

ERC Grants

For top researchers
from all over the world

EUROPEAN COMMISSION

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ERC
European Research Council



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Executive Agency

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Prokaryotic biology

Globalisation
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AIRPORT

“The ERC has established itself within a short period as a successful, leading funding institution world-wide. It will continue to contribute significantly to the making of a unique European research culture.”



***Prof. Helga Nowotny,
President of the European Research Council***

WANTED: BRILLIANT IDEAS

“The ERC is shaking up the established order.”

***Maire Geoghegan-Quinn,
European Commissioner
for Research, Science and Innovation.***



The best scholars are natural risk takers. They play with ideas, ask questions and don't always know where they are going. A French chemist, Charles Frederic Gerhardt, created a new compound by chance in 1853 and called it salicylic-acetic anhydride. He put it aside, but it would later become the basis for aspirin.

The European Research Council (ERC) wants to cultivate that sense of adventure. It is seeking **excellent researchers** driven by endless curiosity who can come up with brilliant intuitions and ideas. Founded in 2007, it works hard to incubate top level research that might help transform tomorrow's world.

Individual applicants outside Europe are now welcome; we are looking for the best people, EU national or not, to work in Europe. The ERC, the first pan-European organisation dedicated to funding EU-based “blue sky” research, invests on average **€1 billion a year on grants**. Hundreds of researchers are already using the money to pay for equipment, junior staff and other resources in projects lasting up to five years. You could be one of them.

“Principal Investigators” (PIs) are well beyond their doctorate. Some, known as **Starting Grantees**, are setting up their first independent projects or consolidating recently established research teams and activities. Others, applying for an **Advanced Grant**, are established leaders in their field. All are fulfilling their research endeavours free of money worries.



"The ERC grant has allowed me to branch out into immunology and shift the direction of my research – they are totally different fields. It gives me more credibility and more direction in that field"

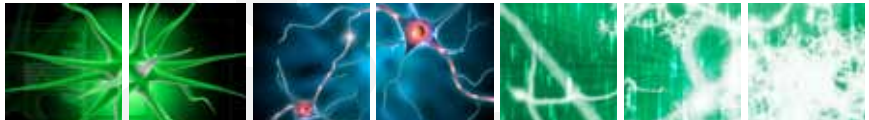


> **Melody Swartz**, grew up in the US but has been Associate Professor at the Swiss Federal Institute of Technology (EPFL since 2003. She made a major career leap thanks to the ERC Starting Grant and now heads up a team of 16 people seeking to better understand the mechanics and regulatory biology of the lymphatic function – an important element of our immune system. The research considers how the lymphatic system interacts with cells as well as how it transports them. *"It's unique in coupling the physiology, immunology and biology,"* she remarks.

She was trained in the US as a chemical engineer and was awarded a doctorate from Massachusetts Institute of Technology in 1998 but now uses those engineering tools in the biological field, as a bioengineer. *"The ERC grant has allowed me to branch out into immunology and shift the direction of my research – they are totally different fields. It gives me more credibility and more direction in that field,"* she explains.



"I want to possibly go back to the US in the future but am here for a while!"



> The adult mammalian brain still holds many enigmas for biologists and neuroscientists. The creation of new neurons (nerve cells) in the hippocampus, part of the brain used for memory formation, is one of them. *"There is no doubt the neurons are created but we don't know what for,"* explains **Ayumu Tashiro**, a scientist at the Centre for the Biology of Memory in Trondheim, Norway.

Tashiro is adopting an unconventional approach in his investigation of the neurons' role, combining two disciplines: molecular biology, which helps detect and manipulate neurons, and electrophysiology, which helps understand how they work. A Japanese national who finished his PhD in the US in 2002, Tashiro was attracted to Norway by his supervisors, two experts in this leading centre, and is working in a team of 12 people. *"I want to possibly go back to the US in the future but am here for a while!"* he says.

