

# retort

THE NEWSLETTER OF THE OXFORD SCIENCE PARK **AUTUMN 2004**



- New companies ■ Company Focus - Magink Display Technologies
- New Laboratory Incubator Space ■ Seminar Round-up

*where the business of science comes to life*

## Editorial



*Dr Byron Byrne of Joint Venture partner Magdalen College*

In this issue we see that the window for venture capital and other sources of funding has re-opened for science-based companies, and many of the stories featured provide strong evidence for this. Although the funding climate is still difficult, it seems that for companies with good ideas and strong management, investment is now available.

Having gained investment, it is fascinating to see the ideas and products companies are developing and have brought to the marketplace. Examples in this issue include; revolutionary display systems, System-on-Chip technologies, surprising sources for new health treatments and technology to simulate the clinical response to new drugs.

On page 7 we review the new flexible laboratory space created in Magdalen Centre North. New

companies have already taken up some of the space, although more is available for companies wishing to move to the Park.

Finally we review some of the seminars and meetings that are regularly held here. These meetings are part of the 'glue' that make the Park much more of a community, providing 'soft' infrastructure to help companies interact and learn from each others' experiences.

We hope that you enjoy this edition of retort and for further information see the new Oxford Science Park web site at [www.oxfordsp.com](http://www.oxfordsp.com).

**Dr Byron Byrne, Magdalen College**

## News from around the Park

### Park Services Manager

The Science Park is pleased to welcome Robert Horsfield as the new Park Services Manager. Robert joins the Science Park from Romec, the engineering division of Royal Mail specialising in office facilities, security, cleaning and M&E.

Robert, who has a first-class degree in Environment Studies, comments: "I knew of the Science Park through my visits to see Oxford United at the Kassam Stadium. I had always noticed the landscaping and interesting architecture as I trudged miserably home after another defeat!"

Robert was struck by the design of the Park, which combines a natural environment with the needs of the various businesses on site. "Part of my role here is to further develop the social side of the Park," he says. "This not only involves getting discounts for Science Park tenants from local services but also increasing awareness of all of the social activities available to employees on the Park, including the very successful Netball and 5-a-side football teams."



*The Science Park Rangers 5-a-side football squad*

### Science Park Rangers

'The Science Park Rangers' is the name of the 5-a-side football squad at the Park. The team plays in the F.A. affiliated 'Oxford Corporate 5-a-side league' ensuring excellent playing surfaces and good refereeing.

Matches are played each week during the season and additional practise matches for the squad are on Wednesdays. The Park website includes a link to the football league table showing the latest results.

### New Science Park website

The Science Park is also pleased to announce the launch of its brand new website. Still to be found at the old address ([www.oxfordsp.com](http://www.oxfordsp.com)), the redesigned site now boasts improved navigation, showing current availability of office space and more detailed maps and visitor information for companies and visitors alike.

Furthermore, the site contains additional history and information about the surge of high tech companies in the Science Park in particular and Oxfordshire in general.

The site was designed by a locally based company "The Image Works".



## Magink Display Technologies

Magink Display Technologies, a company that specialises in the development of next generation, full colour digital ink technologies, is the first company to move into the newly fitted research laboratory suites at The Oxford Science Park.

Magink, which also has offices in Israel and the USA, has moved its UK research facility from London to Oxford and is keen to expand its operations here during the next 12 months.

Dr David Coates, Magink's research manager, explains: "We have research laboratories in the UK and Israel, and in the next few months we will take on more UK staff and some of the research staff from Israel will join us in Oxford so that we can consolidate our research in one centre. The Science Park provides us with an excellent base from which to commercialise our new technologies, as well as a place where we can plan future research developments."

Indeed, Magink has already made inroads into the electronic billboard market, where the Magink system allows for any number of images to be shown and changed almost instantaneously as required.

CEO and founder Ran Poliakine explains: "The digital-ink billboards can show a full colour, high resolution image which, unlike other electronic

displays is visible in full sunlight and at night. The images can be programmed to appear based on factors such as time of day (so they are of interest to different consumer groups passing the billboard), current events (winning lottery numbers), community notices, sales results or even viewer reaction."

