



Life Scientist's Annual Careers Seminar

The Royal Academy of Engineering

Future Recruitment Trends in the Life Science Sector

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07 December

2007



Recruitment Trends in the Life Science Sector

- > My Background
- > BioIndustry Association
- > Biological Medicines Sector
- > Where Are the Opportunities?
- > The Process for You?
- > Who Gets the Opportunities?



My Background





BioIndustry Association

- > Founded in 1989
- > Over 300 companies
- > The BIA Board – A strong biopharmaceutical pedigree

Simon Best	Ardana (Chairman)
Kate Bingham	SV Life Sciences
Steve Chatfield	Emergent
David Chiswell	Sosei, DanioLabs
Glyn Edwards	Antisoma
Jeremy Haigh	Amgen
Andrew Heath	Protherics
Roland Kozlowski	Lectus Therapeutics
Geoff Newman	InteRea International
Ian Nicholson	Chroma Therapeutics
Peter Nolan	Oxford BioMedica
David Porter	Mizuho
Andy Richards	Vectura
Simon Sturge	Vernalis



BIGT 'Bioscience 2015' Bioprocessing Recommendations

Develop UK Position in Developing Biological Medicines by strengthening the bioprocessing sector

- > Bioprocessing is a pivotal technology in turning a lead candidate into a product
- > The Process is The Product

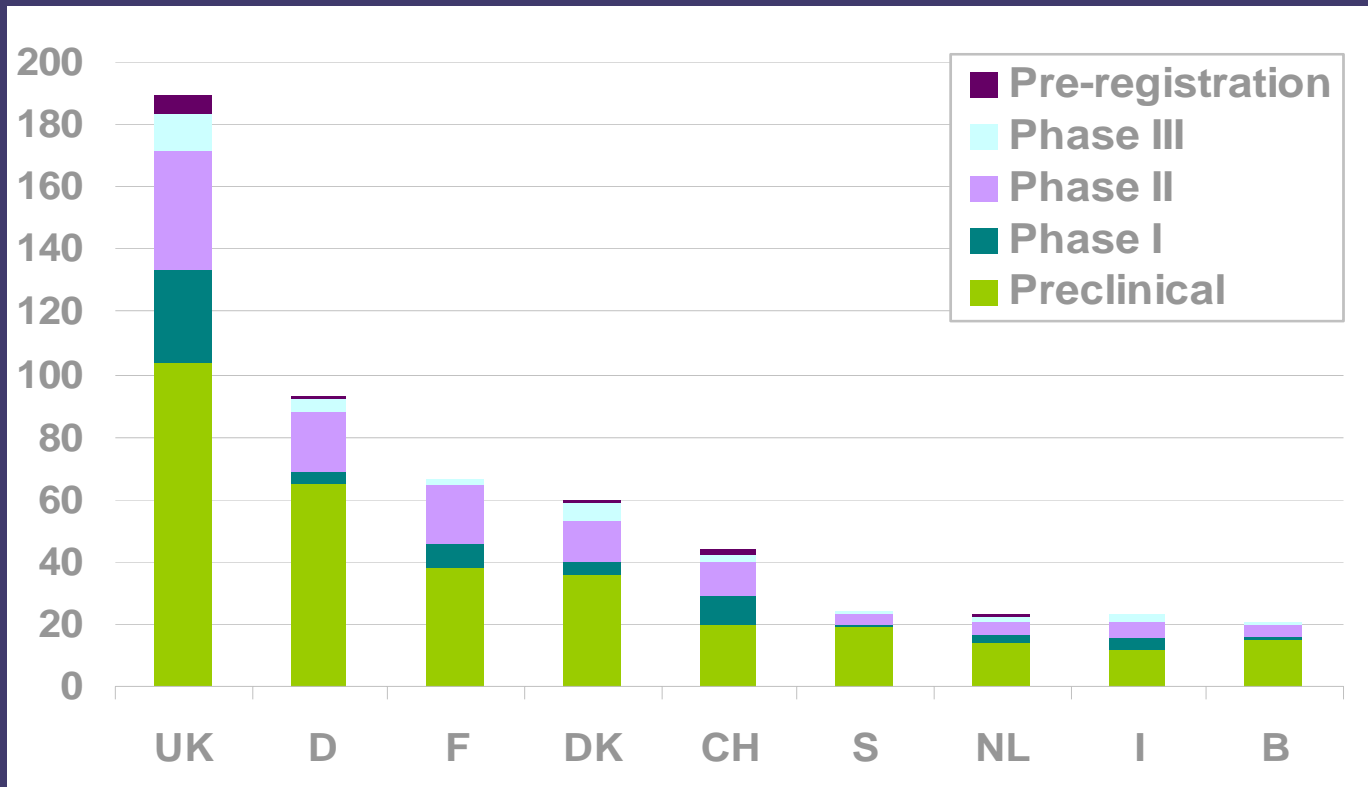
The Future is Biological Medicines (Biopharmaceuticals)

