

European Science, Engineering and Technology Highlights¹ OCTOBER 2013

*To navigate down the report, hold down the CTRL key and click on the title to go to the desired article.
You may return to the selected country by clicking on the ↻ at the bottom of each article.*

Europe:

1. [New European Database of Research Infrastructures Launched](#)
2. [€660 Million in EU Funding to Top Researchers](#)

World Wide:

3. [Worldwide Network of Research Universities to be Created?](#)

Austria:

4. [Pascale Ehrenfreund is the New President of the Austrian FWF](#)

Bulgaria:

5. [Additional € 8.2 Million for Developing Applied Research in Bulgaria](#)

Czech Republic:

6. [Update of the National Research, Development and Innovation Policy of the Czech Republic](#)

France:

7. [French Mathematician Jean-Pierre Bourgignon to Lead the European Research Council](#)
8. [Patrick Nédellec Named Director of the French National Research Center European and International Cooperation Department](#)

¹ Note: If you would like additional information or background, please feel free to contact either Carine Polliotti at cpolliot@nsf.gov or Ana Helman at ahelman@nsf.gov



1 New European Database of Research Infrastructures Launched



The MERIL database (Mapping of the European Research Infrastructure Landscape, <http://portal.meril.eu/>) aims to provide a comprehensive inventory of high quality research infrastructures in Europe across all scientific domains, accessible through an interactive online portal. It will provide a better picture of Europe's existing scientific capacities and foster collaboration amongst the European scientific community by compiling information on high quality facilities of any size and profile, from specialized university laboratories and historical archives to biobanks and experiments at large establishments such as CERN, home of the Large Hadron Collider.

MERIL's development is the result of a pan-European multi-stakeholder effort co-ordinated by the European Science Foundation (ESF). The longstanding need for such a database was reaffirmed in a 2009 report from the ESF and European Heads of Research Councils (EuroHORCs), which stressed that an inventory of existing facilities would enhance the information available to policy makers for planning and funding decisions. The MERIL project was subsequently initiated in October 2010 with competitive funding from the European Commission and significant input from the ESF member organizations and other stakeholders, including the European Strategy Forum on Research Infrastructures (ESFRI).

Research infrastructures indexed in the MERIL portal have been identified as being of high quality and of greater than national relevance by responsible national and international "Data Intermediaries"; they are also required to offer access to external scientific users, nationally and internationally, through a transparent selection and admission process. The database will be continuously open to the addition of research infrastructures that meet the criteria for inclusion.

Martin Hynes, Chief Executive, European Science Foundation, commented, "Research excellence requires high quality facilities which not only support research but also create an attractive environment for researchers. MERIL is a unique resource for the scientific community and we hope it will foster greater interaction, mobility and a sense of partnership across the region."

The MERIL portal is launched at the Lithuanian EU Council Presidency Conference "Horizons for Social Sciences and Humanities" in Vilnius on 24 September 2013. The MERIL project was initially funded for two years (2010-2012) by the European Commission under the coordination of the ESF, and is being maintained in 2013 with the financial support of ESF's member organizations.

Link to MERIL portal: <http://portal.meril.eu/>

Full article available at: http://www.eurekalert.org/pub_releases/2013-09/esf-ned092413.php



2 €660 Million in EU Funding to Top Researchers



Exploring the limits of life on Mars, developing a virus that can target cancer cells, or using photonics to restore vision in patients with cataracts. Societal challenges such as ageing populations in developing countries or inequality in capitalist societies. These are just some of the issues being tackled by the 284 scientists who are set to receive €660 million (USD 890 million) in the latest funding round from the European Research Council (ERC).

In its sixth and last Advanced Grant competition under the EU's Seventh Research Framework Programme (FP7), the ERC will provide individual grants of up to €3.5 million (USD 4.7 million). The funding will enable well-established senior researchers to pursue their 'blue-sky' research. The next

Advanced Grants call will be the first under Horizon 2020, the new EU research and innovation program.

In this call, the successful candidates are of 27 different nationalities, with British, German, French, Dutch and Italian researchers being the most numerous. Grantees are based in some 150 institutions across 18 different European Research Area (ERA) countries.

For this particular competition, just over 2,400 applications were submitted to the ERC, which is a slight increase (4.5%) from last year. Thanks to the ERC grants, the selected scientists in this call will be able to build their own research teams, engaging an estimated 1,200 postdocs and PhD students as ERC team members.

Advanced Grants are awarded to well-established top researchers of any nationality or age, scientifically independent and with a recent research track-record, as well as a profile which identifies them as leaders in their respective field(s). The ERC also funds young, early-career top researchers (ERC Starting Grants) and already independent excellent scientists (ERC Consolidator Grants).

