

ISSUE 07 | MAY 07

melix

BIOSCIENCE CLUSTER NEWS FROM YORKSHIRE FORWARD

Prize. winner

Regional Bioscience
Industry wins big at
Venturefest Yorkshire **4&5**

Beating the superbug

Success of
a spin-out
company **2**



The Region's
Development Agency

ALSO: BIOHUB

R&D SUPPORT

EVENTS



spin-out company battles superbug

The superbug MRSA is among the hospital-born infections being targeted by Sheffield University's latest bioscience spin-out company – **helix** reports.

Absynth Biologics was launched in February to develop vaccines and antibodies for infections caused by the bacterium *Staphylococcus aureus* (*S. aureus*) including its more difficult-to-treat drug-resistant form, methicillin-resistant *S. aureus* (MRSA).

The new company is led by Professor Simon Foster and Dr Jorge Garcia-Lara, one of 29 Fellows participating in the Yorkshire Forward-funded Bioscience Yorkshire Enterprise Fellowship (BYEF) programme – a scheme that offers support and access to £30,000 funding for researchers looking to commercialise their work.

Absynth aims to develop novel immunological targets identified at Sheffield for the prevention or treatment of MRSA and other pathogens. Its unique patented technology is the result of work by Dr Garcia-Lara and Professor

Simon Foster at Sheffield University's Department of Molecular Biology and Biotechnology.

The Absynth Biologics concept uses an immunological approach to target a novel set of proteins, which have never previously been studied. These are important for the growth and/or pathogenesis of the bacterium and are carried by all strains. Also immunological inhibition of their function may in itself prevent bacterial growth ('killer antibodies'). Absynth aims to create vaccines and prophylactic/therapeutic antibodies based on novel targets against *S. aureus* (MRSA) and other important pathogens.

Absynth is 60 per cent owned by university IP commercialisation company, Biofusion, which has pledged £325,000 to help take the early stage research to clinical trial stage. The estimated value of the market for an *S. aureus* vaccine is £1.2 billion by 2020 and £1.7 billion for an antibody.

Biofusion CEO, David Baynes, said:

"The rise of the so-called 'superbugs' is a significant challenge for healthcare systems in the UK and internationally. We believe the Absynth approach offers a potentially effective alternative to the use of conventional antibiotics which are no longer able to successfully treat all hospital acquired infections and as such, addresses a very large market and medical need."

Dr Garcia-Lara, who has carried out research at institutions in Spain, Belgium and the US, said the BYEF programme had been a huge help in putting him on the road to commercialising his work.

"The BYEF has been fabulous. It plugs a gap that conventional university training does not. It's not just about how a board of directors works but how you should focus your science for business."

"Once their discovery is ready to move towards the marketplace, scientists need tailor-made business advice – and this is what the BYEF gives. The programme was well structured and very useful indeed."

new company joins Bradford cancer institute



Bradford University's Institute of Cancer Therapeutics (ICT) has welcomed another key company to its business incubation suite.

A cancer research division of Carmarthenshire-based bioscience company, Morvus Technology, is the second tenant to be housed in the six-month old unit – bringing the facility to three-quarters full.

The Morvus team of four scientists, led by Prof. Terry Jenkins, will design novel therapeutics and treatment strategies for cancer, and robust assays for their clinical detection.

Prof. Jenkins, who has a long association with Bradford University, said: "I am delighted to be working here again, with access to the university's superb facilities. The ICT and Institute of Pharmaceutical Innovation (IPI) are exceptionally well positioned to support our work in synthetic chemistry and on analytical projects."

"This is a real boost for my cancer

drug research team."

Innovation manager for the university's School of Life Sciences, Dr Kevin Adams, welcomed the company, which has also agreed to sponsor the work of a PhD student.

He said: "There has already been a lot of interaction between Morvus and the university on various research activities. A lot of key new cancer treatments arise from collaboration such as this and we're delighted to see Morvus move in."

He added that the ICT not only offered excellent laboratory and office facilities and the university infrastructure, but also significant business start-up support.

