

The problems of 21st century
science advice – p5, 6

Brexit UK leader sets date to leave – p2, 4

Finance Universities feeling the
heat in Horizon 2020 – p5, p7

Radicalisation opens door for social sciences

But doubts remain over policymakers' intentions

EU OFFICIALS HAVE PLEDGED higher priority for social science studies of radicalisation, amid growing political pressure to counter violent extremism across Europe.

A European Commission policy review presented in Brussels on 26 September identified research on Muslim languages and cultures; fieldwork on jihadist recruiting environments; and studies on the use of big data and social networks in terrorist activities as three areas where social sciences could make a difference.

The review was presented to a meeting of about 80 social scientists and officials, gathered to discuss how Horizon 2020 might modify its next set of work programmes, due next year, to contribute to a fuller understanding of violent extremism.

Something of a divide emerged between the policymakers, who want quick answers to security and surveillance questions, and the social scientists. "Political pressure tends to focus mostly on security issues," said Gilles Kepel, a political scientist at Sciences Po in Paris and co-author of the review. "Social sciences want to put this into a wider perspective."

Speakers also suggested that sociologists and political scientists would have to work hard to see their efforts translated into tangible results, and to overcome the political and public-opinion biases that shape the narrative around terrorism. Most agreed, however, that the social sciences could help policymakers understand some of the forces behind terrorism. "There is a lack of an evidence base," said Magnus Ranstorp, a terrorism specialist at the Swedish National Defence College.

The policy review was instigated last year by research commissioner Carlos Moedas, in an effort to show that the research directorate could contribute to the EU's broader response to terror attacks. It was lent greater impetus by terror attacks in Brussels and Nice earlier this year; and in June, a Commission communication set out improved law enforcement and counter-terrorism measures, as well research and education to tackle the issue.

One of the most important changes could be to give more attention to fieldwork studies, participants suggested. "We need to study the milieus in which

by **Laura Greenhalgh**

lgnews@ResearchResearch.com

radicalisation messages are encountered on an every-day basis," said Hilary Pilkington, a sociologist at the University of Manchester. This should involve studying the non-radicalised as well as the radicalised, she said.

Pilkington also warned researchers to ensure that their attention didn't turn into "another discursive weapon to beat already beleaguered communities".

"Communities already exposed to constant surveillance understand radicalisation research as complicit in the cycle of production of Islamophobia; and many social-scientists are sceptical that research can do anything but further stigmatise," she said.

"Radicalisation is interesting, but it's too narrow a dimension," said Kepel, citing investigations into the role of a lack of a father figure, and conversations with jihadis in prison, as examples of other important areas.

Discussions acknowledged the difficulty of translating findings into effective policy. "There's no quick fix, and it will always be difficult to have as nuanced a policy response as the research demands," said Sophia Eriksson Waterschoot, head of unit for Europe 2020 education and training at the Commission

One of the areas now gaining attention is the role of social media networks and YouTube in recruiting radicals, the event was told. But several researchers at the meeting voiced concerns that policymakers' focus on immediate security fixes would hinder exhaustive study of social issues surrounding terrorism. And Kepel highlighted lack of co-ordination between different branches of the social sciences as an ongoing problem.

The research directorate is hoping that its efforts through Horizon 2020, and the establishment of a Radicalisation Action Network to bring together social scientists and practitioners, will help frame the EU's wider policy response to terrorism. "More comparative and interdisciplinary research is certainly needed," director-general of research Robert-Jan Smits said.

Every new opportunity
for research funding
from every sponsor in
the EU, US & beyond

Independent news,
comment and analysis

*Research
Europe

Edited by Colin Macilwain
Europe@ResearchResearch.com
Tel: +44 20 7216 6500
Fax: +44 20 7216 6501
Unit 111, 134-146 Curtain Road, London EC2A 3AR

a *Research publication

Wrecking ball

Debris from the Brexit vote spreads far and wide

With this weekend's announcement by Theresa May, the UK prime minister, that she will invoke Article 50 by March, UK researchers' fears about their future participation in EU programmes have gone up another notch.

The damaging ramifications of the Brexit vote, however, reach far beyond those directly involved in the EU's projects and programmes.

Take the Unified Patent Court, for example, a painstakingly negotiated framework that, if it was ratified, would enable inventors and manufacturers to secure EU-wide patent rights at greatly reduced effort and cost.

It has, in effect, taken 40 years of stop-start negotiation to overcome formidable obstacles to establish such a framework. A plan finally agreed to in 2012, and now awaiting ratification, would allow patents to be filed in English, French and German, and adjudicated at newly established courts, serving different industry sectors, in London, Paris and Munich.

This compromise was achieved in the face of bitter opposition, not least from patent lawyers in those countries whose national languages are not represented. The largest of these countries, Italy and Spain, initially rejected the agreement because their respective languages were not granted equal status. Italy has since come round.

But Brexit threatens, in any case, to reduce the plan to dust. Some say that the UK may go ahead and ratify the Unified Patent Court agreement anyway, ahead of invoking Article 50. But that would entail buying into current and future EU law. Bristows, a prominent London law firm, says of the prospects of the UK ratifying the agreement: "It could in theory, but this seems politically highly unlikely. The UPC agreement includes a provision accepting the primacy of EU law. It seems unthinkable that the UK government could be seen to ratify such an arrangement in the present political climate in the UK."

The benefits to European competitiveness of a single patent have not been seriously questioned, from any political perspective. Everyone can see the advantages and, indeed, the pressing need for it. Its possible disintegration is just the latest addition to a long list of examples of collateral damage brought about by the Brexit vote. But few of these were given even cursory discussion in the run up to the UK's referendum.

That was because the main advocates of Brexit lacked seriousness in their approach. Their rank opportunism was clearly evident when they scrambled for cover, as the result was announced, rather than presenting coherent answers on what they wanted Brexit to look like.

Similar coalitions of malcontents are now campaigning for the election of an overgrown schoolyard bully as president of the United States, and even for Australia to forge a new approach to its foreign policy by quitting the United Nations.

These movements see democracy not so much as a set of solemn responsibilities, but rather as a series of childish pranks. Britain and the EU must now live with the consequences of the Brexit vote. But perhaps the larger question is whether that vote will be seen historically as an aberration—or as part of a wider revolt against not just globalisation, but international cooperation of any kind.

elsewhere

"Once the piece of wood is done, a new piece keeps replacing the guy on top. And the fire goes on."

A European diplomat compares the selection of the next United Nations secretary-general to a bonfire, as candidates move in and out of the running. The UN pledged that this year's selection process would use a new transparent system, but it's looking to be business as usual. *Politico*, 22/9/16.

"A piece of advice I've had is, if you are looking anywhere don't look at France because it's a nightmare."

A UK vice-chancellor confirms his institution wants to set up an EU campus to maintain access to Europe after Brexit—but says France is low on the list. *The Guardian*, 22/9/16.

"People don't go into this for money. We want a rewarding job that uses our passion for science. But that gets taken advantage of."

Gary McDowell, executive director of the Future of Research advocacy group, bemoans inequality in science after a salary survey reveals 29 medical researchers at the University of California earn over \$1 million—but postdocs less than \$50,000. *Nature*, 21/9/16.

"We spend 50 times more treating people who are sick than we invest in finding cures so people don't get sick. You'd only invest this way if you believed people would always suffer from disease."

Facebook chief executive Mark Zuckerberg outlines the priority he places on science as he announces \$3 billion for basic research to cure diseases. *Facebook*, 21/9/16.

"This election is a leap into the unknown [...] But it will certainly re-inject more politics into the Parliament engine."

Charles de Marçilly, head of the Brussels office of the Fondation Robert Schuman think tank, on the January 2017 election for the president of the European Parliament. *Politico*, 30/9/16.

decade

"Bias and outmoded practices governing academic success impeded their progress almost every step of the way."

Donna Shalala, chairwoman of a US national academies report committee, quantifies the extent to which women are disadvantaged in science.

Research Europe, 5 October 2006

what's going on

Single patent endangered by Brexit

The UK's Brexit referendum result could halt existing plans for the Unitary Patent Court and slow implementation of a cross-continent patent, national ministers have been told. A briefing paper, presented to ministers at a Competitiveness Council meeting on 29 September, acknowledged that the predicted timeline for the UPC to become operational "may have to be revisited", because of the UK's decision to leave the EU.

Academies call for recognition of 'reproducibility crisis'

Researchers should publicly acknowledge the reproducibility crisis in the biomedical sciences and implement changes to address it, the InterAcademy Partnership for Health, a global network of science academies, has said. In a position statement on 27 September, the group drew attention to a "growing unease" about the lack of reproducibility of much of the academic literature in the biomedical sciences.

Court rules against Commission on endocrine disruptors

The European Commission has failed to give acceptable reasons for refusing an environmental campaign group access to numerous papers on endocrine-disrupting chemicals, an EU court has ruled. The Commission said that its refusal was due to the necessity to protect its decision-making, and because there was a lack of public interest. But on 20 September, the European Court of Justice ruled that the Commission's decision be annulled.

Liberals push for more power for ombudsman

MEPs from the Alliance of Liberals and Democrats for Europe group have called for the European ombudsman Emily O'Reilly to be given greater power to investigate maladministration by the EU. As it stands, institutions can block the ombudsman's office from viewing documents on their activities. On 27 September, ALDE said that the ombudsman should be allowed access to all material.

Trade official to lead Horizon 2020 review

Pascal Lamy, a French businessman, former EU trade commissioner and director-general of the World Trade Organization, is to lead the expert group that will evaluate Horizon 2020 during 2017. Lamy's chairmanship of the group was announced by the European Commission on 22 September. Eleven further individuals will be selected in October to join the review group, out of 350 applications received, the Commission said.

Moedas wants better performance indicators

The EU research commissioner Carlos Moedas has called for new indicators to measure R&D performance and understand its impact on the economy. Established indicators such as R&D spending, numbers of researchers, scientific publications, citations and patents, are "no longer sufficient", Moedas said at an OECD meeting on data indicators for science and innovation policies in September.

Ex-commissioner to advise VW on environment

The former EU climate chief Connie Hedegaard has been named as a member of the Volkswagen Group's Sustainability Council, which will advise VW on sustainable transport, environmental protection and social responsibility. The car firm announced on 28 September that Hedegaard would join a nine-strong group, created following the high-profile diesel emissions scandal at VW.

europe

Deal could keep Switzerland in Horizon 2020

The Swiss parliament has adopted provisions meant to break an impasse in relations with the EU over immigration, in a move seen as a positive step for the country's future in Horizon 2020.

From 2017, Switzerland will lose its membership of Horizon 2020 unless it resolves a disagreement with the EU over freedom of movement. But on 21 September, its parliament voted in favour of a fix intended to encourage the recruitment of Swiss nationals to fill job vacancies, by advertising at local job centres before launching recruitment abroad.

The plan appears lenient enough to satisfy the EU's requirement to maintain free movement of people in exchange for access to the single market. "That the government wants to privilege Swiss employees on the job market is OK for me," European Commission president Jean-Claude Juncker told a press conference on 20 September following a meeting with the Swiss president.

But it remains to be seen if the plan will satisfy the anti-immigration sentiment that led Switzerland to vote to limit mass immigration in a February 2014 referendum. The right-wing People's Party (SVP) is expected to mobilise against the plan, which needs to pass Switzerland's upper house in December.