BREAKING NEW GROUND

***“The ERC is money to really do research.
It’s a very unique programme.”***

Maria Varela, University Complutense, Madrid - ERC Grantee

Europe’s research landscape changed radically with the creation in 2007 of one agency, the ERC, dedicated to “blue sky” research based in an organisation in the EU or an associated country *. Applicants of all nationalities are welcome, as the ERC’s mission is to foster new ideas and cultivate intellectual leadership. Candidates are assessed according to excellence alone by a team of top scientists, and if successful, have up to five years to complete their projects.

The establishment of the ERC has opened a new window for “bottom-up” investigator driven research. Our aim is to create a truly international environment in which researchers can come and go, generating a fertile pool from which the best new ideas may be retrieved.

Global competition for knowledge leadership is intense. Europe has been host to a wealth of extraordinary new ideas, from the theory of relativity to the world wide web. Yet other parts of the world have performed brilliantly in recent years. The ERC’s avowed ambition is to participate in the task of raising Europe’s status as a hub of new ideas by encouraging unconditional, ‘bottom-up,’ investigator driven research.

Twenty-five panels of renowned scientists and scholars consider applicants’ proposals in the course of a rigorous peer review in life sciences, social sciences and humanities, physical sciences and engineering as well as interdisciplinary research. As panels seek out the most innovative projects, we accept that they will be highly risky.

You could apply for a Starting Grant of up to €2M (suitable for people in mid career who have been engaged in research for between two and twelve years since their PhD) or an Advanced Grant (for those with a track-record of significant research achievements and recognition in the last ten years) of up to €3.5M. Of course, not all project ideas will pass the initial tests, because the ERC is only looking for the best; selection is rigorous.

Experience shows that nurturing talent early is most likely to lead to the brightest inventions in the long term, and this is why the ERC set up the Starting Grants. They provide researchers with a good structure onto which they can build for the future. Advanced Grants have been created to attract established, pioneering investigators to Europe with an interesting package.

*Associated countries: Albania, Bosnia and Herzegovina, Croatia, Iceland, Israel, Faroe Islands, Liechtenstein, FYR of Macedonia, Norway, Republic of Montenegro, Serbia, Switzerland and Turkey



"I'm very grateful to the ERC for really helping me"



> **Maria Varela** is a Spanish physicist at the US Oak Ridge National Laboratory, where she's been since 2002. Her career is flying high thanks to a Starting Grant which will take her back to Madrid's University Complutense where she finished her PhD in 2001. There, she'll lead a team developing new techniques in advanced microscopy.

"I'm very grateful to the ERC for really helping me," she says. At Oak Ridge, she shares equipment as part of a research group, has a good salary and money left over for travel and post-doc help. But the ERC grant will mean she leads several researchers and runs her own lab fitted with a brand new electron microscope paid for by the Spanish government.



"The two grants together make it possible for me to form a nice interdisciplinary group with different expertise"



> **Yiya Chen**, a linguistics expert, is happy at Leiden University in the Netherlands. *"It's a huge centre and one of the best for Chinese linguistic studies,"* she states. Her research has taken her from China to the US, where she gained her doctorate in 2003, and Europe, where she is studying how speakers store and process regular pitch variation. Her ERC starting grant, together with Leiden funds, provides a rich store from which to deepen and broaden her research project. *"The two grants together make it possible for me to form a nice interdisciplinary group with different expertise,"* she reflects.

Chen's origins in China give her an unusual insight into both Eastern and Western attitudes to Chinese linguistics. *"I'd like to bridge the two so that more people outside China can understand, and both sides can gain insight from their respective research schools,"* she explains. The ERC grant will help her realise that vision.

IN THE DRIVING SEAT

“The university is not allowed to interfere or decide who you employ or how to spend the money”.

Christopher Henshilwood - ERC Grantee

You’re absorbed in interesting research, but funding cuts mean you can’t take it much further. You find your current academic structure too hierarchical, or perhaps research funding is good, but there are too many other commitments. Alternatively, perhaps you are very happy at the place where you work, but the cost of the research you’d love to do is simply too high.

