

## Minister opens PolyTherics' new facility



Rt Hon David Willetts visits the PolyTherics facility

**PolyTherics' research expertise and new facilities were showcased to the Rt Hon David Willetts, Minister of State for Universities and Science, and invited guests, at an official opening in March.**

Dr Keith Powell, PolyTherics' Chief Executive Officer spoke of the company's latest growth phase as it adapts and improves an increasingly varied range of therapeutic proteins and peptides for its partners. LBIC's ability to accommodate the expansion has enabled PolyTherics to stay in Central London, within easy reach of its collaborators.

PolyTherics was founded in 2002 and applies precision chemistry to develop protein and peptide-based drugs. They joined LBIC in 2006 and when the company began to outgrow its existing

space, LBIC was able to offer space within another building on the Camden campus of the Royal Veterinary College. An intensive period of renovation and refurbishment followed before PolyTherics was able to move in late last year.

The Minister stressed that small, innovative companies were an increasingly important part of the UK's highly successful life sciences industry and that it was a testament to the quality of PolyTherics' research and development that they have been able to expand into larger premises at LBIC.

### WELCOME

*It's been a busy year for LBIC so far, with a number of new companies having established a presence within the Centre, either as virtual clients or occupying office and laboratory space. At the time of going to press, preparations are underway for BioWednesday, which will be hosted by the Royal Veterinary College on 1st June, with a focus on Comparative and Translational Medicine. The RVC's Professor Dominic Wells joins colleagues working in this area to define and discuss the subject and on page 6 we highlight some of the research taking place.*

*In this issue, the spotlight is on LBIC client deltaDOT, who recently joined us from Imperial College, and we bring you up to speed with some of the latest developments within other client companies.*



Paula Burton  
Editor

### In this issue:

**Interview with Dr Ken Larkin, LBIC's new CEO** Page 3

**Students get their teeth into veterinary business** Page 4

**Focus on deltaDOT** Page 5

## Label Free Molecular Biology



### Leads To Development

Specialist in translational medicine, Leads To Development (L2D), established an operational base at LBIC last October. The Paris-based firm had decided to move closer to its UK customers as demand for its services continues to grow.

L2D provides operational management services for early stage drug development programmes: from design and implementation of a development plan to writing and submission of clinical trial applications. This allows biotech and pharmaceutical companies to bring in expertise as and when needed, in order to reach clinical milestones rapidly and cost effectively and without having to build additional headcount and infrastructure. The team's experience and knowledge of the biotech industry means they can offer a range of business services and advice for investors and drug developers, including due diligence and gap analysis.

Dr Jonathan Kearsley, founder and director of L2D hopes that a UK presence will allow biotech companies and start-ups in the London/ Oxford/ Cambridge triangle, and further afield, to have direct access to L2D's expertise.

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### Solar Press shine in Entrepreneur Awards

The sun was truly shining on the team at Solar Press in March, when it was announced that the company had won the Stelios Award for the Young Clean-Tech Entrepreneur of the Year.

The award of €10,000 was presented to company founder and CTO Jonathan Halls at the Clean Equity Monaco 2011 Conference by Sir Stelios Haji-Ioannou and HSH Prince Albert II of Monaco.



The Solar Press team were commended for their innovation, entrepreneurial passion and business acumen. Jonathan Halls commented "We were delighted to receive this award from the Stelios foundation, recognising our achievements in developing low cost, printable solar panels. LBIC has provided the perfect environment for us to get started quickly as a growing clean-tech start-up company, helping us to make rapid progress in this exciting - and very beneficial - area of technology development."

### Retroscreen Virology appoints David Norwood as Chairman

Retroscreen Virology Limited has announced the appointment of David Norwood as Chairman.

Mr Norwood, former chief executive of the stockbrokers Beeson Gregory and a former director of Evolution, is the founder of the London Stock Exchange listed company, IP Group plc, which specialises in the development of intellectual property based businesses. IP Group plc has a 32% shareholding in Retroscreen Virology. His appointment at Retroscreen Virology heralds Mr. Norwood's return to his entrepreneurial roots, and to his long-standing commitment to assist British universities to generate value from their intellectual property. Retroscreen is

focussed on researching the next generation of antivirals and vaccines for a number of respiratory and enteric viral diseases.

### Cyprotex acquires Aprelica

Setting up a sales office at LBIC was a key determinant in UK-based Cyprotex taking a closer look at, and ultimately acquiring, its US rival, Aprelica. Both companies carry out early preclinical testing for the pharmaceutical industry. The combination of Cyprotex and Aprelica brings together two market leaders specialising in preclinical ADME Tox, giving the combined organisation operations in the world's two largest centres of drug discovery, Europe and North America.