The £6.5 million ICT aims to bring new cancer treatments from 'concept to clinic'. It incorporates the Tom Connors Cancer Research Centre and is situated next to the IPI.

Morvus joins other leading regional Bioscience companies at the unit including; AGT Sciences, Syntopix and Thar Pharma UK.

For more information about the ICT visit www.cancer.brad.ac.uk

region leads Biorefining hub

A virtual 'BioHub' for the UK's bioscience industry and academics is to be formed to put Britain at the forefront of renewable and sustainable energy production.

The Integrated Biorefining Technologies Initiative (IBTI) is being set up by the York-based national Bioscience for Business Knowledge Transfer Network (BfBKTN), created last year.

IBTI's aim is to bring about the use of land and marine crops to replace fossil sources for our fuel, building and packaging materials and chemicals – through a network of small biorefineries across the country.

The scheme has already secured £4 million over the next five years from Government, to be matched by £1 million from private enterprise.

BfBKTN director, Dr John Sime, said there had been a high level of interest from business and that a consortium of ten companies to raise that amount would be confirmed soon.

He said British Sugar has pledged £100,000 to the IBTI and energy giant BP, despite its recent announcement to move a huge bulk of research to the US, has stated a clear intention to work closely with the project.

"The IBTI will be industry-led. This is not an academic exercise, it's for real. The big companies know what is needed and they will be helped by academic advisors," he said.

"Our research in the US and Europe showed that if we are to do anything significant on sustainable technologies for the future, there is a strong need for the UK to have its own cohesive programme to interface with international projects. The IBTI provides that cohesive focus."

He explained that the hub had no geographical centre because the land and marine crops would be grown throughout the UK and refineries should be built as locally as possible to keep the carbon footprint down.

The 'BioHub' is just one of the projects undertaken by BfBKTN since its formation in last February to bring about the integration of microbial technologies with plant and aquatic feedstocks.

It also organised a US West to East Coast trip last May to find out about America's progress in the field. Attended by six industry delegates, a biotechnology academic and a BfBKTN representative, the Global Watch Mission started in San Francisco, where it visited the University of Berkeley and several biotechnology companies. The delegation then moved to Peoria, Illinois, where the US Government's Department of Agriculture runs a research station. The final stop was at the Massachusetts Institute of Technology, in Boston.

And in March, the network ran its first annual conference, entitled Smart Feedstocks for Industrial Products. Held at Oxford University, the two-day event was attended by 75 delegates from industry, academia and government.

Dr Sime, who joined as director in October, added: "BfBKTN's first year has been hugely successful, with our work to form productive networks between scientists and businesses across the country and beyond well under way."

BfBKTN now has 130 member organisations, about half of which are small to medium-sized enterprises.

For more information about joining the BfBKTN email jp534@york.ac.uk



Contests to spot entrepreneurial talent can change the future of their participants. **helix** reports on this year's Venturefest Yorkshire

nothing ventured nothing gained

Pitching for investment for your bright idea isn't always as grim as it looks on the hit TV series *Dragon's Den*. At Venturefest Yorkshire 2007, held at York racecourse in February, more than £60,000 worth of prizes were awarded, with two of the biggest winners hailing from the region's bioscience industry.

And far from leaving with the ring of acerbic comments in their ears, those who didn't bag a prize left armed with business cards and new contacts from up to 2,000 delegates attending the event.

The aim of Venturefest Yorkshire, sponsored by Yorkshire Forward, is to encourage the region's entrepreneurs to work together to advance the commercialisation of their technologies, whether they are innovative students or fledgling companies with big ideas.

In addition to providing space for hundreds of exhibitors, the one-day event features competitions for a number of prizes provided by a mix of venture capitalists and established companies.

One of the most influential contests has been the Investment Competition, run by technology network organisation, Connect Yorkshire, and the Yorkshire Association of Business Angels. Three years ago the award was won by Medcom, now a highly successful medical publishing company.

This year's winner is Sheffield-based Kirkstall, a start-up company developing microfluidic cell culture systems. Sometimes referred to as an 'electronic rat', it provides an alternative to animal testing for cosmetic and pharmaceutical products.

