



Out of the Blue and Down to Earth
Making the Transition from Academia to Biotech

**Careers in Science:
Choices and Opportunities**

ISMB Retreat

19 June 2007



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Crystallography
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Rank by Market Cap	Company (FT Global 500)	Market Cap £bn	Rank by VA	Company (from VA 750)	VA £bn	Is it in Top 30 by Market Cap
1	Gazprom, Russia	130.9	1	Royal Dutch Shell, UK	34.1	Yes
2	Royal Dutch Shell, UK	110.5	2	BP, UK	26.6	Yes
3	BP, UK	106.5	3	Total, France	24.8	Yes
4	HSBC, UK	106.3	4	Siemens, Germany	24.2	Yes
5	Total, France	85.3	5	DaimlerChrysler, Germany	23.5	No
6	Roche, Switzerland	83.4	6	Deutsche Telekom, Germany	23.3	No
7	GlaxoSmithKline, UK	78.9	7	HSBC, UK	19.7	Yes
8	Vodafone, UK	78.8	8	France Telecom, France	18.0	No
9	Novartis, Switzerland	77.8	9	Eni, Italy	17.9	Yes
10	Nestle, Switzerland	71.9	10	Volkswagen, Germany	17.6	No
11	Eni, Italy	66.4	11	Royal Bank of Scotland, UK	15.8	Yes
12	Electricite de France, Fr	65.6	12	UBS, Switzerland	15.3	Yes
13	Royal Bank of Scotland, UK	65.4	13	Electricite de France, France	14.9	Yes
14	UBS, Switzerland	65.4	14	Gazprom, Russia	14.7	Yes
15	Sanofi-Aventis	64.5	15	Telefonica, Spain	13.8	Yes
16	Banco Santander, Spain	60.3	16	Deutsche Post, Germany	13.3	No
17	BHP Billiton, UK	57.2	17	GlaxoSmithKline, UK	13.2	Yes
18	Telefonica, Spain	55.7	18	Credit Agricole, France	12.7	No
19	BNP Paribas, France	53.3	19	Allianz, Germany	12.3	Yes
20	ING, Netherlands	50.1	20	Nestle, Switzerland	12.3	Yes
21	Barclays, UK	49.7	21	Vodafone, UK	12.1	Yes
22	Siemens, Germany	49.2	22	Barclays, UK	12.0	Yes
23	UniCredito Italiano, Italy	48.5	23	ING, Netherlands	12.0	Yes
24	E.On, Germany	46.9	24	Deutsche Bank, Germany	11.8	No
25	Banca Intesa, Italy	45.8	25	BNP Paribas, France	11.4	Yes
26	Allianz, Germany	45.4	26	Robert Bosch, Germany	11.3	No
27	BBV Argentaria, Spain	44.8	27	Telecom Italia, Italy	11.2	No
28	AstraZeneca, UK	44.0	28	Societe Generale, France	10.8	No
29	HBOS, UK	43.8	29	Sanofi-Aventis, France	10.8	Yes
30	Unilever, UK	42.3	30	Credit Suisse, Switzerland	10.4	No

Market Capitalisation is the aggregate value of a company

Value Added is the amount of wealth generated by it.

Some pharmaceutical companies are among the most valuable and wealthy, all industries considered.

In order to sustain this market presence, the industry continuously cycles through consolidations and mergers.

These cycles are driven by economic forces, and all available variables may be utilised in order to balance the books. This inevitably includes the workforce.

The message is that no matter what size company you might join, it is the same factors that should be considered:

- Job satisfaction
- Salary and perks
- Career Prospects

You will have little control over longevity...

Source: DTI online's Value Added Scoreboard 2007



Glaxo Smithkline to be formed in £114bn "merger of equals"

Glaxo Wellcome Plc and Smith-kline Beecham Plc announced a £114bn "merger of equals" between the two companies on January 17. The merger comes almost two years since a previous attempt to bring them together broke down after disagreements between senior managers. The merger is expected to be completed by the summer.

The new company is to be called Glaxo Smithkline (GSK). It will be based in the United Kingdom but have its operational headquarters in the United States. The merger will create the world's largest pharmaceutical company with annual sales of over £15bn and a research and development budget of £2.4bn.

Speaking at a press conference in London on January 17, Sir Richard Sykes (executive chairman, Glaxo Wellcome, and non-executive chairman designate, GSK) said that both he and Mr Jan Leschly, chief executive of Smithkline Beecham, shared a vision of creating a world-class pharmaceutical company through the merger. "The time is right and the market is right for what we are doing," he said.

Sanofi's takeover of Aventis the biggest deal of 2004 by far

Without doubt, the most notable deal of the 116 reported was France-headquartered Sanofi-Synthelabo's \$62.6 bn hostile takeover of Franco-German drugmaker Aventis.