Additional Information:

ERC grants target top researchers of any nationality who are based in, or willing to move to, the European Research Area (ERA) (the EU Member States plus countries associated to the EU research program). As the largest EU Member-States, the UK, Germany and France host the highest absolute number of selected researchers in this call. In relation to population size, the Netherlands, UK, Finland and Denmark (of the EU countries), and Switzerland and Israel (of the countries associated with the EU research program), host the greatest number of successful candidates in this call.

The overall success rate for this call lies at nearly 12%. The share of selected women in this round of grants is just over 13%, reflecting the continuing underrepresentation of women in senior research positions. The average age of the researchers to be funded is 53 years old.

In this call, 45% of successful proposals were in the 'Physical Science and Engineering' domain, 36% in 'Life Sciences', and 18% in 'Social Sciences and Humanities'. The grantees were selected through peer review evaluation by 25 panels composed of renowned scientists from around the world.

Set up in 2007 by the EU, the European Research Council is the first pan-European funding organization for excellence in frontier research. The ERC, which is a pioneering component of the EU's Seventh Research Framework Program ('Ideas' Specific Program), has a total budget of €7.5 billion (USD 10 billion) from 2007 to 2013. The European Commission proposed a significant boost of the ERC budget in the new framework program "Horizon 2020" (2014-2020).

Full article available at: http://europa.eu/rapid/press-release_IP-13-867_en.htm?locale=en



3 Worldwide Network of Research Universities to be Created?



Four of the world's major research university groups released a joint statement in China on 10 October outlining the characteristics of contemporary research universities as the next step towards establishing an international network of the four associations. This latest move follows discussions among the four groups over the past 18 months about creating a parallel organization to the Global Research Council, a virtual organization launched in Arlington in Virginia in May last year and comprising the heads of about 50 science and engineering funding agencies from around the world. At a meeting in Hefei outside Shanghai on Thursday, the presidents released the statement along with an explanatory Q&A document. These were intended to identify the key characteristics that make research universities effective while also promoting a policy environment "which protects, nurtures and cultivates the values, standards and behaviors underlying these characteristics so as to facilitate their development if they do not already exist", the statement said.

Full article available at: <http://www.universityworldnews.com/article.php?story=20131009115557994>



4 Pascale Ehrenfreund is the New President of the Austrian FWF



© FWF/Hans Schubert

Pascale Ehrenfreund has been elected President of the Austrian Science Fund (FWF). Professor Ehrenfreund and the new Executive Board took up their functions in September 2013.

An astrophysicist, Ehrenfreund studied astronomy and biology/genetics at the University of Vienna, after which she earned her master's degree in molecular biology in Salzburg at the Austrian Academy of Sciences. She went on to complete her Ph.D. in astrophysics in Paris and Vienna. In 1999, she earned her venia in astrochemistry at the University of Vienna with funding from an APART Fellowship from the Austrian Academy of Sciences. In 2008, Ehrenfreund also earned a master's degree in management and international relations.

From 2001 onward, Ehrenfreund worked as a professor of astrobiology in Amsterdam and in Leiden, where she has served as a visiting professor

since 2006. In 2005, Ehrenfreund moved on to the United States, where she worked as a Distinguished Visiting Scientist at JPL/Caltech in Pasadena, California. Since 2008, she has been a Research Professor of Space Policy and International Affairs at George Washington University's Center for International Science and Technology Policy. In that capacity, she addresses science policy issues with a special focus on international relations. Since 2008, she has also been a lead investigator at the NASA Astrobiology Institute, where she is collaborating in the search for traces of life in the solar system. Ehrenfreund has also chaired the Committee on Space Research (COSPAR) Panel on Exploration (PEX) since 2010, and she was a member of the European Commission's FP7 Space Advisory Group (SAG) from 2011 to 2013. In addition to numerous other memberships, she has served on the NRC Committee on Human Space Flight since 2012. Since 1999, she has also been present in outer space, as the asteroid "9826 Ehrenfreund 2114 T-3" bears her name.

More information available at: http://www.fwf.ac.at/en/public_relations/press/pa20130606-en.html



5 Additional € 8.2 Million for Developing Applied Research in Bulgaria



The total amount of the grant "Development of applied research in the research organizations in Bulgaria" was increased from BGN 19 558 300 (USD 13.5 million) to BGN 35 700 637 (USD 24.6 million). This will enable the financing of project proposals included in the reserve list, which have successfully passed the evaluation process, but did not receive funding. The main objective of grant is to strengthen and develop the capacity of

Bulgarian research organizations for the implementation of successful R&D programs by providing support for the renovation and modernization of the equipment necessary for the implementation of applied research.

The minimum grant amount for each individual project is BGN 100 000 (USD 79 000), and the maximum is BGN 4 000 000 (USD 2.8 million). The grant procedure is realized with the financial support of the European Union through the European Regional Development Fund.