Adds Poliakine: "This is a global market, and since January 2003 we have installed trial billboard displays of up to 6 metres by 3 metres in size in cities around the world, including Toronto, Mumbai, Panama, Abu Dhabi, New York and at several sites in Europe. The billboards are researched and designed by Magink and manufactured by arrangement with Mitsubishi Electronics in Japan."

Smaller, full colour versions are also available. Mitsubishi is installing Magink information displays at highway rest stops and roadside tourist centres in Japan. They provide news, a list of local attractions, and traffic and weather conditions for the next 100 miles. Each sign can be updated instantly via a wireless transmission. Similarly, Japan Railways Group can press a "send" button and update all of its Magink timetable displays on train platforms.

The exciting nature of Magink's technology will explain why the company successfully raised US\$27 million in series C funding in July in New York. Poliakine states: "This significant investment will enable Magink to build a global marketing and distribution system, while strengthening our position as a world leader in the field of digital ink and its vast potential for display applications."

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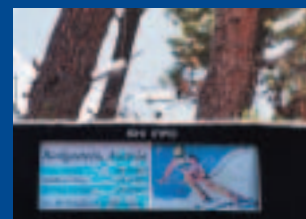
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Ski information



Advertising billboards



Roadside information



Sports updates

### The Technology

Magink is developing and commercialising the next generation of display technologies based on its proprietary digital ink technology. Magink's technology enables displays such as billboards to become digital, thereby making it easier to change content. Thanks to wireless technology, this can even be done remotely and instantaneously.

Furthermore, due to its so-called 'paper-like' quality, Magink allows for lightweight displays that require significantly less power than other display units, and

yet which are more easily viewable in sunlight thanks to their reflective capabilities.

Compared to a similar digital display on a plasma screen or an LCD, for example, the Magink display remains readable in full sunlight and from wide angles (plus or minus 60 degrees). Furthermore, a power source is only needed when an image on the display needs to be changed. This significantly reduces the cost of digital content displays, making Magink a truly viable alternative.

## PowderMed spin-out

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**PowderMed is a new company that has been created as a spin-out of the PowderJect therapeutic DNA vaccine programmes that were previously owned by Chiron Vaccines, a business unit of Chiron Corporation.**

The company was launched back in May, following a successful application for £20 million in venture capital from a syndicate of leading life science investors. At the same time, PowderMed announced a deal with GlaxoSmithKline, which sees the latter gain additional licenses to the PowderJect powder injection technology in the field of oncology. PowderMed also acquires from GSK two former DNA vaccine programs based on the same technology.

PowderMed has also announced that five new therapeutic vaccines, each using the proprietary PowderJect DNA powder injection technology, will progress into clinical development within the next two years. These target genital herpes, hepatitis B, genital warts, HIV/AIDS (partnered with GSK) and lung cancer (partnered with Ludwig Institute for Cancer Research). The start of this 'first time in man' clinical study in

cancer patients using the NY-ESO1 antigen was announced in September.

Says Dr Clive Dix, the former head of PowderJect's research and development, and the CEO of PowderMed: "PowderMed's technology is clinically validated and provides a unique ability to use the immune system to treat chronic diseases. Using this pioneering technology, we will be developing an exciting pipeline of therapeutic DNA vaccines. PowderMed, with its experienced development team, starts life well placed to become the leading therapeutic DNA vaccine company in the world."

John Lambert, president of Chiron Vaccines, says of the new company: "We believe that powder injection has great potential as a novel vaccine delivery technique. Although the technology platform does not fit with Chiron Vaccines' R&D pipeline, we are pleased that its development will continue under the stewardship of PowderMed."

PowderMed's shareholders include Schroder Ventures Life Sciences, Advent Venture Partners, Abingworth Management Ltd and Oxford Bioscience Partners, with Chiron Vaccines retaining a minority equity stake.

## Zeneus Pharma moves to the Park

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**Zeneus Pharma, a global specialty pharmaceutical company, has established its worldwide headquarters at the Science Park.**

The company's European sales force, which has a presence in 17 countries, sells directly to specialist doctors in hospitals and other healthcare centres. Zeneus Pharma's sales and marketing force, together with the company's other core competencies in clinical development and regulatory affairs, provide a window

on Europe for US and other pharmaceutical and biotechnology companies that require a strong European partner.

