

## European societies form biomedical alliance

A new European alliance of biomedical researchers has been launched to boost research funding and keep Europe competitive as China's research investment soars. Tony Kirby reports.

Although the USA remains its main competitor, European biomedical research is facing a new threat from Asia, especially China, whose investment in research is increasing greatly. China's thriving economy means it can prioritise and substantially expand investment in biomedical research and development (R&D). But in Europe, austerity measures from the global financial crisis are forcing widespread cuts, leaving researchers there struggling simply to maintain the status quo.

As a percentage of gross domestic product (GDP), the European Union (EU) spends just 1.8% on all R&D, compared with 2.7% in the USA, and 3.4% in Japan. Worse, data recently released by UNESCO showed that between 2002 and 2007, European investment in research had stagnated: actual spending on all R&D increased by just 29%, whereas GDP increased 27% in that time, meaning there was virtually no real-terms spending increase. Meanwhile, China increased R&D spending by a staggering 160% over those 5 years, while its GDP increased by 97%. China's commitment to accelerate research spending—with a likely doubling of GDP—will result in a near quadrupling of its R&D budget by 2020. Although actual R&D spending in Europe (US\$244 billion in 2007), was roughly three times that of China (\$87 billion), the above projections will see this gap closed rapidly.

A sense of urgency is beginning to take hold in Europe. The Alliance for Biomedical Research in Europe (Biomed Alliance) has now formed to lobby, among other things, for extra research funding so that Europe is not left behind by global competition. On Dec 9, 2010, in Brussels, the Biomed Alliance officially formed from the

four founding societies: the European Association for the Study of Diabetes (EASD); European Respiratory Society (ERS); European Society of Cardiology (ESC); and European Cancer Organisation (ECCO). Also present in Brussels were high-level executives from a further 28 societies across

**“Europe must face the challenges posed by the USA and Asia, or accept no longer being a world power in medical research.”**

Europe, representing an estimated 400 000 European researchers. These organisations are seeking support from their membership to join the Alliance early this year. Early signatories include the European Association for the Study of the Liver and the European College of Neuropsychopharmacology. “To date, advocacy for European biomedical research has been fragmented and uncoordinated”, says Ulf Smith, president of EASD and the inaugural president of the Biomed Alliance. “Our new alliance aims to give a single, powerful voice to the European biomedical research community, maximising its impact on research budgets, covering all health disciplines, for improved health of all European citizens.”

The four founding societies will do much of the early work in the alliance. “We must rapidly develop the profile of the alliance and invest in both a new website and media resources”, says Caroline Dive, a pharmacology professor at the University of Manchester, UK, who is one of the alliance's two inaugural vice-presidents and represents ECCO.

Smith, a professor at the University of Gothenberg, Sweden, says Europe must face the challenges posed by the

a world power in medical research. “The EU committed in Lisbon (2000) and again in Barcelona (2002) to increase R&D spending towards 3% of GDP by 2010, but we are still at just 1.8%. So I ask the European Parliament and all its member states: where is this money?”

Currently, about 90% of funding for health-related research in EU countries comes from member states' own budgets, with the other 10% coming from the European Parliament. As well as the obvious call for more money, the Biomed Alliance will enable the European research community to interact with the EU more effectively. The scientific community acknowledges the importance of the current Framework Programmes (FPs) used to allocate funds, says Karin Sipido, the alliance's other inaugural vice-president from the Catholic University of Leuven, Belgium, who represents ESC. But she adds researchers complain of difficulty accessing the funds and of accountability. Lack of continuity is also a common complaint. “Excellent collaborations are often disbanded because their grant has expired, and it is very difficult to get extensions”, says Sipido, adding that many feel the application process for EU funds can be extremely complex. “A structured

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input from the Biomed Alliance could help direct funds more fairly, adequately, and sustainably in the eyes of researchers.”

