

European Research Council  
Established by the European Commission

# ideas

#1

MARCH 2016

Newsletter of the European Research Council

Widening participation  
No “magic bullet” for  
scientific excellence

What's on  
**Open access: what you need to know**

Tales of serendipity  
Earliest evidence of warfare  
unearthed in Kenya



[Subscribe](#)



Horizon 2020  
European Union funding  
for Research & Innovation



The landscape in which scientists in Europe, and elsewhere in the world, operate is changing, and changing fast. One of the most prominent developments, which keeps researchers, publishers, funding organisations, governmental agencies, and other stakeholders on their toes, is the move towards “open science”: a mixture of policies that aim to make the process of science and its results more accessible and accountable. The motives behind these policies are mixed, reflecting different interests and incentives of the stakeholders involved. This makes the process complicated and subject to forces that sometimes pull in different directions.

Open access to scientific publications is an important element in the path towards open science. It has been on the agenda for some time, and has rapidly developed in recent years. As open access publication becomes more prominent, universities and funding organisations re-orient their budgets, scientific publishers change their business models, and grass roots initiatives have some scientific communities work towards the realisation of an open access publication environment outside traditional frameworks.

Open access to research data is relatively new, ‘relatively’ since in some disciplines the storage and sharing of data is already firmly entrenched in the science process. In other disciplines it is in its early stages, with infrastructures and shared standards still being developed. And there are other differences that are due to the nature of the data, and the privacy and security concerns that open access to such data raises.

Open science is important for a variety of reasons. It stimulates scientific, economic and social innovation. Also, by increasing transparency, it strengthens integrity and accountability. And these are crucial for the public’s trust in science, which is a key factor in fostering and maintaining open and democratic societies.

From its inception in 2007, the ERC has been a strong supporter of the idea of open science. It aims to foster it in various ways, e.g. by implementing policies, advising its grantees and working with other stakeholders to support the necessary infrastructures.

In doing so, the ERC remains sensitive to the realities “on the ground”. Publication cultures differ from one discipline to another, depending also on the prevailing form of publication. Likewise, disciplines differ with respect to the practicalities of open access to research data.

It is the firm conviction of the ERC that science needs to move forward, while maintaining awareness of the multi-faceted nature of the problems encountered and hence of the solutions needed. The ERC remains committed to open science.

You will read more about this in this issue of the newsletter.

**Prof. Martin Stokhof, Member of the ERC Scientific Council,  
Chairman of its Working Group on Open Access**



|   |                                  |           |
|---|----------------------------------|-----------|
| <b>ERC Scientific Council member Prof. Martin Stokhof</b>       | <b>Editorial</b>                 | <b>2</b>  |
| <b>Open access: What you need to know</b>                       | <b>What's on</b>                 | <b>4</b>  |
| <b>ERC grantees who published their work in open access</b>     | <b>Research in the spotlight</b> | <b>6</b>  |
| <b>ERC attends the Davos summit</b>                             | <b>Going global</b>              | <b>8</b>  |
| <b>No "magic bullet" for scientific excellence</b>              | <b>Widening participation</b>    | <b>9</b>  |
|   | <b>Focus on United Kingdom</b>   | <b>10</b> |
| <b>Discovery in Kenya sheds light on the origins of warfare</b> | <b>Tales of serendipity</b>      | <b>12</b> |
|   | <b>Did you miss this?</b>        | <b>14</b> |
|   | <b>Calendar of ERC calls</b>     | <b>15</b> |

**Editorial Board:**

Massimo Gaudina, Madeleine Drielsma, Magdalena Kufrej  
 Noélie Auvergne, Samantha Christey, Marcin Mońko  
 Scientific Council members: Dame Athene Donald, Martin Stokhof, Isabelle Vernos

**Thanks to:**

ERC grantees Paulo de Assis, Prof. Ian Thomas Baldwin, Dr Marta Mirazón Lahr  
 Elisa Bazzani, Giulia Gabrielli, Helena Gonzalez-Sancho Boderó, Dagmar Meyer,  
 Edward Smith

For comments: [erc-info@ec.europa.eu](mailto: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.

# Open access: What you need to know



*In the digital age information wants to be free. This creed of hackers and internet pioneers today has become a government policy. The falling costs of distribution and copying of data, and the fact that information came to be a crucial economic resource made the drive to open the access to research results inevitable. Open access means online access to scientific publications, free of charge, for any user.*

Open access is just one component of a general worldwide trend toward more open science and research processes that include freely available research data, growing use of scientific blogs and social media, and new forms of collaboration.

## Why open access?

Since the beginning, the ERC has held the view that providing free online access to scientific results and ideas coming from ERC projects is the most effective way of ensuring that they can be accessed and used as the basis for further research. There are strong arguments in favour of open access, both ethical – “all knowledge should be freely available to everyone” - and practical - the costs of journal subscriptions have been spiralling and are hard to bear even for the biggest libraries. Broader access to the research results has the potential to accelerate innovation, help avoid duplication of research efforts and improve transparency vis-à-vis society at large.