Chief Executive Bryan Morton commented: "The company has substantial clinical, regulatory, sales and marketing operations in Europe, with worldwide sales through partner agreements. We have a broad portfolio of specialist marketed products currently focused on cancer, critical care and niche cardiovascular disease."

The current portfolio has sales in excess of US\$80 million and the company intends to maximise the sales by seeking additional indications and by out-licensing to ensure penetration of the US and other non-European pharmaceutical markets. To support its growth strategy and to build its portfolio, the company intends to acquire or in-license late stage or marketed products, avoiding the high risk of early stage drug discovery.

Zeneus Pharma's chairman is Sir Richard Sykes, the former chairman of GlaxoSmithKline. It is a privately held company backed by Apex Partners, one of the world's leading private equity investment groups.



Zeneus Pharma in Magdalen Centre North

# Evolutec wins funding

## Biopharmaceutical company Evolutec has raised £6 million in funding following its launch on to the Alternative Investment Market (AIM) of the London Stock Exchange.

On admission, the market capitalisation of Evolutec at the placing price was estimated at £12.7 million.

Commenting on the AIM admission, CEO of Evolutec, Dr Mark Carnegie Brown, said: "We are delighted to have enjoyed strong support for our flotation from shareholders, both new and existing, and look forward to building value as a quoted company. The funds raised will allow us to undertake key clinical trials and development work with our technology."

The proceeds will be used to fund proof of concept phase II clinical trials in allergic rhinitis (commonly known as hay fever) and phase II and III trials in post-cataract surgery for rEV131 and to fund the development of the company's pipeline.

Evolutec has based the development of its platform technology on the characterisation of pharmacologically active proteins found in tick and other parasite saliva.

For ticks and other blood-feeding parasites to survive, they must combat a hosts response to their attack. The tick remains undetected by its mammalian hosts, including humans, by injecting an array of immunomodulatory and anti-inflammatory molecules. This stealth technology manages the host response and allows the tick to take its blood meal.

Evolutec isolates therapeutic candidates from the saliva of the tick. This technology has evolved over millions of years to allow the tick to complete its life cycle. These parasite molecules enter the host via the parasite's saliva. Anti-inflammatory, anti-coagulant and anti-pain molecules that emulate the activity of the parasite proteins may have potential as therapeutic agents.



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An engorged tick

# Physiomics signs collaboration

## Magdalen Centre-based Physiomics has signed a collaboration agreement with Bayer Technology Services GmbH, the engineering and applied science subsidiary of Bayer AG. The agreement is to cooperate in the field of clinical response prediction.

Clinical response prediction measures the optimum dosing and efficacy of therapeutic compounds. This cooperation brings together two unique strengths in systems biology - the Bayer Technology Services' PK-Sim® physiology based pharmacokinetic (PBPK) modelling and Physiomics' SystemCell™ technology, which can determine and predict optimum drug levels.

The collaboration reflects the growing demand from the pharmaceutical and biotechnology industries for simulation technology to streamline drug discovery from pre-clinical through to Phase III. Clinical response prediction is designed to smooth out dosing and

related toxicity problems early in a drug's development. Integrating pharmacokinetic and pharmacodynamic technologies into one predictive system aids portfolio attrition risk assessment, clinical protocol optimisation and project troubleshooting.

The integrated approach delivers quantitative arguments for the prioritisation of drug candidates in a pipeline, maximises clinical trial outcomes, and also interprets failures in trials of apparently promising drugs.

Under the terms of the agreement, Bayer Technology Services and Physiomics have committed themselves, under strict confidentiality, to undertake specific consulting projects according to customer requirements.

"The collaboration with Physiomics strengthens our position as a technology leader in the field of predictive biological simulations," said Dr Helmut Mothes, Senior Vice President of Bayer Technology Services. "Together, we are able to add significant value to the whole R&D value chain of our customers in the pharmaceutical and biotech industry."

