global”

The results of the fourth competition for ERC Advanced Grants were published in January. Around €660 million was awarded to 294 senior top researchers. The demand for ERC funding is still on the rise; the number of applications increased by 13% compared to the last Advanced Grant call. The selected projects cover a wide array of topics, such as new treatments of visual impairment and a better use of sustainable fuels for automotive and aeronautic engines.

Find out more,
[click here](#) (January 2012)



The ERC has launched its new global campaign to attract more top talent worldwide, led by Secretary General Prof. Dingwell. The first stop was in Canada, where he and a Canadian ERC grantee spoke at the annual AAAS Meeting, held in Vancouver. Then, Dingwell promoted the ERC in South Africa, and visited a South African ERC grantee's excavation site. The tour, covering over 15 countries, will now continue to Latin America, Russia, Ukraine, Asia, the US and Mexico.

See BBC interview [here](#).
Find out more [here](#) (Canada) and [here](#) (South Africa)



Projects funded to spur innovation

The ERC has concluded its first competition for Proof of Concept funding. Introduced last year and with a limited budget, it allows researchers who are already ERC grant holders to bridge the gap between research and the earliest stage of an innovation with a €150,000 grant. This can help speed outcomes of the research onto the market. In this call, a total of 52 grants were awarded, of which the final 22 were announced in February.

To find out more, [click here](#) (February 2012)



Exercise changes marks on DNA

The genetic heredity a person is born with is not quite as impossible to change as one might think. American ERC grantee Juleen Zierath (Karolinska Institutet, Sweden) has shown that when healthy but inactive people are made to exercise it actually alters chemical marks on their DNA in a matter of minutes, although the underlying genetic code stays the same. “Exercise is medicine, and it seems the means to alter our epigenomes for better health may be only a jog away,” says Juleen Zierath.

To find out more, [click here](#) (March 2012)



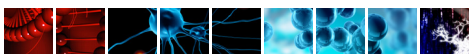


Indicative calendar of ERC Calls

Call for proposals	Publication date	Deadline	Funding
ERC 2012 Advanced Grants	16 November 2011	Social Sciences & Humanities: 11 April 2012 (other two domains: closed)	Up to € 3.5 Mio per grant
ERC 2012 Proof of Concept (Open only to ERC grant holders)	02 February 2012	Spring deadline: 03 May 2012 Autumn deadline: 03 October 2012	Up to € 150 000 per grant

Please stay tuned for July when information about the the future ERC calls will be released on the ERC website.

NB: The official deadlines are only those indicated on the Participant Portal





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