Although Aventis was openly looking to partner with another firm, it insisted that the bid from Sanofi, a substantially smaller business than its own, significantly undervalued the company.

Aventis was never happy with the offer, even formally inviting Swiss drug major Novartis to enter negotiations.

Three months of wrangling and hostilities finally culminated in Aventis' acceptance of Sanofi's deal, representing not only the biggest of 2004 in the pharmaceutical industry to create the third largest drug group, and comfortably overshooting last year's \$57-billion mega-merger of Pfizer and Pharmacia, but also marking 2004's second-largest deal across all industries worldwide.

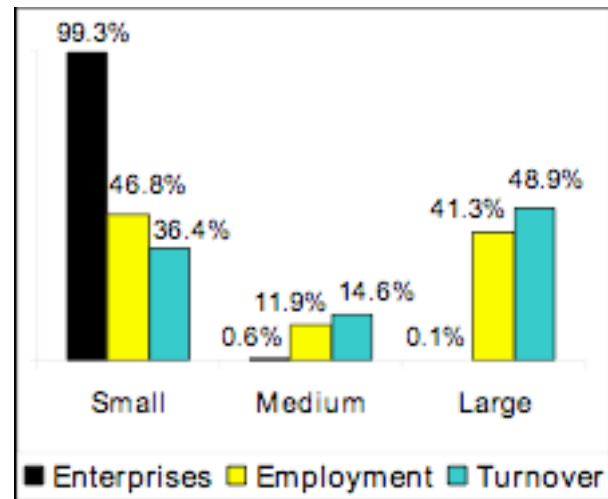
Company	Partner	Deal value (\$)	Completed
Abbott Laboratories	TheraSense	\$1.2 billion	April 2004
Amgen	Tularik	\$1.3 billion	Aug 2004
Charles River Laboratories Int	Inveresk Research Group	\$1.5 billion	TBC
CSL	Aventis Behring	\$925.0 million	March 2004
DaVita	Gambro Healthcare	\$3.1 billion	TBC
Eli Lilly	Applied Molecular Evolution	\$400.0 million	Feb 2004
General Electric	Amersham	\$10.2 billion	April 2004
Genzyme	Ilex	\$1.0 billion	Dec 2004
Johnson & Johnson	Guidant Corp	\$25.4 billion	TBC
Mylan	King Pharmaceuticals	\$4.0 billion	TBC
Novartis	Mead Johnson (from Bristol-Myers Squibb)	\$385.0 million	Feb 2004
Perrigo	Agis	\$818.0 million	Nov 2004
Pfizer	Esperion Therapeutics	\$1.3 billion	Feb 2004
QLT	Atrix Laboratories	\$855.0 million	Nov 2004
Roche	Bayer HealthCare OTC	\$2.9 billion	TBC
Sandoz (Novartis)	Sabex	\$565.0 million	Aug 2004
UCB	Celltech	\$2.7 billion	Aug 2004
US Oncology	Oiler Acquisition	\$1.7 billion	March 2004
Warren Acquisition	Warner Chilcott	\$3.0 billion	Jan 2005
Yamanouchi	Fujisawa	\$8.0 billion	TBC

According to the DTI figures for 2005:

There were 4.3 million UK businesses in operation at the start of that year, **99.3% of them were small** (Less than 49 employees).

While only 0.6% (or 27,000) were medium (50 to 249 employees), and only 0.1% (or 6,000) were large (> 250 employees).

At that time SMEs accounted for 58.7% of UK employment and 51.1% of UK turnover.



Small enterprises alone accounted for 46.8% Of employment and 36.4% of turnover.

Statistics show that there was a net increase of companies from 2004 to 2005 by 1.4%.

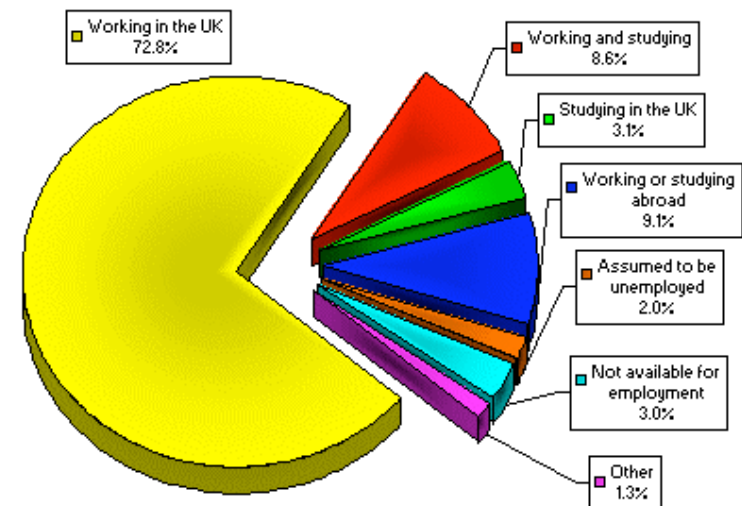
Start-up and close-down in this sector is HIGH.