### GATC Biotech: Successful pilot study for non-invasive prenatal diagnostics

Scientists from the Center for Prenatal Diagnosis and Human Genetics in Berlin, GATC Biotech AG and LifeCodexx AG have been collaborating to develop a non-invasive diagnostic test based on Next Generation Sequencing, which reliably detects Down syndrome.

The test is based on the sequencing of cell free fetal DNA from maternal blood, and could become a no-risk alternative to invasive prenatal examinations such as the analysis of amniotic fluid. Currently, the only reliable way of diagnosing chromosomal irregularities is to use the invasive prenatal methods; which cause miscarriage in about one per cent of cases. The team hope that the first prenatal diagnostic test will be launched at the end of the year. The project was supported by BMBF funding from the ZimSolo and KMU-Innovativ programs.

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# Interview with Dr Ken Larkin, CEO of LBIC

***Congratulations on being appointed as CEO of LBIC. How long have you been in the role and what are your priorities?***

I joined in January 2009 and took over from LBIC's founder, Professor Colin Howard, this year. Under Colin's leadership, LBIC developed a reputation as London's premier biocubator for life science companies – a position I intend to retain and build upon.

Despite challenging times, we continue to support a growing client base through the provision of lab and office facilities, excellent customer service, training and business support. The critical issue for us is the provision of 'grow-on space' for companies wishing to retain and expand their operations within London. The recent graduation of our largest client, Retroscreen Virology Ltd, relieved the pressure to some extent – if only temporarily, as we have recently welcomed four new clients: deltaDOT, Stabilitech, iQur and Health-Smart.

We also intend to develop our business support and training offers. The HEFCE-funded ORBIS bioscience business training programme was a great start, linking 60 graduate interns to bio-pharmaceutical companies, resulting in over half securing offers of employment.

***LBIC now has over 40 client companies. How many of these are British-based versus overseas and how do you see things developing in the future?***

We support a wide base of companies, ranging from university spin-outs through to established UK firms and international subsidiaries from mainland Europe, North America and Asia Pacific.

With over a third of companies originating from overseas markets, LBIC is rapidly becoming a hub of international activity. We have seen an increase in the number of overseas companies looking to establish a presence in the UK. Many are taking advantage of LBIC's low cost, low risk virtual client package in order to benefit from a London address, dedicated reception services and access to the London network. I see future opportunities to partner with "like-minded" bio-incubators in order to promote early stage internationalisation and cross-border expansion.

***LBIC established a Business Support Network for companies last year – how is that helping life sciences companies coming into London?***

Building on our virtual client package, the Business Support Network provides services to help entrepreneurs establish and grow their company. Providers have been selected on the basis of their industry experience and ability to provide relevant and timely support to companies at different stages of growth, whether for a new start-up or an overseas company establishing a UK subsidiary. New and existing clients benefit from professional, confidential business advice at preferential rates.

***LBIC is owned and managed by the Royal Veterinary College, the UK's largest and longest-established veterinary institution. How does that benefit client companies?***

The Royal Veterinary College is a leading centre for comparative and translational medicine, and we are keen to

develop more strategic and operational links over time. There is huge potential for collaborative links with LBIC's client companies – a number of which are already exploring the opportunities in bioveterinary medicine.

In addition, RVC offers biotech companies access to specialist equipment and its Contract Research Unit provides routine animal husbandry and laboratory services as well as full study and design management.

We are also keen to contribute to and enhance the experience of the College's students. We have developed short courses in bio-enterprise; Bioveterinary Science students will be able to carry out their final year project with client companies and we are at the centre of an initiative to develop a co-operative education programme in industrial bioscience, as well as running a programme for veterinary students, in partnership with the Beaumont Sainsbury Animal Hospital (see over page).



## RVC students get their teeth into veterinary business



*Dr Jim Gazzard and students participating in the Innovets programme*

LBIC joined forces with the Royal Veterinary College's companion animal practice in April to provide a new type of clinical skills training for students keen to develop business and enterprise skills. The Beaumont Sainsbury Animal Hospital, based in Camden, hosted 'Innovets', and students were asked to explore the commercial potential of veterinary dentistry.

The student team worked with clinicians to research market opportunities and the operational challenges faced by practices

seeking to offer new services to improve animal health. At the end of the week, students presented their findings to the BSAH management team.

Dr Jim Gazzard, a senior lecturer at the College, set up the Innovets programme, with a view to encouraging more 'hands-on' learning for veterinary students and to ensure that students develop business and management skills to complement their clinical training.

LBIC welcomes the companies listed below, who have joined the Centre as virtual, office and/or laboratory clients over the past six months.

