

United Kingdom

Prophecy of Doom

Prominent British life science investors give stern words of warning.

Britain's leading biotech investor has expressed fears that domestic biotech business is flagging. In an interview with the London newspaper *The Independent*, Chris Evans of venture capital firm Merlin Biosciences complained about a "sick garden syndrome" in the UK, meaning that "we keep pulling the flowers up every six months to look at the size of the roots, and ram them back in the ground wondering why they struggle to grow." Evans said that US biotech teams were vastly more creative and entrepreneurial by comparison and that American companies would therefore make "swift strides". "They [the US teams] can recognize huge value potential in projects when the UK often sees little", Evans added.

As evidence for his prophecy of doom, Evans said that Britain has seen the smallest number of biotech start-ups since 1999. Only 37 biotech companies were established last year in the UK. Additionally, several model companies have disappeared from the island in the last 15 months in high-priced acquisitions, including Cambridge

Antibody Technology and Kudos Pharmaceuticals (both bought by AstraZeneca), Neutec Pharma (by Novartis), and Doman-tis (by GlaxoSmithKline).

Evans' gloomy words are backed by



Biotech supporters raise the alarm: Christopher Evans (left), Stephen Bunting (right).

numbers compiled by the research firm VentureOne. In 2006, just €245 million were invested in biotech start-ups across the UK. The peak level of fundraising, in 2001 when investors showered the biotech sector with €558 million, is long past.

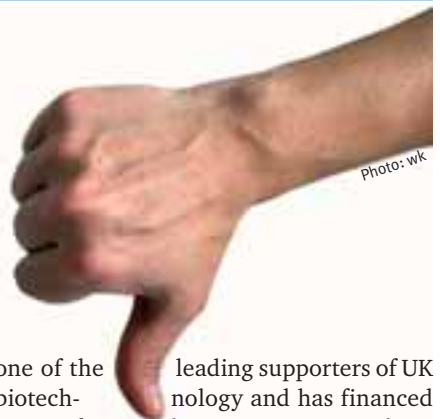
Evans is, with Merlin Biosciences,

one of the leading supporters of UK biotech- nology and has financed some of its biggest successes. These include Vectura (a company which develops inhaled drugs for lung diseases) and Ark Therapeutics (which produces agents against vascular disease and cancer).

Blair is all smiles for the TV cameras

A prominent colleague of Evans, Stephen Bunting, agrees. Bunting, Managing Director of Europe's largest life science investment company (Abingworth LSI), denounced "a shortage of seed money, a shortage of early-stage money, a shortage of late-stage money and a shortage of money from public markets."

Even so, it is questionable whether British politicians have been listening. When opening a new research centre belonging to US biotech giant Amgen in Uxbridge, London, the Prime Minister, Tony Blair, raved about the "enormous strength" of Britain's "vital industry" and was all smiles for the TV cameras. WINFRIED KOEPELLE



Ireland

Farewell to the Biotech Boom?

The Emerald Isle suffers severe setbacks as pharmaceutical companies close plants and fire employees.

Ireland's biotech boom of recent years could well be past its peak. In recent weeks, various pieces of bad news have been leaked to the public, beginning with an announcement by Pfizer on February 8th, 2007. The world's biggest pharmaceutical company intends to scale back its Irish operations and to close manufacturing plants in Cork, which could lead to the loss of 500 jobs. According to Pfizer, the reason was a failed medical test of its experimental cholesterol drug, torcetrapib, in December last year. Irish government officials told the *Irish Times* that they were supporting Pfizer in its efforts to secure the sale of its plants, which would be suited to firms that make generic drugs. At the moment, Pfizer employs 2,300 people in Ireland.

Five weeks later the Franco-German drugmaker Sanofi-Aventis announced job cuts of 200 on the Emerald Isle (in Waterford) by the end of the year. The reason? According to Sanofi-Aventis "a site evaluation which revealed excess capacity within its plant network that could take over the manufacturing done in Ireland".

The final blow for Irish biotech came from the US pharmaceutical giant Bristol-Myers Squibb (BMS), which is pulling \$25 billion

in assets out of its Irish holding company. Why is BMS doing this? The company spokesman offers no more than flowery waffle, but a likely motive is tax avoidance. BMS will make savings when moving its assets to somewhere with a lower corporate tax rate than Ireland's (which already ranks, at 12.5 per cent, among Europe's lowest). -WK-



Germany & USA

Treasure Trove

Micromet, a Nasdaq-listed biotech company of German descent, has bagged a \$100 million licensing pact with Tracon Pharmaceuticals (San Diego, USA). The sum will be paid in milestones, if Micromet's D93 anti-cancer antibody is successfully developed and commercialized. Additionally, Tracon will pay royalties on worldwide sales of D93. At present, the US company is planning a phase I trial of D93 for this year. According to Micromet officials, D93 is a recombinant humanized IgG monoclonal antibody that inhibits angiogenesis, tumour cell growth and metastasis by targeting cleaved collagen, which is predominantly produced in the extracellular matrix of tumours. Because of its anti-angiogenic activity, it may also be helpful against diseases like age-related macular degeneration (AMD) and proliferative diabetic retinopathy (PDR).

