



LBIC welcomes a new branch of the Crucell Vaccine Institute, part of the Janssen Pharmaceutical group of Johnson & Johnson.

Crucell Vaccine Institute (CVI) London has come a long way since the wintry month of February when Dr Anthony Williamson began setting up a new CVI lab and office at LBIC. Dr Williamson previously headed a CVI team in La Jolla, San Diego, but as a result of CVI's expansion he returned to his native country to establish CVI London as a centre for microbiome research and discovery.

The microbiome is our 'inner world' of micro-organisms – the estimated 100 trillion microbes that inhabit the human body. "Technological innovations have enabled an explosion of microbiome research over the past five years. This has

implicated the microbiome in a wide range of health and disease states," says Dr Williamson.

CVI's microbiome group began modestly, with only Dr Williamson and his newly recruited microbiologist Dr Marcus Rauch, who relocated to London after working at the University of California, San Francisco. Dr Williamson's team expanded during the summer to include three new members: Dr Diana Munera Molina, Dr Nabeetha Nagalingam (both microbiologists) and Kiana West (lab manager), who transferred from CVI La Jolla.

Though the new centre is not yet complete, Dr Williamson says: "We're operational, with around 70% of the lab kitted out and our team working in a temporary office. We should be fully up and running soon." The space is predominantly set up for... **Continued on page 3.**

WELCOME

London continues to be a focal point for life sciences in the UK, and we are excited to hear from Eliot Forster, CEO of the new MedCity project aiming to emulate the success of TechCity in the capital.

The international draw of London is clear in the number of overseas companies setting up a base here. We recently welcomed new clients from Spain, the Netherlands and the USA.

Part of London's appeal lies in its solid support network. LBIC's own Business Support Network is very valuable, as are its links with parent company the Royal Veterinary College – see pages 6 and 7 for updates from them. We also introduce Sciad's newly-launched Newswire service, offering biotech companies targeted exposure for key news items.

L. Getty

Lucy Garnsworthy, Editor

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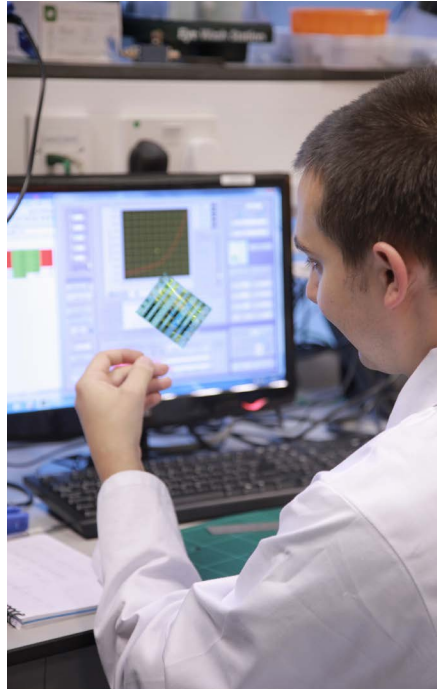
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deltaDOT and RVC launch on-demand therapeutic drug monitoring service

deltaDOT has launched a new therapeutic drug monitoring service in conjunction with the Royal Veterinary College. The initial service offered is a measure of glomerular filtration rate (GFR) in cats and dogs, widely considered to be the gold standard test for kidney function. Measurement of GFR can help identify early renal dysfunction in a dog or cat. The test itself involves the injection of a solution of Iohexol, a contrast agent (Omnipaque® 300). Three blood samples are taken over four hours and serum Iohexol concentration is measured for GFR calculation. A clinical interpretation of the GFR is proposed based on the results of the test and previous history and laboratory results.

Earlier diagnosis of renal dysfunction may be of significant benefit, allowing diet optimisation and preventing life-changing kidney damage. The company is currently looking for partners to market their Iohexol test in human diagnostics as well as in companion animals.



Transpharmation expands with creation of Irish subsidiary

Transpharmation, a translational biology contract research organisation, has announced the incorporation of Transpharmation Ireland, which will be based at Trinity College, Dublin.

The new subsidiary will enable the addition of a suite of complementary services to those already offered in the UK – notably with the addition of a clinical experimental medicine platform (e.g. Pharmaco-EEG, MRI), together with extended preclinical capabilities.