If the measures are approved, Switzerland will have time to ratify the Croatia protocol—needed to

by **Laura Greenhalgh**

lgnews@ResearchResearch.com

allow access to the newest EU member state—before a 9 February deadline, and regain full membership of Horizon 2020.

But if that deadline is missed, Swiss researchers will face several years with no access to EU research funding. This leaves them in limbo, right now, as to whether to progress applications. "Swiss researchers are very anxious to know if they will still be able to apply for European research funds," said Patrick Aebischer, president of the École Polytechnique Fédérale de Lausanne (EPFL).

The situation is being closely monitored in the UK because of the precedent it sets for Brexit negotiations. "The Swiss example makes it very clear, in real terms, that the EU is not going to cave in on freedom of movement," said Mike Galsworthy, leader of the Scientists for EU campaign group. "The EU is sticking to its principles."

Galsworthy said that he supported the Swiss solution because it illustrates that it is possible to maintain freedom of movement while at the same time considering the population's desire to find work.

"If the Swiss deal goes through, it shows a way to hold to greater principles while also taking care of local concerns," he said. "The UK government could follow that example."

UK exit from the EU set for 2019, May tells party

Theresa May, the UK's prime minister, has announced that the UK will leave the EU by spring 2019, creating uncertainty about the country's participation in Horizon 2020.

Previously, the lack of a specific timetable for Brexit left open the possibility that the UK could retain full access to Horizon 2020 until the programme ends. But at the Conservative Party conference in Birmingham on 2 October, May set a deadline of spring 2019 for the UK's departure—meaning the country will no longer be an EU member state in the final two years of the programme.

During her opening speech, May set out a firm timeline for the Brexit process, stating that she intended to invoke Article 50 of the Lisbon treaty in March 2017. May also indicated that she would take a hard line in the subsequent two-year negotiating period—stating that she would not seek to comply with EU requirements on immigration in exchange for a free trade deal. "Let me be clear, we are not leaving the EU today to give up control of immigration again," she told the conference.

Mike Galsworthy, programme director of the UK-based campaign group Scientists for EU, said that he was concerned by the developments. The UK government has given no guarantees to British researchers about their

by **Eleni Courea**

news@ResearchResearch.com

future in EU research after the Brexit date, he said—adding that complacency could lead to the UK becoming a much less attractive place for research.

However, Thomas Jørgensen, senior policy coordinator at the European University Association, said that he remained optimistic that the UK could still retain access to EU research for the duration of Horizon 2020. Since Horizon 2020 and Erasmus+ are not tied to membership of the single market, the UK could agree separate association agreements that would allow full access to the two funding programmes, he said.

Jørgensen added that the March 2017 date for the triggering of Article 50 was not unexpected—and said that he believed UK universities will remain attractive partners for collaboration even outside the EU framework. "We want to work with good universities wherever they are," he said.

But while top UK universities may be protected by their global reputation, Brexit will have a big impact on middle-band UK universities which are heavily dependent on EU funding and students, Galsworthy said.

Science advice ‘getting harder’

Politicians, officials and science advisers gathering in Brussels have said that it has become more difficult to make use of evidence in governance decisions.

The problems that governments need science to help them tackle—which span economic, environmental and social topics—don’t have straightforward answers, said Peter Gluckman, chairman of the International Network for Government Science Advice (Ingsa) at a conference on science and policymaking in Brussels on 29 September.

Vast increases in the amount and sources of available data are compounding this problem, attendees heard. “The job of scientific adviser has dramatically changed. It’s not any more about the answers, it’s about the process of collecting evidence in a multidisciplinary world,” EU research commissioner Carlos Moedas said.

The EU education commissioner Tibor Navracsics, who is responsible for the Joint Research Centre, the European Commission’s in-house science service, agreed, and said that processing evidence was part of the problem. “The volume of knowledge and the fragmentation of science into ever-narrower disciplines make it harder to make sense of,” he said.

Ingsa—which organised the event jointly with the

by Craig Nicholson

cnnews@ResearchResearch.com

Commission—is working on a set of principles to underpin science advice in this “complex, context-specific and changing” environment, Gluckman said. These are scheduled to be published at the World Science Forum in Jordan in 2017.

During his keynote speech, Moedas said that transparency is becoming increasingly important in the provision of science advice. “People are no longer willing to accept scientific advice on trust,” he said. “Scientific advice must go a step further and explain the evidence base.”

But Bernhard Url, executive director of the European Food Safety Authority, said that transparency alone was not enough—and that a framework was needed to determine how “independent” science has to be if it is used in decision-making. Efsa has been under scrutiny after it used industry research to deem the weedkiller glyphosate safe; its conclusions clashed with those of the International Agency for Research on Cancer.

“We’re not looking for ideal independence, but an agreed framework of independence in the bigger picture of governance of scientific advice,” said Url.

‘Billions wasted’ on unsuccessful EU applications

Low Horizon 2020 success rates have cost institutions up to €2.7 billion, the European University Association has found.

The EUA gave its upper estimate of the cost of unsuccessful applications to Horizon 2020 in a presentation at its Funding Forum in Porto, Portugal, on 6 and 7 October (see *View, page 7*). The figure was based on the first 100 Horizon 2020 calls, which the European Commission said received 31,115 proposals but funded only 4,315 projects.

If applicants spent €50,000 preparing each of the 26,800 unfunded proposals, the total cost for institutions, research organisations and companies was €1.34bn, the EUA observed. This figure is probably “in the right ballpark”, Thomas Estermann, the association’s director of funding, told *Research Europe*. However, it could have reached €2.7bn. “You will have projects for which the costs are even higher than €100,000, particularly in countries with high staff costs,” he said.

The figures were presented amid rising complaints about Horizon 2020’s low success rates, which stood at 14 per cent for the first 100 calls—compared with about 20 per cent for the previous Framework programme. “I think most universities are concerned,” said Tom Bowker, EU research and development manager at the University of Bristol in the UK. Some Horizon 2020

by Craig Nicholson

cnnews@ResearchResearch.com

instruments—such as the FET Open—have success rates as low as 2 per cent, as a result of which Bristol no longer encourages its researchers to apply, he said.

This has led to a waste of top ideas and has reduced academic motivation, Estermann said. He quoted a source from a Danish university saying that Horizon 2020 awards were “perceived as a lottery” because even proposals that scored 14.5 out of 15 in evaluations have not been funded.

The cost of unsuccessful applications could be reduced by increasing the use of two-stage calls and describing calls more clearly, the EUA said.

“In the good old days when success rates were around 20 per cent, this was not really an issue,” said Peter Fisch, a former head of unit in the Commission’s research directorate. But he added that a greater use of two-stage calls could encourage even more applications, and that a narrowing of call descriptions would also be undesirable. “Science needs freedom to flourish,” he said.

Estermann warned that high levels of competition meant that institutions devoting the most resources to research support were winning most of the funding. “There is an increasing differentiation between systems. That’s a big challenge for Europe.”

interview peter gluckman

Opening up

New Zealander Peter Gluckman tells **Craig Nicholson** about the challenges of advising governments, and what he thinks of the European approach.

Meeting in a backroom of the Joint Research Centre headquarters in Brussels, Peter Gluckman, New Zealand's chief scientific adviser, takes issue with his title. He prefers to consider himself an adviser on the use of science in policymaking, he says. "We're not giving the technical advice, but helping with its interpretation."

Gluckman, a paediatrician, was appointed CSA to the New Zealand prime minister in 2009, and by bringing an international outlook to his role he has since become a global ambassador for both his island state and the discipline of science advice.

Despite ever-growing recognition of the role of "evidence broker", the job is getting more challenging, he says. The evidence-based problems that governments now face fall into the realm of 'post-normal science'; a term coined by Jerry Ravetz and Silvio Funtowicz to describe a situation where facts are uncertain, values are in dispute, the stakes are high and decisions are needed urgently. "By and large, it's no longer about straightforward questions," Gluckman says.

To help his fellow science advisers face this new paradigm, in 2014 Gluckman took the helm of the International Network for Government Science Advice, set up by the International Council for Science.

Speaking the day before its first meeting as a fully formed entity in Brussels on 29-30 September, Gluckman says the network has "taken off like a rocket". The idea spiralled from an occasional forum for discussion to a broad, permanent entity, he says. Recently the network secured financial backing from the UK-based Wellcome Trust and its organisers signed a memorandum of understanding with Unesco to work on global capacity building.

Ingsa is developing a set of principles for science advice to be first outlined at the World Science Forum in Jordan next year. These must encompass a broad spectrum of scientific advice styles and needs, Gluckman says, covering advice for emergencies and long-term planning; at regional, national and transnational levels of government; and for countries at different levels of development.

"There are lots of dimensions to this; it's complicated and there's no single answer," he says. But a set of guidelines are urgently needed. "It's an important time in strengthening the relationship between the evidence communities and the policy communities."

The choice of Brussels to host the meet-

ing was appropriate given the discourse in Europe about science advice, Gluckman says. In 2011, the president of the Commission at the time, José Manuel Barroso, made Scottish biologist Anne Glover his CSA; in 2014, his successor Jean-Claude Juncker failed to renew the post. There has since been much talk about the amount of power Glover wielded (she said not much, while environment groups said too much) and the nature of the Scientific Advice Mechanism that was subsequently set up.

Gluckman believes that "form should follow function" in any arrangement for science advice. The Commission's needs differ from national governments' because the EU isn't responsible for urgent management of natural disasters or terrorist attacks, he says, reducing the need for emergency meetings with an individual CSA. "The need for acute advice is slightly different. I don't think president Juncker is making decisions on a day-to-day basis in the same way as a prime minister," he says.

But the EU is dealing with an existential crisis, after the UK voted, in June, to leave; and with member states seemingly unable to unite in a response to the migration crisis. Scientific advisers can't directly counter this rising disunity, Gluckman says; if they adopt a political agenda they will lose the trust of both politicians and the public. But they do have a role in helping governments find solutions to their perceived problems.

The rise of nationalist sentiment has followed a "hollowing out of the political discourse", Gluckman says—"not because there are fewer centrist people, necessarily, but because the changed nature of communication and information flows with social media gives greater weight to the extremes".

Science advisers can help both politicians and the public navigate these information flows, Gluckman says. They shouldn't buy into the narrative of 'post-truth politics', however, but instead acknowledge reality's complexity. "Science no longer claims to deal in truths or certainties: it increasingly deals with probabilities," he says.

As Ingsa continues to grow in the coming years, Gluckman says that CSAs must be nurtured to offer a nuance to the political arena that the wider body of science struggles to find. "The science community wants us to be arrogant, and wants us to follow a formula: 'This is what we know, therefore this is what we must do'."

"If we're honest, most of the science that governments are using is incomplete and to some extent ambiguous," he says. "Academies tend not to reflect these dimensions." *More to say? Email comment@ResearchResearch.com*

'Science no longer claims to deal in truths or certainties: it increasingly deals with probabilities.'

thomas estermann **view from the top**

University survey shows falling funds and rising pressures

Europe's universities are feeling the heat. Public investment is falling, but universities are expected to do more. Universities are increasingly expected to show and quantify their contributions to society, and are playing their part in addressing Europe's challenges, including youth unemployment, social and economic crises, and unprecedented migration flows.

At a national level, capital funding and investment in infrastructure for universities are decreasing. Costs are passed on to students, while student aid is declining. Meanwhile, layoffs and hiring freezes are on the rise.