Managing director, Malcolm Wilkinson, was awarded a £29,775 package including cash, support and business accommodation to help him develop commercial products based on technology being pioneered at Pisa University, for which Kirkstall has an exclusive licence. He said the cash won in the competition was going towards further market assessment. In-kind support was also provided covering the design of a website, legal and financial services and office space.

Leeds-born Dr Wilkinson has a business background – he runs a technology transfer consultancy in Cambridge – and says the award has already made a huge difference.

"Winning has really triggered an acceleration in this business. Not only will the cash and services prove very useful but also the exposure and contacts that have come as a result will be invaluable. Since the event, we have been approached by a number of investors."

In addition to seeking up to £200,000 further funding, Kirkstall is looking for suitable partners and manufacturers with whom to enter the early stage toxicology screening market, valued at £500 million a year.

Dr Wilkinson is confident of building up a product development team of about ten by the end of the year, based at the Sheffield Incubator, where there is a strong healthcare and medical devices cluster.

"The multidisciplinary research capability and expertise in toxicology screening at both Sheffield University and Sheffield Hallam are renowned and I am confident Kirkstall is well placed to take on this very large market," he said.

"Venturefest Yorkshire has fast become a must-attend event for the region's business talent and this year was no exception"

Another key Venturefest prize was the 'New Product Award' sponsored by electronics company GSPK, which offers £20,000 worth of business advice, management consultancy and support. This went to two-year-old York University spin-out company, Paraytec, for its patented miniature scientific instrument, ActiPix D100. The equipment incorporates the company's ground-breaking ultra-violet absorbance detection technology, which is used to test liquid samples for analytical and life sciences applications faster and more accurately than existing methods.

Chief executive officer Carolyn Parkinson said: "What we have done is turn the technique on its head and taken it into applications where it hasn't previously been the preferred methodology."

She said that winning the GSPK New Product Award was very important to the company, which is now taking on additional technical staff to boost its team of five and is looking to form strategic partnerships with complementary scientific instrumentation manufacturers.

"We regard GSPK as an excellent resource for companies like ours, developing novel instrumentation. It would take us a very long time to establish the level of expertise they have in modifying a prototype into an efficient production model. They are the perfect working partner for us and we're delighted to have won the award."

And the huge potential of this product was underlined less than a month later, when it was awarded the silver medal for best new product at the Chicago-held Pittcon 2007 scientific equipment exhibition, the biggest in the world.

"For a small company from Yorkshire to have its first product voted number two in the world demonstrates the importance of this technology on the global stage," said Ms Parkinson.

Other Venturefest winners were Harrogate-based Santeau, which has developed O2GO, a vitamin-packed fruity water supplement to encourage more people to drink the recommended two litres a day. It won the Innovation Central Award sponsored by card protection company CPP.

Venturefest Yorkshire chairman, Professor Tony Robards OBE, said: "Venturefest Yorkshire has fast become a must-attend event for the region's business talent and this year was no exception."

"Not only will the cash and services prove very useful but also the exposure and contacts that have come as a result will be invaluable"

"For a small company from Yorkshire to have its first product voted number two in the world demonstrates the importance of this technology on the global stage"

Carolyn Parkinson of Paraytec



grants for management training

Grants of up to £2,000 are available to bioscience companies looking to improve their leadership and management skills in a new government-funded project.

The Learning and Skills Council (LSC) is offering a free brokerage service to help senior managers identify their leadership training needs and £500 grants to undertake appropriate training. Further grants of £1,500 are on offer to help entire management teams improve their leadership skills.

The service forms part of the Government's 'Train to Gain' programme and fits within Yorkshire Forward's framework of business support.

Emma Hoddinott, LSC manager of the brokerage explains; "The Leadership and Management brokerage aims to help businesses maximise their growth potential, by focusing on the key person in the organisation. Increasing their skills, can

help them use the business' resources and people better.

"The process is simple, focuses on the individual's needs and provides a helping hand to find the right training, which can be time consuming for many companies."