- > Approved biopharmaceuticals have been administered to more than **325 million patients**
- > There are now around
 - > **300 biopharmaceuticals on the market**
 - > **more than 700 biopharmaceuticals in clinical trials worldwide – 11% UK**
- > Biopharmaceuticals are far **more difficult and expensive to manufacture** (bioprocessing) than their small molecule cousins
- > While most traditional pharmaceuticals are orally available, most biopharmaceuticals are **administered by injection or infusion**
- > Biopharmaceuticals fall into a number of different **product classes**. These include:
 - > Recombinant proteins
 - > Recombinant antibodies
 - > Vaccines
 - > Gene, cell and tissue therapies

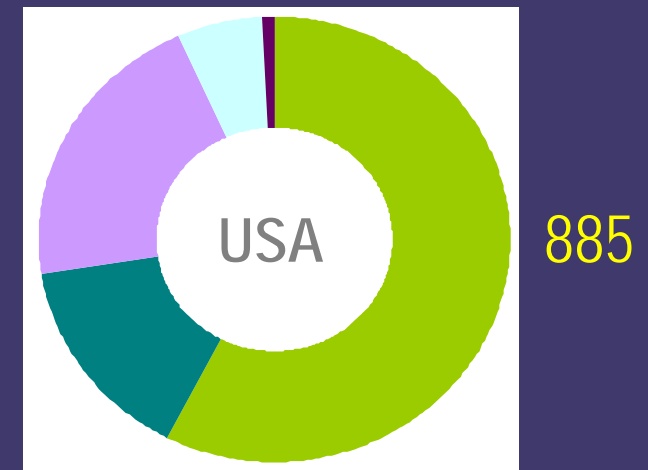
The Market

- > In 2005, the **global market** for biopharmaceuticals was estimated at **\$85bn**
- > Two-thirds of this from the sales of recombinant proteins, such as **Epogen, Rituxan and Enbrel**
- > A number of biopharmaceuticals are now classed as '**blockbuster**' drugs with sales over \$1bn/year
- > In 2005, Amgen's **Epogen**, recombinant human erythropoietin, was the biggest selling biopharmaceutical with sales over **\$3.0bn**
- > Also in 2005, **Humira**, became the first **UK discovered antibody** product to achieve blockbuster status with sales of \$1.4bn generating significant benefit for **CAT and the MRC**