The European University Association's data, compiled through the 2016 Public Funding Observatory survey that covers 30 countries, reveals that although public funding to universities increased in 11 countries between 2008 and 2015, rising enrolment has led funding per student to fall in seven of these. Meanwhile, public funding has fallen in 13 systems; in seven of these, student numbers have grown.

In other words, almost all of Europe's higher education systems are under strain. The Public Funding Observatory also showed widening funding gaps between national systems, creating a huge challenge for the EU's goal in creating unified European higher education and research areas.

Tight national funding means more competition for EU funds. Some countries expect European money to fill the holes in national funding. However, EUA analysis shows that this is not the case. Universities with a better national funding base have higher success rates than those with low or declining budgets.

Horizon 2020 provides high added value, but suffers from oversubscription. As a result, many highly rated proposals are left unfunded. In an EUA consultation on the programme, many of the 200 respondents noted falling success rates due to rising competition.

In addition, EU funding itself is under threat. More than €2 billion was diverted from Horizon 2020 in 2015. While the European Commission has announced a small increase for the programme, this does not make up for the cuts, nor will it significantly increase the success rate—the lowest of any Framework programme so far.

In his State of the Union speech, Commission president Jean-Claude Juncker focused on growth, jobs and

the situation of young Europeans. However, he did not once mention research, innovation or higher education and their role in creating growth and possibilities.

Instead, the Commission proposed to enlarge and prolong the European Fund for Strategic Investments, which diverted funds away from Horizon 2020 last year. An EUA study found that Efsi has failed to fund innovative projects or bring universities and industry closer together, as originally promised.

Rather than putting money into loan instruments such as Efsi, the EU should dramatically increase grant programmes such as Horizon 2020 and Erasmus+. Grants show a high return on investment: they trigger research and development spending, contribute to growth, create jobs and foster collaboration and student and staff mobility.

Horizon 2020 is effective but inefficient. The solutions require action from universities and from national and European funders. First, higher education institutions need to develop coherent strategies for winning European funding, develop their internal support systems, and only submit their strongest proposals.

National funders need to calculate the real costs of Horizon 2020 participation. The EUA estimates that preparing proposals, successful and otherwise, has cost 30-50 per cent of the funding allocated so far. National funders need to identify inefficiencies and find solutions—by, for example, setting up funds to support unsuccessful top proposals. This would stop money spent on proposals being wasted, support institutions in their strategic development, and boost national funding for universities.

The EU should also work on reducing the cost of applications. Simplification is key, and while some progress has been made, EUA survey respondents still report too much red tape, especially in cost accounting, calculation of personnel costs and time sheets. The most effective simplification measure would be for the Commission to accept nationally recognised costing and accounting procedures.

The pressure on Europe's universities can be eased, but this requires real and coordinated change, now. Without this, the continent risks failing to resolve its challenges and maintain its competitiveness, while potentially groundbreaking ideas go to waste or go elsewhere. The EUA, therefore, calls on all decision-makers to work to provide sustainable, sufficient and simple funding for Europe's universities.

Something to add? Email comment@ResearchResearch.com

Thomas Estermann is director of governance, funding and public policy development at the European University Association. The 3rd EUA Funding Forum takes place on 6-7 October at the University of Porto in Portugal.

'Almost all of Europe's higher education systems are under strain.'

view olmos-peñuela & benneworth

Make knowledge transfer about the reservoir, not the spigot

Policymakers increasingly want science funding to deliver excellent research that also yields a benefit to society. This trend has created a vision of the ideal scientist in the form of a researcher engaged in entrepreneurial science, creating excellent knowledge and transferring it into the market through spin-offs, patents, licensing and contract deals.

This emerging vision is coming to dominate scientists' horizons because it has become directly associated with access to funding, and so with career prospects. But this singular notion of "the excellent scientist" creates too narrow a view of how research can benefit society, because it focuses on the last link in the knowledge chain.

Science is a progressive effort where many researchers contribute to a collective reservoir of knowledge. Without that reservoir, the entrepreneurial scientist would never be able to perform the final, most visible act.

Surely, then, science and policy should focus more on understanding all the stages of the chain that support and lead up to the entrepreneurial act, rather than just rewarding and encouraging the last scientist. Maximising the growth of the reservoir is at least as important to getting the best social returns as encouraging high-profile entrepreneurial behaviour.

What's not known, however, is what distinguishes the knowledge in this reservoir with high potential impact. And without knowing how such knowledge is created, policymakers are in no position to maximise it.

An important characteristic of useful knowledge is that it fits with the way people outside academia understand their needs. Knowledge that is accessible to consumers will be easier to apply, and from society's perspective represents a better resource for future research.

One way for academics to make their knowledge more accessible is to incorporate user knowledge into the research process. If we could detect and characterise the

researchers who are open in this way, then we would better understand those more likely to produce knowledge relevant to society, and help to maximise the reservoir of useful knowledge.

Our research team has sought to do just this. Using the Impacto database—which contains data on how 1,500 researchers at the Spanish National Research Council engage with users—we examined the characteristics most associated with open researchers.

Personal characteristics included age,

gender, seniority and working conditions such as salary and job security; professional characteristics covered disciplinary affiliation, multidisciplinary and connections beyond academia. We divided the research process into five kinds of activities, from reflection to dissemination, and defined open researchers as those who had taken account of user needs, or included user input, in at least three of their research activities. This category corresponded to about a quarter of the overall sample.

We were surprised to find that personal characteristics are not significantly correlated with openness. Researchers in the social sciences and humanities are also just as likely to be open as those working in science, technology, engineering and mathematics.

The most open researchers, though, do share other professional characteristics. They tend to use formal interaction channels, such as patents, licences and contracts, rather than informal links. They are engaged with external agents, including companies, non-governmental and international organisations. They are more likely to work on interdisciplinary problems, showing a general receptivity to outside influences, and they tend to be in fields that are experiencing greater pressure to contribute to societal problems.

Our findings suggest that we need to move beyond a one-size-fits-all picture of the entrepreneurial scientist if we want to better understand what kinds of researchers are laying the foundations of useful research. Most importantly, these scientists are well-connected, not just to users in wider society but also to other disciplines and perspectives. They are active in research communities that incorporate users and are doing research that speaks beyond the boundaries of their own discipline.

If policymakers want to maximise the benefits of research for their society, they should create incentives for researchers to be more open in their work and not restrict those incentives to the final activities of the process. Policies should encourage academics to incorporate more external knowledge in their research, and recognition should be given for building channels to other groups that will help the eventual uptake of knowledge.

More to say? Email comment@ResearchResearch.com

Julia Olmos-Peñuela is in the department of management at the University of Valencia and at the INGENIO (CSIC-UPV) research institute, Valencia. Paul Benneworth is in the Center for Higher Education Policy Studies at the University of Twente. See also Science and Public Policy doi: 10.1093/scipol/scw016

'We need to move beyond a one-size-fits-all picture of the entrepreneurial scientist.'

funding opportunities

Research Europe
6 October 2016

every new opportunity every discipline

highlights

EU creative projects

The Directorate-General for Education and Culture, through its Creative Europe programme, invites applications for its European cooperation grants. Grants are worth up to €2 million [7].

EU H2020 inequality

The European Commission Horizon 2020: Societal Challenges invites proposals for its call on reversing inequalities and promoting fairness. The total budget is €9.5 million [9].

Technology collaboration

The Swedish Energy Agency and the International Energy Agency invite proposals for their IEA technology collaboration programme on district heating and cooling including combined heat and power. The budget is USD 700,000 (€620,000). Grants are worth up to USD 200,000 [13].

EU green economy

The Interreg IVA 2 Mers Seas Zeeën Programme invites applications for its third call for proposals. The total budget is €241 million [14].

Finance fellowships

The Bank of England invites applications for the Houblon-Norman and George fellowships. The total budget is £120,000 (€140,000) per year [46].

deadlines

Opportunities from previous issues of *Research Europe*, listed by closing date. European Commission and associated funders marked **EU**.

Each entry is followed by a Web id

October

14 EU Directorate-General for Agriculture and Rural Development study on risk management in EU agriculture *1191650*

EU EUREKA Celtic-Plus call for proposals *1158474*

FR Mercator Ocean design and execution of research and development *1191396*

UK Science and Technology Facilities Council Rutherford international fellowship programme *1186490*

CH World Health Organisation global polio eradication initiative call for proposals *1158074*

15 **CH** CERN fellowships for non-member state theoretical physicists *259954*

TW Chiang Ching-kuo Foundation for International Scholarly Exchange *1191723*

TW Chiang Ching-kuo Foundation for International Scholarly Exchange database grants *1181479*

TW Chiang Ching-Kuo Foundation for International Scholarly Exchange research grants – European region *257819*

EU Directorate-General for Mobility and Transport programme support action under the connecting Europe facility in the field of trans-European transport network *1190657*

CH European Respiratory Society clinical research collaboration *1188591*

SE Fredrika Bremer Association scholarships for women *1184657*

EU Horizon 2020: Societal Challenges H2020-CO-CREATION-2016 co-creation for growth and inclusion – topics 2 and 3 *1184873*

FR International Union for Quaternary Research skills enhancement grants *1169710*

FR International Union for Quaternary Research international focus groups grants *1169707*

FR International Union for Quaternary Research project grants *260069*

DE Leibniz Institute of European History postdoctoral fellowships *1161882*

NZ New Zealand Ministry for Culture and Heritage History Research Trust Fund *191031*

SE Knut and Alice Wallenberg foundation postdoctoral programme for foreign guest researchers grant *1174377*

FR UNESCO international geoscience programme young scientist projects *204178*

IT Unicredit Foundation/ European Money and Finance Forum/Uni-Credit and Universities Foundation research prize *1190929*

16 **NL** Network for Studies on Pensions, Aging and Retirement thesis awards *1170559*

17 **EU** Committee of the Regions of the European Union multiple framework contract for studies in the fields of agriculture, health and maritime policy *1191531*

EU European Space Agency Rexus and Bexus rocket and balloon experiments *1160890*

CA Quebec Health Research Fund postdoctoral training grants for applicants living outside of Québec *1174617*

18 **EU** Directorate-General for Migration and Home Affairs supporting initiatives in the field of drugs policy *1190632*

EU ERA-Net European Research Network on Illicit Drugst second joint call – society and response to drug use *1179773*

EU Horizon 2020: Excellent Science H2020 ERC-2017-STG ERC starting grants *1191089*

EU Horizon 2020: Industrial Leadership H2020-INNOSUP-2016-2017 for a better innovation support to SMEs – topic 5 *1186208*

UK Royal Society international exchanges scheme standard programme *1162434*

20 **FR** Fyssen Foundation research grants *205141*

21 **EU** Directorate-General for Mobility and Transport study on the safety level of specific stability requirements for ro-ro passenger ships *1191224*

UK Kay Kendall Leukaemia Fund junior research fellowships *172146*

24 **DE** Helmholtz Association Helmholtz international fellow award *1178621*

BE King Baudouin Foundation Ernest Solvay fund for projects for individuals *1173781*

BE King Baudouin Foundation Ernest Solvay fund for projects for organisations *1173782*

europa

EU regional governance

The Committee of the Regions of the European Union invites tenders for the following contracts:

- studies in the fields of constitutional affairs, multilevel governance and devolution, worth €600,000 over 12 months.

Web id: 1191839

- studies in the fields of environment, climate change, energy and space policy, worth up to €400,000 over 12 months.