## Changing ERC requirements

In the past decade, the opportunities for publications in open access have increased substantially and the EU rules on open access have gradually become stricter. ERC grantees who won their grants in the 2007 - 2011 calls were not legally required to provide open access to their publications. Grants

*“If you have knowledge, let others light their candles in it.”*

Margaret Fuller, US journalist

awarded in the 2012 and 2013 competitions already required ERC grantees to make their “best effort” to provide open access to the publications resulting from funded projects. Since the 2014 calls, open access to all peer-reviewed publications is mandatory in accordance with the Horizon 2020 framework programme.

## The colours of open access

All new ERC grant agreements require researchers to (i) immediately deposit peer-reviewed publications (e.g. journal article, monographs) in adequate repositories for scientific publications and (ii) provide open access to them. When the grantee publishes an article in an open access journal or in a subscription journal that provides immediate open access, referred to as “gold” access, then open access to the deposited publication in a repository must be provided, at the latest, on the date of the journal publication. The situation is similar for monographs. When authors are self-archiving their articles in repositories – the so-called “green” open access - access to the deposited article must be provided within six months of its publication (twelve months for the social sciences and the humanities). It is worth knowing that open access fees are eligible as costs for ERC grants.

## What about books?

Of course, not all publishing is online. Traditionally, researchers in many social sciences and humanities

disciplines have published the results of their studies in books or book chapters. How does this fit into the EU open access policy? All grantees have the same obligation to deposit their publications in open access repositories. However, ERC grant agreements do make exceptions for social science and humanities, recognising the special situation of scholars active in these domains, and allowing a longer embargo for “green” open access, up to 12 months, for publications in this domain.

The ERC has supported key open access repositories in life sciences ([Europe PubMed Central](#)) and physical sciences and engineering ([arXiv](#)), as well as [OAPEN](#), a repository for books and monographs mainly in the social sciences and the humanities. These repositories cover many scientific domains and publication formats. The ERC strongly encourages its grantees to use discipline-specific repositories for their publications.

**I am a researcher, what’s in it for me?**

For newer ERC grantees open access is a legal obligation. For

others, it is a way of working that is strongly recommended by the ERC Scientific Council. It’s also the right thing to do if you care about other researchers and the broader public that may use the products of your studies. But by providing open access to your work, you also serve your own personal interest by increasing your visibility and the usage of your work.

**Read also**

On the next two pages, meet ERC grantees Dr Paulo de Assis and Prof. Ian Thomas Baldwin and discover their research results published in open access.

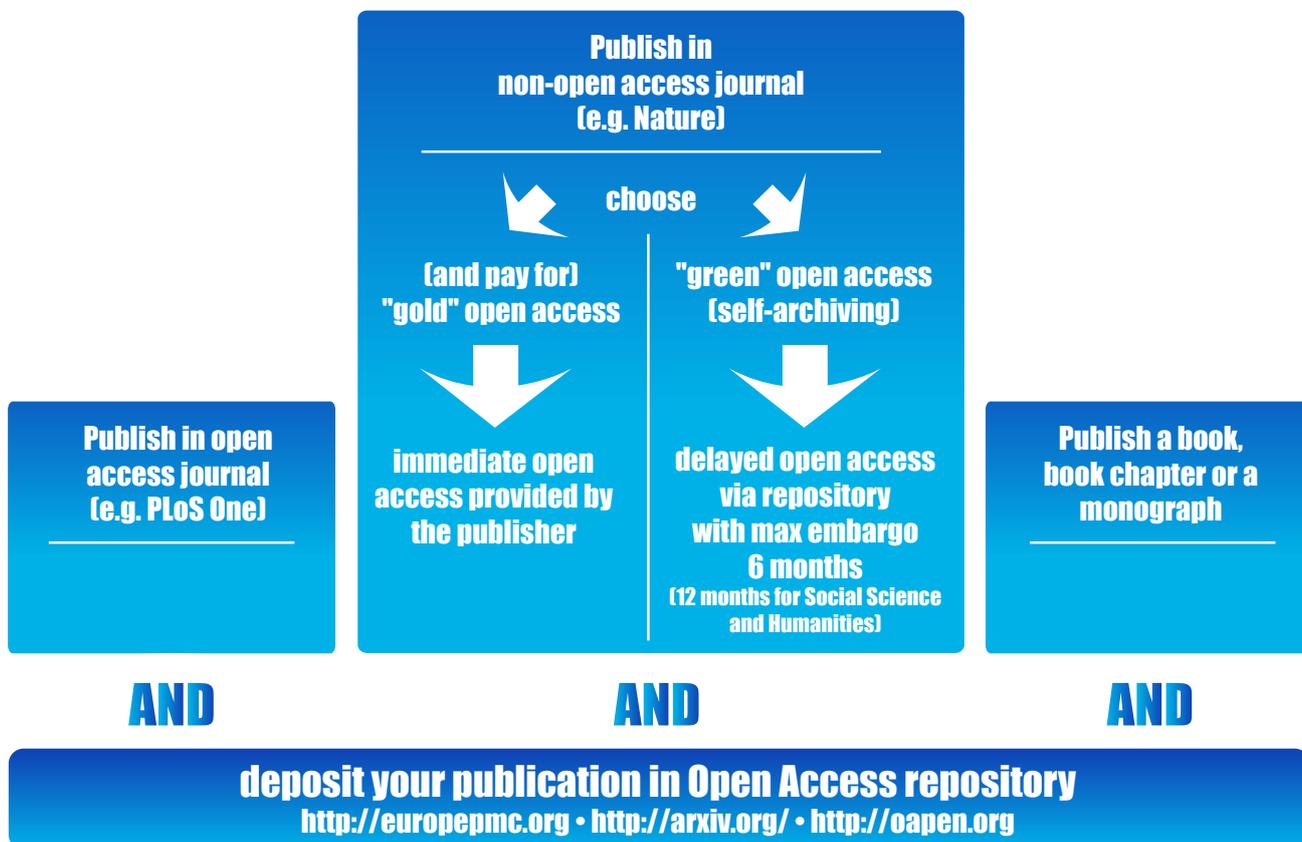
- [Open access at the ERC](#)
- [ERC Open Access Guidelines \(non-binding\)](#)
- [European Commission’s policy on open access](#)