In addition to the new clinical capabilities, the subsidiary will focus on the neurobiology of ageing and mood disorders, particularly by combining complex molecular and behavioural endpoints with real time electro-physiological measurements.

Domainex secures £1.4m award to progress COPD programme

Domainex has secured a £1.4m Biomedical Catalyst Award to support development of its lead compound for chronic obstructive pulmonary disease (COPD) and take it towards Phase I clinical studies. In a recent preclinical study, the Domainex compound showed more than twice the effect of the comparator drugs in reducing the cigarette smoke-induced influx of inflammatory cells, particularly neutrophils, into the lung. Previous work has shown the inhibitors in Domainex's compound to be potent anti-inflammatory agents, suggesting that these compounds may also have utility in other inflammatory diseases including rheumatoid arthritis, lupus and psoriasis.

New Bio-Analysis Centre at LBIC

A Bio-Analysis Centre has recently been set up at LBIC and is working towards GLP compliance. The B-AC will initially offer a Triple Quad Mass Spectrometer, two HPLC instruments plus deltaDOT's latest Capillary Electrophoresis system. Users can run their own samples on the instruments or send the samples in for analysis. A similar service was previously run successfully at UCL and the manager of that service, Dr Carolyn Hyde, will run the new B-AC. Her contact details are: cali@b-ac.co.uk or 020 7691 2064. For more details please visit www.b-ac.co.uk

LBIC welcomes the companies listed below, who have joined the Centre over the past six months:

- Aglaris Cell
- Bio-Analysis Centre
- BUGS Bioscience
- Fabrican
- Immunoclin
- Orphidia
- Riffyn
- Zorion Medical

Continued from front page

gene sequencing and data mining/analysis, with a small area for wet lab activities. CVI London plans to collaborate with academic groups on microbial community analysis, bioinformatics and metabolomics research, including the study of samples from clinical cohorts.

CVI looked at various options before

settling on LBIC. Dr Williamson explains: "The location is ideal. Access is easy and there's a lot of investment in innovation happening in this part of London. We also have the chance to interact with other innovative groups located here." He adds that renting space at LBIC, rather than investing in infrastructure, is attractive for a

group that needs to stay "small and agile" in a fast-changing field.

CVI was established in 2011 as the centre of excellence for Immunoprophylaxis within the Janssen Pharmaceutical group. The new London base complements discovery centres in the Netherlands and the United States.

The growth of PolyTherics

From two employees to AIM listing of Abzena



PolyTherics, an Abzena company, provides a range of technologies for the site-specific conjugation of drugs to antibodies to create antibody drug conjugates (ADCs) and of polymers to proteins to extend their half-life.

September 2001: PolyTherics established by Imperial College London and the School of Pharmacy, University of London (now part of University College London), with initial funding from the Imperial Innovations University Challenge Seed Fund, the Wellcome Trust and the Bloomsbury Bioseed Fund. The founding scientists were Professor Steve Brocchini, Professor Sunil Shaunak and Dr Antony Godwin (currently the company's VP of Chemistry).

May 2006: PolyTherics moves into LBIC with two employees.

2006-2010: PolyTherics' team expands, taking on additional laboratory and office space within LBIC.

2010: PolyTherics moves into the Amoroso building on the RVC Camden campus to accommodate its activities.

January 2012: PolyTherics acquires Warwick Effect Polymers (WEP), which was founded in September 2001 as a University of Warwick spin-out to commercialise the research of Professor David Haddleton. The acquisition of WEP added novel polymers to PolyTherics' portfolio of technologies and new investors which included, amongst others, Mercia Fund Management and the Advantage Enterprise & Innovation Fund.

January 2013: PolyTherics expands further within its building in Camden to accommodate the growing team developing the ThioBridge ADC technology.

July 2013: PolyTherics acquires Antitope (founded in December 2004 by Dr Matthew Baker and Dr Frank Carr and based on the Babraham Research Campus near Cambridge). Antitope provides immunogenicity assessment, proteins engineering to create humanised antibodies and deimmunised proteins, and manufacturing cell line development to organisations developing antibodies and proteins as therapeutic products. The acquisition of

Antitope was funded by the issue of new shares to an aggregate value of £13.5m. The investment round was led by PolyTherics' major investor, Imperial Innovations, and brought in new investor Invesco Perpetual.

