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Encouraging industry participation in the EU's Sixth Framework Programme: Issues, barriers and potential solutions

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Abstract

There is around €100m annually in the Sixth Framework Programme earmarked exclusively for small and medium-sized enterprises (SMEs) in the life sciences field. That is 15 per cent of the total amount available. But most of it has yet to be allocated. Why are biopharmaceutical SMEs not applying and how can they get access to this money?

The Emerging Biopharmaceutical Enterprises (EBE) group teamed up with representatives of the European Commission for the 'Life Sciences, Genomics and Biotechnology for Health' Thematic Priority to help companies understand how they can benefit from the Programme and give them an opportunity to add their ideas to it. Attendees came from 60 biopharmaceutical companies, and the programme was structured to allow companies to ask questions, but also put forward ideas to be included in upcoming Calls for the Sixth Framework Programme, as well as suggestions for improving the Seventh Framework Programme to improve industry participation. The event also gave them the chance to ask the Commission representatives specific questions on the administrative aspects of the Programme. The event was organised in conjunction with the Scientific Officers responsible for the different areas in the Programme; and the external experts who advise the Commission on the content of the future calls and the overall strategy for priority areas and activities of research were also invited. This meeting was designed to be as relaxed and open as possible and put the companies directly in contact with the people who implement the Framework Programme. The input from this session based on the feedback of the attendees has been formally forwarded to the Commission and the Thematic Priority Advisory Group.

This paper discusses the aims and focus of the Sixth Framework Programme. It provides an overview of the discussion between the EBE and the representatives from the European Commission for the 'Life Sciences, Genomics and Biotechnology for Health' Thematic Priority and summarises the key problems and solutions arising therein.

Keywords: research, 6FP, EU, industry participation, EU research associations

INTRODUCTION

The EU's Framework Programmes are the main instrument for funding research in Europe. The programmes have been in place since 1984 and each runs for a period of five years. The Sixth Framework Programme became effective in 2002 and will run until 2006.

Administered by the Commission's Directorate-General (DG) for Research,

the Sixth Framework Programme is open to all public and private entities based in the EU and in the accession states, as well as certain other 'associated' states. To receive EU financial support, academia, companies and all manner of private and public entities put together consortia to propose research projects in areas identified by the Commission under a number of predetermined thematic

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Involvement of companies a vital component for achieving Lisbon and Barcelona

A strong desire to cooperate in R&D at EU level

headings. The main themes in the Sixth Framework Programme include a broad range of subjects, including life sciences, information society technologies, aeronautics and space, food quality and safety, among others.

At the time, the Sixth Framework Programme had recently celebrated its first birthday and had attracted some 11,600 applications to date. Research Commissioner Philippe Busquin said that he had been encouraged by the first year's results, explaining that they showed that 'the European scientific and business community is vibrant and willing to pool resources at the European level'.¹ This last is important, given that the Sixth Framework Programme differs from its predecessors in a number of areas, particularly in terms of fostering a European Research Area (ERA) as a focal point. The concept of integrated research activities is key, with two new 'instruments' to support the objectives – the Networks of Excellence (NoEs) and Integrated Projects (IPs). The overall ethos is to support 'coherent and long-term research activities and partnerships'.²

POLITICAL FOCUS

Europe's political interest in research has steadily increased as economic growth becomes increasingly dependent on Europe's ability to research. However, as science advances, it is also clear that many of the challenges that we, as a society, face cannot be solved solely at a national level. One good example is cancer research, where, despite the considerable investments made in this field throughout Europe, fragmentation and duplication of research efforts within member states and across Europe, coupled with a lack of coherence at European level, have been identified as key stumbling blocks to progress. Clearly, in the interests of society, there are some areas where coordination and cooperation will enable us to reap strong benefits.

Therefore, the particular focus of the Sixth Framework Programme was to support the creation of a true 'European

Research Area' as outlined in the so-called 'Lisbon Agenda', which aimed to make Europe by 2010 'the most competitive and dynamic knowledge-driven economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion'.³ Thus, the EU's Sixth Framework Programme is the financial instrument that is supposed to make that ambitious goal a reality.

Two years on from Lisbon, on reviewing progress towards this goal, the EU heads of state also agreed that, as part of making it a reality, investment in European R&D must be increased to around 3 per cent of GDP from the current 1.9 per cent.⁴ This would bring the EU in line with the levels of spending in the USA and Japan, which spend 2.8 and 2.9 per cent, respectively.⁵ And – since it is foreseen that two-thirds of this money is to come from the private sector – the economic policy guidelines also recommended improved incentives for companies to invest in R&D. Therefore, evidently, private enterprise has been identified as a key cornerstone to the success or failure of the future of research in Europe. So, if the Sixth Framework Programme is the financial instrument that is supposed to make the Lisbon Agenda a reality, how does private industry get involved in the Framework Programme and is it working for companies?