With the lucrative deal, Micromet has demonstrated farsightedness (or was it merely a large dollop of luck?). Either way, the Munich-based company bought the crisis-ridden US company Cancervax in 2006 by means of an exchange of stock – and obtained: a collapsing company, liquid funds of about \$45 million, a convenient backdoor to Nasdaq and the D93 antibody, which now seems to be made of pure gold. -WK-



Photo: Worldofboxes

USA

Dangerous Drugs

Bad news for manufacturers, for patients and for drug abusers as well: the US Food and Drug Administration (FDA) has ordered a strengthening of the warning labels on the anaemia drugs Aranesp, Epogen ("Epo"; see photo), and Procrit. Referring to recent studies, the FDA said that high doses of these drugs have been associated with quicker tumour growth in patients with head and neck cancers. In addition, the drugs are linked to



an increased risk of blood clots in patients following orthopaedic surgery. Other side effects of these erythropoiesis-stimulating agents (ESAs), used to boost the number of red blood cells, have long been known. They can increase the risk of developing blood clots, as well as heart attacks and strokes in patients with chronic kidney failure.

Epogen and Aranesp are manufactured by Amgen. Procrit is an Epogen analogue made by Johnson & Johnson. ESAs first came to public attention after several doping scandals in competitive sports and dozens of unexplained deaths among young and apparently healthy athletes. Sharp tongues have commented that they probably didn't read the package inserts which contain the warning message: *Can cause severe side effects, including death, when used in high doses or to treat conditions for which they are not approved.* -WK-

The Netherlands & the USA

Dutch Pills Go West

Dutch chemical group Akzo Nobel has scrapped plans to list its drug unit, Organon Biosciences (OBS), on the stock exchange. In September 2006, Akzo Nobel announced that it would split its 61,500 workforce into two (with Akzo Nobel operating the coatings and chemicals divisions) and prepare the Organon section for an IPO. Later, it was leaked to the press that the US pharmaceutical conglomerate Schering-Plough, the world's third-largest maker of birth control pills, was lining up a bid for Organon.

In March 2007 it became evident that the IPO was a non-starter. Instead, Akzo Nobel sells OBS for \$14.4 billion (about €11.0 billion) to Schering-Plough. This translates as a sum 14 times greater than Organon's estimated 2007 earnings (some \$1.0 billion). According to market observers, the deal can be regarded as the expensive acquisition of a brimming medicine cabinet. This cabinet's most promising drug is the experimental anti-depressant Asenapine, currently in Phase III testing and referred to as a "potential blockbuster" by Schering-Plough's CEO Fred Hassan. -WK-



Photo: Schering-Plough

Fred Hassan purchases a medicine cabinet.

The World

Hope for 50 Cents

Malaria kills millions of children every year. A new drug could end this.

Malaria, the cruel vector-borne disease which kills more than a million children every year, has come up against a persuasive stop sign. After five years of development, the *Drugs for Neglected Diseases initiative* (DNDi) has launched its first anti-malarial product. The new drug, developed and produced in cooperation with the French pharmaceutical company, Sanofi-Aventis, is a novel formulation of artesunate and amodiaquine, called ASAQ (both compounds are well known treatments and have been used against malaria for many years).

Soon available at a low price

The new and non-patented drug is soon to be available in sub-Saharan Africa (where the disease rages at its worst) at a low price. Co-developer Sanofi-Aventis has agreed not to claim any patents so that the pills may be freely copied by generic firms (artesunate and amodiaquine are too old to patent, but a one-pill formulation could have been). According to DNDi Director, Bernard Pecoul, a



treatment with the new drug ASAQ ("easy-to-take as a pill") will cost less than 50 cents for children, and less than \$1 for adults.

Coartem, from Novartis, is rival drug of different composition that is already on the market, and has been sold at low prices to the WHO since 2001. Because of locally occurring resistance to the ASAQ ingredient amodiaquine, Coartem works better in East Africa. WHO officials said that they would welcome competition between the two low-budget drugs.

No vaccine for malaria to date

To date, no vaccine is available for malaria, which is one of the most common and economically threatening infectious diseases. To complicate matters further, prophylactic drug treatments are too expensive for most people living in high-risk areas as well as drugs that treat the symptoms caused by their illness.

Two specimens of the mosquito *Anopheles gambiae*, the transmitter of the malaria parasite *Plasmodium falciparum*.

