

The Future of Employment

Rosy Future?

A recently-published study predicts hundreds of thousands of bio tech jobs.

Biotechnology has a bright looking future – this is the result of a recently published study of biotech in Germany, according to the initiators IG BCE (Mining, Chemical and Energy Industrial Union), DIB (German Association of Biotechnology Industries) and the Hans Böckler foundation. The study's startling result shows that in less than 15 years "the number of people in a workplace connected with biotechnology will be higher than the number of persons currently employed in the entire German chemical industry", said a DIB spokesperson. The study was performed by the Fraunhofer Institute for Systems and Innovation Research (Fraunhofer ISI) and the German Institute for Economic Research (DIW) Berlin.

According to the study, between 258,000 and 443,000 jobs are currently influenced directly by biotechnology (people employed directly in biotechnology, users of biotechnology and suppliers). By 2020 biotechnology should be able to secure or create between 369,000 and 596,000 jobs. In addition, there are 217,000-471,000 people with jobs influenced by biotechnology in upstream industries, a number which could rise to 369,000-682,000 by 2020.



Are dreary job hunts soon to be a thing of the past? A study of German biotechnology promises fantastic prospects for life scientists and related professions.

So much for the authors' comments! But is it really appropriate to rejoice? The initiators (especially the DIB) don't seem notably independent and probably have vested interests in obtaining exactly such great results. Their motivation can be clearly detected in comments like "It is essential for Germany as an industry location to drive forward the use of this potential and to benefit from the entire range of possible applications" or "Germany must use the potential of this new technology in a more decisive manner and improve relevant framework conditions, so that this industry location is not left behind in dynamic international developments". Surely these are statements made by lobbyists, rather than fair-minded persons.

In addition, most of the resulting data looks very imprecise, wobbling in certain cases by more than 100 per cent. Finally, the numbers for the biotechnological core sector are the least inspiring. The study states that there are currently 89,000-93,000 active staff, increasing only moderately to 97,000-113,000 by 2020. Effectively, this would be a 0.7 per cent increase per annum – certainly nothing worthwhile celebrating.

WINFRIED KOEPPELE

United Kingdom & Germany

Old Vintage in New Bottles

RNAi causes companies to do strange things – for example changing their names.

SR Pharma plc, a London-based RNAi therapeutics company, changes its name into Silence Therapeutics plc. The reason, according to the company, is "to better reflect the company's core focus on the RNAi technology" (in which specific genes are 'silenced'). Silence Therapeutics develops RNAi drugs which are directed against cancer, such as gastro-intestinal and non-small cell lung cancer. The company's own drug candidates (2 in number) are in pre-clinical development, whereas a further molecule (for the treatment of Age-related Macular Degeneration, or AMD, and other indications) is in clinical development via Silence's collaborators Quark Biotech and its sub-licensee Pfizer.

Silence Therapeutics was formed in 1994 as 'Stanford Rook Ltd', a drug development spin-off from University College London,

specialising in immunotherapy. In 2005, the firm completely revised its strategic direction and in the same year acquired Atugen AG, a RNAi company from Berlin, Germany. Since then the company has been based in both London and Berlin and is listed on AiM (a sub-market of the London Stock Exchange, designated for smaller companies).



-WK-



France

Gallic Rooster in Ascent

France's struggling biotech has more and more good news. Recently an Euronext IPO of Metabolic Explorer (Clermont-Ferrand, France) raised €60 million (an unusually high figure for a French biotech IPO). Metabolic Explorer was founded in 1999 and self-describes as a manufacturer of "green chemicals", meaning that the firm produces bulk chemicals in a more environmentally friendly way than existing oil-dependent production processes. In its approach, based on fermentation,



Metabolic uses bacteria to produce existing bulk chemicals. In the first five weeks since issuing shares, the IPO has been a success story. The share price exploded from €8.40 to €11.70 (a 39% increase), providing Metabolic Explorer with a market capitalisation of €236 million. -WK-

France

Constant Pressure

Disappointing phase IIa results on an experimental hypertension drug have led to the termination of France's Nicox (Sophia Antipolis near Paris) trial and the subsequent dismissal of the whole development programme. The compound, with the name NCX 1000, was intended to treat high blood pressure in the vein that carries blood from the digestive system to the liver. But in a double-blind proof-of-concept study on 11 Spanish patients with portal hypertension, no improvement could be observed. The failure has also had negative consequences for Nicox' development partner Axcan Pharma (Quebec, Canada).