**Do you have more questions?**

Contact [erc-open-access@ec.europa.eu](mailto:erc-open-access@ec.europa.eu)

## Providing open access to your publications

*If you are an ERC grantee\* and you written an article, monograph, book or other work for publication, here is how you can provide open access to it.*



\* grants funded under Horizon 2020 oblige beneficiaries to provide open access to resulting publications; grants funded under FP7 do not require open access or require grantees to make their best effort to provide open access.

# Listening to jet-lagged plants

© Prof. Ian T. Baldwin



*Prof. Ian Thomas Baldwin received an ERC Advanced Grant to study the internal circadian clock of plants. In particular, he wants to understand the ecological consequences of plants falling 'out of synch'. In this interview, Prof. Baldwin shares some of his research findings and explains why he has chosen to make his study results openly available.*

## Why did you apply to the ERC to fund your project?

[ClockworkGreen](#) is a very iconoclastic research study. Only an organisation like the ERC, with its incredibly robust review process and its emphasis on innovative projects and creativity, could fund such research.

## What is it about?

Internal clocks, rhythmised by the day-night cycle, play a key role in most living organisms, including plants. This mechanism synchronises, coordinates and helps plants to anticipate important biological processes, like growing from a seed, flowering, expanding roots, fighting herbivores and attracting insects. The project aims to better understand how the circadian clock helps plants to adapt to environmental changes, including extreme variations, like those triggered by climate change. For this purpose, we have chosen a native plant from the Great Basin Desert of Utah, USA, the *Nicotiana attenuata*, the wild tobacco plant. We engineered it genetically in Germany, taking apart its biological clock, and then we put it back into its natural habitat to observe what it takes for an 'out-of synch' plant to survive. Plants have all sorts of behaviours but, before silencing this clock, we never knew what rhythmised them and how they reacted to time disruption.

## What project findings would you stress at this stage?

The wild tobacco plant is a model ecological system. It grows in the desert following fires, as it uses smoke chemicals to initiate germination and growth from its seeds that can lie dormant in the seedbank of the soil for hundreds of years, waiting for the next fire cycle. It has

given us interesting insights into how intelligently a plant can adapt to and solve many different problems. It uses its own chemistry and biology in incredibly sophisticated ways, but it also uses other living organisms around it, including predators. The plant's ecological performance has everything to do with timing and we have discovered a lot about how the clock regulates the plant's behaviours, including growth and survival in extreme conditions. The findings apply to other natural plant species; they could help us to boost our agricultural crops' ecological know-how.

## You gave open access to your research findings. Why?

Being a scientist means discovering new things about the world and sharing that knowledge for the use of others. Making data public is an intrinsic part of the scientific process. Before the new electronic media platforms existed, publishers played an important role in disseminating these results in paper form to other scientists. Today, traditional publishers' services are no longer needed and - from a moral point of view - providing free access to our data and scientific results is, I believe, the only way forward. We owe it to the public, the tax payers that fund our research. As scientists are all independent thinkers, those that share this view can only lead by example. Open access venues, such as [eLife](#), can really change the way we use publications to disseminate our research and promote our careers.

Researcher: **Prof. Ian Thomas Baldwin**

Host Institution: **Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. (Germany)**

Project: **Ecological performance of arrhythmic plants in nature (ClockworkGreen)**

ERC call: **Advanced Grant 2011**

ERC funding: **EUR 2.4 million (2012-2017)**



# Music worth sharing



*What has music meant through the years? How have the performance and understanding of music changed over time? These are some of the questions that concert pianist and artistic researcher Paulo de Assis addresses in his ERC-funded project [MUSICEXPERIMENT21](#). He studies musical interpretation at the brink of arts and philosophy, challenging the idea of what it means to make music. Recently, his works were published in a monograph in the ERC endorsed open access database OAPEN to make the results of his project available to a wider public.*

Musical performances have changed greatly since the times of Bach's famous *Abendmusik*. Nowadays, lights, smoke, projections, all accompany the actual piece. Music is why you buy the ticket, but there is no denying that all the other experiences are engrossing and stimulating, and have radically modified how we perceive music. Researcher and artist Paulo de Assis, from the Orpheus Institute in Belgium, studies this change throughout the centuries, proposing new innovative practices.