### 3A Pathology

deltaDOT – [www.deltadot.com](http://www.deltadot.com)

Health Smart –  
[www.healthsmart.co.uk](http://www.healthsmart.co.uk)

Helianth Systems –  
[www.helianthsystems.co.uk](http://www.helianthsystems.co.uk)

High Force Research –  
[www.highforceresearch.com](http://www.highforceresearch.com)

iQur – [www.iqur.com](http://www.iqur.com)

Leads to Development –  
[www.leadstodevelopment.com](http://www.leadstodevelopment.com)

Plasticell – [www.Plasticell.co.uk](http://www.Plasticell.co.uk)

SensAthlete –  
[www.lbic.com/clients/sensathlete](http://www.lbic.com/clients/sensathlete)

Stabilitech –  
[www.stabilitech.com](http://www.stabilitech.com)

Transpharmation –  
[www.transpharmation.co.uk](http://www.transpharmation.co.uk)

## Become a Bio-entrepreneur!



*Mayor of London, Boris Johnson, visits deltaDOT at the Launch of the Business Bootcamp programme*

Anyone wanting to start a life science or healthcare business needs skills and confidence, access to industry networks and insights and professional contacts. The process can be daunting; market research, banking affairs, intellectual property

and funding issues all present potential roadblocks. Knowing how to overcome such hurdles is important – The BioPioneer Bootcamp is designed to help.

Designed for technology entrepreneurs, this two-day training programme is for anyone thinking about becoming self-employed and developing a successful business. BioPioneer is an intensive workshop, led by successful entrepreneurs and sector experts. Participants develop an enterprise action plan and gain insights into the pre-start-up, early trading and growth phases of technology businesses. Most importantly, they gain exclusive access to the wisdom and

contacts of leading experts, entrepreneurs and industry players within the sector. The workshop includes a networking session, hosted by the UK Centre for Medical Research and Innovation (UKCMRI), at the Wellcome Trust. LBIC will award a free, six-month virtual tenancy at its facilities to the delegate who produces the best business action plan. A limited number of partial- and full-fee scholarships are available to cover registration fees, and can be applied for as part of the registration process.

The 2011 BioPioneer Bootcamp takes place at the Royal Veterinary College from 13th-15th July at a cost of £300 for individuals and £600 for company representatives, inclusive of VAT.  
[www.rvc.ac.uk/enterprise/biopioneer](http://www.rvc.ac.uk/enterprise/biopioneer)

# Making the transition from academia to commercial company



**We interview Stuart Hassard, Chief Scientific Officer and co-founder of deltaDOT, to find out more about what they are up to and future plans.**

## *Can you tell us a little about deltaDOT and what you do?*

We have developed a label-free capillary electrophoresis instrument, based on a mixture of molecular biology and particle physics. This is able to analyse most biomolecules without the need for detection labels. Our label-free approach eliminates the potential effects of the labels on molecules, which reduces errors in analysis and removes bias. This approach also reduces the cost per analysis, as it avoids the need to purchase and dispose of labels.

As well as selling and leasing our PEREGRINE-1 instruments, we provide technical support to organisations already using them. We also offer a service that analyses samples for clients, and are looking for longer-term contract research opportunities.

## *Your work originates from Imperial – how are you finding the transition from academia?*

We were set up as an Imperial spin-out in November 2000 and rented space in several of the College's departments during our first five years. For the past five years we have been based in the Imperial Incubator on the College's South Kensington campus.

Being based in an incubator, instead of an academic department, has helped us

make the transition into being a commercial company. Although we are now at LBIC, strong links remain between deltaDOT and research groups at Imperial that are using our technology.

## *What impact is your technology going to have on the life sciences sector?*

The absence of labels means that one system can be used for multiple stage analysis work-flow, which avoids the issue of bias that multiple instrumentation brings. This also leads to cost savings in consumables, instrument upkeep and staff numbers. Our technology will speed up life sciences research, as it is faster to use our system as opposed to traditional gel-based approaches, taking minutes rather than hours or days. Our instrument is fully automated and can process up to 20 samples at a time. This offers significant productivity benefits when many samples need to be analysed.

*“Being based in an incubator, instead of an academic department, has helped us make the transition into being a commercial company”.*

We are able to accurately quantify most biomolecules and detect changes as small as 1% in many cases. The technology has a wide variety of applications, including vaccine production, drug discovery, general life sciences research, manufacturing of biosimilars, QA/QC, and bioprocess analytics.

Quality Assurance and Quality Control represent particularly good opportunities for us in view of the consistent reproducibility of our results. As an example, we are already assisting a vaccine manufacturer with their QA/QC requirements. Their regulator was not satisfied with the traditional approach to quantifying the proteins in the final product (using gels and densitometry) and we are now incorporated into their manufacturing process.

## *What benefits would researchers gain from using deltaDOT's technology?*

Much better data quality (resolution, quantification, sensitivity and reproducibility of analysis) when compared to the traditional electrophoresis approach.

We can also successfully analyse about 20% of samples that are currently being sent for analysis on a mass spectrometer but could be done much more cheaply using our system. Using deltaDOT's approach for these samples would save researchers the time, money and hassle of getting them analysed in a mass spec off-site.