Nicox, one of France's figureheads in biotechnology, develops nitric oxide-donating drugs against pain and inflammation and for cardio-metabolic diseases. However, the emerging flop with NCX 1000 won't knock the company off the map. Nicox has focussed its resources on two other lead compounds,

namely, a phase 3 drug for the treatment of osteoarthritis and a phase 2 drug for type 2 diabetes. Additionally, the firm has strategic partnerships with two of the world's leading pharmaceutical companies, Pfizer and Merck & Co. The company, listed on Euronext Paris, is comfortably off. Beyond a €45.5 million private placement financing in 2006 and an increase of capital in February 2007, which earned an additional €120.7 million, Nicox presently owns cash and cash equivalents of nearly €200 million. Considering the company's 2006 net loss of €24.7 million, Nicox has good chances of surviving the coming, pricey years and succeeding in its announced "transition from an R&D to a biopharmaceutical company". At least the shareholders are looking highly confident, as Nicox' market value has doubled in the last 12 months. -WK-

Switzerland

The Eight Billion Dollar Plant

Swiss drug maker Roche has inaugurated a biotechnology production centre in Basel for the manufacture of cancer treatment Avastin (and plans a wave-making new administration building; see below). The first batch of the cancer drug is scheduled for 2009. In the meantime, Avastin is supplied by Roche's majority-owned U.S. partner Genentech. Avastin, first identified in 1989, is an angiogenesis inhibitor, which shuts down the blood vessels that feed tumours, starving the tumour. Avastin targets the vascular endothelial growth factor (VEGF), which plays an important role in making new blood vessels. Analysts predict that, once established, Avastin will earn \$8 billion or more per annum. -WK-



This one's not for the production of Avastin: The projected, wave-making new Roche "Bau 1" building in Basel will house administration offices. Date of completion: 2011.

Italy / Switzerland

Swiss Appeal

Europe's publicly traded biotech companies including Qiagen, Novozymes and Eurofins are gaining new blood at the Swiss Exchange (SWX), which mainly attracts biotech companies. After the IPO of Cosmo Pharmaceuticals (Milan, Italy) in the beginning of March, the Swiss drug maker, Adnex Pharmaceuticals (Geneva), is already preparing to take to the floor.

The hitherto unobtrusive company with 70 employees was founded in 2002 by four scientists with a strong background in pharmaceutical business. Adnex develops small



Photo: Kutay/Tamir/istockphoto

molecule compounds and specialises in the treatment of diseases of the central nervous system. Since its foundation, Adnex has raised the enormous sum of €68 million from investors. The planned IPO, scheduled for the end of May, should raise a further estimated €94 million.

Cosmo Pharmaceuticals, a therapy developer for gastro intestinal diseases (such as ulcerative colitis and Crohn's disease), reached the Swiss Exchange two months earlier. The Milan-based firm disposed of its ordinary stock for CHF 20 (€12.1) per share, issuing a total of 2,675,000 shares and yielding total returns of €32.4 million. Cosmo was founded in 1997 by the current managing director Mauro Severino Ajani. The company's clinical development pipeline includes six compounds: one approved, one in Phase III, two in Phase II and one in preclinical phase. The company has 117 employees and created revenues of €15.2 million in 2006. -WK-

Thor Bjorgolfsson made his fortune in Russian beer. These days he is more interested in life sciences.



Photo: Actavis

Iceland

Billionaire's Bet

An Icelandic investor risks his fortune on generics producer Actavis.

The billionaire Thor Bjorgolfsson tables €2.7 billion to acquire the Icelandic generic drug manufacturer Actavis and remove the public company from the stock market. Bjorgolfsson believes that making Actavis private would give the company a pivotal competitive advantage in the ongoing global consolidation of the generic industry (and realise considerable profit, one assumes). Bjorgolfsson's investment group, Novator, intends to buy out all other stockholders. In fact with a 35 per cent share of his joint investment fund Amber International in Actavis, Bjorgolfsson is already the largest Actavis stockholder. Other major Actavis investors are the Landesbank Luxembourg (6.9%), the Actavis Group it-

self (5%) and GLB Hedge (4.1%).

Recently, Actavis failed to take over Merck KGaA's generic subsidiary and Pliva (Croatia). The company's management put the blame on Actavis' position as a public company which forced it to disclose confidential information.

An active executive

Actavis, one of the world's largest producers of generic pharmaceuticals, with revenues of €1.4 billion and a net profit of €103 million in 2006, has 11,000 employees worldwide. Founded in 1956, the company has executed more than 20 acquisitions in the past seven years. Thor Bjorgolfsson, a 40-year-old self-made businessman,

who in 1991 made his first fortune with a brewery in Russia, has been declared "Iceland's first billionaire". Bjorgolfsson is currently ranked by Forbes Magazine as the 249th richest person in the world, worth – guess! – right, nearly €2.7 billion. Bjorgolfsson is risking all his fortune on Actavis. It looks like a "make-or-break" business...

WINFRIED KOEPELLE

Exhibitions

Brilliant in Boston but Here Comes Hannover

After a well-attended 2007 BIO International Convention, its German counterpart, Biotechnica, awaits October.