His research explores how music performance has evolved from focusing exclusively on the music and composer's guidelines, to a multi-experience and multi-interpretation approach. According to De Assis, this has led to a shift in the role of the musician from simple "interpreter" to actual "performer". It has put individual artists under the spotlight, giving them a role as important as that of the composer. In his project De Assis proposes, collects and analyses different possible techniques, expanding current understandings of this phenomenon.

De Assis's position as a music researcher is unique. As a concert pianist, he is able not only to study different forms of interpretation, but also to create them. This new form of research, termed *Artistic Experimentation*, has produced a

variety of new media for musical interpretation. De Assis and his team have worked, for example, on renditions of works by Luigi Nono, Robert Schumann, Arnold Schoenberg, and even Friedrich Nietzsche, as well as derivate pieces of Beethoven's *Diabelli Variations* created using procedures inspired by mathematical algorithms. The group has also developed new lighting systems specific for piano keyboards.

The approach in MUSICEXPERIMENT21 is incredibly multidisciplinary, using concepts from philosophy, epistemology, aesthetics, theatre studies, and musicology to fully appreciate how different "experimental performance practices" have become an integral part of musical performance and how they could be used for further innovations in musical and performing arts.

As a result of his project, De Assis has created an online database with samples that allows a comprehensive understanding of music interpretation in the XXI century. His research was presented in books, academic conferences, and many original musical performances. The impact of De Assis's work extends from influences on the research methods of the European Association of Conservatoires, to the ConNext network of seven leading global music conservatoires, to academic institutions such as the Norwegian Academy of Music, the Helsinki Collegium for Advanced Studies, the Berne Graduate School of the Arts, the Stockholm University of the Arts, and the International Society of Artistic Research.

The monograph "Experimental Affinities in Music" that sums up his ERC-funded research is now published in the open access library OAPEN and will allow the work of this research team to be freely accessible to a wider audience, from fellow researchers in the burgeoning field of Artistic Research to the general public.

## ERC attends the Davos summit

*Against a backdrop of snow-clad mountains, political and business leaders, renowned researchers and civil society figures from around the world gathered in Davos in late January to discuss pressing global issues.*

This year, the summit of the World Economic Forum had the overarching theme of “the fourth industrial revolution”, but other topics, such as the refugee crisis and the importance of cutting-edge science, were also on the agenda.

The ERC took part in the summit for the fourth time to show what Europe is doing to prevent brain drain and to showcase the latest advances in science that came about as a result of ERC-funded projects. ERC President Jean-Pierre Bourguignon and thirteen ERC grantees, including Nobel laureates Sir Christopher Pissarides and Sir Konstantin Novoselov, shared their insights in sixteen [sessions](#) on topics such as the rise of intelligent machines, the concept of a world without work and the dilemma of taking risks in science.

The ERC also held its own IdeasLab session with four grantees who presented their research looking at “the future of computing”. For example, ERC Starting grantee Prof. Jeremy O’Brien expects that in ten years quantum computing will outperform everyday computers. He said: “*The very fast computing power given by quantum computers has the potential to disrupt traditional businesses and challenge our cyber-security. Businesses need to be ready for a quantum future because it’s coming.*”

The Davos summit was also a good occasion for the ERC to pass on a more political message. During an [ERC press conference](#), European Commissioner for Research, Innovation and Science Carlos Moedas and ERC President Prof. Jean-Pierre Bourguignon underlined the ERC’s role in preventing brain drain and providing the impetus for growth in Europe. The Commissioner highlighted the ERC’s role in supporting scientific excellence. “*The ERC funds the work of some of the most*



ERC grantee Prof. Jeremy O’Brien at the IdeasLab in Davos

*brilliant minds in frontier research, people who have discovered things that will change the future of our lives and the welfare of our planet,”* he said. President Bourguignon focused on the importance of providing the right conditions to young researchers to develop their talent. “*We’re betting on the future and on the younger generation*”, he explained.

They spoke alongside ERC Starting grantee Prof. Hélène Rey, named “the economist to watch in 2016” by *The Economist*. She is a shining example of talent coming back to Europe thanks to opportunities offered by the ERC. After winning an ERC Starting grant in 2007, she returned to Europe from the University of Princeton in the US. In Davos, she caught the media attention with her [blog post](#), in which she made an impassioned plea to solve the refugee crisis in Europe.

The summit once again provided a first-rate platform for interacting with influential personalities beyond the ERC’s typical counterparts, a chance to speak to the world press and to convey the message that blue sky research is not an option, but an imperative.

Read also the ERC [press release](#).



