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Comment: The UK Government's strategic approach to the biotechnology industry

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Abstract

The UK Government recognises that biotechnology is a key industry for the future and is determined to create the best possible conditions to continue the sector's growth and success. This paper addresses the key initiatives being taken by government.

INTRODUCTION

The UK is one of the best places in the world for biosciences. UK scientists have been responsible for many of the fundamental discoveries that have led biosciences to be one of the prime drivers of the twenty-first century, and the need to maintain and build the strength of the UK science base is a priority for the UK Government.

The UK is well placed in the European biotechnology scene. There are almost 400¹ dedicated biotechnology businesses in the UK, employing just over 18,700¹ people, and the UK accounts for almost three-quarters of public biotechnology companies in Europe.

UK annual revenues in 2001 of around £1.8bn¹ are almost three times those of its closest European competitor. The UK's biotechnology sector is the largest in Europe, and second only to the USA, supported by its greater maturity and much stronger product pipeline. UK companies account for 49 per cent² of products in the pipeline by European public companies. Also, 62 per cent² of biotechnology drugs in Phase III trials in Europe are from the UK.

A WORLD-CLASS SCIENCE BASE

The UK boasts an excellent science base, with favourable economic and political

conditions, and a clear and fair regulatory regime.

A clear example of the UK's science success is the recent Nobel Prize in Medicine to Sir John Sulston and Sydney Brenner for their groundbreaking work in genomics. The UK government recognises the need to maintain and develop this world-class science base, and has significantly increased its funding of research, facilities and incentives for knowledge transfer in the last three Government Spending Reviews. In 1997/98 the Science Budget was £1.3bn, and in this year's Comprehensive Spending Review the Science Budget will grow by an average of 10 per cent a year in real terms and will reach £2.9bn by 2005/6.

KNOWLEDGE TRANSFER

The Government has also taken a number of initiatives to encourage knowledge transfer from the research base. For example, University Challenge, which provides seed corn funding to universities, Science Enterprise Centres, which provide access to entrepreneurial skills to undergraduates and graduates in science and engineering, and the Higher Education Innovation Fund, which provides funding to universities to encourage them in knowledge transfer.

The government supports a number of initiatives aimed at speeding up the diffusion throughout industry of advances in science and technology. One of these is Harnessing Genomics, a £25m programme that provides support to the UK biotechnology sector, from exploring the ideas that could lead to innovative new applications to assisting biotechnology companies to start up and develop. One aspect of Harnessing Genomics is support for six major BioBeacon projects developing world-class technologies in bioinformatics, bioimaging and bionanotechnology.

The government also nurtures innovative R&D through broader channels such as the SMART grant programme, which provides support for feasibility studies and development projects; and LINK, a framework for collaboration between the public and private sectors in the areas of strategic importance to the economy. With £15m of public funding, the LINK Applied Genomics programme launched in 2000 is the biggest bioscience LINK programme to date.

GETTING THE RIGHT ENVIRONMENT

The UK has the largest and most experienced venture capital industry in Europe, and is home to several of the largest biotechnology investment funds. Over 1999 and 2000 the UK sector raised £1.84bn¹ of investment, of which just over 75 per cent was raised by healthcare companies, though today, of course, the conditions are very different.

The UK has a favourable environment for biotechnology companies to grow. It is important to ensure the right fiscal and regulatory conditions. Over the past few years the UK Treasury has introduced several measures to encourage investment, particularly in high technology. The R&D tax credits, introduced in 2000, represent an investment of £500m by the government.

The UK is also dedicated to minimising the regulatory burdens on industry while maintaining appropriate safeguards for public safety. Regulations must be proportionate, practical, enforceable and based on sound science. In a sector where the development of products can take up to 12 years, a predictable case to regulation is needed in order that industry can plan.

The use of stem cells has been one area of success in adapting legislation and regulations to changing circumstances in order to ensure that the UK provides as favourable an environment as possible. The approval of these regulations has put the UK in a leading position internationally, attracting top scientists in this area.

A National Stem Cell Bank is also being set up, which will further enhance the UK's lead in stem cell research. The planned facility will provide research with a supply of stem cells.

LOOKING AHEAD

To ensure that the UK remains as a global leader in biotechnology, a Bioscience Innovation and Growth Team has been formed. This team is a joint initiative between the Department of Trade and Industry, Department of Health and the Bioindustry Association, and will be led by Sir David Cooksey (Chairman of Advent Venture Partners). It will look at all the significant factors that affect the UK's competitiveness in bioscience, identify any barriers to competitiveness and make recommendations on how they can be overcome. It will report in early autumn.

The UK Prime Minister has led the strong government support for the biosciences. In a speech that he gave to the Royal Society last year on why 'Science Matters', he commented, 'The biosciences are, rightly, drawing much admiring attention at the present time.' He went on to say, 'I want Britain and Europe to be at the forefront of scientific advance.' The UK Government recognises that

biotechnology is a key industry for the future and is determined to create the best possible conditions to continue the sector's growth and success.

References

1. Data are from a biotechnology survey commissioned by the DTI in 2001.
2. Ernst and Young (2002), 'Beyond Borders: The Global Biotechnology Report 2002'.