Biopharmaceutical Pipeline



UK v US

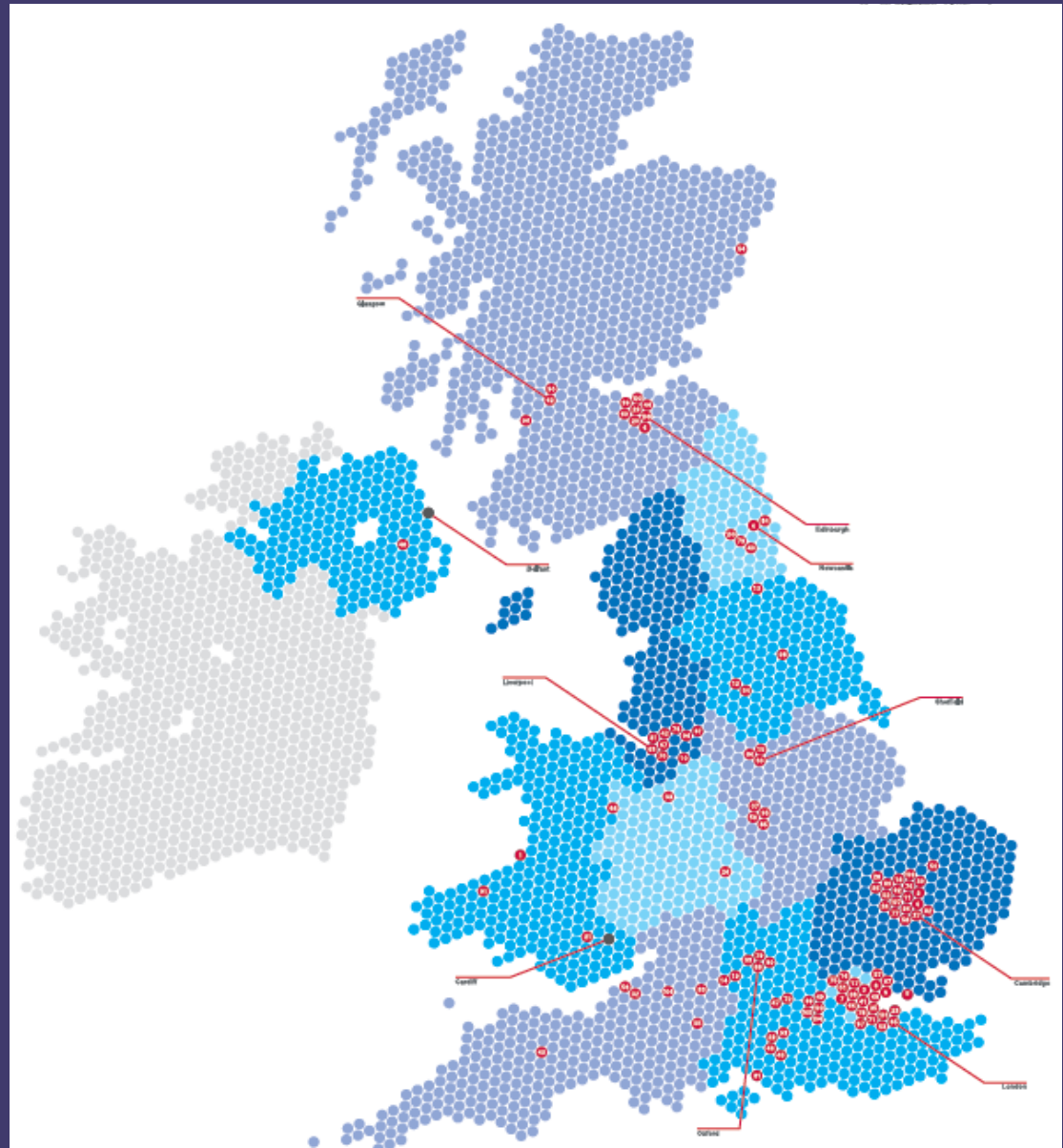


Adding Value Through Bioprocessing

- > Bioprocessing is the pivotal technology to convert a lead into a product
- > The UK has an international strength in early clinical manufacture
 - > Avecia
 - > Lonza
 - > Cobra Biomanufacturing
 - > Angel
 - > National Biomanufacturing Centre
- > And strong Specialist Suppliers
 - > Invitrogen
 - > Millipore

UK Sector

> Some Clustering





What Hit The Headlines in the last 12 months

- > December 05 Protherics do big deal with Astra Zeneca
- > April 06 Novartis acquired Chiron Vaccines
- > June 06 Novartis acquired NeuTec Pharma
- > July 06 Novozymes acquired Delta Biotechnology
- > August 06 AstraZeneca completed a £567 million takeover of Cambridge Antibody Technology
- > August 06 Millipore bought Celliance
- > November 06 CAT is now the antibody discovery arm of AstraZeneca and is expanding its Cambridge base



What are we Doing?

- > Building powerful networks
 - > Annual bioProcessUK Conference
- > Reinvigorating the research base
 - > Bioprocessing Research Industry Club
- > Driving the development of people with the right skills
 - > Talent acquisition and development
- > Influencing UK trade and investment to build the company base
 - > Evaluating UK competitiveness



Where are The Opportunities?

Lonza

Individuality Matters...

Excellent reward packages + extensive career development opportunities

Lonza, a chemical and biotechnology company driven by the life sciences, generated sales of CHF 2.52 billion in 2005. Headquartered in Switzerland, Lonza operates 23 production and R&D sites around the world. Its 6400 employees are passionately committed to delivering sustainable value to their customers. Lonza is one of the leading custom manufacturers of chemical intermediates, active ingredients and biopharmaceuticals for the pharmaceutical and agrochemical industries. On the basis of organic chemicals and biotechnology platforms, Lonza creates value-added solutions for the nutrition, hygiene & personal care, wood & water treatment and industrial specialty markets.

We have a number of new positions within the Analytical Development department of our Biopharmaceuticals sector. Joining an existing team, you will support the department's core activities, which could involve the testing of process related samples, assay transfer, assay evaluation, protein stability, protein characterisation and/or assay validation. This will involve interaction with other development departments, QC and QA groups and our customers, to ensure the timely completion of studies so you will need good interpersonal and communication skills. An understanding of cGMP and analytical method development and validation would be an advantage although training is available.