May 2014: Abzena is created to provide a strong group identity for its two wholly-owned subsidiaries, PolyTherics (including WEP) and Antitope, which between them employ more than 85 people and offer services and technologies to enable R&D companies to develop better biopharmaceuticals. The group generates revenues by provision of services and from

technology licences, which have the potential to generate significant future revenues from royalties on sales of products created using the group's conjugation and humanisation/deimmunisation technologies.

10 July 2014: Abzena is admitted to AIM (the London Stock Exchange's international market for smaller growing companies), raising £20m by way of a placing of 25m new ordinary shares. The investors who have supported the business through its growth have continued to do so with Invesco Asset Management and Imperial Innovations, the largest shareholders, and



Neil Woodford investing from his new fund into Abzena at the IPO.

August 2014: After almost four years in the Amoroso building and eight years of growth within LBIC, Abzena relocates to Babraham Research Campus – a successful example of a company with its roots in London and its wings spread wide as it grows its international business as a provider of services and technologies to enable better biopharmaceuticals.

MedCity chairman Eliot Forster

Joel Dudley interviews MedCity chairman Eliot Forster about the project, which has been developed to support London and the south east's position as a life sciences epicentre.

How did the project come about?

MedCity was officially launched in April this year but as a concept it has much deeper roots. It came about through a strong understanding across the life sciences arena that the more we work together the stronger we are. The greater south east region is world-renowned for carrying out excellent research but we are not as successful as we could be at turning that into economic benefit, and that is the fundamental goal of MedCity – our success will be measured in jobs, new companies, greater investment and more and better therapies and devices for patients.

Who are the current partners of MedCity and might this list expand over time?

MedCity was founded by London's three academic health science centres – Imperial College Academic Health Centre, King's Health Partners and UCLPartners – with the Mayor of London, plus support from the HEFCE. It's a collaboration not a membership organisation and our collaborations will be broad – so in that sense our partners will be, and already are, numerous. We have good links with Oxford and Cambridge and are developing relationships in the coastal area, which is very important. Our remit is to act as a

catalyst – to create a new channel for collaboration and a clear voice to articulate our region's powerful offer internationally.

In our spring issue we reported that MedCity received £1.2m of funding from the Mayor of London's office and had received a £2.92m grant from the HEFCE. How is this finance being used? What progress has been made in recent months?

MedCity is still very much in start-up mode and our first focus has been to define what our early remit and goals should be. That has involved a lot of listening, including during our first event which we held for digital health entrepreneurs as part of London Technology Week. Digital health is going to be an important component of MedCity's strategy, and we are currently working on an action plan for how we can clarify and simplify the path to market for entrepreneurs working in this area. Our other key focus is on access to investment – and highlighting to the financial community what a depth of opportunity there is in this sector for wealth creation through investment that improves lives.

Creating a strong voice for the region's life sciences has been important right from the start, both publicly and behind the scenes, and that has included joining the UKTI delegation to BIO in June, which was an incredible opportunity to raise the profile of how MedCity can support international businesses and investors to access the great richness of the greater south east. One mark of our success is the fact that the London-Oxford-Cambridge golden triangle has been named a top global life sciences region to watch in Jones Lang LaSalle's annual Global Life Sciences Cluster Report.