INDUSTRY TARGETS

There is clearly an issue for private involvement, since, despite having €100m annually in the field of life sciences – 15 per cent of the budget in this field – reserved for small and medium-size enterprises (SMEs), particularly a driver of R&D in this field, the majority of the money has not been applied for. So there are obviously problems in persuading companies to participate in the Sixth Framework Programme. And, given the importance attached to getting private enterprise involved in research in the EU, at the beginning of September 2003, the

Emerging Biopharmaceutical Enterprises (EBE) group organised a workshop in conjunction with the staff at the European Commission responsible for the Framework Programmes, to establish the reasons why companies, and particular SMEs in the life sciences field, were not applying for funding at the expected level. This report has been reviewed by R&D directors in many of the larger pharmaceutical companies, and the recommendations endorsed by all companies, large and small.

TIME NEEDED

One of the main issues for companies is the level of investment in terms of time and effort and the corresponding chance of success. At the time of the workshop, the Sixth Framework Programme had attracted some 11,600 applications.⁶ Of these applications, a total of 108 IPs and 57 NoEs had been, in principle, approved for funding and were being negotiated.⁷ The 'hit' rate is, therefore, not very high. This 'risk–return' ratio affects companies' perception of the Framework Programmes. The requirement to invest – or to lose, given the overall chances of success – time on the application means that companies feel that they are effectively putting money and time up front, with very little chance of success.

This is partially due to what the Commission – which is responsible for administering the Framework Programme – calls 'over-subscription' to many of the themes. It says that it will seek to address this in future calls by narrowing the focus of the topics included in the calls. However, while this will help consortia in assessing if they really fit with the theme of the research, it will also potentially increase another area of companies' concern, that of the 'one chance only' nature of the Framework Programme. The fact that topics are unlikely to be included in future calls means that, if a consortium is not successful, there is no chance to re-submit in future. Narrowing the themes will increase this 'one chance only' nature, which means that the risk–

work ratio will become more of an issue, potentially further reducing company interest. Additionally, in the case of biopharmaceutical companies, narrowing the scope of the topics potentially limits the approach to certain diseases. According to companies, the Commission could better address the issue by re-including topics in future calls, particularly if no project on that topic has been accepted for funding. This would have the added benefits of increasing the timelines for consortia, addressing problems that might have prevented funding at the time of the first application and allowing better planning for resource and staff allocation.

MIXED RESEARCH FOCUS

Another key issue, according to the industry input, is the fundamental difference in outlook between companies and the overall Framework Programme. There is a feeling that the Framework Programmes do not focus on any particular end-product, which is, by definition, the purpose of a company. Industry participants have expressed concern about funding research into developing increasing numbers of technologies without first of all finding out the best ways to use the existing technologies in more applications. They have expressed a belief that the Commission should be clearer about whether it wishes to focus on basic, applied or object-oriented research. This last is important for companies, as they need to concentrate on research that aims to have a product or, at the very least, something that will give rise to a product at the end of the process. This will enable them to evaluate participation based on which products they would aim to be selling in, say, 20 years' time.

AN ACADEMIC POWERBASE?

Rightly or wrongly, industry feels that it is fundamentally 'not welcome' in the Framework Programmes. It is perceived that a consortium will only be successful if

Companies believe chances of success are not high enough

No second chances

Industry reports feeling 'not welcome' in consortia and Programme

it contains academia as the majority of participants. This puts people off, as the timelines and working methods of academia differ from those of the corporate world. Furthermore, companies report that, when consortia are downsized owing to reduced funding awards, it is they, the companies, that are the first to be evicted. This, coupled with the lack of 'object-oriented research', contributes to the overall general belief in the corporate world that the Programme is solely aimed at academic institutions. The belief is that the Framework Programmes are dominated by an academic 'powerbase', which – in particular – drives which projects are accepted and which not.

The Commission acknowledges this problem and has repeatedly asked for industry involvement in the evaluation process. However, given the time required to participate in the evaluation process, which might require a five-day stint in Brussels, many companies feel that they cannot justify the staff time.

Executives need their team members and cannot simply give up one of their staff members for five days, as well as pay for their travel and accommodation for that period, for something that is not going to directly benefit the company. Both Commission and companies are obviously struggling with this issue. On the one hand, it is clearly desirable to increase the industry participation in the evaluation process. On the other, how do you persuade industry to give up their staff under the above circumstances, where any benefits are probably vicarious – obviously no one can evaluate a proposal from which they themselves stand to benefit – and certainly long term? The solutions are not obvious, but one suggestion is that companies could participate in the evaluation process for one or two days at a time, after which they would be succeeded by a different expert, from another company. In this way, 'industry' acting as a whole, would be able to spread the load. The coordination could be an issue but could be ensured by some kind of overall

industry platform organisation. And such a scheme would certainly go a long way to increasing industry input, one of the fundamental shortcomings of the current system.