ERC press conference in Davos

© World Economic Forum/swiss-image.ch/Photo Michele Limina

© World Economic Forum/swiss-image.ch/Photo Michele Limina

# No “magic bullet” for scientific excellence



© Narodowe Centrum Nauki (NCN)

*At the beginning of March, the ERC took part in a debate on scientific excellence in Poland. Krakow, once the country's capital and still a centre of learning, was the venue of a seminar that aimed to identify the best practices in supporting scientists to successfully apply for ERC grants.*

The meeting, which brought together research policy-makers and scientists from Poland and other EU countries, was organised jointly by the Polish National Science Centre (NCN) and the ERC on the occasion of the fifth anniversary of the NCN, a body set up by Poland based on the model of the ERC.

One of the speakers, the Vice President of the Austrian Science Fund (FWF), **Prof. Christine Mannhalter**, listed a full catalogue of systemic issues that need to be addressed to improve the competitiveness of ERC grant applicants: appropriate resources for curiosity-driven research, science infrastructure, introduction of scientific performance as key indicator for budget allocation. She also pointed to crucial questions related to young researchers that policy-makers need to answer: *“How do we motivate scientists? How are they recognised? Do they have a satisfactory career perspective?”*

**Prof. József Pálincás**, President of the Hungarian National Research, Development and Innovation Office, said that institutional changes and consolidation of research institutes were the most effective measures to support excellence in Hungarian science. *“The ERC changed the attitude of many national funding agencies and it put excellence at the centre,”* he said. As one of the best practices, he gave the example of Hungarian “Momentum Grants” that provide reasonable pay, independence, flexibility and predictable career paths for cutting-edge researchers.

President of Polish Academy of Sciences (PAN) **Prof. Jerzy Duszyński** highlighted that there is no “magic bullet” that will solve the problem of the relatively weak performance of Polish researchers in ERC competitions. *“We need to change many things, but I am against changing one thing, the ERC, because we already profit from it. ERC grants will not change our system, but they are a very good indicator of whether we are good or not, competitive or not”*, he said.

As an example of best practices, **Dr Coenraad Krijger**, Director of Policy Development at the Netherlands Organisation for Scientific Research (NWO), explained the Dutch system for supporting investigator-driven research. He also raised the point of the tense relationship between assuring diversity in the scientific community and competitiveness. *“The culture of competition and merit-based research funding decreases diversity in a community, favours competitive individuals, and perpetuates gender imbalances”*, he pointed out.

At the official anniversary ceremony, ERC President **Prof. Jean-Pierre Bourguignon** conveyed a message that the ERC would like to see more excellent researchers from Eastern and Central Europe amongst its grantees. Pointing to the fact that relatively few researchers in Eastern and Central European are amongst the ERC grantees, he said: *“[...] the adequate presence of top talent from Poland would do more justice to the extraordinary tradition and potential of Polish science”*.

Learn more about the [Working Group on Widening European Participation](#) chaired by Prof. Eva Kondorosi, who was also present at the event.

# United Kingdom



In this issue, we focus on the United Kingdom, one of the few countries not yet covered in the “*Ideas*” newsletter. The UK is a shining example of how excellent science can be done, and an important actor in the global discussion on open access.

A big step for open access in the UK was made in 2012, when the national government accepted recommendations of the [Finch Group Report](#), prepared by experts from academia, research funding and publishing. It highlighted the need to set a policy specifically aimed to support publication in open access or hybrid journals, and making the rights to use and re-use research results more flexible.

The findings of the Finch Group Report were then used by [Research Councils UK \(RCUK\)](#), a strategic partnership of the UK’s seven research councils, which invests around £3 billion per year in all research disciplines. One of RCUK’s priorities is to ensure that research results supported by public funds are available to the research community and to a wider public.

The UK is also one of the most successful countries in terms of scientific excellence, as highlighted by EU Commissioner for Research, Science and Innovation Carlos Moedas during his [speech](#) at the University of Cambridge on 3 March. “*The UK is an essential and valued partner in all of the EU’s key international research collaboration*”, he said.

With some of the most prestigious universities in the world and an outstanding number of ERC-funded projects, the UK is not only a hub for international talent, but also one of the leading contributors to the European scientific landscape. Particularly, its openness is one of the key factors of scientific excellence, as the Commissioner emphasised.

Aside from its key role in the European research scene, the UK has several other connections to the ERC. Currently the Scientific Council counts three British members: Dame Athene Donald, whom you will hear from on the next page, as well as Dame Janet Thornton and France-based Prof. Margaret Buckingham.

The UK is the most successful country in terms of number of ERC grant holders. It hosts almost 1,300 ERC-funded researchers, of whom almost 50% are non-British nationals. The grantees based in the UK have received in total over €1 billion since the ERC’s launch in 2007. But there are also Britons who choose to go abroad; 96 UK researchers carry out their ERC-funded research outside their home country.





## Questions to ERC Scientific Council member Prof. Dame Athene Donald

### **The UK has been the biggest recipient of ERC funding so far. What lies behind this success?**

“The UK has had a long tradition of research, with our universities going back many centuries and academics, from Isaac Newton on, having contributed very significantly to the body of knowledge across the disciplines. As Commissioner Carlos Moedas said during his recent visit to my own university of Cambridge, we have always had an open culture. Since the Enlightenment we have been welcoming academics from around the world and, now as then, particularly from mainland Europe. Furthermore, our universities are well respected in our society. All these reasons contribute to the outstanding success that the UK has seen with respect to ERC funding.