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# Ignios secures US\$3.8 million first round funding

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Ignios, based in the Magdalen Centre, successfully raised US\$3.8 million in a first round of private financing early in 2004. The investment, which was jointly led by venture capital firms Alice Lab and BTG, has enabled Ignios to take its SystemWeaver™ technology from early development through to production.

Ignios is a technology licensing company that specialises in improving embedded system-on-chip (SoC) technologies. An SoC is defined as a single chip that holds all of the hardware circuitry necessary to implement an entire electronic system. An SoC would therefore include a microprocessor, on-chip memory (RAM and ROM), peripheral interfaces, I/O structures, data converters, and other system components. Software is written for the on-chip microprocessor to implement the specific behaviour of the intended system.

Given that these highly-integrated chips can be used to implement entire electronic systems, SoCs are typically found in many 'embedded' electronic systems where the need for increased functionality, improved battery life and reduced cost is paramount. Common uses for SoCs are in network routers, digital cameras, mobile phones, mobile basestations, set-top boxes, etc, with further uses in

medical applications such as ultrasound scanners becoming increasingly common.

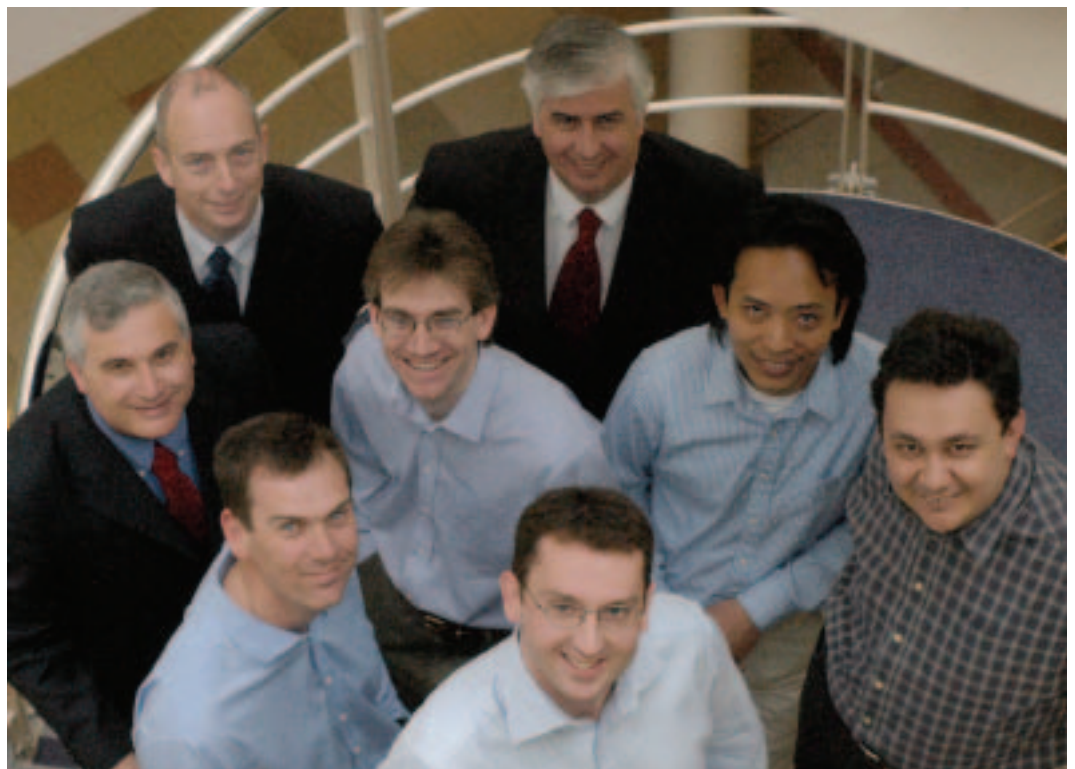
Ignios licenses its SystemWeaver hardware and software designs to companies developing SoCs. The inclusion of SystemWeaver hardware in an SoC helps to improve the performance and ease-of-use of the chip, thereby improving the cost, power efficiency and time-to-market of the end-product, be it a PDA, mobile basestation etc. SystemWeaver was developed specifically to address the challenges of the latest generation of SoCs, which are becoming increasingly complex through the integration of multiple processors on-chip (so-called 'multicore' SoCs).