Web id: 1191887

Email: cor-marches-publics@cor.europa.eu

Deadline: 20 October 2016 [2]

EU information technology

The Directorate-General for Competition invites tenders for the provision of consultancy services on technical, economic and legal matters in the context of information and communications technology and media competition cases. The contract is worth €2.8 million over 48 months.

Web id: 1191859

Email: comp-c-mail@ec.europa.eu

Deadline: 28 October 2016 [3]

EU green economy 1

The Directorate-General for the Environment invites tenders for a pilot project for fostering a green circular economy in Europe through capacity building, networking and exchanges of innovative solutions and bridging the green innovations gap. The tenderer will facilitate knowledge transfer and exchange of innovative best practices and develop capacity and innovation potential for SMEs to develop eco-innovative solutions and seize new opportunities in the green circular economy. The contract is worth €1 million over 24 months.

Web id: 1191874

Email: env-tenders@ec.europa.eu

Deadline: 28 October 2016 [4]

EU next generation internet

Directorate-General for Communications Networks, Content and Technology invites tenders for a study on next generation internet 2025. The tenderer will support the definition phase of the next generation internet initiative including developing a concept for a new research and innovation initiative. The contract is worth up to €300,000.

Web id: 1192013

Email: cnect-r2-eoi@ec.europa.eu

Deadline: 31 October 2016 [5]

EU Eureka innovation award

Eureka invites proposals for its innovation award. This recognises candidates that have finalised a Eureka project between 1 January 2013 and 31 December 2015. Three winners will receive €6,000 each and participate in a contest for best project pitch, which will be awarded €2,000. The three winners will also be offered a pan-European promotion package worth €10,000.

Web id: 1186865

Email: award@eurekanetwork.org

Deadline: 4 November 2016 [6]

Online Funding Search

For full details of every funding opportunity, visit
www.ResearchProfessional.com

Online subscribers can view full details of any funding opportunity by simply searching for the Web id number as free text in a funding search.

Funding search

Free text: 1234567 x

Search

NOT TO BE
PHOTOCOPIED

For subscriptions call +44 20 7216 6500

EU creative projects

The Directorate-General for Education and Culture, through its Creative Europe programme, invites applications for its European cooperation grants. These support the capacity of the European cultural and creative sectors to operate internationally, and to promote the transnational circulation and mobility of works. Grants are worth up to €2 million.

Web id: 1177060

Email: eacea-creative-europe-cooperationprojects@ec.europa.eu

Deadline: 23 November 2016 [7]

EU digital Europe

The Innovation & Networks Executive Agency invites proposals for the Connecting Europe facility telecom initiative - third call. This supports projects of common interest that will contribute to increasing interoperability, connectivity and deployment of trans-European digital infrastructures across the EU.

Web id: 1191901

Email: inacef-telecom-calls@ec.europa.eu

Deadline: 15 December 2016 [8]

EU H2020 reversing inequality

The European Commission Horizon 2020: Societal Challenges invites proposals, under the Europe in a changing world – inclusive, innovative and reflective societies work programme, for its H2020-SC6-REV-INEQUAL-2017 call on reversing inequalities and promoting fairness. This supports actions on reversing inequalities and promoting fairness. The total budget is €9.5 million.

Web id: 1184879

Deadline: 2 February 2017 [9]

Retinal diseases research

The King Baudouin Foundation invites applications for the John W Mouton pro retina grant. This recognises research related to the pathologies of the retina. The grant is worth up to €20,000.

Web id: 1180356

Email: tseyen.a@kbs-frb.be

Deadline: 8 February 2017 [10]

Veterinary dermatology

The European Society of Veterinary Dermatology invites applications for its research grants. These support basic or clinical research in veterinary dermatology. Grants range from €5,000 to €15,000.

Web id: 209592

Email: publications-grants@esvd.org

Deadline: 1 April 2017 [11]

Maritime law scholarships

Nordisk Skibsrederforening, under the Kristian Gerhard Jebsen og Janzen Fund, invites applications for its maritime law scholarships. These enable Finnish, Swedish or Norwegian lawyers to acquire improved qualifications for practising maritime law through academic research or practical legal experience outside the Nordic countries. Scholarships are worth up to NOK 300,000 (€33,000) each.

Web id: 1165020

Email: post@nordisk.no

Deadline: 31 January 2017 [12]

Technology collaboration

The Swedish Energy Agency and the International Energy Agency invite proposals for their IEA technology collaboration

programme on district heating and cooling including combined heat and power – Annex XII. This supports studies, applied research, experimental investigations and projects related to district energy practice. The total budget is USD 700,000 (€620,000). Grants range from USD 100,000 to USD 200,000.

Web id: 1191927

Email: iead-dhc@agfw.de

Deadline: 15 February 2017 [13]

EU green economy 2

The Interreg IVA 2 Mers Seas Zeeën Programme invites applications for its third call for proposals. This aims to develop an innovative, knowledge and research based, as well as sustainable and inclusive, two seas area, where the natural resources are protected and green economy is promoted. The total budget is €241 million.

Web id: 1183457

Email: contact@interreg2seas.eu

Deadline: 28 October 2016 [14]

EU human spaceflight

The European Space Agency invites applications for its call for proposals using the human spaceflight analogue parabolic flight. This supports cooperative research that requires various reduced gravity levels in addition to microgravity conditions.

Web id: 1191988

Email: partialg@esa.int

Deadline: 2 December 2016 [15]

EU Baltic Sea region

Interreg Baltic Sea Region invites draft applications for its seed money call. This supports the preparation of projects in line with the action plan of the EU strategy for the Baltic Sea region. Grants are worth €50,000 each.

Web id: 1190479

Email: marina.kislyak@interreg-baltic.eu

Deadline: 28 October 2016 [17]

Swedish doctoral studies

The Swedish Women's Educational Association invites applications for its international scholarship. This supports PhD research on Swedish language, literature and society. The scholarship is worth USD 10,000 (€8,900).

Web id: 207937

Email: frankfurt@swea.org

Deadline: 4 January 2017 [18]

Concepts for conferences

The Volkswagen Foundation invites outline proposals for its Herrenhausen Conferences. These support conferences that address scientific issues characterised by actuality, social relevance, and potential for innovation. Grants are worth up to €100,000.

Web id: 1185811

Email: ebeling@volkswagenstiftung.de

Deadline: 9 January 2017 [19]

EU biotechnology research

ERA-Net EuroTransBio invites applications for its transnational call. This aims to enhance the competitive capacity of Europe's biotechnology industry by supporting SMEs and their strategic partnerships.

Web id: 1160924

Email: etboffice@fz-juelich.de

Deadline: 31 January 2017 [20]

History fellowships

The Herzog August Bibliothek invites applications for its postdoctoral fellowships. These support research in the areas of medieval and early modern cultural history at the library. Fellowships are worth between €3,600 and €21,600.

Web id: 1161760

Email: forschung@hab.de

Deadline: 31 January 2017 [21]

Weimar awards

The Klassik Stiftung Weimar invites applications for its postdoctoral awards. These support postdoctoral researchers who wish to use the Weimar collections for their research work. Funding is worth €1,500 per month for up to six months.

Web id: 1161724

Email: angela.jahn@klassik-stiftung.de

Deadline: 31 January 2017 [22]

Molecular biology prize

The European Molecular Biology Organisation invites nominations for its gold medal. This recognises a scientist and their contributions to the life sciences in Europe. The prize is worth €10,000.

Web id: 206979

Email: goldmedal@embo.org

Deadline: 1 February 2017 [23]

European history research

The Leibniz Institute of European History invites applications for its doctoral scholarships. These support research into the religious, political, social or cultural history of Europe between about 1450 and about 1970 at the Leibniz Institute in Mainz, Germany. Scholarships are worth up to €14,400.

Web id: 1161881

Email: ieg3@ieg-mainz.de

Deadline: 1 February 2017 [24]

District heating and cooling

The International Energy Agency invites proposals for its technology collaboration programme on district heating and cooling programme including combined heat and power. This supports projects on the design, performance and operation of centralised heating and cooling generation, distribution systems and consumer installations. Funding is worth between USD 100,000 (€8,900) and USD 200,000.

Web id: 1176661

Email: iea-dhc@agfw.de

Deadline: 15 February 2017 [25]

EU skin permeation

The European Food Safety Authority invites tenders for applicability of in silico tools for the evaluation of the prediction of dermal absorption for pesticides. The contract is worth €250,000 over 12 months.

Web id: 1191963

Email: efsaprocedurement@efsa.europa.eu

Deadline: 31 October 2016 [28]

EU environment research

Era-Planet invites proposals for its joint transnational call. This supports transnational research on smart cities and resilient societies, resource efficiency and environmental management, global changes and environmental treaties, or polar areas and natural resources. The total budget is €52.3 million.

Web id: 1191854

Email: pironne@iia.cnr.it

Deadline: 13 November 2016 [29]

Luxembourg research grants

The National Research Fund Luxembourg invites applications for its ATTRACT programme. This enables research institutions in Luxembourg to expand their competencies in strategic research areas by attracting young researchers to Luxembourg. Grants are worth up to €2 million each.

Web id: 208283

Email: ulrike.kohl@fnr.lu

Deadline: 8 December 2016 [30]

Statistics prize

The International Statistical Institute invites applications for the Karl Pearson prize. This recognises a research contribution that has had influence on statistical theory, methodology, practice or applications. The prize comprises €5,000 and travel support to attend the World Statistics Congress.

Web id: 1175092

Deadline: 15 November 2016 [31]

Innovative workshops

The Lorentz Center, with funding from the Netherlands Organisation for Scientific Research (NWO), invites proposals for the Lorentz Center workshops fund. Funding enables researchers to organise workshops at the centre to stimulate innovative research, and to focus on new collaborations and interactions. The total budget is €700,000.

Web id: 1158115

Email: jensenius@lorentzcenter

Deadline: 15 January 2017 [32]

Nature protection grants

The Van Tienhoven Foundation for International Nature Protection invites applications for its grants. These support actions that lead to change in policy and practice in the promotion of protection, conservation and sustainable use of ecosystems and their living organisms outside the Netherlands. Grants are worth up to €10,000 each.

Web id: 1173598

Email: applications@vantienhovenfoundation.com

Deadline: 15 February 2017 [33]

Microbiology award

The Federation of European Microbiological Societies invites applications for the FEMS-Jensen award. This recognises academic achievement showing potential to develop a research career in microbiology. The award is worth up to €10,000.

Web id: 1191508

Email: fems@fems-microbiology.org

Deadline: 1 March 2017 [34]

Eastern Europe funding

The International Visegrad Fund invites applications for its strategic grants. These support long-term projects relevant to Visegrad group countries that link entities in all of them. Funding has no upper limit, grants are worth €40,000 on average.

Web id: 1172140

Deadline: 15 April 2017 [36]

Clinical physics

The Nordic Association for Clinical Physics and Elekta invite application for their grant. This supports clinically working physicists in the field of radiation therapy and encourages research in the field. The grant is worth €3,500.

Web id: 1169955**Email:** anders.tingberg@med.lu.se**Deadline:** 1 November 2016 [37]**Robotics and automation**

Robotdalen invites applications for its innovation award. This recognises ideas, concepts or solutions with commercial potential and technology related to robotics and automation. The awards are worth SEK 100,000 (€10,400) each.

Web id: 1171259**Email:** klas.larsson@robotdalen.se**Deadline:** 1 November 2016 [38]**Steel research prize**

SSAB invites nominations for the international Swedish steel prize. This can be awarded for any product in which high-strength structural steel, wear plate or tool steel has contributed to an innovative design which gives clear benefits. The prize is worth SEK 100,000 (€10,400).