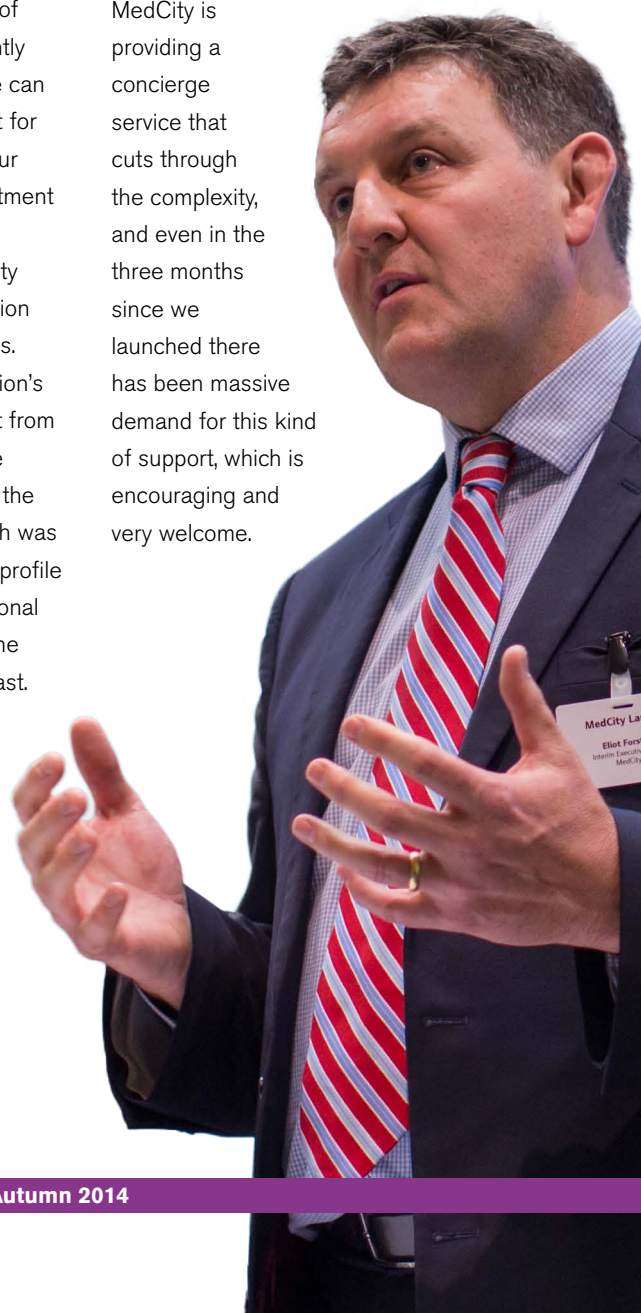
We are also establishing a small but very energetic core team to coordinate and amplify activity across the region.

What lessons have been learned from East London Tech City?

The fact that our name is very similar to Tech City isn't a coincidence and, though we're a different industry, there are elements we intend to mimic, most notably the cluster philosophy – encouraging investment and creating an environment in which companies thrive.

One thing Tech City has done which is also top of MedCity's agenda is to create a recognisable brand for the tech industry and a front door through which it can be accessed. That is vital, since this region is home to an embarrassment of life sciences riches – with so much on offer, it can be hard to identify precisely the right partner and place for your work.

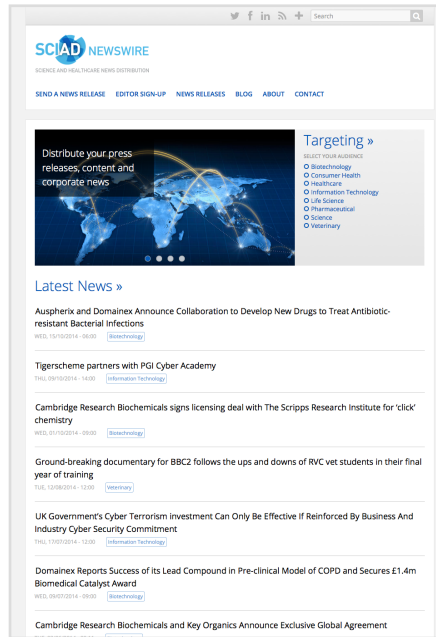
MedCity is providing a concierge service that cuts through the complexity, and even in the three months since we launched there has been massive demand for this kind of support, which is encouraging and very welcome.



Focus on Sciad Newswire

Sciad Newswire is a dedicated news distribution service for life science and biotech companies.

The newswire has been built to offer businesses a better alternative to using more broadly-based wire services. All too frequently, regular newswires don't reach the specialist media publications that are essential reading for the audiences that biotech and life science companies need to reach. Instead, these newswires will give your news exposure on their partners' many websites which at first glance looks like a successful outcome. However, on closer inspection, a lot of the coverage is published on sites that aren't read by biotech and life science audiences and so is of little value, even in helping push up your website's search engine rankings. To overcome this problem, we have developed the Sciad Newswire, carefully researched and built to reach both specialist journalists and relevant mainstream reporters across Europe, North America and Asia. Since its launch in early 2014 Sciad Newswire has quickly become established as a news source that journalists can trust for high quality content, helping to put your company on the map.