The initiative should help address skills concerns within the regional bio industry. A survey carried out by the Confederation of British Industry and Yorkshire Forward in November 2006 identified that a fifth of Yorkshire and Humber's bioscience and chemicals companies felt their management needed to be improved. The Treasury-commissioned 2006 Leitch report also highlighted leadership skills as a key area for improvement in British business.

For more information on training opportunities contact Train to Gain on 0845 833 7000 or visit www.traintogain.gov.uk



Bioscience gets business savvy

In the fast moving world of the bioscience industry, commercial acumen is as vital as academic knowledge.

The bio2work programme – run by SYBEN and designed to develop these skills in new graduates – has just completed its latest eight week programme at the University of Bradford's Institute for Pharmaceutical Innovation.

The course has helped 17 students improve their practical and commercial skills, making them 'job ready' for entry into the region's bioscience and healthcare sectors.

Funded by Yorkshire Forward, the programme consists of both business and laboratory modules. It builds on the success of bio2work 2005, after which all graduate participants choosing to find work in the region did so. Another programme is planned for 2008.

SYBEN chief executive, Lisa Pennington, said the programme had again been a huge success and had gone a long way to retaining the region's bioscience talent with three graduates already being offered work with bioscience companies in Yorkshire and Humber.

She said: "Of course it's early days yet, but this year's bio2work has been very effective in preparing our graduates for business.

"The key to the course is that the content is driven by regional industry and laboratory sessions are delivered to a Quality Assurance ethos, meaning that graduates understand how industry standard labs are operated."

The programme's business modules covered commercial awareness, personal development, intellectual property, product development, statistics, employment readiness, time management, business planning, marketing and sales.

The laboratory modules included generic scientific disciplines such as microbiology, analytical chemistry and immunology.

Lisa added: "By equipping graduates with these new skills, identified by industry, the programme will save employers' valuable time and resources by enabling staff to begin work with little extra training. They will therefore contribute much quicker to the workforce."

Forty-five regional companies and organisations have helped to shape the next bio2work programme, which will run from January to February 2008 in Leeds.

bio2work is open to graduates who have completed their first degree or a higher qualification within the last three years and are seeking work in the Yorkshire region.

Companies interested in being involved or students wishing to take part can contact Lisa Pennington on l.pennington@syben.org.uk or visit bio2work.co.uk



new R&D support scheme helps ideas grow

Help is at hand for hundreds of bioscience companies in the region hoping to access billions of pounds of European Union research funding.

Yorkshire Forward has launched a service to ensure Yorkshire and Humber businesses make the most of the EU's research and development budget, worth £34 billion (€50bn) over the next seven years.

The new European R&D Support Programme will help steer firms and academic institutions through the application process for the European Framework Programme (FP7) launched in January.

It will be run by a partnership between Newcastle-based business services company RTC North and Cambridge technology management firm, Sagentia.

Primary contact for the programme Ian Henderson says the opportunities for bioscience companies are huge as they span so many of the European Commission's targeted divisions, including health, energy, food agriculture and the environment.

Based at the Round Foundry Media Centre in Leeds, Mr Henderson says: "Not only is this worth taking part in, in terms of the direct financial contribution, but also the associated benefits include increased profile, involvement in emerging technologies, access to new suppliers and market opportunities across Europe."

The European R&D Support Programme offers eight services: a helpline for basic information on FP7 and a website which includes details of regional events, FP7 news and useful links. It offers diagnostic visits to discuss project suitability, and runs workshops providing practical advice. Its toolkit offers guides to participation and e-bulletins highlight upcoming deadlines, partnering opportunities and newsworthy items.

The programme also carries out Partner Searches to encourage collaboration within Yorkshire and beyond. Finally, its Proposal Support Service provides a one-to-one guide to preparing FP7 proposal documents, including an independent evaluation prior to submission.

And the region's company accountants should be aware that R&D activity is eligible for significant tax rebates – but if they don't make their claim before April 2008, they could lose as much as a third of potential savings.

Large firms qualify for 25 per cent additional deduction on expenditure and SMEs qualify for 50 per cent, which can currently be backdated by six years, to be reduced to two after March 2008.