Web id: 201551**Email:** anna.rutkvist@ssab.com**Deadline:** 1 February 2017 [39]**Integration and cooperation**

Botnia-Atlantica invites project proposals for the Botnia-Atlantica programme. This aims to overcome challenges that are characteristic for the programme area and to contribute to increased capacity for innovation, strengthened business sector, developed natural and cultural heritage and improved communications in east-west direction.

Web id: 1170735**Email:** info@botnia-atlantica.eu**Deadline:** 13 March 2017 [40]**Insurance research**

The Geneva Association invites submissions for its research grant. This supports research in the field of risk and insurance economics. The grant is worth CHF 10,000 (€9,200) over 10 months.

Web id: 159044**Email:** secretariat@geneva

association.org

Deadline: 9 December 2016 [41]**Medical education**

The European Respiratory Society invites applications for its medical education grant. This facilitates training and continuing medical education in the field of respiratory medicine. A total of €35,000 is available for one or numerous projects.

Web id: 1191428**Email:** education@ersnet.org**Deadline:** 1 February 2017 [42]**Global insurance issues**

The Geneva Association and the International Insurance Society invite submissions for the Shin research excellence award. This recognises papers in the field of applied insurance and risk management research that address issues of concern to global insurance executives. The award is worth up to USD 5,000 (€4,400).

Web id: 1191892**Email:** secretariat@geneva

association.org

Deadline: 1 February 2017 [43]**Postgraduate studies grants**

The Zeno Karl Schindler Foundation invites applications for its summer school grants. These enable American and European students to study at a Swiss

university or Swiss students to study at an American or European university during summer. Grants include a monthly stipend of CHF 1,600 (€1,500) and return travel.

Web id: 1171406**Email:** info@zenokarlschindler

-foundation.ch

Deadline: 15 March 2017 [44]**Higher temperatures**

The Department for International Development invites tenders for a study on value for money adaptation to the labour productivity impacts of higher temperatures in the Department's priority countries. The tenderer will develop an understanding of how higher temperatures will affect labour supply and labour productivity and of cost-effective measures countries could take to address these impacts. Funding is worth up to £50,000 (€58,000).

Web id: 1191907**Email:** j-beynon@dfid.gov.uk**Deadline:** 24 October 2016 [45]**Finance fellowships**

The Bank of England invites applications for the Houlblon-Norman and George fellowships. These fund research into the function of financial business institutions, and the economic conditions affecting them. The total budget is £120,000 (€140,000) per year.

Web id: 207896**Email:** ma-hngfund@bankofengland.

co.uk

Deadline: 30 October 2016 [46]**Library residence**

Gladstone's Library invites applications for its scholarships. These are for periods of residential research using the library's resources. Awards cover the use of the library and the cost of residence for a period of one or two weeks.

Web id: 205838**Email:** leigh-ann.hills@gladlib.org**Deadline:** 1 November 2016 [47]**Highway design**

Highways England invites tenders for its design services contract for the South West highways. The tenderer will prepare technical designs and undertake supporting work for capital renewal projects and improvements from an initial scheme feasibility phase through to the end of construction phase.

Web id: 1191971**Email:** psw.ops@highwaysengland.co.uk**Deadline:** 4 November 2016 [48]**Biology grants**

The Company of Biologists invites applications for its scientific meeting grants. These support the hosting of meetings, workshops and conferences within the field of biology. Grants are generally worth from £2,000 to £6,000.

Web id: 1173309**Email:** charity@biologists.com**Deadline:** 19 December 2016 [49]**Endocrinology training**

The European Society of Endocrinology invites applications for its international endocrine scholars programme. This enables young endocrinologists to gain training experience in a laboratory for two to three years. Scholars receive a bursary worth €3,000 to cover visits to

potential host laboratories, three years' free society membership, and they are invited to the society's annual meeting with travels and accommodation covered.

Web id: 1165727**Email:** info@euro-endo.org**Deadline:** 14 January 2017 [50]**Endangered languages**

The Hans Rausing Endangered Languages Project invites applications for the following opportunities:

- individual graduate scholarship, covering direct living costs over one to three years. **Web id:** 213836

- individual postdoctoral fellowships, worth up to £150,000 (€173,000) for up to two years. **Web id:** 253150

- major documentation project, worth up to £150,000 for between six and 36 months. **Web id:** 253146

- small grants, worth up to £10,000 for between six and 12 months.

Web id: 213840**Email:** eldp@soas.ac.uk**Deadline:** 15 January 2017 [54]**Biochemistry awards**

The Biochemical Society invites nominations for its centenary award. This recognises a biochemist from any part of the world. The award is worth £3,000 (€3,500).

Web id: 1161323**Email:** rowena.mitchell@

biochemistry.org

Deadline: 31 January 2017 [55]**Forensic science scholarship**

The Forensic Science Society invites applications for its research scholarship. This supports research based on scientific methods in the fields of forensic science, criminal justice, forensic science policy and practice, forensic medicine or crime investigation. The scholarship is worth up to £3,000 (€3,500) per year for up to three years.

Web id: 210581**Email:** info@csofs.org**Deadline:** 31 January 2017 [56]**Art and architectural history**

The Paul Mellon Centre for Studies in British Art invites applications for its junior fellowships. These enable doctoral scholars to pursue further studies related to British art and architectural history in the UK, to be based at the centre. Four fellowships, worth £7,500 (€8,700) each over three months, are available.

Web id: 202247**Deadline:** 31 January 2017 [57]**Archaeology fellowship**

The School of Advanced Study's Institute of Classical Studies invites applications for the AD Trendall fellowship. This enables a scholar whose research interests are in southern Italian archaeology and history, or in art history, to spend a minimum of six weeks at the institute and deliver a lecture. The fellowship is worth £5,000 (€5,800).

Web id: 1191009**Email:** director.ics@sas.ac.uk**Deadline:** 31 January 2017 [58]**Antimicrobial chemotherapy**

The British Society for Antimicrobial Chemotherapy invites applications for the following opportunities:

- overseas scholarship, including a monthly grant of £1,250 (€1,400), and a monthly consumables grant of £600 for the host department. **Web id:** 209808

- project grants, worth up to £15,000 for projects of up to one year duration.

Web id: 209801**Email:** grants@bsac.org.uk**Deadline:** 28 February 2017 [60]**Japanese studies fellowships**

The Sainsbury Institute for the Study of Japanese Arts and Cultures invites applications for the Robert and Lisa Sainsbury fellowships. These provide recipients with an opportunity to work in a scholarly environment conducive to the completion of a publication project. Fellowships are worth up to £23,500 (€27,000).

Web id: 209367**Email:** sisjac@sainsbury-institute.org**Deadline:** 28 February 2017 [61]**rest of world****Natural science prizes**

The Dan David Foundation invites nominations for the Dan David prizes. These recognise and encourage innovative and interdisciplinary research that cuts across traditional boundaries and paradigms within the fields of archaeology and natural sciences, literature and astronomy. Three prizes, worth USD 1 million (€890,000) each, are available.

Web id: 204688**Email:** ddprize@post.tau.ac.il**Deadline:** 30 November 2016 [67]**Israeli fellowships**

The Lady Davis Fellowship Trust invites applications for the following opportunities:

- graduate fellowships at the Technion Institute, worth up to USD 12,000 (€14,000) and a return ticket, for between a semester and one year with a possibility of extension.

Web id: 192788

- postdoctoral fellowships, worth up to USD 15,000 for one year with the possibility of extension, plus a housing allowance of USD 100 and a return airline ticket.

Web id: 192789

- visiting professor fellowships at Technion Institute, worth up to USD 21,600 for up to nine months, plus a monthly housing allowance of USD 100, plus one return airline ticket. **Web id:** 192790

- visiting professorships at the Hebrew University in Israel, worth between USD 2,250 and USD 2,650 per month, plus a return flight and half of the medical insurance. **Web id:** 185087

Deadline: 30 November 2016 [71]**Chinese studies fellowships**

The Chiang Ching-kuo Foundation for International Scholarly Exchange invites applications for its fellowships for PhD dissertation and postdoctoral research. These support PhD students to complete their dissertation in Chinese studies and postdoctoral fellows to conduct research in Chinese studies. Grants are worth up to €15,000 and €21,000 respectively.

Web id: 1191730**Email:** maggielin@cckf.org.tw**Deadline:** 15 January 2017 [72]

tenders

Solar simulator *ESA

The European Space Agency invites tenders for the procurement of a large area solar simulator flasher for four junction solar cell devices. The tenderer will carry out the procurement of a pulsed solar simulator for the measurement of space solar panels based on European present state of the art four junction solar cells. The activity should include the manufacturing of the pulsed solar simulator. The contract is worth between €100,000 and €200,000. Ref: 16.1EP.01.

Deadline: 31 October 2016

De-orbiting devices *ESA

The European Space Agency invites tenders for a study on the environmental aspects of passive de-orbiting devices. The tenderer will carry out a study on the environmental aspects of passive de-orbiting devices, using flux prediction and vulnerability modelling approaches. The contract is worth between €200,000 and €500,000. Ref: 16.197.16.

Deadline: 4 November 2016

Directorates *ESA

The European Space Agency invites tenders for specification for certification of ESA directorates. The tenderer will perform the surveillance and recommendation activity necessary to maintain the certification against the applicable standard requirements of the Earth observations programmes directorate quality management certification. The contract is worth between €100,000 and €200,000. Ref: 16.10Q.05.

Deadline: 4 November 2016

Particle background *ESA

The European Space Agency invites tenders for an experimental evaluation of advanced telescope for high-energy astrophysics charged particle background from secondary radiation and scattering in optics. The tenderer will use accelerator facilities to quantify the physical models and cross sections for high energy charged particle secondary production. The contract is worth at least €500,000. Ref: 16.1EE.03.

Deadline: 8 November 2016

Satellite technology *ESA

The European Space Agency invites tenders for the provision of inter-satellite links technology. The tenderer will carry out the development and qualification of inter-satellite link critical units, for consideration under Galileo second generation. The contract is worth at least €500,000. Ref: 16.154.19.

Deadline: 14 November 2016

Satellite integration *ESA

The European Space Agency invites tenders for the provision of a demonstrator for satellite-terrestrial integration in the 5G context. The tenderer will design and build a large-scale real-time live 5G integrated satellite-terrestrial network proof-of-concept that enables the satellite terrestrial convergence into the 5G context. The contract is worth at least €500,000. Ref: 16.1TT.01.