How it works

Sciad Newswire is easy to use. You simply submit your news using the form on the website, or email your news release to news@sciadnewswire.com as a Microsoft Word document (.doc, .docx) confirming when you want it to be sent out and which list you'd like it sent to. You'll be sent a quotation and once you approve your news will be distributed at the time and date agreed.

Social media

Sciad Newswire also reaches out to journalists, bloggers and other commentators and influencers via social media channels. When you're writing your press release bear in mind that your headline will be the text that is often tweeted or posted directly from your release page. Include important keywords in your heading and ensure it includes less than 140 characters, the maximum limit on Twitter.

Search engine optimised

Make sure that you target your audiences precisely by using keywords that people in your industry who are searching for information about companies like yours are likely to use; Google can be used to suggest terms to you as well. This will help to generate traffic to your website as searchers will be able to find more information about your company easily.

For more information call **+44 (0) 207 691 2155** and ask for Deborah Cockerill or Richard Anderson or email us at info@sciadnewswire.com.

Introduction to: Aglaris

Aglaris produces equipment to ensure cell and tissue culture is an easy, problem-free task. The company became an LBIC client in July 2014.

The use of cells and tissues is increasingly common in research and the medical and pharmaceutical sectors. The uses for this type of biological material are very diverse, from tissue engineering (manufacture of living tissue) to cell therapy (treatment of diseases using cells as a drug) and drug development and testing.

The processes for cell culture have evolved little since the 1950s and have drawbacks which have made their evolution

slower than expected. Current cell culture is purely manual, with all the disadvantages this entails: a high cost, contaminations, poor repeatability between batches and the need for highly-specialised technicians. In addition, cellular processes require the use of toxic products (trypsin) which results in sub-optimal cell quality and also reduces yield (trypsin causes a cell death rate nearing 30 percent).

To meet the needs of such therapies, a

more affordable and technically competitive source of cellular production is needed. Aglaris Cell has therefore designed fully automated and toxin-free cell culture equipment and has already patented the technology.

The first generation (aglaris facer 1.0: equipment for cell culture) is in prototype phase, and the second generation (aglaris facer IPS: equipment for cell reprogramming) is in the design phase.



Is anything secure in the Cloud?

BY MALCOLM NEWDICK, MANAGING DIRECTOR AT RIVERBANK IT

Businesses moving to the Cloud have made Microsoft's cloud service, Office 365, the fastest-growing business in the company's history. But security worries about putting company data in the Cloud still remain.

The Cloud certainly adds new risks. You don't have any control about where your data is stored. You don't know who has access to it, whether it's an employee or a government. So what can you do?

One approach is to make your choice based on the level of security you need:

Low security: Choose reliable suppliers and trust that they manage it properly. That, after all, is what we do when we choose a bank, and that worked okay until around 2008.

Medium security: Go with a local IT provider that manages their own Cloud infrastructure. If you know where the servers are located and you know who has access to it, you have more control over your security.

High security: Avoid shared Cloud services and avoid shared server platforms. Run your own servers, just as you would if your IT was still in your office. But put them in a secure data centre.

So why not avoid all these risks by

keeping all your IT in your own office, just as you always have done? The answer is that this isn't safer. Your physical security probably depends on a single door lock and a single pane of glass and you have many single points of failure, including server and firewall. It's just familiar, not secure.



Security worries will always be with us, but we have to make sure

we worry about the right things. Get the basics right – strong passwords, good management of ex-employees and effective physical security. These are probably your biggest risks.

'Epigenetics is difficult – accounting is easy – it's about understanding the terminology!'

Richard Brooks from LBIC Business Support Network provider FD Solutions shares his advice for finance in life science companies.

How often do you hear or read something that seems too difficult to understand, and therefore struggle with the application? Often this is down to the language used by specialists in their particular area of expertise, be they microbiologists, physicists, lawyers or accountants.

Having provided finance directors to a broad range of businesses in different sectors, I am very aware of the depth and breadth of the English language when businesses describe what they do. Consequently, I spend time researching the words (usually scientific) in order to better understand what each business is all about.

So why do I meet many clever scientists who struggle with accounting terms like cash flow and working capital? Probably for

the same reason I have to do my research – it's not immediately a natural fit. However, it is clear from my work that understanding some terms in the accounting vernacular enables a greater transparency on how a business functions – and therefore leads to better businesses.

