

BIOSCIENCES IN THE SOUTH WEST OF ENGLAND



The UK is one of the world's leading biotechnology economies and has been a centre for excellence in biosciences academic research since the discovery of the DNA double helix in Cambridge and King's College London 50 years ago this April. The UK institutes played a pivotal role in decoding the human genome in the 1990's, and are central to developments in the post-genomic era. UK universities and Institutes remain at the forefront of global research, and this research expertise is harnessed through a number of technology transfer groups throughout the country.

The UK is a leading trading nation in which the needs of intellectual property dependent companies are met by a strong research base, very favourable tax breaks for R & D (recently adjusted by the Chancellor of the Exchequer to maximise the benefit to small and medium sized enterprises), and a highly developed banking and venture capital sector. A pro-business government supports a clear and fair regulatory regime for biosciences; effective trade organisations and international technology promoters with expertise in specific bioscience disciplines. Together these factors create a very favourable investment climate for biosciences and related R&D.

The UK's biotechnology industry is the best established in Europe, and its maturity has led to the formation of companies that rival and in some cases exceed those of the US for research excellence and market presence.

The South West of England's excellence in biotechnology reflects the UK model of essential strengths in the bioscience base together with a growing entrepreneurial culture. The South West of England is home to internationally recognised pockets of biomedical and biotechnology expertise. Bioscience in the South West is rapidly

establishing a critical mass which is dynamic and adaptable, fully participating in international collaborative research and joint ventures which the entrepreneurial culture demands. Bioscience is supported by proactive university business-support initiatives and collaboration with businesses.

South West biotech companies reflect the overall strengths of the UK bioindustry, which are:

- Biomed/biopharma
- Diagnostics
- Agrifood/environmental biotech
- Specialist reagents and instrumentation (manufacturing and support)

The South West Biotechnology sector includes:

- 40 - 50 companies undertaking core R & D
- 90 - 100 companies supporting the sector
- 10 - 15 developing companies (yr 1-2), all of whom strengthen the South West lead in existing disciplines

The South West of England Regional Development Agency is committed to nurturing and developing the biosciences sector in the region.

A comprehensive package of support is available to biobusiness in the South West region:

- World class facilities: the region is creating specialised bioincubation facilities and science parks to encourage expansion and the growth of biobusinesses
- World class expertise
- Strong research-based academic institutions

- An excellent network of bio suppliers
- Strong support organisations
- An entrepreneurial skills base including a consistent supply of postgraduates and postdoctoral researchers
- A growing cluster of young high tech companies with intellectual property portfolios
- Introductions to facilitate collaborative research and partnerships with companies, universities and research centres
- Introductions to specialists for facilitating biobusiness

BioApproaches South West

(www.bioapproaches.co.uk)

is the dedicated business and professional development group for the biotechnology sector in the South West. The role of Bioapproaches South West is to catalyse the business and professional development of the biotechnology sector through access to information, training and network activities to create business advantage.

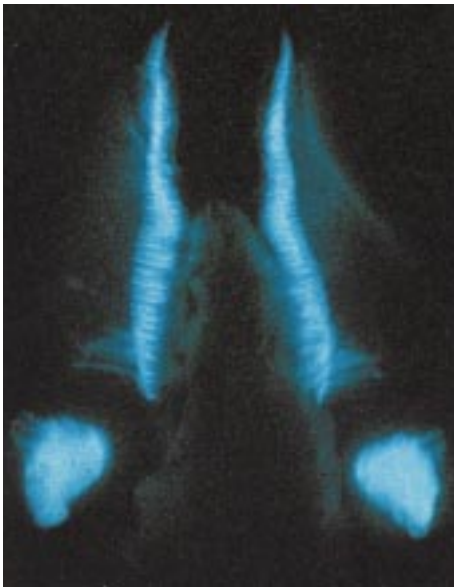


THE SOUTH WEST STORY

In the South West of England innovative companies of international renown are rapidly responding to global markets and investment challenges. The South West is increasingly recognised as the place to develop a bioscience company.

A cross section of the variety of specialisms in companies already operating in the region include:

COMPANY NAME	ACTIVITIES	WWW.
Affiniti Research Products Ltd	Bioreagents	www.affiniti.com
Alpharma Ltd	Pharmaceutical manufacturing	www.alpharma.com
Enact Pharma Ltd	Biopharmaceuticals	www.enactpharma.com
G W Pharmaceuticals plc	Drug discovery	www.gpharm.com
Hunter Fleming	Drug development	www.hunter-fleming.com
Key Organics Ltd	Combinatorial chemistry/drug discovery	www.keyorganics.com
Knight Scientific Ltd	Diagnostics	www.knightscientific.com
Mobious Genomics Ltd	Novel sequencing technology	www.mobious.com
Molecular Sensing plc	DNA detection and analysis technologies	www.molecular-sensing.com
Patheon UK Ltd	Contract pharmaceuticals manufacturing	www.patheon.com
Tripos Receptor Research Ltd	Bioinformatics/HTS/drug discovery	www.tripos.com
Vectura Ltd	Drug delivery technology	www.vectura.com



Glow light organs in a piddock - courtesy of Knight Scientific Ltd.