The current EU FP7 programme covers calls from 2007 to 2013, and the final FP7 calls (for 2013 projects) are due this year. EU research priorities for 2012–13 include ageing, medical technologies, cancer, and the brain. Negotiations on how the next FP (2014–20) will work are also to be finalised by the end of 2011, and the alliance has a clear opportunity to shape these negotiations. “The alliance will take a proactive stance, communicating effectively with the EU at all appropriate levels including the EC, the European Parliament, and the Council of Ministers”, says Sipido.

At the Brussels meeting, Ruxandra Draghia-Akli, director of the health directorate at the Directorate-General for Research and Innovation in the European Commission, expressed deep concern about current European funding earmarked for health projects. Europe’s total spend of about \$10 billion per year is made up of \$9 billion from the EU member state national budgets plus \$1 billion from the EU. But this is just a third of the \$30 billion spent per year by the US National Institutes of Health.

“Input from the learned societies is vital for the content of future programmes, so the new alliance has a real opportunity here”, says Draghia-Akli. “Difficult decisions about funding priorities are rendered more rational if scientists themselves participate in the selection process.” She foresees a formal consultation with the Biomed Alliance as being a key part of the next FP. On lack of continuity, Draghia-Akli laments that the EU does not have the luxury of unlimited funds but insists successful collaborations are free to apply for additional grants. But Smith and Sipido say the reality is that it is very difficult for FPs to accommodate grant extensions. “Our programme is designed to provide support to excellent applicants to complete

defined-term projects”, Draghia-Akli admits. She adds that a consultation paper to be published early in 2011 will offer stakeholders the opportunity to raise these issues.

An example of successful and effective communication between the EU and researchers—that could be a template for the future—is the DIAMAP project, funded by FP7 to set future priorities for diabetes research in Europe. Draghia-Akli says DIAMAP helped shape decisions on FP7 funding for 2012 and 2013. Smith suggests that the FPs could fund similar roadmap projects for other disciplines, that could ultimately be presented together by the Biomed Alliance and used to set a wide range of research priorities.

There could be several potential additional functions for the alliance, in addition to lobbying for extra EU funding. It will also lobby member states to increase funding, and could be a partner in the EU’s current impact assessment of FP7 programmes to date. To promote the alliance, Smith says each member society could have its own Biomed Alliance session within its own annual meeting, and individual member societies could pool EU expertise to reduce the burden of administration. The alliance will also look at the lack of career continuity in Europe, with many EU scientists reluctant to switch countries after age 40 years because of concerns about loss of pension entitlements.

“Researcher mobility must be addressed to keep Europe competitive, and we should have a medical research passport to facilitate easier transfer between countries”, says Liselotte Højgaard, a professor in medicine at the University of Copenhagen, Denmark. Højgaard is also chair of the European Medical Research Council—the member organisation of the public funders of medical research in Europe (part of the European Science Foundation) and the European Commission Science Advisory Board—consisting of 20 researchers across Europe who provide advice to

the EU Health Directorate on research priorities. “This new alliance is a major step forward for strengthening medical research in Europe”, she says. “We look forward to a close collaboration with the alliance, and believe the learned societies are crucial for the development of medical research.”

Draghia-Akli is hopeful that the next FP will continue the trend of large budget increases seen in successive FPs. She also sees potential benefits in China’s increased prosperity, such as the larger export market for research-intensive European industries. But she adds: “I am nevertheless conscious that unless investment is maintained and indeed increased in European biomedical research in all areas, and on the entire path from academics to small and medium enterprises and industry, we risk falling behind.”

In his recent State of the Union address, US President Barack Obama drew attention to the importance of job creation through investment and research, and the forthcoming US budget will show exactly what he intends. His address received the backing of the Federation of American Societies for Experimental Biology—America’s largest coalition of biomedical researchers—representing 23 scientific societies and more than 100 000 researchers worldwide.

“Through the alliance the European biomedical research community can better work towards remaining at the heart of health-related research and innovation worldwide”, concludes Smith, who wants European policy makers to show the same leadership as Obama on research investment. “Our efforts must be matched—very soon—by concrete action by both the European Parliament and individual member states to increase their research budgets. Otherwise Europe will continue to stagnate, stifling innovation and competitiveness while compromising the health and quality of life of its citizens.”

Tony Kirby