I have presented at 15 workshops for scientists and engineers over the last six years, mainly in developing countries. One session I run is on financial terminology (I focus on 10 terms only). I have found that the best results are achieved by getting the workshop participants to work out the meaning of some of these terms themselves with group



case study examples. I provide an integrated financial forecast App in which they can vary assumptions about expenditures, capital expenditure, R&D, debtor and creditor days and immediately see the effect on cash flow over a five year period.

The benefit from this approach is that the participants are better able to discuss finance with potential funding sources. The aim is not to turn these clever people into accountants but demonstrate that there is a big difference between profit and cash – and also explain some essential financial terminology.

Businesses fail because they run out of cash, so if you are planning any business, understand your cash flows. If this is not something you are interested in then find someone else in the senior management team to take it on.

RVC Business: the new integrated commercial services department

The Royal Veterinary College has brought together its non-clinical commercial activity into one new department, named RVC Business.

RVC Business integrates facilities and technical services with academic expertise to support commercial companies operating in both the bioveterinary and human health sectors.

Launched in August, RVC Business incorporates the commercial activities of the College's Biological Services Unit, Contract Research Unit, Named Veterinary

Surgeon Service, RVC Enterprise and its Clinical Investigation Centre.

The RVC has expanded its research activity threefold over the last decade and developed LBIC – now ranked second life science incubator in the UK in terms of the number of client companies. The new department builds on these successes, exploiting synergies across different areas

within the College and ensuring a consolidated and professional approach for external companies wanting to work with the RVC.

Dr Ken Larkin, Head of RVC Business, said: "The RVC really adds value to our commercial clients by joining up not just our facilities and technical services, but also involving the leading academic expertise and research insight from across the College.

"RVC Business has effectively become a one-stop-shop for any bioveterinary or biomedical company looking for support to develop innovative new products and services in their field," he added.

RVC fosters industry collaborations

Initiatives such as MedCity rely on successful collaboration between academia and industry. In recognition of this, the Royal Veterinary College has developed a programme for match-funding proof of concept projects to seed collaborative relationships with new commercial partners.

Launched in 2013, this 'Concept Development Partnership Fund' has established partnerships with several SMEs, with a particular focus on clients of the London BioScience Innovation Centre and members of the regional biotechnology network One Nucleus.

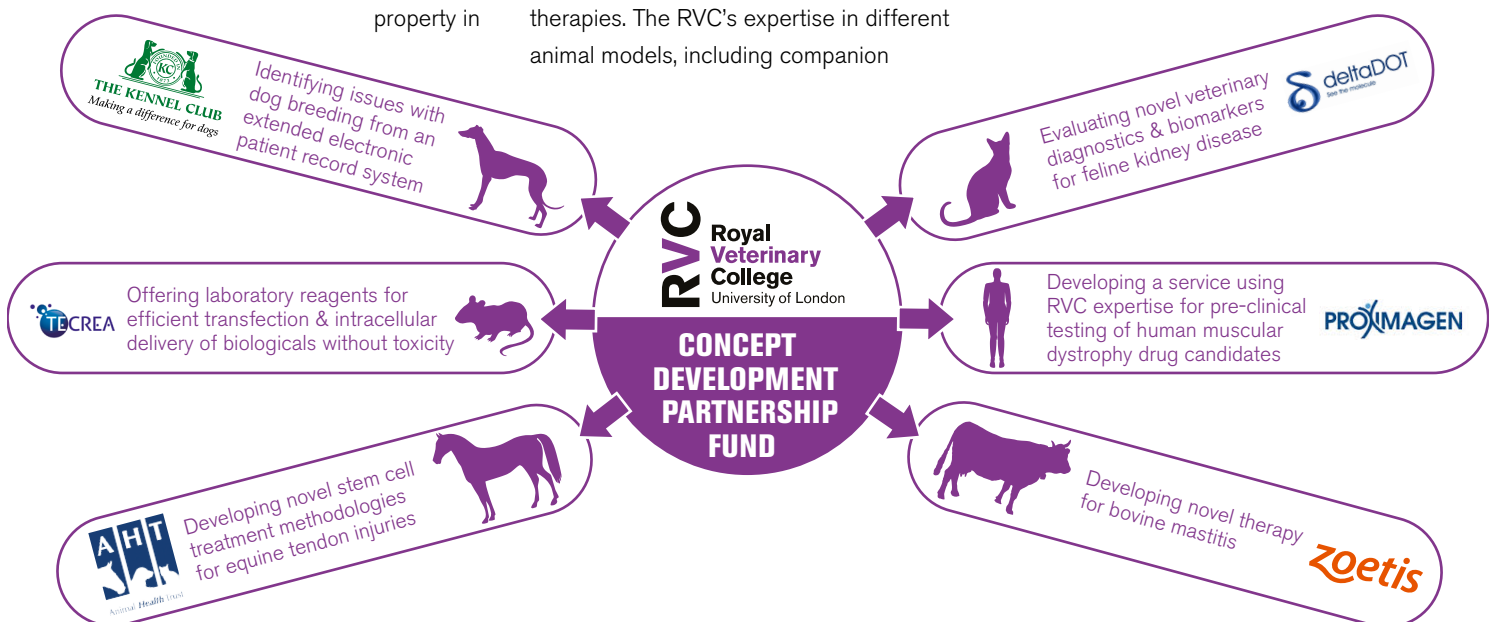
The projects had to be led by an RVC researcher and intellectual property in