However perhaps we also need to look at our education system. Many failings though it may have, including its early specialisation, we do expect our undergraduates at research-intensive universities to develop independence early on. By the time they start research, many of them will be entirely comfortable with this approach. I have noted how the brightest US students who come to Cambridge to carry out research can falter initially at this freedom that they are given from the day of arrival. Those who successfully make the transition then thrive and flourish. I believe this lack of rigid hierarchy, the expectation that all students will question and be critical as they pursue their research, and the absence of what one might term ‘spoon-feeding’ for research students contributes to the success of early-career researchers within the UK system.”

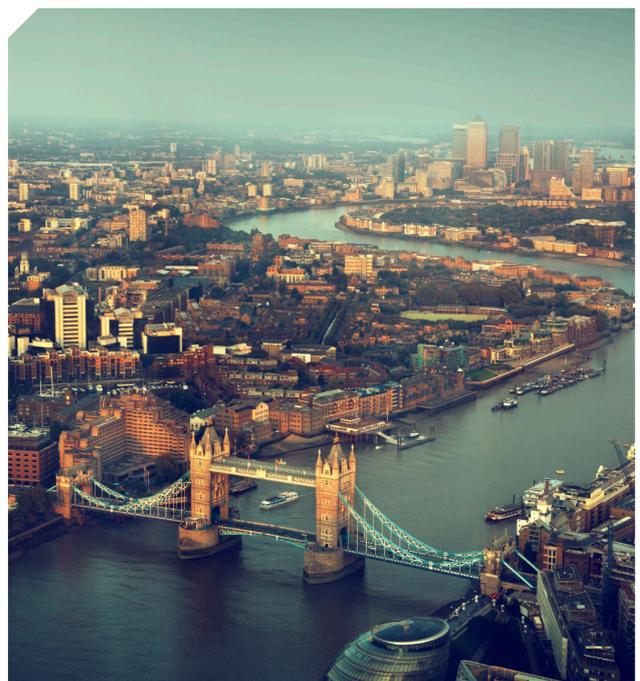
### **Please tell us about the UK research landscape.**

“The UK has many strengths and is perhaps particularly strong on single investigator-led research of the kind the ERC funds. As one rather crude measure, it is noticeable that over the past century the UK has been remarkably successful (for a country of its size) in winning Nobel Prizes. The UK is one of the larger countries in the EU and in absolute terms spends the third highest amount on research out of the EU Member States (although this amounts to a lower proportion of GDP than other G7 countries, something that is of concern to many UK scientists), so perhaps it is not surprising that quite a large share of ERC grantees are based in the UK. Furthermore the UK produces 15.9% of the most highly cited academic articles from a pool of only 4.1% of global researchers. We should be proud of the impact of our collective endeavours.

However, we have a landscape of multiple research councils which can mean some projects are in danger of falling down the cracks between them. If you work at disciplinary boundaries (such as physics-biology, as in my case) this can lead to frustration when it feels tricky to ensure your proposal fits neatly within the defined boundaries. This is of course an issue the ERC is very much aware of and it therefore encourages interdisciplinarity. Success rates for proposals that cross boundaries (and panels) are carefully monitored by the ERC Scientific Council.”

### **What was the role of the UK in the setting up the ERC?**

“Right from the time of the original intent to construct a pan-European research council, the UK research community has been heavily involved and committed. As UK research Minister, Lord David Sainsbury was a key supporter. The Chair of the first [Identification Committee](#) that proposed appropriate members for the inaugural Scientific Council was the UK’s Lord Chris Patten. We have seen a series of distinguished UK academics serve on the Scientific Council, including Nobel Prize winner Sir Tim Hunt, who was instrumental for the ERC since the start, and the founding members Dame Wendy Hall and Lord Robert May, and a little later Dame Henrietta Moore.”