Deadline: 29 March 2017

*ESA is at: <http://emits.esa.int>

usa

Institute for Aegean Prehistory publication team support

Web id: 1169667

No deadline [79]

Saint Louis University National Endowment for the Humanities research fellowships

Web id: 257623

No deadline [80]

US Department of Agriculture postdoctoral research opportunity – crop physiology

Web id: 1186588

No deadline [81]

Oxalosis and Hyperoxaluria Foundation research grants

Web id: 213331

Deadline: 1 November 2016 [82]

Society for American Music Adrienne Fried Block fellowship

Web id: 1191841

Deadline: 1 November 2016 [83]

University of Wisconsin Solmsen fellowships

Web id: 189799

Deadline: 1 November 2016 [84]

Bill and Melinda Gates Foundation design new solutions to data integration for malaria elimination

Web id: 1191802

Deadline: 9 November 2016 [85]

Bill and Melinda Gates Foundation develop novel platforms to accelerate contraceptive drug discovery

Web id: 1191800

Deadline: 9 November 2016 [86]

World Bank big data innovation challenge

Web id: 1191960

Deadline: 9 November 2016 [87]

Harry J Lloyd Charitable Trust basic research grants

Web id: 254618

Deadline: 10 November 2016 [88]

Harry J Lloyd Charitable Trust career development grant

Web id: 254617

Deadline: 10 November 2016 [89]

Harry J Lloyd Charitable Trust translational research grant

Web id: 254619

Deadline: 10 November 2016 [90]

The Renaissance Society of America Claude Palisca fellowship in musicology

Web id: 1191306

Deadline: 10 November 2016 [91]

The Renaissance Society of America Folger fellowships

Web id: 1191097

Deadline: 10 November 2016 [92]

The Renaissance Society of America short-term research fellowships

Web id: 1191305

Deadline: 10 November 2016 [100]

National Science Foundation collaborative research in computational neuroscience

Web id: 192853

Deadline: 19 December 2016 [102]

Leakey Foundation research grants

Web id: 204604

Deadline: 10 January 2017 [103]

American Academy of Facial Plastic and Reconstructive Surgery Foundation investigator development grant

Web id: 194830

Deadline: 15 January 2017 [104]

policy diary

October

- 13 EPC 20th Anniversary Conference, Brussels, Belgium. <http://rsrch.co/1WxUZhg>
- 14 Horizon 2020 Infoday: Research Public-Private Partnerships, Brussels, Belgium. <http://rsrch.co/2bzcn9Z>
- 17 Lab Connections: Policy Labs in Europe, Brussels, Belgium. To 18. <http://rsrch.co/2bYyVMg>
 - European Foundation Centre Research Forum Conference 2016, London, UK. To 18. <http://rsrch.co/29SrgMW>
- 18 ISC Seminar: Impact of Data Protection Regulation on Collaborative Science, Brussels, Belgium. <http://rsrch.co/2bIXn2f>
- 20 Mainstreaming Gender Equality into Academic and Research Organisations, Brussels, Belgium. <http://rsrch.co/2biLDke>
 - Counterfactual Methods for Policy Impact Evaluation, Milan, Italy. To 21. <http://rsrch.co/2bYHUwL>
- 24 Science for Smart Specialization Workshop, Vienna, Austria. <http://rsrch.co/2cUaFqR>
- 26 Presidency Conference: Re-Industrialisation of the EU, Bratislava, Slovakia. To 28. <http://rsrch.co/2bIs3BW>
 - Copyright in Europe: Adapting EU Rules to the New Digital Age, Brussels, Belgium. <http://rsrch.co/2bYGyC4>

November

- 7 Circular Economy Innovation and Design, Surrey, UK. To 8. <http://rsrch.co/2cCyxj6>
- 8 Science Meets European Parliament, Brussels, Belgium. <http://rsrch.co/1TZiCnv>
- 9 Euraxess Careers Workshop, Bratislava, Slovakia. <http://rsrch.co/28JC4io>
- 14 Women and Leadership in Academia, Zurich, Switzerland. <http://rsrch.co/2colYfj>
- 15 Presidency Conference: Social Sciences and Humanities in Addressing Global Challenges, Bratislava, Slovakia. To 16. <http://rsrch.co/28JN9is>
- 16 Global Trends to 2030: Society and Governance, Brussels, Belgium. To 17. <http://rsrch.co/2bYHUwL>
- 17 European Quality Assurance Forum, Ljubljana, Slovenia. To 19. <http://rsrch.co/10e5gss>
 - 4th Annual European Cybersecurity Conference, Brussels, Belgium. <http://rsrch.co/2ccnm38>

* Research Europe

ISSN 1366-9885

Published every two weeks with breaks at Christmas, Easter and in summer. The next issue will be published on 20 October.

Letters to

Research Europe
Unit 111, 134-146 Curtain Road,
London EC2A 3AR, England
news@researchresearch.com

Enquiries to

info@researchresearch.com
Tel +44 20 7216 6500

Editor Colin Macilwain

Comment and Analysis Editor
John Whitfield

News Editor Laura Greenhalgh

Senior Reporter Craig Nicholson

Reporters

Cristina Gallardo, Lindsay
McKenzie, Anna McKie,
Amanda Stringfellow

Chief Sub Editor Kris Pedder

Sub Editor Jenny Maukola

Data Analyst Gretchen Ransow

Funding Content Managers

Mikael Järvelin,
Sanja Vlaisavljevic

Deputy Funding Content

Manager Mirella Rosenström

Senior Funding Content Editor

Sofia Capel

Deputy Funding Content Editor

Marion Galley

Editorial Researchers

Claire Braun, Anna Hagberg,
Lucas Haks, Gladys Hellgren,
Louise Jensen, Eeva-Maija
Jokiniemi, Lotte Krause,
Sam Marberg, Willemijn van
Mossevelde, Marcia Rato, Ben
Raynor, Saara Santanen, Dalia
Saris, Kartikey Srivastava,
Simon Svendsen

Production Manager

Katherine Lester

Production Team

Grace Harrison, Laura Kipp

Technical Director Steve Potter**Editor, Research Fortnight**

Ehsan Masood

Chairman and Founder

William Cullerne Bown

Publisher Thérèse Claffey**Sales Director** Nicky Cooper**Sales Managers**

Jon Thornton, Alison Warder

Advertising London

Trishita Shah, +44 20 7216 6528
advertise@researchresearch.com

Published by *Research.

Copyright © Research Research
Limited, 2016.

ALL RIGHTS RESERVED

Reproducing *Research Europe*
by photocopying, electronic or
other means in any language
without the permission of the
publisher is illegal.



Please recycle after use.

NOT TO BE PHOTOCOPIED

a *Research publication

Reviewing evidence

Stanford sceptic John Ioannidis tells **Laura Greenhalgh** of his doubts about the trustworthiness of the burgeoning review literature.

Meta-analyses: the holy grail of scientific evidence. Across many fields of research, especially in biomedicine, these types of assessments are used to combine findings from different studies into one statistical evaluation, and provide a weightier assessment of the state of knowledge.

But in the latest issue of the *Milbank Quarterly*, John Ioannidis, an epidemiologist at Stanford University, casts doubt on whether many of these compendiums of research are all they are cracked up to be. "There are too many meta-analyses that are misleading, unnecessary and fail to enlighten our appreciation of the evidence," he says. "They need to become more reliable."

In 2005 Ioannidis gained prominence by publishing a seminal paper on reproducibility in *PLOS Medicine*, entitled *Why Most Published Research Findings Are False*. A decade on, he heads up the Meta-Research Innovation Center at Stanford University (METRICS). His latest conclusions are based on a study of meta-analyses over the past 25 years: in 2014, the publication rate of such assessments was 2,635 per cent higher than in 1991, Ioannidis reports, against the corresponding 153 per cent rise in the overall volume of biomedical research literature.

Ioannidis argues that much of this rise has been caused by industry researchers: indeed, he says that meta-analyses are being increasingly used to propagate economic interests, such as pharmaceutical companies seizing on large-scale reviews to promote their drugs. "In the past, if a company wanted to promote their products, they had to find the best experts in the field and pay them to make speeches at major conferences or write editorials," says Ioannidis. "Now, we see a factory production of meta-analyses."

China has also become prolific in the field: it accounted for 63 per cent of genetics meta-analyses published in 2014, compared with 7 per cent from the United States. "Chinese researchers are using the recipe that Europeans and Americans were using 10 or 20 years ago very nicely, but failing to recognise that the field has moved to a completely different space," he says. "And these papers can still be published, even though they're so outdated."

Meta-analyses and systematic reviews are essential when designed and performed correctly, Ioannidis says. But their proliferation has been accompanied by scant attention to detail. "Systematic reviews have been automated to a large extent—there's a recipe that is easy to apply, so you can make them 'quick and dirty'," he says. "And in an environment where people need to publish

to get recognition, producing reviews of low quality has become an easy way to do that."

The problem is not universal; and there are biomedical disciplines that still don't have enough reviews, says Ioannidis. But in others, the pockets of proliferation have been extreme: there were 185 meta-analyses conducted on the effectiveness of antidepressants between 2007-14, for example, Ioannidis says. "This makes absolutely no sense."

In the long term, Ioannidis believes, biomedical researchers could take a leaf out of the physicists' book and start to consider properly-designed meta-analyses as the primary mode of research, rather than as retrospective add-ons. "It would have been unheard of in trying to find the Higgs Boson, to have 30,000 scientists each one doing their own studies and then performing a systematic review at some point," he says. "We would have found 5,000 Higgs Bosons probably, because each of these scientists would want to claim they found it; but we wouldn't have found the Higgs Boson."

And he is also advocating a reform of academic reward systems, which he says would address wider reproducibility problems, as well as those seen in meta-analyses: "If a system just says publish as many papers as you can, and I don't care whether they are true or not—don't even bother to check—then this is what we're going to get."

But despite the enormity of the challenge in improving the reproducibility of science, Ioannidis says he's positive about the future. "These are issues that are raised on a daily basis," he says. "I see a huge response from scientists, funders and journals who want to improve things." Despite findings suggesting that as few as a third of conclusions in psychology or economics are reproducible, many fields are improving their approach: he cites the move towards pre-registration of clinical trials as an example.

And, while some could read Ioannidis's findings on research quality as a justification to spend less on a flawed system, he advocates spending more. "Even with all the problems we have currently, even if the problems were worse, I would still invest in science and I would invest more than we do now. We don't really have an alternative."

Something to add? Email comment@ResearchResearch.com

John Ioannidis

- * **2013-present** Co-director, METRICS
- * **2010-present** Professor of medicine, Stanford Prevention Research Center
- * **1998-2010** Department of Hygiene and Epidemiology, University of Ioannina School of Medicine, Greece
- * **1996-1998** Medical officer, US National Institute of Allergy and Infectious Diseases
- * **1993-1996** PhD in biopathology, University of Athens School of Medicine

uk & ireland

Opposition leader promises to double UK science budget if elected prime minister

Jeremy Corbyn, the leader of Britain's opposition Labour Party, has said that he will increase UK spending on R&D to 3 per cent of GDP if he becomes prime minister.

The pledge was made in a keynote speech at the party's annual conference in Liverpool on 28 September. If implemented, the measure would amount to a near doubling of the UK's spending on research and development.

Corbyn said that the UK spent less on research as a percentage of its national income than France, Germany or the United States.

In the speech, Corbyn also repeated an earlier pledge to reintroduce state support for university students, known as maintenance grants. These have been phased out by previous Labour and Conservative-led governments.

The extra public spending would be funded by an increase in corporation tax. In a rapidly changing economy, people need to retrain or upgrade their skills without falling into debt, Corbyn said.

Corbyn also urged "businesses, academics, workers, trade unions and anyone who cares about our future prosperity" to have their say on the party's industrial strategy review, announced at the conference on 27 September.

uk & i in brief

Cambridge picks human rights specialist as vice-chancellor

The University of Cambridge has nominated Stephen Toope, the former president of the University of British Columbia, as its next vice-chancellor. Toope, who specialises in human rights and international dispute resolution, is expected to take over from Leszek Borysiewicz on 1 October 2017.