Researchers using High Performance Liquid Chromatography may also find that our technology has significant advantages over this approach in terms of speed of analysis and cost per sample.

## *Can you give us an example of a successful collaboration, to date?*

We have set up an associate company in Qatar that offers proteomic and life sciences services in the Middle East and North Africa. This is part of a long-term collaboration deal between deltaDOT and the Qatar Foundation. deltaDOT-Qatar has similar capabilities to deltaDOT and is located on the Qatar Science and Technology Park.

## *What attracted you to set up at LBIC?*

Good facilities – it's a joy to have Cat II labs at last with proper extraction and piped nitrogen. Daylight – there wasn't too much of this in the Imperial Incubator.

LBIC's role as a biotech cluster – the concentration of biotech companies in one location offers a great opportunity for us to deploy our technology by working with other members of the network and with RVC researchers. We are also keen to submit joint grant proposals with LBIC and RVC wherever our technology can contribute to improvement in knowledge, or save costs and/or time.

**For further information and a technical presentation visit [www.deltadot.com](http://www.deltadot.com)**

# Insights from animal diseases: Comparative and Translational Medicine



Patricia Latter, Head of Business Development at RVC, outlines the College's expertise in this area. *Comparative & Translational Medicine: Insights from Academia & Industry* is the title of the 1st June BioWednesday hosted by the Royal Veterinary College.

Advances in treating human medical conditions have been made possible by gaining a deeper understanding of the development of diseases in animals. The Royal Veterinary College has particular strengths in comparative and translational medicine, with a focus on improving animal and human health. There are many benefits of using comparative medicine for linking genetic and environmental influences on human health (see panel).

- **Veterinary Science investigates diseases that occur naturally in animals, which may provide *in vivo* models to investigate equivalent or identical human diseases for drug development.**
- **Companion animals' local environment is linked to their owners' lifestyle and can be used to identify risk factors for chronic diseases**
- **Domestic animals are often more genetically homogeneous, with a breeding history which can be used to investigate genetic influences on disease and therapeutic opportunities.**

## RVC collaboration



The College's research programmes address both basic and clinical problems in the biosciences, with applications in veterinary and human medicine.

We have access to clinical cases from our teaching hospitals and offer a single point of access from basic research to pre-clinical contract study and clinical trials with

expertise to advise on GCP protocols. RVC has over 180 research-active staff and postgraduate students with two programmes covering different aspects of research: Infection and Immunity and Lifestyle. The College also has an internationally renowned epidemiology team, and animal pathology, genetics and animal welfare are strong scientific disciplines underpinning each research theme.

### Case studies

Age-related degenerative **tendon disease** is a common human disease and is also common in horses, which have a similar tendon structure and function. The RVC has developed and treated 1500 horses with a stem cell therapy for tendon disease, which has implications for the treatment of tendonitis in humans.

**Chronic kidney disease** is associated with hypertension in cats. Using the large resource of clinical and genetic data from our



animal hospitals, we are gaining a greater insight into the genetic and environmental influences on hypertension, and their comparison with human patients.

**Obesity** is a major risk factor for type II diabetes in both humans and cats. In contrast, risk factors for diabetes in obese dogs is more related to acute changes and is similar to human type I diabetes. Comparative studies ask the questions: why are cats predisposed to develop type II diabetes when they become obese and why are dogs protected? Are these reasons also the same as for differences in diabetes I and II in humans?

**Contact Patricia Latter, Head of Business Development, if you would like to find out more about opportunities for collaboration with the College.**

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# LBIC founder receives Lifetime Achievement Award



**Congratulations to Professor Colin Howard, founder of LBIC, who was recently presented with a Lifetime Achievement Award for his contribution to life sciences. The award was presented at the last Genesis Conference in London, in front of key players in the life sciences and biotech arena. It recognises Professor Howard's achievement, both as a leading academic researcher and in establishing the London BioScience Innovation Centre, which has played an active role in nurturing companies over the past decade.**



*Professor Colin Howard with the Rt. Hon. David Willetts MP, at the Minister's recent visit to LBIC*



London BioScience  
Innovation Centre

WHERE ENTERPRISE COMES TO SUCCEED

Scan the QR code  
for instant access  
to our website



## Contact us

LBIC has been supporting life sciences companies since 2001. Today we host over 40 companies ranging from entrepreneurial start-ups to more established UK companies and overseas subsidiaries from the US, Japan, Germany, France, Italy, Denmark and Finland.



The Centre is a 10-minute walk from St Pancras International, for Eurostar services to mainland Europe. For further information, or to enquire about availability of laboratory or office space, contact:

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**Janette Richardson:**  
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**Paula Burton:**  
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**Lucy Garnsworthy:**  
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