# Discovery in Kenya sheds light on the origins of warfare

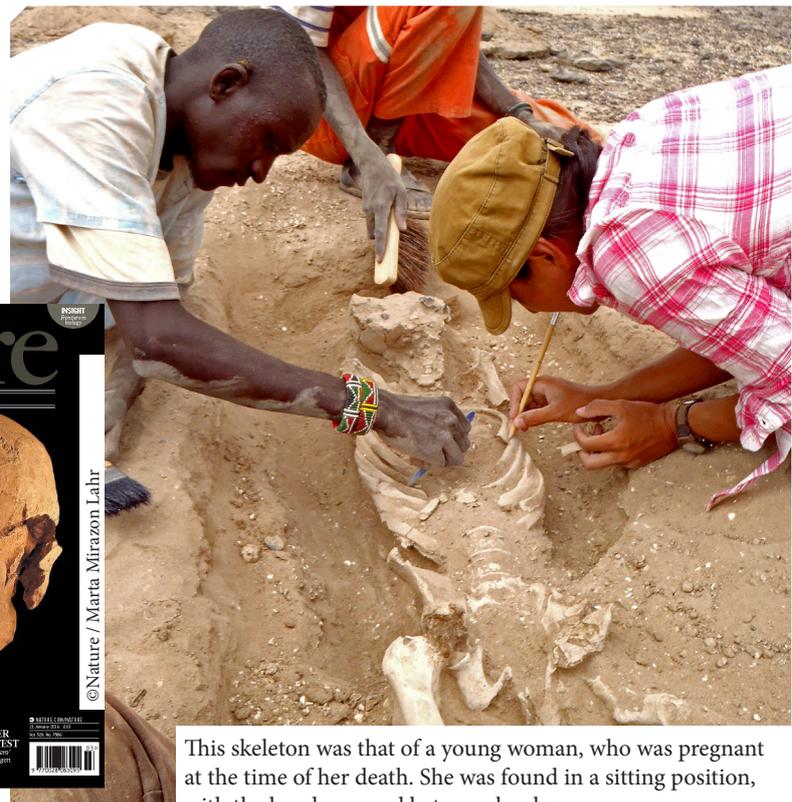


Dr Marta Mirazon Lahr & Prof Robert Foley at Tot Emulukun's wedding, Turkana

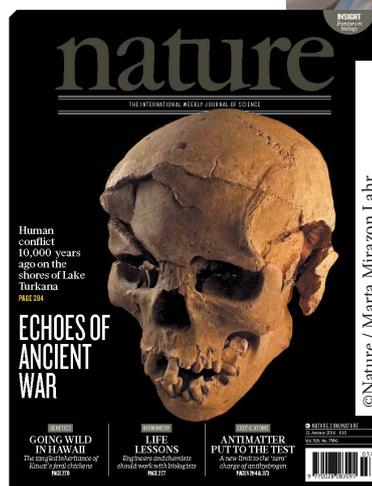
*Why homo sapiens came from Africa and how the species has spread in late prehistory? This is what Dr Marta Mirazon Lahr set out to study when she received an ERC Advanced Grant in 2012. When her team started excavations in Kenya to collect samples of fossils from the Stone Age, they did not expect to stumble upon a real archaeological treasure – the earliest historical evidence of warfare.*

Dr Mirazon Lahr's team unearthed the remains of 27 tribespeople brutally murdered around 10,000 years ago from the sediment of a dried-up lagoon, 30 km from Lake Turkana in northern Kenya, at the excavation site Nataturk. They show clear signs of a violent death, such as skulls smashed in and skeletons stabbed with stone arrows and spear tips. Amongst the victims, at least six were little children and eight were female, including a heavily pregnant woman. Some of them had had their hands and knees bound before they died. The bodies had not been buried, but instead they had fallen into the marshy pool, which has long since dried helping preserve the remains in relatively good shape.

The discovery is the oldest evidence of war so far; it has indicated for the first time that warfare was present already in the late Stone Age. Previously, many scholars believed



This skeleton was that of a young woman, who was pregnant at the time of her death. She was found in a sitting position, with the hands crossed between her legs.





Dr Frances Rivera



This skeleton was that of a woman, found reclining on her left elbow, with fractures on the knees and possibly the left foot. The position of the hands suggests her wrists may have been bound. She was found surrounded by fish.

that warfare first emerged long after the times of prehistoric nomads, when humans formed settled communities, and that the origins of war are closely linked to the feeling of ownership. *“Finding the remains of a massacre among*

*the skeletons of hunter-gatherers of this period was totally surprising”*, admitted Dr Mirazon Lahr.



Dr Ronika Power

The pieces of weapons found on the excavation site had been made of obsidian, a black volcanic rock which had been very rare at the time in northern Kenya. This suggests that the Nataturk tribe had been attacked by raiders coming possibly from another region. Dr Mirazon Lahr believes that the assaulters’ intention was to kill these tribe members who could put up a defence or who were too weak, too old or too young to be useful. The fact that no teenage victims were found in the lagoon may suggest that they had been captured.

According to the grantee, this milestone discovery may simply show a standard antagonistic response to an encounter between two social groups at the time. It can also point towards the fact that various tribes were competing with each other for better socio-economic conditions. *“The massacre may have resulted from an attempt to seize resources - territory, women, children, food stored in pots - whose value was similar to those of later food-producing agricultural societies, among whom violent attacks on settlements became part of life,”* she said.

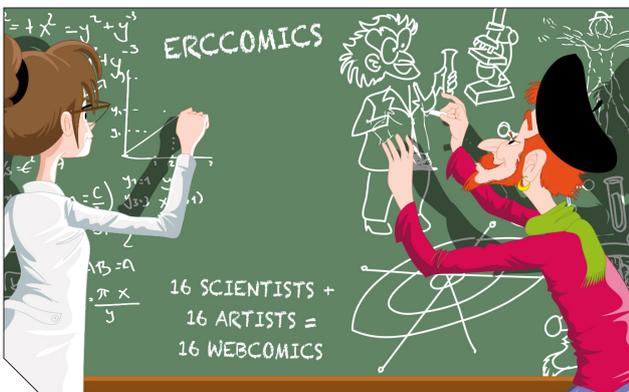


Prof Robert Foley

The results of this ERC project were featured on the cover of the Nature magazine in January and revived an academic discussion on the origins of warfare. Some researchers suggested that the capacity for organised violence occurs deep in the evolutionary history of our species. Prof. Robert Foley, who co-authored the study, commented: *“I’ve no doubt it is in our biology to be aggressive and lethal, just as it is to be deeply caring and loving. A lot of what we understand about human evolutionary biology suggests these are two sides of the same coin.”*