Science budget shielded from Brexit currency falls

The UK government will shoulder any extra costs for subscriptions to international facilities caused by the fall in the value of the pound, following Britain's vote to leave the EU. Under the pledge, the budgets of the Science and Technology Facilities Council and the UK Space Agency will be protected from currency fluctuations.

MPs begin inquiry into Brexit and universities

The House of Commons Education Committee has launched an inquiry into how the UK's exit from the EU will affect higher education. The committee said that it wanted written submissions on the implications of Brexit for EU students and staff who want to come to the UK. It will also consider what protections should be given to those already in the UK and the ramifications for Britons who want to work and study in the EU. The future of Erasmus+ will also be discussed.

by Anna McKie

amnews@ResearchResearch.com

He claimed that the Conservatives had turned their backs on what he called the proud British tradition of "individual ingenuity and collective endeavour", citing scientists Ada Lovelace, Alan Turing and Tim Berners-Lee as examples of that tradition.

"A country that doesn't invest is a country that has given up," he said.

The speech followed Corbyn's re-election to the leadership with an even larger share of the vote than in 2015. Corbyn's leadership has attracted more members than at any time in the party's history.

Part of the reason for his popularity is that Corbyn and his team have rejected many of the policies of former prime ministers Tony Blair and Gordon Brown. However, Corbyn is less popular among MPs, the majority of whom do not think Corbyn can win an election.

Meanwhile, the Labour-led regional government in Wales is also considering introducing maintenance grants, following a review of its national higher education funding and student finance arrangement.

Society struggles to recognise women scientists

The Royal Society has announced the 44 recipients of its prestigious University Research Fellowships for 2016—out of which only 10 are women. This is a small improvement on last year, when eight of the 38 fellows were women. The society said that the proportion of female recipients was in line with the proportion of applications from female researchers. It added that "too many talented individuals do not fulfil their scientific potential because of issues such as gender, ethnicity or disability".

UK funds Shanghai lab to study Chinese medicine

The Biotechnology and Biological Sciences Research Council is to fund the study of Chinese medicine at a new lab in Shanghai. The Centre of Excellence for Plant and Microbial Science will carry out two research projects on Chinese medicine. The facility is a collaboration between the John Innes Centre in Norwich and the Chinese Academy of Sciences. It will employ 10 senior scientists to lead international groups of researchers. A total of 16 projects have been funded, mostly in food security.

London university to divest funds from fossil fuels

King's College London has said that it intends to move some of its investments out of fossil fuel companies and into low-carbon alternatives. The college will adopt a phased programme of investing a proportion of its £179-million (€208m) endowment in low-carbon alternatives.

French state urges campuses to go global

France's higher education institutions are losing ground to their international competitors in exporting their courses overseas, a government report has said.

Institutions offered 604 higher education programmes abroad in 2015, which were delivered to about 37,000 students, the report stated. This share of the international higher education market paled in comparison with France's main English-speaking competitors. UK institutions, for example, served 253,700 students abroad.

The report suggested that France has failed to capture the international higher education market largely because of its commitment to teach courses in French: 57 per cent of courses overseas are offered only in French, while German institutions offered 90 per cent of their courses in English.

French Transnational Higher Education: The Urgent Need for a Strategy was published on 26 September. It surveyed French universities' and grandes écoles' operations overseas, and gathered data on remote and online courses.

Online activities are relatively poorly developed, the report stated. "France lags far behind when it comes to distance learning," Bernard Ramanantsoa, the former dean of the HEC Paris business school and co-author of

by James Brooks

jbnews@ResearchResearch.com

the report, told a press conference. "When it comes to all things digital France is only an emerging player."

The report said that most of France's higher education institutions, and in particular universities, lacked a stable and assertive strategy for progressing activities abroad. It suggested that French institutions bolster their international development teams.

It also suggested four possible avenues for institutions to consider: an outreach strategy based on scientific and academic diplomacy; a "deployment by and for research strategy", which would target future talent in areas of emerging research excellence; a market appropriation strategy, which would require significant investment in new affiliates; and a digital diversification strategy, to increase online courses.

"There is no single effective strategy," Ramanantsoa said. "Each institution must build one, depending on its strengths and the vision for its development."

The report was commissioned by France Stratégie, an in-house government policy think tank that reports to the prime minister. Its other co-author was Quentin Delpuch, a project manager at the think tank.

nations in brief

Germany presents open-access strategy

The federal education ministry has stipulated that all publicly funded research in Germany

should be made freely available to the public. The clause introduced into funding agreements stated that researchers can use either the green or gold model—meaning that they should use an embargo period where needed.

Researchers win budget boost

The French government has presented its 2017 spending plan, with higher education and research set to receive €820 million more than in 2016. About €60m would be used to create 1,000 additional university jobs, while €235m would go to student grants and a service to help graduates find work, the government said. It added that France's national research agency, the ANR, would receive a raise amid increasing oversubscription for grants.

Young researchers head for industry

Fifty-five per cent of early-career researchers in Germany plan to quit academia within the next 10 years, according to a study by the Stifterverband association of German research funders and the DZHW, the national centre for higher education research. Permanent contracts, interesting tasks and better pay were the main reasons why researchers said they were attracted to a career in industry.

Dutch R&D group lobbies for investment

A coalition of Dutch universities and businesses has said that the government must spend €1 billion more on research and innovation every year to meet a growing shortfall. The Knowledge Coalition, which represents eight university and business organisations, said that the money is needed to enable the Netherlands to continue to capitalise on its strong history in research. Concerns have been raised about planned cuts of about €500m a year to the national science budget.

Latest round of Spanish appointments confirmed

The Spanish government has approved more than €100 million in funding to support 1,000 research posts. Half of the money will go to the Ramón y Cajal programme, which targets researchers with up to 10 years of post-doctoral experience. Postdoctoral positions, doctoral students and industry roles are also supported. The move follows a hiring freeze between 2009-14 that accompanied significant reductions in the research budget.

Epidemiologist to head Swiss foundation

Matthias Egger has been elected president of the Swiss National Science Foundation, Switzerland's public science funder, beginning in 2017. An epidemiologist at the University of Bern, Egger will succeed Martin Vetterli, who will take up the role of president of the École Polytechnique Fédérale de Lausanne.

nordic

Government plans to boost Swedish research

The Swedish government has proposed spending more on research over the next four years.

In a spending plan released in September—a precursor to the national research bill due later in the autumn—the government proposed a 125 million Swedish kronor (€13m) increase for the research and higher education budget in 2017, up from a total of kr49.7bn in 2016. It also proposed a progressive increase in subsequent years, promising a total of kr2.2bn extra by 2020.

The government said it hoped that spending more on universities would help to safeguard the freedom of academic research. Universities will receive an additional kr15m in basic grants for 2017, and by 2020 the government will have spent an extra kr1.3bn on basic grants. They received kr42bn in public funds in 2016.

“It is important that higher education institutions are given opportunities to plan in the long-term and to have full responsibility,” said Helen Hellmark Knutsson, Sweden’s research minister. “Too much reliance on external funding risks making it harder for institutions to act independently and responsibly.”

Further top-ups for several agencies were specified in the budget. This includes kr270m extra by 2020 for the Swedish Research Council, which received a total of kr6.2bn in 2016. The innovation agency Vinnova, which

by **Jenny Maukola**

news@ResearchResearch.com

is funded by the ministry of enterprise and innovation, is to receive a kr575m top-up by 2020. Public funding for Vinnova amounted to kr2.6bn in 2016.

The budget also included a strong focus on societal challenge research, with a kr680m increase by 2020 planned for topics such as climate change and digitisation.

“Swedish research is internationally prominent, but more resources are needed to develop Sweden as a knowledge nation and strengthen competitiveness,” said Hellmark Knutsson.

Sulf, the Swedish Association of University Teachers, said that although the additional funds for universities were welcome, the plan again demonstrated the prioritisation of competitive over basic research funding. “The government has repeatedly said that it understands the problem and that basic funding should be increased. Yet it has chosen to propose a basic grant increase of kr1.3bn while increasing competitive funds by more than kr1.5bn [by 2020],” Sulf said.

Karin Åmossa, head of research and international affairs at Sulf, said: “There is a risk that research and teaching will drift further apart, as universities choose to fund short-term projects and hire researchers who do not teach.”



Unity

Where universities work together

*Unity is the new way to work with anyone in universities and research.

It's a simple place to form groups, share files and work on them together.

Built by universities, for universities, with some help from us at *Research

Try *Unity now at www.unity.ac

Finnish universities face identity crisis

The 2008 economic downturn encouraged many European governments to take a closer look at the productivity of their higher education systems. Several introduced structural reforms intended to get universities to think more strategically about their operations in order to increase competitiveness.

Finland was no exception. In 2010, the government started reforms to make universities more independent from the state. University leadership was given more responsibility for financial management and institutions were encouraged to increase their commercial activities and become more business-minded.

As a result, university fundraising and investment returns as a percentage of total income rose from 0.4 per cent in 2010 to 3.8 per cent in 2014. To encourage fundraising, the government announced that it would give institutions a top-up of three times the private funds collected between 2014-17, capped at €150 million.

Six years after the reforms began, there have been mixed results. An assessment, commissioned by the Finnish parliament and published on 15 September, found that universities have become more autonomous and decision-making more efficient. Institutions have also become more productive in terms of teaching and research output, and there has been significantly more, and closer, business collaboration.

But the reforms also appear to have led to an identity crisis. The report found that university leaders mostly saw their institutions as business-oriented organisations providing clients with research and education services. On the other hand, employees were

**nordic
outlook**

by Jenny Maukola

news@ResearchResearch.com

more prone to see their workplace as a community, in which a collegiate body—representing students, academics and support staff—should influence important decisions such as the institution's strategic direction.

Traditionally, Finnish culture places strong emphasis on egalitarianism, which translates into horizontal rather than vertical management structures. It's not surprising that following the reforms many employees reported feeling less able to get involved. Many also described a negative impact on their wellbeing at work, in the form of stress and uncertainty. "We're not asked about anything anymore. We're not told anything anymore. Information doesn't flow," one professor was quoted as saying.

In a statement made on 15 September, research minister Sanni Grahn-Laasonen acknowledged that universities' governance structure and leadership culture needed development, and that staff and students should become more involved in important decisions. But she said that there was no immediate need to amend the law to force through the changes.

According to Petri Koikkalainen, head of the Finnish Union of University Researchers and Teachers, a change in the law would be necessary to ensure that staff have more say. "It's unlikely that any university board or rector would voluntarily give away that sort of power," he said. He added that the union would lobby the parliament to push for this.

It remains to be seen whether the government will address the problem, or whether it will press on with its business-minded reforms, regardless.

nordic in brief

Karolinska looks east

The Karolinska Institute will launch the Ming Wai Lau Centre for Reparative Medicine in Hong

Kong on 7 October with the aim of increasing collaboration in Asia. The centre, at the Hong Kong Science Park, will be funded by a €45-million donation from Hong-Kong-based businessman Ming Wai Lau.

ESS considers nuclear waste

The European Spallation Source has signed an agreement with the firm Swedish Nuclear Fuel and Waste Management to oversee the disposal of its radioactive waste. Around 2,500 cubic metres of radioactive waste will be generated over the lifetime of the facility, the ESS said, most of which will be stored for 30 years before disposal. Construction of the €1.8-billion, neutron-based particle accelerator is expected to be finished by 2025.