Analytical Development Scientists: Protein Stability

The group is responsible for the pre-formulation and stability studies performed as part of process and product development for recombinant antibodies and proteins produced by Lonza Biologics.

You should have a scientific degree or equivalent, which includes protein biochemistry as well as detailed knowledge and understanding of a range of analytical methods and their application for the investigation of proteins. An understanding of protein structure and function is desirable. Experience in chromatography, electrophoresis and spectrometric methods, gained in an academic or commercial environment, particularly in the area of protein degradation and stability would be an advantage.

Analytical Development Scientists: Protein Characterisation

The group is responsible for the detailed characterisation studies performed as part of process and product development for recombinant antibodies and proteins produced by Lonza Biologics.

Your degree should include protein biochemistry and you should have an interest in protein characterisation as well as commercial or academic experience of working with chromatographic, electrophoresis and/or mass spectrometric methods. Experience in the determination of protein primary structure and the profiling of post translational modifications by mass spectrometry will be required for Senior Scientist roles.

If you feel you meet the above criteria, please email your CV, quoting AD1006/NS to our Recruitment Team, at careers.slough@lonza.com or send your CV directly to Ruth Upton, Recruitment Department, Lonza Biologics Plc, 228 Bath Road, Slough SL1 4DX, UK.

For details on all our current vacancies please visit our website. www.lonza.com
Lonza is an equal opportunity employer

Oxford bioMedica plc develops gene-based medicines for the treatment of cancer and neurodegenerative diseases. Two cancer products are in clinical trials and products are completing their pre-clinical evaluation. Due to the expansion of our clinical program, we are now looking to strengthen our Clinical Development Group with a Clinical Research Associate to play a key role in delivering the medical potential of our research.

Clinical Research Associate

The post holder must be able to demonstrate real understanding of the role of a CRA in monitoring and ensuring compliance with GCP.

You will be able to motivate clinical investigation staff to high levels of productivity while maintaining compliance with GCP.

You will initially be working on oncology studies but the portfolio includes entirely novel gene based therapies in neurological and ophthalmic indications.

This is largely a field based position requiring extensive UK travel and base location can be flexible. Some less frequent travel to Europe and the US will also be required.

Applicants should have a keen eye for detail and excellent interpersonal and communication skills. We offer competitive salaries, which are aimed at attracting and retaining the best people with recognised relevant experience. We offer a share option scheme, generous holiday allowance, childcare voucher scheme, health cash benefit plan, life assurance and a company pension scheme. A company car or car allowance will be provided for this position.

To apply, please send your CV to HR Manager, Oxford bioMedica plc, Medway Centre, Robert Robinson Avenue, The Oxford Science Park, Oxford, OX4 6GA, hr@oxfordbiomedica.co.uk

Closing date for applications is 15 November 2006.

Please see our website for more information: www.oxfordbiomedica.co.uk

MEMBERSHIP RELATIONSHIP MANAGER

The BioIndustry Association is the trade body for innovative enterprise in the UK's bioscience sector. We look after the industry interests of over 300 member companies in this sector plus associated professional service firms and network groups. For more information see www.bioindustry.org

Responsibilities will include:

- Developing working relationships with biotech organisations and other stakeholders, including membership recruitment and renewals
- Promoting long-term benefits of membership to new and existing members of the BIA
- Actively engaging with members through company visits, event attendance, seminar contribution etc
- Developing marketing campaigns and generating reports around membership financial activity

The Ideal candidate will have:

- Two years' experience post graduation in membership or relationship marketing activity, especially managing professional services
- Some experience gained in scientific research and an appreciation of the bioscience or healthcare industries
- Proficient communication skills including direct marketing campaigns
- Sound IT acumen and project management skills

Please apply with salary expectation, or contact for more information, Carolyn Ponder at cponder@bioindustry.org by Friday 10 November

Developing UK Biotech industry leaders

We support ambitious young scientists working in the biotechnology field with the funds for training activities, including attendance at conferences and courses such as the MBA or MSc, which relate to their personal development. For further details contact:

Ian Bowbrick, The Royal Academy of Engineering,
29 Great Peter Street, London SW1P 3LW
Tel: +44 (0) 20 7227 0500. Fax: +44 (0) 20 7233 0054
Email: ian.bowbrick@raeng.org.uk
www.raeng.org.uk/education/professional/sainsfile

bioProcessUK

Opportunities for Graduates/ Post Graduates interested in biopharmaceutical bioprocessing

One Year Graduate Placement

bioProcessUK, a business unit of the BioIndustry Association, has a vacancy for a recent bioscience graduate student with an interest in the bioscience that underpins biopharmaceutical bioprocessing. This will be a technical marketing role for a fixed term of 12 months and will provide an excellent foundation for careers in this exciting sector. The post is based in London. Apply by email to bioprocessuk@bioindustry.org by the 30th November 2006.