## 2015 Consolidator Grant and Proof of Concept results

In the latest Consolidator Grant call, the ERC has funded 302 excellent mid-career scientists with grants up to EUR 2 million each, allowing them to follow their most creative scientific ideas ([press release](#)). Selected projects will, for example, develop a new method to control insects that transmit diseases such as the Zika virus and measure the effectiveness of political apologies across cultures. The ERC has also awarded 135 Proof of Concept grants, worth EUR 150,000 each, to help ERC grantees make their research more marketable, for instance by establishing intellectual property rights or conducting technical validation ([press release](#)).



## Your research explained in a comic strip

Are you an ERC grantee? Would you like to see your research project translated into a comic strip? [ERCCOMICS](#) is ERC's communication campaign aiming to find "an innovative way to highlight ERC projects". The project coordinators, Université Pierre et Marie Curie - Paris 6 and French communication agency La Bande Destinée, are now looking for four ERC grantees keen to cooperate with comic artists to explain their research in an original and interesting way. If you are willing to participate in this venture, read about the details on the [ERCCOMICS website](#) and apply online by 30 April.

## ERC President at "Next Einstein Forum", Dakar

On 10 March, ERC President Prof. Jean-Pierre Bourguignon spoke at the [Next Einstein Forum Global Gathering](#) in Dakar, Senegal, an event gathering 15 of Africa's top young scientists and connecting them with leaders from Africa and the rest of the world in an effort to boost their contribution to solve global challenges. Prof. Bourguignon's first visit to Africa as ERC President provided the occasion to launch the new "ERC - Open to the World" social media campaign. This embodies the ERC's commitment to encourage global scientific cooperation by offering funding opportunities to non-European researchers, thus making Europe a hub for global scientific excellence. See also the ERC [highlight](#).



ERC President and grantees at the launch event.

## ERC=Science<sup>2</sup> campaign launched

On 16 February, the ERC=Science<sup>2</sup> campaign was [launched](#) in Brussels. The project, led by Science|Business, is set to organise promotional activities around popular scientific themes to highlight projects funded by the ERC. During the next three and half years, exhibitions, live research demonstrations and events will take place in science museums and public places, while a variety of multimedia materials will be published on the [ERC=Science<sup>2</sup> website](#). The first topic is science that can make our cities more liveable. You can also follow the campaign on [Facebook](#) and [Twitter](#).

# Calendar of ERC calls

Grants open to researchers from anywhere in the world

| Call for proposals*               | Publication date | Deadline                      | Budget          | Funding                         |
|-----------------------------------|------------------|-------------------------------|-----------------|---------------------------------|
| ERC 2016 Advanced Grant           | 24 May 2016      | 1 September 2016              | EUR 540 million | Up to EUR 2.5 million per grant |
| ERC 2016 Proof of Concept Grant** | 22 October 2015  | 26 May 2016<br>4 October 2016 | EUR 20 million  | Up to EUR 150,000 per grant     |

\*\*Researchers who wish to apply to one of the ERC calls can do so through the [Participant Portal](#).

\*\*Call open to ERC grantees only.

Read the new rules for re-submission of proposals in the [ERC Work Programme 2016](#) (pp. 18 – 20).

For more information regarding ERC Proof of Concept grants, please see the [ERC Work Programme 2016](#) (pp. 35 – 41).

Candidates should apply with a host institution in an EU Member State or a Horizon 2020 Associated country.

See further information on the [Participant Portal](#).

Stay informed on the [ERC website](#) and the [Participant Portal](#).

## Information on the ongoing selection:

- In the 2015 ERC **Advanced Grant** call, **1,951** applications were submitted (results to be officially communicated in April)
- In the 2016 ERC **Starting Grant** call, **2,935** applications were submitted (results to be officially communicated in September - tbc)
- In the 2016 ERC **Consolidator Grant** call, **2,304** applications were submitted (results to be officially communicated before the end of the year)



## In memoriam of Patricia Rizzo

Words cannot express the sadness we are feeling right now. After a few days of excruciating waiting and angst, our worst fears have been confirmed. Our colleague Patricia Rizzo is amongst the victims of the recent terrorist attack in Brussels. We will greatly miss this truly loveable and kind person. Our thoughts go out to her son and her parents, and to family and friends. We truly share their pain and sorrow.

On behalf of the European research family,  
 Carlos Moedas, Commissioner for Research, Science and Innovation  
 Robert-Jan Smits, Director General of DG RTD  
 Jean-Pierre Bourguignon, President of the European Research Council  
 Pablo Amor, Director of the European Research Council Executive Agency.