Adapted from:

http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/bg/highlights/highlight_00

03



6 Update of the National Research, Development and Innovation Policy of the Czech Republic



The Update of the National Research, Development and Innovation Policy 2009-2015 with an outlook to 2020 has been approved by the government of the Czech Republic. The main aim of the update is to improve conditions for innovation, knowledge transfer and diffusion of frontier technologies as the key sources of economic growth over the long term. The update is focused on four priority areas: i) Supply of high-quality human resources; ii) Enhancing the framework for transfer and utilization of knowledge; iii) Boosting the innovative capacity in the business sectors and iv) Improving strategic management of the system. As the keystone has been flagged the

field of human resources, as this is essential for the successful launch of operation of the newly build large research infrastructure projects (ESFRI, etc.). The document is divided in two parts; one outlining the strategy and one dealing with its implementation, including specific indicators, deadline and responsible government bodies. Another purpose of the update is to re-align the reform agenda with the government medium-term budgetary plans, which have been significantly altered by the economic crisis and prolonged recession, as the result of which the public support for R&D stagnates and is expected to remain stable in medium-term outlook (in contrast to the expansion envisaged in the original document). However, the update confirms the commitment to meet the 2020 national target of 1% of government spending on R&D as % of GDP.

Full article available at:

http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/cz/highlights/highlight_000

3



7 French Mathematician Jean-Pierre Bourguignon to Lead the European Research Council



© Jean-François Dars

French mathematician Jean-Pierre Bourguignon is to become the next president of the European Research Council, Research Europe has learned. Bourguignon has been selected to take up the role from January 2014, several sources say. A former chairman of the ERC's peer-review panel for young mathematicians, Bourguignon has been the director of France's Institute for Advanced Scientific Studies in Bures-sur-Yvette near Paris since 1994. Bourguignon will take over from Helga Nowotny, the Austrian sociologist who has been in the position since 2010. The post, based in Brussels, will also include the responsibilities of Secretary General Donald Dingwell, a role that will not be renewed after Dingwell's term ends in November. The nomination of Bourguignon has been made following the efforts of a seven-member search committee, set up by the Commission to select Nowotny's successor from three candidates. His appointment still has to be announced officially by the European Commission, a process that could be delayed as a result of the on-going Horizon 2020 negotiations.

66-year-old Bourguignon holds an engineering degree from the École Polytechnique near Paris. In 1977, he gained a PhD in mathematics at the University of Paris VII and began studying the mathematical aspects of physical theories and geometry. In the same year as his PhD, Bourguignon was awarded a

bronze medal from the French National Centre of Scientific Research (CNRS). His term as research director at the center ended in August this year. Bourguignon is also a member of its Ethics Committee of Sciences. Further accolades for Bourguignon include the Prix Paul Langevin, awarded to him by the Academy of Sciences of Paris in 1987, and honorary degrees from Keio University in Japan and Nankai University in China. He has previously been president of the Mathematical Society of France, from 1990-92, and president of the European Mathematical Society, from 1995-98. He is a member of a number of other academies and societies, including Academia Europaea, and is a foreign member of the Royal Spanish Academy of Sciences.

Bourguignon will take the helm of the ERC at the start of the next EU Framework programme, Horizon 2020, under which the council is set to receive a significant budget boost. Over the seven-year Horizon 2020 programme, the ERC will receive 17 per cent of the total budget—which equates to €13 billion (USD 18 billion) in constant prices. Under Framework 7, the ERC received €7.5bn (USD 10.3 billion).

Full article by by Laura Greenhalgh and Rebecca Hill at:

http://www.researchresearch.com/index.php?option=com_news&template=rr_2col&view=article&articleId=1339098



8 Patrick Nédellec Named Director of the French National Research Center European and International Cooperation Department



© CR

On October 1, 2013, Patrick Nédellec was appointed Director of the National Research Center (CNRS) European Research and International Cooperation Department (DERCI) by president Alain Fuchs. He succeeds Minh-Hà Pham-Delègue, who has been named scientific advisor for science and technology at the French Embassy in Washington D.C. (US).

Born in Paris in 1965, Patrick Nédellec left France in 1989 to pursue his studies at Laval University in Quebec, Canada, where he earned a master's degree in biochemistry in 1991. In 1995, he completed a PhD thesis at McGill University's Division of Experimental Medicine in Montreal.

After returning to France, he joined the Pasteur Institute as a postdoctoral fellow in the Slow Viruses Unit. The following year, he became a CNRS researcher at Paris Descartes University's School of Pharmacy. In 2003, he was named scientific and academic cooperation attaché at the French Embassy in Copenhagen (Denmark). Four years later, he moved to China to serve as scientific attaché in charge of the innovation sector at the French Embassy in Beijing. In January 2011, Nédellec returned to CNRS as Director of the CNRS China office. As the new director of DERC, his mission will be to implement and promote the CNRS European and international cooperation policy.

Press release available at: <http://www2.cnrs.fr/en/2269.htm>