These are some of reasons why any scientist or scholar might want to apply. The ERC grants have been devised to solve these problems. They allow **Principal Investigators (PIs)** to take their career in their own hands.

The ERC Starting Grant is an exciting opportunity for outstanding early or mid-career researchers. It’s like a significant career advancement. It allows researchers to take a central role and get their teeth into the issues that fascinate them. Some may find they are consolidating a team while others are heading one up for the first time. **Applicants** will need to have shown some independence already, such as publishing papers in major journals without any senior involvement. All will notice one major change: they **are in the driving seat**.

An ERC Advanced Grant allows people who are already research leaders to build ambitious projects and experiment with new and unusual techniques or ideas. It is an attractive **opportunity to venture into unknown territory** and, perhaps, shake up the whole field.



"This grant gives me exactly what I am looking for; to go over there and work with colleagues in a completely new network"



> **Vladimir Canudas-Romo** is a Mexican demographer who completed his PhD at Groningen in the Netherlands in 2003. He is now looking for new fertile ground after a spell at the John Hopkins School of Public Health in the US. He wants to explore new ideas with new people. So he has opted for a fresh scene in Scandinavia, where he will be based in Denmark.

"This grant gives me exactly what I am looking for; to go over there and work with colleagues in a completely new network," he states, adding: *"the ERC grant is different because money goes to the PI, not the institute. It empowers the researcher. So if this doesn't work in one place, I can move around."* As he takes pains to explain, the ERC only expects PIs to spend at least 50% of time there. *"So I can negotiate with both universities."*



"in the US you can't use the money to hire more personnel or to reduce teaching"



> In a Diophantine equation, only integer solutions are allowed. *"Although the theory of Diophantine equations is one of the oldest subjects in mathematics, it is still a mostly unexplored frontier with many wide open fundamental problems and conjectures,"* says **Alexander Gorodnik**, a Ukrainian mathematician using dynamical systems to study this issue at Bristol University in the UK. He is looking to uncover the structure of these solutions.

He came to the UK from the US, where he completed his PhD after finishing his degree in Kiev in 1992, partly for personal reasons, but is glad of his choice. For one thing, he has more time for research. *"I considered lots of options, but Bristol was the most attractive. It was a big decision,"* he points out. Comparing the ERC to the US NSF grant, he says: *"in the US you can't use the money to hire more personnel or to reduce teaching."*

CUTTING TIES

“The ERC is more streamlined than other grants. It’s one big grant that can allow me to put my research onto a straight road for the next five years.”

Alexander Gorodnik - ERC Grantee

A PI endowed with an ERC grant enjoys an unusual amount of **freedom**. For instance, if you needed to move to a university in another EU or associated country while working on the ERC research project, you would be entitled to do so. You choose your own team and in some cases a team member could even be working in another European university. What matters is that the research group chosen is best geared towards carrying out the most insightful research.

The ERC and related research organisations are keen to help promising scientists and scholars looking for a new direction. **Research autonomy** is a core value at the heart of our mission.

The **EU’s Scientific Visa** liberates PIs in another way. It helps create a specific residence permit for researchers coming in from other parts of the world. Once the residence permit has been awarded, you would be free to move within all EU Member States for the purpose of the project and if you want to extend your stay in a country, it is no longer necessary to return to your country of origin to apply; you are more mobile within the EU. The point is to open the door to the world’s best scholars and scientists.



"Often, archaeologists work almost in isolation. The ERC grant is a major advantage for anyone in our field, which is cash hungry for research,"



> In 1991 **Christopher Henshilwood**, is a distinguished South African archaeologist at the University of the Witwatersrand who in 1995 gained a PhD in Cambridge, UK and has had professorships in the US. He has found a rich seam of information about early humans in Blombos cave, South Africa. and is embarking on a new excavation there on behalf of Bordeaux and Bergen universities funded by the ERC. *"We know homo sapiens evolved in Africa...what was it that allowed them to take over places occupied by other hominids [such as Neanderthals in Europe]?"* he asks. This and related questions will be the subject of the study.