In a survey of Biological/ Biomedical Sciences 2003 Ph.D. Graduates:

http://www.grad.ac.uk/cms/ShowPage/Home_page/Resources/What_Do_PhDs_Do_/Biological_and_biomedical_sciences/p!edceebg

Of the 2,845 eligible: 13% are classed as biologists
6% molecular biology, biophysics, biochemistry.

Biosciences 2003	UK PhD graduates
Female	1,055
Male	740
Total in sample	1,795
Total PhD graduates in this subject area	2,845
% response	63.1%



8.5% become HE/ University lecturers.

44% enter scientific research occupations,
57% of these in Universities.

Unemployment is 2% below the national rate, and is below the rate for first and Masters graduates.

Pharmaceutical/ chemical industry attracts around 16% of B/BS Ph.D.s

Essential Resources

London Biotechnology Network:

LBN Career Track

Launched in March 2007, *Career Track* is aimed at nurturing the enormous labour pool arising from the 39,000 life science graduates and PhDs trained every year in London. The initiative will: address skills gaps identified by employers, hurdles faced by those seeking employment, enhance the Academia-Industry interface, encourage business creation and growth and work with London's diversity for maximal benefit to stakeholders.

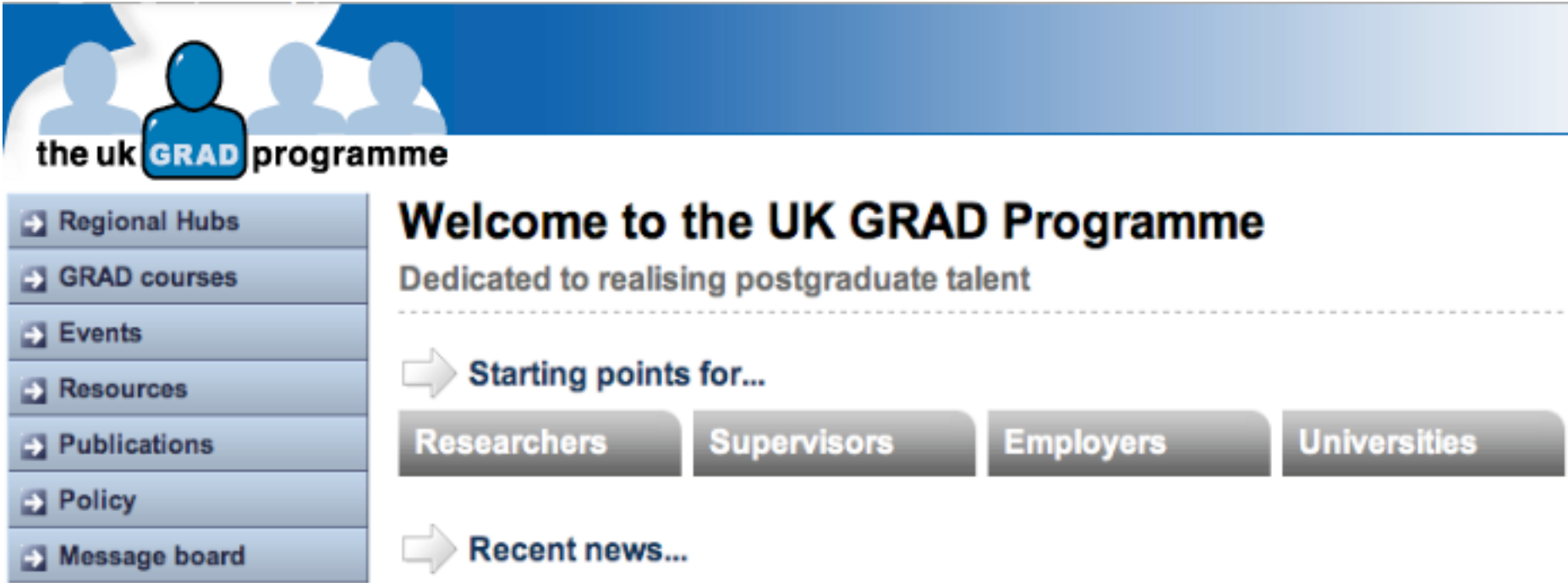
<http://www.londonbiotechnology.co.uk/>

BioWednesday meetings

Annual *Genesis* Meeting

Essential Resources

The UK GRAD Programme - Online:



The screenshot shows the homepage of the UK GRAD Programme. At the top, there is a blue header with the text "the uk GRAD programme" and an icon of four stylized figures. Below the header is a navigation menu with the following items: Regional Hubs, GRAD courses, Events, Resources, Publications, Policy, and Message board. The main content area features a large heading "Welcome to the UK GRAD Programme" followed by the tagline "Dedicated to realising postgraduate talent". Below this, there is a section titled "Starting points for..." with four buttons: Researchers, Supervisors, Employers, and Universities. At the bottom of the main content area, there is a section titled "Recent news..." with a right-pointing arrow.

http://www.grad.ac.uk/cms/ShowPage/Home_page/p!eecddL

Essential Resources

ScienceCareers.org - Careers Online:

CAREER TOOLS AND RESOURCES

 **Science Careers Forum >**
Career Consultant Dave Jensen moderates our popular online message board for career development advice.

Career Development Booklets >
Search chapters of advice for young scientists.

Graduate Programs >
Find information on available graduate programs.

How-to Guides >

- > Craft a Winning Resume/CV
- > Prepare for an Interview
- > More Guides

Salary Resources >

Career Fairs

Workshops

<http://sciencecareers.sciencemag.org/>

Essential Resources

naturejobs.com - Careers Online:

**Announcement - Naturejobs launches
The Source Event - a Career Fair for
scientists**

The Source Event is a new dedicated Science Career Fair launched by Naturejobs and London First in London for 2007. The event will be split into a dynamic and exciting exhibition with plenary conference and workshop sessions running alongside the event.

Visit www.thesourceevent.com to find out how you can be a part of this exciting new event.

<http://www.nature.com/naturejobs/index.html>

Essential Resources

[jobs.ac.uk](http://www.jobs.ac.uk) - Careers Online:

Careers: Top Ten Tips
Our careers based Top Ten Tips offer quick tips on applying to surviving. Click on a Top Ten Tips below, or [browse our archives](#).

 **[Top Ten Tips For Applying At Local Councils](#)**
Friday, June 1, 2007

 **[Top 10 Tips For Staying Sane \(and Positive\) While Jobseeking](#)**
Tuesday, May 8, 2007


 **[You've Got 10 Seconds To Impress Me - 10 Things NOT To Do On Your CV](#)**
Monday, March 5, 2007



Articles Case Studies Commentary **Top Ten Tips**

<http://www.jobs.ac.uk>

Other Resources


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 monster.co.uk
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Conferences

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- [Market Reports](#)
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- [Conference Proceedings](#)

Current Vacancies

Job Title	Reference	Salary	Location	
Northern Germany Sales Manager	EU-4703	€ Negotiable	Germany	Details >>
Scientific Group Leader, Immunotolerance	EU-4704	€ Negotiable	Leipzig, Germany	Details >>
Business Development Professionals x 2	EU-4705	£ 35-55k	UK	Details >>
Research Project Team Leader	EU-4706	£ 35-55k	UK	Details >>
Research Project Team Leader / Toxicologist	EU-4707	£ 40-55k	UK	Details >>
Sales Representative	EU-4708	£ 30k + Com	UK	Details >>

Selected Candidates

Reference	Position Required	Location	Experience/Background
5123	Research or applications specialist	N. America	PhD ; X-ray crystallography, molecular modelling
5124	Sales Representative	North UK / Scotland	PhD ; molecular biology
5125	Senior marketing/Bus. Dev.	Europe	20 years technical/commercial marketing
5126	Research or analytical	N. America	Analytical and microbiological development and testing
5127	Senior Research in Pharma/biotech	N. America	organic chemistry, lab automation, medicinal chemistry ; Ass. Prof.
5128	Senior Sales/Marketing	N. Germany	PhD. ; lab automation ; sales/marketing
5129	Senior Research	N. America	PhD ; biomolecular screening
5130	Associate Principal Scientist	Switzerland	PHD-Qualified / 12 Years MEMS Exp
5131	CEO / Non Exec	Europe	25years Applied Healthcare Experience

Many other candidates - too numerous to list - [contact us](#) with your requirements

We offer a specialist recruitment service focused on locating staff worldwide, working at all levels, in the following areas:

- Drug Discovery
- ADME / Toxicology
- Biomolecular Screening
- Genomics
- Proteomics
- Metabolomics
- Molecular Biology
- Mass Spectroscopy
- Cell Biology
- Stem Cell research
- Medicinal Chemistry
- Protein Crystallography
- Process Research & Development
- Thermal Analysis
- Catalyst & Materials Research