SOUTH WEST CENTRES OF EXCELLENCE IN BIOTECH EXPERTISE

Entrepreneurial activity in the South West thrives on the wealth of research excellence. Proactive universities with excellent reputations for science and biotechnology research support developments in the biosciences sector. Following on from this, the commercialisation of intellectual property in the region is enhanced by the culture of enterprise in the universities which facilitates licensing deals and spin-out companies.

There are also major independent research organisations in the South West (such as Centre for Applied Microbiological Research - CAMR) which fully participate in the development of the sector.

S W UNIVERSITIES WITH RESEARCH EXCELLENCE IN BIOSCIENCES:

(Please see separate listing for specialist information)

Leading universities in the region together are ranked on a par with Cambridge or Oxford for the scale and quality of their research (as rated by a UK National Research Assessment Exercise in 2001 (RAE)).

The universities with bioscience expertise are:

University of Bristol	www.bristol.ac.uk
University of Bath	www.bath.ac.uk
University of Exeter	www.ex.ac.uk
University of West of England	www.uwe.ac.uk
University of Plymouth	www.plymouth.ac.uk

All the academic research centres in the region have business support and technology transfer capabilities.

HOW SOUTH WEST UNIVERSITIES WORK FOR BUSINESS IN THE REGION:

- Exceptionally strong links with industry
- Collaborative commercial activity (licensing, joint ventures, spin-out companies, support for incubator and innovation units)
- Vocationally relevant courses
- Internationally recognised centres of excellence
- Source of high calibre employees
- Established global networks
- Exploitation of knowledge to create commercial advantage

MAJOR INDEPENDENT RESEARCH ORGANISATIONS IN THE SOUTH WEST:

CAMR - www.camr.co.uk

CAMR (Centre for applied Microbiological Research) based in Porton Down, Wiltshire, conducts research into infectious diseases on behalf of the UK Department of Health. CAMR has laboratory facilities that are able to handle pathogens up to and including Biosafety level 4. A major recent development is the partnership with the Battelle Memorial Institute and with CDC Atlanta in the US on the anthrax vaccine, adding to its existing portfolio of anthrax expertise.



Courtesy of GW Pharmaceuticals Plc.

DSTL - www.dstl.co.uk

An extremely high level of expertise in vaccine technology enables DSTL to undertake targeted commercial research in vaccine development and production. The facilities at Porton Down are world class and world renowned. DSTL also has expertise in microbiological and molecular biology, toxicology and pharmacology which is highly relevant to drug evaluation and handling highly toxic agents.

WORLD CLASS FACILITIES FOR BIOSCIENCES IN THE SOUTH WEST

The facilities environment in the South West region is highly supportive of the biosciences industry, offering a life cycle of opportunities to companies from business mentoring of ideas, to virtual incubation, to pre-incubation and incubation for start-up companies. For larger companies, science park accommodation is available.

Incubator units can be found at both Exeter and Bristol universities, the Tamar Science Park in Plymouth and Winfrith Science Park in Dorset. The facilities at Exeter University are currently being expanded to accommodate the dynamic growth of small companies requiring accommodation. The accommodation and services it provides create an environment suitable for the development of bioscience companies. The units offer managed office space and access to business support services. Spin-out companies from the Universities are welcomed and benefit from access to world class research and high calibre students.

Plymouth International Business Park is a major new 33 acre initiative from the South West RDA. Plans include the creation of a medical park of international calibre and one of the largest hospital and research complexes in Europe.

The site is adjacent to Derriford Hospital (one of the biggest in Europe) and adjacent to the **Tamar Science Park** (offering incubators and larger units) and the Peninsula Medical School.

The **Peninsula Medical School** is the UK's newest medical school and has initiated the development of a significant research programme focusing on diabetes, cancer, multiple sclerosis, stroke and neurological diseases. The research programme includes the integration of molecular genetic testing with clinical medicine.

Q West - a Science Park for Bristol

Planning is in the works for a new science park at Emerson's Green, Bristol; a project in which the Universities' of Bristol and Bath are heavily involved.

Permission has been granted for 800,000 square feet of high technology accommodation on a 63 acre green field site at Emerson's Green, branded as Q West. The park will create a vibrant high technology cluster, which will link to the universities. The universities' initial involvement will be through a 15,000 sq ft Academic Innovation Centre, the second phase of which may include category 2 biotech laboratories.

Other facilities for biobusiness in the region include Porton Down Science Park in Wiltshire and Winfrith Science Park in Dorset which has developed links with the University of Southampton (Hampshire).

Support for Biosciences in the South West

The South West of England Regional Development Agency is strongly committed to developing and growing the sector in the region. The agency will provide support and practical help to enable companies to benefit from the many advantages of setting up, growing or relocating a new business to the region. The South West RDA works closely with all the support agencies in the region; Invest UK in London and has overseas offices in North America and Japan.

The South West RDA works in collaboration with the support organisations BioApproaches, Bio Elf and Western Arc, all of which provide business and professional development assistance for bioscience in the South West.

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