The 2007 BIO International Convention in Boston, arranged by the U.S. Biotechnology Industry Organization (BIO), attracted more attendees than ever. An increase of almost 15 per cent from the previous year resulted in 22,366 visitors, one-third from outside the United States. Celebs from Hollywood (Michael J. Fox), high society (Queen Noor of Jordan) and science (Robert Langer and Phillip Sharp (both MIT) as well as Craig Mello (University of Massachusetts Medical School)) were on site, giving lectures inside the exhibition halls, constantly being chased by camera crews and crowds of politicians. Over four days (May 6-9) more than 200 breakout sessions were held, covering 20 educational tracks on pressing issues in biotechnology including global health, biofuels, stem cell research, vaccines, investment strategies and white biotechnology. The BIO Exhibition featured more than 1,900 companies and 60 domestic, national and regional pavilions representing many aspects of the biotech industry. In addition, more than 6,000 attendees representing

1,503 companies participated in the BIO Business Forum and held 12,103 partnering meetings, turning the BIO Convention into the world's largest event for the biotech industry.

You didn't manage to visit Boston this year? Don't despair! From 9-11 October 2007 Europe's competing event, Biotechnica,

will take place in Hannover, Germany. More than 900 exhibitors and 13,000 trade visitors are expected from around the globe. This year, the Biotechnica fair will be focussing on industrial applications and red biotechnology (biopharmaceuticals).

Furthermore, a prize of €60,000 is reserved for a lucky, medium-sized biotech company. All you have to do is to register before 1 June 2007 for the "European Biotechnica Award", then keep your fingers crossed. And, hey, celebs

will also be appearing in Hannover; unfortunately not from heady Hollywood but from bureaucratic Brussels. The fair will be opened by the Vice-President of the European Commission, the German politician Guenter Verheugen.

-WK-



Two years ago: Biotechnica 2005 in Hannover.

Photo: wk

United Kingdom & Sweden / USA

The American Dream (Episode 1)

AstraZeneca tables \$15.2 billion for Medimmune. Two lucky men are thrilled about it.

How would you manage to carry US\$15.2 billion to your local bank? For this sum, payable in cash, the Anglo-Swedish pharmaceutical group AstraZeneca intends to buy the U.S. biotech company Medimmune. US\$15 billion, that's as much as the gross domestic product (the value of all goods and services produced within a year) of the Republic of Iceland in 2006! So, which means of transportation should AstraZeneca choose for \$15 billion in 100 dollar banknotes? A suitcase? A shopping trolley? The backseat of the CEO's car? Whatever they choose, they will be completely wrong. US\$15 billion in 100 dollar banknotes weighs 150 tons. AstraZeneca should assign a fleet of lorries!

The pharmaceutical company is paying a sky-high price, 53% higher than the Medimmune stock price reached the evening before the offer was made. It's the largest acquisition the company has ever made. AstraZeneca suffered a series of setbacks with its clinical studies recently and is now seeking salvation in Medimmune's drug pipeline. Currently, the corporation



Medimmune's founder, Wayne T. Hockmeyer (left), multimillionaire, and current CEO David Mott (right), multimillionaire shortly.

still earns huge turnovers (\$26.5 billion in 2006) with drugs like Seroquel (for schizophrenia) or Crestor (to control cholesterol level).

However, AstraZeneca is afraid of generics producers and, therefore, needs to strengthen its pipeline. Medimmune's products using proteins rather than synthetic chemistry (such as Synagis for respiratory illnesses in babies and FluMist, a nasal flu vaccine) could help them to do just that.

There are some lucky winners in this acquisition. One of them is Wayne T. Hockmeyer, a former United States Army officer. Hockmeyer was an internationally recognised malaria vaccine researcher when he founded Medimmune in 1988. Last year, Hockmeyer earned \$3.5 million as Medimmune's then chairman.

Hockmeyer still owns blocks of shares – which rocketed 53% after the announcement of the merger, you remember? Another lucky winner is Medimmune's current CEO, David Mott. He is in line to benefit to the tune of a mere \$145 million after the acquisition – as a friendly “compensation”.

-WK-

USA

The American Dream (Episode 2)

Stratagene's founder sold his legendary company – and promptly set up the next.

Bye, bye Stratagene! Founder Joseph Sorge has sold his legendary company for \$182 million to instrumentation provider Agilent (Santa Clara, California). Sorge, a former assistant professor at Scripps Research Institute in San Diego, held the reins at La Jolla-based Stratagene since its foundation in 1984 and was the largest shareholder, too. He negotiated a lucrative contract with Agilent, which provided a 28% premium on the company's closing share price on the evening before the deal emerged.

Stratagene, a developer, manufacturer and marketer mainly of life science research products, was cutting edge for a long time in its development of thermal cyclers. Henceforth, it will operate



Joseph Sorge sold Stratagene.

as a division within Agilent's Life Sciences Solutions Unit. Stratagene's 400 employees, many of them currently working in locations in Edinburgh (Scotland), Amsterdam (the Netherlands) and Kassel (Germany), are expected to join Agilent.

Their former boss, Sorge, announced that he has already formed a new company namely Catalyst Assets (Delaware, USA) to pursue molecular diagnostic applications and is “looking forward to having more time to focus on research and discovery”. For this purpose, he purchased certain assets of Stratagene from Agilent immediately after the acquisition and will license some of Agilent's molecular diagnostic technologies. It is unlikely that Mr Sorge will disappear off the scene!

-WK-