The €2.5 million will pay for a multi-disciplinary team, so not all will be archaeologists. Climatologists and other experts are included - an unusual feature. *"Often, archaeologists work almost in isolation. The ERC grant is a major advantage for anyone in our field, which is cash hungry for research,"* he remarks.



"The ERC grant is what makes living and working in the EU possible, as conditions in Greece could be improved. Compared to coming to the EU without the ERC grant, it's night and day; there's no comparison,"



> **Dimitris Achlioptas** is a high-flying Greek computer scientist who moved back to Athens, Greece, where he is a Professor, after 15 years in North America including a stint at Microsoft's research centre, a doctorate at Toronto University awarded in 1999 and several professorships. Dimitris freely admits this would hardly have been possible without the ERC, which is funding his research on randomness in computer science. *"The ERC grant is what makes living and working in the EU possible, as conditions in Greece could be improved. Compared to coming to the EU without the ERC grant, it's night and day; there's no comparison,"* he asserts.

His experience of bureaucracy is also positive. *"The minimisation of reports [two in five years] to the ERC is great,"* he says, also impressed by the amount of freedom available for decision-making: *"My impression is that the latitude of power to spend money is very big, in particular bigger than for other EU grants."*

READY FOR TAKE-OFF

“My impression is that the latitude of power to spend money is very big, in particular bigger than for other EU grants.”

Dimitris Achlioptas - ERC Grantee

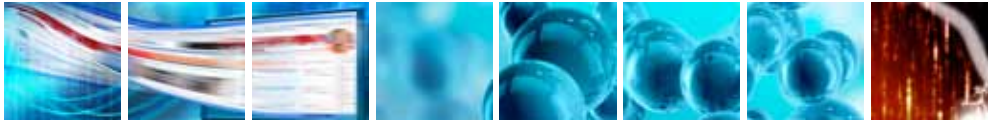
Success breeds success. Advanced and Starting Grantees often find their ERC awards attract fresh funding from other sources, too. But if you win the award, it should provide plenty for junior researchers and considerable spending on equipment. You'll be able to **pick and choose from that individual pot as you see fit**. For instance, you have an instant source if you need staff. No more hunting around for funds here and there.

Meanwhile, as each year passes, the ERC funding will continue to rise, providing more and more opportunities for scholars to cultivate their ideas. **By 2014, the ERC's total annual funding pot will come to €1.8 billion.**

The ERC is **aiming to cut down on red tape**. We know it gets in the way of productive research. Of course there is a standardised application procedure and scientific and financial reports to be filed once projects get under way, but the procedure is significantly lighter. European authorities are also making efforts to cut down on bureaucracy in other ways. For instance, immigration officials are required to fast track people applying for Scientific Visas and to deliver residence permits within thirty days of application.

You'll find EURAXESS (<http://ec.europa.eu/euraxess>), a network of 200 centres in 35 European countries, a useful tool once you've arrived. It supports scientists and scholars on the move and helps them settle in by supplying practical information and help on accommodation, children's schools, IP rights, tax, pensions and other routine issues. Again, the aim is to cut down on stress for new arrivals.

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<http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=14>

How to get funding

<http://erc.europa.eu/index.cfm?fuseaction=page.display&topicID=498>

ERC Starting Grants

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The EU at a glance

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“The mission of the ERC is to fund excellence in a truly bottom-up mode. The ERC therefore offers unique opportunities for the best researchers without looking at their nationality. Whether these top researchers are non-Europeans, or Europeans returning home – they are invited to carry out their ERC-funded research in one of the EU’s members states or an EU-associated country. By being open to talented researchers from a worldwide base, the European Research Area will itself become one of the most attractive places for exciting work in frontier research”.

Helga Nowotny,
President of the European Research Council May 2010



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