INTELLECTUAL PROPERTY CONCERNS

Another issue is raised by the inherent conflict between the cooperative nature of the research in the EU's Framework Programmes and the fact that – certainly for many small companies without products on the market yet – their intellectual property is often the only asset that a company has in hand. Being required to open up and share this, particularly when it is your only asset, is viewed as tantamount to company suicide. But, again, the Commission has sought to address this by significantly extending the intellectual property protection provisions in the Sixth Framework Programme, with a view to increasing company participation. Under this Framework Programme, if you generate knowledge, you own it. You can use others' knowledge only if it came from the cooperative project itself and if, in addition, it is required to exploit your own knowledge. And, thus, according to the European Commission, the 'open door' nature of cooperative research, so much criticised in the past, should no longer be an issue. In reality, though, companies often do not perceive that the problem has indeed been sufficiently addressed.

LEVEL OF FUNDING

Another challenge to overcome is the question of degree of funding. As mentioned earlier, the Sixth Framework Programme is, according to the Commission, striving to promote greater efficiency and to build what it calls 'critical mass', which ensures that funded projects have 'a lasting impact on the scientific and technological landscape'.⁸ However, a common complaint from consortia, even if they are accepted for funding, is that they are given only a part

A need to increase company involvement in evaluations to address intellectual property protection further ...

of the funding required for the project. The message is that, even if the project is considered to be of enough societal benefit to warrant EU resources, it will not be sufficiently funded to ensure that it achieves the originally established goals. This has two implications – either consortia must, on top of the work and effort of putting together the original successful funding proposal, re-start work to find alternative sources for the additional funding to carry out the project; or that they strip down the project to fit the budget allocated. This clearly means more work in both cases. However, in addition, stripping down a project to fit the budget allocated can mean that the predicted results will be much less of a ‘big bang’ advance than those originally foreseen by the project. The key criticism from researchers is that the EU prefers to ‘sprinkle’ money around to many little projects rather than fund something substantially to achieve big advances. This certainly lessens risk, but research is essentially a risky business. And this risk-averse climate, resulting in a little money for many projects, not only dampens enthusiasm for participation, but also limits the potential to fund a really big breakthrough – surely one of the key objectives of research.

COMMUNICATION

Even if all of these issues were to be fixed in such a way as to increase industry participation, there still remains another key issue facing the success of the EU's Framework Programmes in general – and that is communications. For example, more than half of the 60 company attendees at the EBE's workshop in September had little or no knowledge of the Programme, its existence or its objectives. The age-old ‘unanswerable’ question, ‘If a tree falls in the forest and there is nobody around, does it make a sound?’ could equally apply to the EU's Framework Programmes. Because, even if all the structural improvements were made to encourage industry participation,

companies are not going to apply to participate in something that they either do not know exists, or that they have fundamental misconceptions about. The main improvement that the Commission could make in the EU's Framework Programme is to get out there and start talking about it, proactively, in places where companies meet and in words that companies can understand. Fears and rumours about the Framework Programmes abound. And, although it might not be something that is appropriate for each and every company, there are certainly more companies out there that would participate if they either knew the Sixth Framework Programme existed or if they knew the facts about its rules.

INDUSTRY'S RESPONSIBILITY

It is easy to criticise the Commission and the Framework Programmes. And it is true that some issues, such as the fundamental dichotomy between the approach of academia and the approach of industry, are not going to be addressed by any number of ‘tweaks’ in the process. But there are many things that companies that do wish to engage in collaborative research could do, too, to make their lives easier. The Commission has put in place a series of support facilities, including National Contact Points (NCPs), and many countries have national funding agencies that actually fund consortia to apply for EU funding. Companies should make more use of these.

Most of all, it must be remembered that the Commission – although often in the firing line – is merely implementing the policy decided by the European Parliament and the member states. If companies are serious about increasing their influence on what is contained in the EU's Research Programmes, contacts at a national level are vital. Getting governments, not just the Commission, to understand the issues facing companies' participation in collaborative research is crucial to improving the functioning of

... and to achieve a critical mass level of funding to achieve real results

Companies should use the resources that are available to help

A need to publicise the Framework Programmes

Companies should use their national influence and improve it for the future

the system and increasing the participation of private enterprise.

CONCLUSION

Companies are already working together to advance research in several key areas. Because it is clear to everyone that cooperation in research is the way forward if we want to solve many of the problems we face. But if the EU wants to integrate that existing research into our overall EU Research Area, some of the key issues – some of them pretty easy to fix, such as the lack of awareness – that are preventing companies embracing this cooperative effort need to be addressed.

Failure to do this will mean that the EU's Framework Programmes become in reality what companies currently perceive them to be – a politically correct way of sprinkling EU money around – rather than the financial instrument that is intended to make the Lisbon objectives a reality.

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