the form of technology and/or expertise had to originate from the RVC and be essential to the project. The projects selected were small in scale initially, to allow for defined commercial goals that were achievable within one year.

Projects were diverse and covered many industrial sectors, ranging from laboratory reagents to diagnostic biomarkers to novel therapies. The RVC's expertise in different animal models, including companion

animals and production animals, was particularly valuable. The diagram shows the various projects undertaken with industry partners.

The Concept Development Fund enabled the commercialisation of RVC technology and expertise and also promoted the formation of novel collaborations between commercial contacts and researchers. Commercial exposure is invaluable for entrepreneurial scientists, while the companies involved gain access to the specialist knowledge and skills found in academia.



LBIC: Where enterprise comes to succeed

The London BioScience Innovation Centre (LBIC) provides a focus for life sciences activity in the UK capital, offering laboratory, office and meeting room facilities of an exceptionally high standard and a professional front door that cannot fail to impress.



Lab and office space

LBIC's containment level II laboratories are designed for a variety of functions such as molecular biology, protein biochemistry and cell culture. Key features include class II safety cabinets, integrated gas piping, sterilisation services and access to offices and write-up suites.

Hot desks

LBIC's hot desking facility means you can rent a permanent desk in a shared office, or simply pay by the hour as needed.

Virtual client offer

Virtual tenancy at LBIC is an excellent choice for companies looking for a low-cost way to establish a presence in the UK

capital. Virtual clients gain the advantage of a central London address and access to a range of benefits (see below).

Meeting rooms and conference facilities

LBIC offers a number of meeting rooms and conference facilities for client use or occasional hire by non-resident companies. Catering can be provided upon request.


Benefits

- Reception services
- Full business support package via the LBIC Business Support Network
- Regular invitations to events, training and seminars
- Complimentary 12 months' One Nucleus membership with access to its Purchasing Scheme
- Presence in LBIC marketing and communications
- Access to Royal Veterinary College services and equipment, including contract research, diagnostics and imaging

Contact **Janette Richardson** at jarichardson@rvc.ac.uk or **Tel: +44 (0) 207 691 2071** to see how we can help.


Would you like to feature in our newsletter?

If you would like to contribute to a future issue of LBIC News, contact **Lucy Garnsworthy** on +44 (0) 207 691 0982 or email lgarnsworthy@rvc.ac.uk



London BioScience
Innovation Centre

WHERE ENTERPRISE COMES TO SUCCEED



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LBIC has been supporting life sciences companies since 2001. Today we host over 50 companies ranging from entrepreneurial start-ups to more established UK companies and overseas subsidiaries from Europe, North America and Asia Pacific. The Centre is owned



and operated by the prestigious Royal Veterinary College, one of the independent Colleges of the University of London.

The Centre is a 10-minute walk from St Pancras International for Eurostar services and the site of The Francis Crick Institute.

Our management team comprises:

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Patricia Latter
Deputy Director

Janette Richardson
Operations Manager

Joel Dudley
Marketing Communications

Lucy Garnsworthy
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