To deliver an alternative to these people, the DNDi was established as an independent, not-for-profit drug development organisation in 2003. This initiative, started by the medical charity *Médecins Sans Frontières* (Doctors Without Borders) and with roots in Brazil, India, Kenya, Malaysia and France, aims to develop new or improved drugs for neglected tropical diseases, such as malaria, leishmaniasis, trypanosomiasis, and Chagas disease. The improved malaria drug is DNDi's first successfully completed project. It was funded by the European Union, the Agence Française de Développement, the Swiss Development Cooperation, the Dutch and UK governments, and *Médecins sans Frontières*.

WINFRIED KOEPELLE

Norway

Musical Millions

An orchestral conductor once founded a biotech company. Now it's gone public.

Cancer therapeutics company Algeta (Oslo, Norway), performed an initial public offering (IPO) on the Oslo Børs at the end of March. With an indicative price range of NOK 41 to NOK 51 per share, the expected proceeds amounted to between NOK 200 million and NOK 250 million (€25,2 and €31,5 million, respectively). Shortly before this issue of *Lab Times* went to press, it became known that Algeta's offering was more than two times oversubscribed and that it came in at the top of the price margin. The gross proceeds amounted to NOK 250 million (€31,5 million).

Resourceful Algeta had already raised €23 million by means of a push for venture capital in September 2005.

Algeta develops alpha particle emitters as radiopharmaceuticals for the treatment of cancer. Funds raised by its IPO are ear-

marked for the initiation of a phase III clinical program for Alpharadin, Algeta's lead product, which demonstrated effectiveness against prostate cancer in a recently finished phase II trial. Alpharadin is a bone-seeking radiopharmaceutical. Its (radio)active element is the α particle emitter radium-223.

Algeta was founded in 1997 under the name "Anticancer Therapeutic Inventions" by Roy Larsen and Øyvind Bruland. The company changed its name to Algeta in 2003. Co-founder Bruland is a Professor of Clinical Oncology at the Norwegian Radium Hospital ("Radiumhospitalet") in Oslo – and something approaching a polymath. At www.bruland.info we learn more about the unorthodox professor's

talents as a poet, a conductor of symphonies, an accordion player (see photo) and venturesome mountaineer.

-WK-



Algeta's musical founder Øyvind Bruland.

Switzerland & USA

Friendly takeover

Swiss healthcare giant Roche has acquired US instrument producer 454 Life Sciences (Branford, Connecticut) for US \$140 million cash. 454 was a majority-owned subsidiary of Curagen, a drug development company also headquartered in Branford. The acquisition confirmed recent rumours predicting a closer collaboration with 454, which is active in high-throughput DNA sequencing, as true. Since 2006 Roche has exclusively sold and distributed 454's new model of an ultra-fast gene sequencer (the "Genome Sequencer 20 System") as well as relevant reagents and consumables. The two companies caused a stir after 2006 press reports on a project

to sequence the complete Neanderthal genome (undertaken together with the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany).

According to a press release, Roche plans to maintain the 454 Life Sciences facility in Branford with its 167 employees as a part of its organization. Severin Schwan, CEO of Roche Diagnostics, referred to the acquisition as a "part of Roche's strategy to strengthen its position as a major player in the sequencing market." In fact, Roche's strategic action is a straight attack on rival Applied Biosystems, the current top dog in manufacturing DNA sequencing machines. -WK-

Israel

Holy Land Boosts Biotech

A group of several Israeli organisations are planning to invest \$110 million in biotechnology. Two state ministries, together with five Jewish associations recently revealed plans to establish the *Kiryat Shmona Biotech Valley* near Tel Hai College, located at Israel's furthest northern border. According to a report in the *Globes Online* newspaper, it



Kiryat Shmona, Israel. Deceptively idyllic in a region of conflict.

is intended to attract "top-quality biomedical researchers" to live and work in Upper Galilee. The project will be presented to the public at a meeting in June. The newspaper added that the project's planners hope for an initial 20 start-ups with 250-300 employees and at least one large "anchor company" (Teva, the largest Israeli pharmaceuticals group, already has a facility at Tel Hai College). -WK-

United Kingdom & USA

Multibillion ADHD Drug

The British pharmaceutical company Shire (located in Hampshire) has paid a whopping \$2.6 billion (2 billion euros) for New River Pharmaceuticals (Radford, USA). The reason? New River's ADHD drug Vyvanse, which is soon likely to receive FDA approval. Vyvanse is to replace Shire's Adderall, which is (next to Ritalin and Concerta) the most prescribed ADHD medication, but loses patent protection in 2009. -WK-

Germany & France

Krauts Keen on CNS

Evotec (Hamburg) has acquired all the shares of Neuro3d (Mulhouse, France), a developer of treatments for diseases of the central nervous system (CNS). Neuro3d's business will be transferred to Hamburg and the Mulhouse site will be closed. Neuro3d was founded in November 2000 and had 39 employees. Its new owner has latterly set its main focus on CNS disease and wants to use the net cash proceeds from the transaction to advance an acquired Neuro3d drug and its own CNS projects. -WK-