Bursaries for the Annual bioProcessUK Conference (AbC)

bioProcessUK, through its sponsoring companies, is offering 25 bursaries for those completing their PhD or engaged in their first post-doc who are involved in biopharmaceutical bioprocess research, to attend the AbC in Edinburgh on 29th-30th November. Application form requests to be received by email.

Career Advice Roadshows

Over the course of the next six months bioProcessUK will run three career advice workshops in Scotland and the North and South of England. For further information on any of the above, please contact bioprocessuk@bioindustry.org

www.bioprocessuk.org

Exciting careers in biopharmaceutical development and manufacturing

Cell Biologist
A versatile and multi-disciplinary clinical oncology professional with successful application techniques such as experience and Candidates should have equivalent in

Assay Biologist
A position is available for projects, principally enzyme-based assays should be educated but full training will be provided. The salary and benefits are commensurate with the role. Please send your CV to: info@perac.com Perac 438 C Camb

Tel: +44 (0) 1223 311111
E-mail: info@perac.com
Web: <http://www.perac.com>

Creating Scientific Opportunities

- Are you looking for design and development opportunities?
- Do you want to work for a leading biotech company?
- Are you interested in biopharmaceutical development and manufacturing?
- Do you want to be among the best in the industry?

Tessella is a leading biotech company and support services and technology over 25 years experience including: high definition, emulsion, and more.

We are looking for programming and will provide opportunity to work on projects.

You should have a minimum of 2 years experience with Masters/PhD.

Apply via email to info@tessella.com See www.tessella.com

Avecia



Opportunity – Your Choice

Sector? Red, White Green or Blue

Where? Academia, public sector, service sector, biotech, pharma

Function?

Medicine Research

Medicine Developer

Medicine Manufacture

Company IP Lawyer

Sales and Marketing

Chief Executive

Finance Director

Regulatory Affairs

Intra/Entrepreneur

Technical Business Development

Generic Skill Needs

A numerate bioscientist able to cross disciplines and lead innovation & commercialisation

- > High level academic achievement
- > Strong interpersonal skills
- > Career record, tangible success
- > International experience
- > Strategic thinkers
- > Strong technical fit
- > Passion and commitment
- > Energy 'a can do attitude'
- > Teamwork: Do people like working with you?
- > Effective communication
- > Persistence, hard work



Who Gets the Opportunities?

- > Those that
 - > Know what they want
 - > Have a sound & relevant technical background
 - > Have good references, it's a small industry
 - > Understand the business context
 - > People want to work with
 - > Network (Not many jobs are advertised)

The Process for You

- > Information
 - > BioIndustry Association (BIA): www.bioindustry.org, www.bioprocessuk.org
 - > Bioindustry Organisation: www.bio.org
 - > Healthcare www.healthtechktn.com
 - > White, Green and blue www.biosciencektn.com
- > Monitor Trends
 - > Where is academic funding going
 - > In whom are the Venture Capitalists investing
- > Get Networking
 - > Regional networks
 - > Where are your departments alumni?
 - > With whom does your department collaborate?
 - > Attend all industry presentations in the University
 - > Ask people what they do
- > Personal Plan
 - > Type of job – online www.belbin.com
 - > Location
 - > Mid to long term plans
 - > Target companies speculatively



In Summary

- > It is a changing and dynamic job market
- > Multinational pharma do not offer what they did e.g. security
- > Biotechs also offer exciting career opportunities
- > Security is provided by clusters
- > We need to be flexible and keep up to date e.g. RAE
- > Service based businesses provide a wide range of opportunities
- > There are exciting jobs in the UK although it's a global business



What should The Industry Do To Encourage Top Talent?

- > Communicate bioscience opportunity to young people
- > Tailor this communication to the target audience age and education
- > Demonstrate that there are jobs and that they are intellectually stimulating and financially rewarding
- > Bridge the communication gap between companies and potential applicants
- > Other sectors "just seem to be shouting louder"



bioProcessUK Opportunities

- > Annual bioProcessUK Forum
 - > Edinburgh 29th – 30th November Bursaries for academics
 - > Two set aside for this audience
- > British High Commission bursaries to visit Singapore Bioprocessing Conference – March 2007
- > Access to companies through www.bioprocessuk.org
- > Careers advice road shows with recruiters
- > Graduate Placement at bioProcessUK
 - > From January 2007
 - > Talk to Sarah West