Grant application burden investigated

The Norwegian government has commissioned the Nordic Institute for Studies in Innovation, Research and Education to find out how much time and resource universities spend on applying for grants. The survey about applications to the Research Council of Norway will feed into potential changes to the system, the government said. The review panel is being led by Siri Hatlen, chairwoman of the board of the Norwegian University of Life Sciences.

Ministers agree to Arctic cooperation

Denmark, Finland, Iceland, Norway and Sweden have signed a global agreement to increase international cooperation in research on the Arctic region. The agreement also pledges to increase indigenous involvement in research. It was signed by 25 countries meeting for the first Arctic science ministerial at the White House.

usa

NIH sets out stricter clinical trial rules

The United States government has announced updated and wide-ranging policies on how information from clinical trials should be shared with the public.

The Department of Health and Human Services (HHS) released the final version of its rule on 16 September. It clarified who was responsible for submitting information to a government database of clinical trials and what types of studies were covered. At the same time, the National Institutes of Health announced its own, more comprehensive, requirements.

The ClinicalTrials.gov database is managed by the National Library of Medicine, which is part of the NIH. The public website has information about the questions that trials are asking and how to enrol as a participant.

Critics of the database have said that too few studies have posted their trial results on the database. Research published in *The New England Journal of Medicine* in 2015 found that fewer than half of the trials required by law to post their results on the site actually did so.

The updated rules are an attempt to strengthen and clarify the requirements. Under the HHS rule, all controlled clinical trials of products subjected to Food and Drug Administration approval must be registered in the database. Studies that compare the efficacy of devices

by Sam Lemonick

news@ResearchResearch.com

and studies of paediatric products already on the market are also included. Phase 1 trials and other exploratory studies are excluded.

Trials must register within a few weeks of enrolling subjects and report their results within a year of study conclusion—including information about participants, outcomes and any adverse effects. Trials that do not result in an approved drug or device must still submit results. Researchers must also explain their methods and describe how they will analyse their results.

Observers have predicted that the penalties, including fines and potentially withholding of grants, will encourage compliance. Emma Meagher, chief clinical research officer at University of Pennsylvania's medical school, told CBS News: "There haven't been real consequences for people who haven't posted data. But the new penalty that may jeopardise funding is a wonderful carrot." She said that she wondered whether the rules would have financial costs for researchers or institutions. Drug firm Pfizer said in 2009 that it could take researchers 40 hours to submit trial summaries. Meagher said that she hoped the NIH would provide funding to cover the labour costs.

usa in brief

Universities say they'll pay postdocs more

About three-quarters of institutions have said that they will mandate higher salaries for postdoctoral researchers to comply with federal overtime rules, a survey by the Council on Governmental Relations has found. Set to take effect on 1 December, the rules require employers to pay overtime to salaried employees who make less than \$47,500 (£42,300), which is more than double the current threshold.

Zuckerberg pledges \$3bn to health research

Facebook founder Mark Zuckerberg and his wife Priscilla Chan have promised to donate \$3 billion (£2.67bn) to disease research over the next 10 years, with the professed goal of curing all major diseases by 2100. Zuckerberg and Chan, a pediatrician, joined other tech industry philanthropists who have made big pledges with bold goals over the last several years.

\$157m for children's study grants

The National Institutes of Health has announced \$157 million (£121m) in awards under the scaled-down version of an ambitious study on children's health. The Environmental Influences on Child Health Outcomes (ECHO) programme, announced in 2015, takes the place of the National Children's Study, which was cancelled.

Short-term spending fix agreed in Congress

The Congress has agreed a short-term spending bill, called a continuing resolution, that will avoid a government shutdown and keep agencies funded until 9 December. The bill maintains current spending levels at just over \$1 trillion (£890 billion) a year, although it lasts for little more than two months.

NFL pledges money for concussion studies

The National Football League has pledged \$100m (£89m) for research into head injuries and related technology development, just months after being exposed trying to manipulate federally funded research on the subject. The NFL has faced increasing criticism for its handling of concussions and other head injuries, which have been linked to dementia, depression and other conditions in retired players.

House chairman questions global cancer funding

The chairman of a House oversight committee has questioned why the National Institutes of Health continued to contribute to the International Agency for Research on Cancer. Representative and committee chairman Jason Chaffetz, a Republican of Utah, wrote to NIH director Francis Collins to ask why the agency was awarding grants to IARC, which is part of the World Health Organization. Chaffetz said that the NIH had given the organisation more than \$1.2m (£1.1m) in 2016.

Syrian conflict forces seed bank to relocate

A collection of seeds from more than 150,000 dryland plants in the Middle East is being reinstated in Lebanon after scientists lost access to its original home in Syria.

The gene collection, overseen by the International Center for Agricultural Research in the Dry Areas (Icarda), has been relocated from Syria to a gene bank in Terbol. On 29 September, Icarda announced that it had inaugurated the Terbol collection and put the project's aims back on track.

This will allow scientists to regain access to the collection, which the organisation said is a vital contributor to global science and security. "As today's commercial crop seed industry concentrates its efforts on a narrow genetic base, these public goods genetic materials are a strategic resource," said Icarda director-general Mahmoud Solh.

"The gene bank provides collections that all countries and global breeding programmes can use to develop new crop varieties that have improved yields, and can assist resource-poor farmers in the fight against food insecurity and climate change," he added.

Since the 1980s, Icarda has stored specimens in a facility in Tel Hadia, near Aleppo. The Syrian seed bank forms part of a global network, which works in conjunc-

by Laura Greenhalgh

lgnews@ResearchResearch.com

tion with a central facility—the Svalbard Global Seed Vault on the Norwegian island of Spitsbergen—that stores samples as a backup.

But after war broke out in Syria in 2011, Icarda said it became clear that specimens stored in Aleppo could not be guaranteed as secure. That year, the organisation sent samples of 87 per cent of its Syrian collection to the Svalbard facility, and eventually established duplications of the whole collection across seed banks around the world.

In September 2015, Icarda announced that it would reinstate the collection in neighbouring Lebanon, where an existing seed bank was located in Terbol, about 300 kilometres from Aleppo. This resulted in the first "withdrawal" from the Svalbard storage facility.

Going forward, scientists, curators and the public can access the collection in Lebanon, the organisation said, while the Aleppo facility remains in existence but inaccessible. The Terbol station will work in conjunction with a research station in Morocco, and all samples will continue to be duplicated at Svalbard and at other seed banks to ensure preservation, Icarda said.

world in brief

Europe dominates WHO nominations

Four of the six candidates to become the next director-general of the World Health Organization have been nominated by EU member states. The candidates come from France, Italy, the UK and Hungary, in addition to nominations by Ethiopia and Pakistan. The Ethiopian candidate, former foreign affairs minister Tedros Adhanom, is being championed by the African Union.

Social scientists told to step up

The World Social Science Report 2016 has said that there is insufficient research on inequality and social justice. Despite a fivefold increase in research output since 1992, inequality continued to define the political agenda, through the Arab Spring and the Occupy movement, for example. Academics should examine the role and nature of corruption, the impact of technological process and the effect of the media on inequality, the report said.

Atomic agency joins Zika fight

The International Atomic Energy Agency has received \$4 million (€3.6m) from the US Department of State to progress a mosquito-sterilization technique that could limit the spread of Zika virus. The technique employs irradiation to sterilise male mosquitos in laboratories, which are then released into the wild to limit reproduction.

Canada revives staff survey

Statistics Canada is to reinstate the University and College Academic Staff System survey, which gathers data on the socio-economic make-up of full-time academic staff at Canada's universities. The government said that continued assessment of data on, for example, gender, age and qualifications, was vital to enhance diversity in academia. Statistics Canada said it would work with universities to fill the data gap.

Innovation 'on the rise'

The latest OECD entrepreneurship assessment has said that there are positive signs for innovators after a decline following the financial crisis. It reported that the rate of startup creation has rebounded to above 2007 levels in six countries: Canada, France, the Netherlands, Norway, Sweden and the United Kingdom. However, Finland, Italy and Belgium were still struggling.

Universities told to engage more on Twitter

A survey of Australian universities has claimed that few are using social media to effectively engage with students or a wider audience. The assessment, conducted by the management platform Hootsuite, concluded that 83 per cent of institutions use social media but that most communication is not interactive. It urged institutions to reconsider their approach to get the most from online interactions.

ET TU, WONKS? After the Commission hurriedly had to modify its much-hyped plans for abolishing mobile roaming charges, to remove an unpopular time limit, digital commissioner Günther Oettinger could have used a victory. It was a shame then that in the Scale Up Europe manifesto on digital entrepreneurship, which he welcomed on Twitter, a group of think tanks described his plans for imposing a “snippet tax” on online article-curation platforms as “poison to European entrepreneurs”. Tomorrow is a new day, Günther.

BEHIND CLOSED DOORS We were very pleased to see that the EU’s flagship Human Brain Project research programme is holding a summit from 12 to 15 October in Florence. Finally a chance to hear all about the initiative’s progress and how it has tackled its organisational and public image problems! Or so we thought, until we were politely informed by the event organisers that the summit is closed to press. Well, it’s only €1 billion of taxpayers’ money...

WHO NEEDS ENEMIES? A meeting on science advice and policymaking took place in Brussels last week, and Marga Gual Soler, project director at the Center for Science Diplomacy of the American Association for the Advancement of Science, was asked to summarise the first day. We’re not sure quite how diplomatic her sum-

mary was, however: “By the second session speakers were already repeating a lot of the items and insights and running out of talking points,” she said. “We have about 100 different ways of formulating the same idea.”

SOFT LANDING As UK prime minister Theresa May pledged to activate Article 50 by March 2017 and begin the country’s divorce negotiations from the EU, a political TV programme hosted by the journalist Robert Peston ran a Twitter poll asking what kind of Brexit people would support. Taking 53 per cent of the votes, a ‘super soft’ Brexit won out easily over ‘hard as nails’ (19), ‘firm’ (17) and ‘squidgy’ (11). It’s probably for the best: ‘squidgy’ would be quite difficult to translate into 23 languages.

DUBIOUS HONOUR The Ig-Nobel prizes—awarded “for achievements that first make people laugh, then make them think”—are a light-hearted recognition that sometimes genuinely innovative ideas can be found at the fringes of research. However, with this year’s chemistry Ig-Nobel going to the car manufacturer Volkswagen for “solving the problem of excessive automobile pollution emissions by automatically, electromechanically producing fewer emissions whenever the cars are being tested”, we wonder whether the definition of ‘ignoble’—“dishonourable; base; despicable”—was used by mistake.



Subscribe now

Research Europe is the leading independent source of news, analysis and funding opportunities for researchers and policymakers in Europe. We offer a range of subscription options in print and online.

Multi-user subscriptions

Universities, Research Institutes, Learned Societies and other Membership Organisations, Government Departments and Funders can subscribe to *Research Europe* via our online platform ***Research Professional**.

Subscriptions for Individuals

Individual researchers or policymakers can subscribe to the paper edition of *Research Europe* only. Published fortnightly, 22 issues a year, €585.

Register me as a subscriber to *Research Europe* paper edition for one year. I understand that if I am not entirely satisfied, I can cancel my subscription during the first 60 days and get a 100% refund.

Name	Postcode	Country
Position	Telephone	
Organisation	Email	
Address	Signed	
	Date	

Fax this form back to +44 20 7216 6501 or order online at www.ResearchResearch.com/subscribe

Payment We will invoice you. Or call +44 20 7216 6500 for credit card payments **Enquiries** +44 20 7216 6528 or subs@ResearchResearch.com