For more information on the European R&D Support Programme, visit www.euroresearchsupport.co.uk or ring the helpline on 0845 630 8003 or email at ian.henderson@rtcnorth.co.uk

Case study

Sheffield-based polymer coatings company PolyBioMed can testify to the big difference a research grant can make to the commercialisation of a new technology.

Yorkshire Forward this year gave the company £88,000 towards a £197,000 project to bring to market a new type of coating for urinary catheters. The coating will offer a much more lubricious surface than the currently used PVC catheters, making it more comfortable for the user.

The company, owned by Oxfordshire-based devices company Lombard Medical, has already used £20,000 to order a customised friction-testing machine for its premises at Sheffield Technology Park. By saving time and money, this will have a significant impact on the firm's progress towards licensing out the technology to manufacturers.

The grant is also going towards taking on two more researchers to bolster PolyBioMed's team of eight.

Managing director Kadem Al-Lamee said: "The grant has speeded up the overall commercialisation process, which will bring in revenue faster so that we can invest in developing the technology further for use on other medical devices."





events diary

YSTN – Taking Innovation to Market

May 23 2007

The Old Swan Hotel, Harrogate

Co-hosted with the DTI Viking Fund.

Speakers:

- Doug Richards, Former *Dragons' Den* and founder/chairman of Library House
- Carolyn Parkinson, CEO of Paraytec Ltd
- Simon Hill, executive director business development at Yorkshire Forward.

Doug will be revealing the secrets of taking innovation successfully to market to YSTN members.

The YSTN events are free to attend but strictly by RSVP invitation.

Applications of Emerging & Disruptive Technologies in Medical Devices and Healthcare

14 – 15 May 2007

The Sheffield Bioincubator,

40 Leavygreave Road, Sheffield, S3 7RD

This two day course will demonstrate how micro and nanotechnologies are already impacting the healthcare sector by enabling new products, procedures and therapies that match previously unmet clinical needs or can deliver more cost effective solutions. The intrinsic benefits of the technology (miniaturisation, high reliability, improved performance, new functional capabilities) have to be balanced against the barriers to the introduction of any new medical product.

This course builds on the significant personal experience of the lecturers who have transferred technology from research to the marketplace. It also utilises a wealth of case studies (both successes and failures) from many medical product companies worldwide. Potential pitfalls in product development will be identified and ways of overcoming them revealed.

The course also provides analysis of future trends in a valuable series of roadmaps for each of the major application areas.

To register or for further information, please contact Lisa Pennington, SYBEN on l.pennington@syben.org.uk or 01246 540 050.

Biofinance Europe-Finance Options for Bioscience Companies

18 June 2007, London

BioFinance Europe will bring together experienced bioscience investors with senior executives from some of the most innovative companies in Europe. Explore and discuss the alternative finance options available for bioscience companies in Europe. By the end of this one day meeting you will have a sound knowledge of ALL your finance options.

Learn from our informative, interactive sessions and panels of leading speakers.

For more information visit www.biofinanceeurope.org

useful contacts

YORKSHIRE FORWARD BIOSCIENCE CLUSTER

Dr Danielle Hankin – cluster manager

Tel: 0113 394 9658

Email: danielle.hankin@yorkshire-forward.com

www.bioscience-yorkshire.com

SCIENCE CITY YORK

Steph Morris

Tel: 01904 554433

www.sciencecityyork.org.uk

SOUTH YORKSHIRE BIOSCIENCE ENTERPRISE NETWORK (SYBEN)

Lisa Pennington

Tel: 01246 540 050

Email: lisa.pennington@syben.org.uk

www.syben.org.uk



PART FUNDED BY THE
EUROPEAN REGIONAL
DEVELOPMENT FUND



If you have any queries or feedback relating to information contained in this publication, please write to **helix** editor Tori Wilkinson at the following address:

Yorkshire Forward, 2 Victoria Place, Leeds LS11 5AE. Tel: 0113 394 9600 Fax: 0113 243 1088. www.yorkshire-forward.com

Published by Yorkshire Forward in association with Words&Pictures and Geronimo Communications.