"We have developed SystemWeaver in response to clear demand from the industry," explains Mark Lippett, Ignios' co-founder and chief technology officer. "This technology will remove a major barrier to achieving optimal system performance in complex SoC designs, and will deliver competitive advantage throughout the value chain – from semiconductor companies and OEMs (Original Equipment Manufacturers) to operating system developers."

"Our investment in Ignios is motivated by the market potential for this technology and the strong interest that we have seen from several leading semiconductor companies," comments Miki Granski of Alice Lab.

"With a solid technology foundation and the scope to develop a significant intellectual property portfolio, Ignios is well-placed to make a big impact in the industry," adds Peter Beynon of BTG.

*Founders, Investor Directors and first staff at Ignios on completion of initial funding round*



# New laboratories opened

Following on from the announcement in the last issue of *retort*, the Science Park has successfully completed the conversion of a 6,800 ft<sup>2</sup> wing of Magdalen Centre North into small laboratory and office suites (each laboratory comes with its own office), now available on simple monthly licence agreements.

The suites are suitable for small companies, short term research projects or research and development satellite departments of larger organisations. The monthly

Companies in the laboratory suites can take advantage of some useful shared facilities. These include a glasswash, autoclave, ice maker, a central RO water supply, a room for freezers (fitted with additional cooling) and a vented fume cupboard (available for hire). A small kitchen area is also provided.

Budgeting for companies has also been carefully considered. In addition to the shared laboratory facilities, the monthly licence fee includes: business and water rates, telephone line rental (pro-rata), voicemail, broadband internet connection and managed LAN (Local Area Network), parking and visitor parking and a full reception service provided in Magdalen Centre South.

“Apart from providing the right type of facilities, costs are also very transparent,” explains



licence means that if, for some reason, they need to move out then they only need give one month's notice.

Seven suites have been created with laboratories suitable for 2, 4, or 6 persons. Each lab has fitted benching with flexible shelving, a sink and separate wash basin; also an ample supply of power and data outlets are provided. In addition, two of the laboratories are fitted with 3 phase power. The laboratory and office areas are all heated and cooled by a VRF (Variable Refrigerant Flow) comfort cooling system.

Ian Macpherson, Business Development Manager, explains: “VRF systems are now a common form of air conditioning in modern commercial buildings and the systems fitted here use environmentally friendly R407c refrigerant. Each of the laboratory and office units is heated and cooled by a dedicated ducted fan coil unit supplying conditioned air into the space. Independent temperature and fan speed control is provided in all of the suites by wall-mounted controllers.”

Shannon Blaszkowski, Manager of the Magdalen Centre. “Interested companies can be quoted a cost for each month. Importantly this includes the cost of comfort cooling and power. Companies often forget about these costs until they receive the bills, and if they have to pay them, it can come as quite a shock. Our system helps companies to budget realistically by the month or for the whole year.”

Companies also benefit from additional facilities in Magdalen Centre South, which is connected to the North building via an enclosed bridge. In Magdalen Centre South, there is a café/restaurant, conference and additional meeting rooms, photocopying and fax facilities, binding facilities, franking of mail and secretarial services as required.

The two largest laboratory suites have already been occupied. However, the remaining suites are available in combinations if companies need additional space.

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# Seminar round-up



Regular seminars are held in the Magdalen Centre

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## Seminars for high-tech companies are regularly held at the Science Park and are useful for companies to share experiences and to get to know their neighbours.

Ian Macpherson, Business Development Manager at the Park, explains: "We have some meetings purely for companies based at the Science Park, but we also encourage people from outside the Park to attend a number of meetings and to organise relevant events here."

Macpherson adds: "There are other benefits of organising meetings at the Park. One aspect is that enthusiasm for specific topics helps you to assess trends in the market, for example the demand for specific services and skills."

He explains: "In the summer we organised a 'Case Study' day for University science students who might be interested in establishing their own science-based company. The response from the students was truly overwhelming and quite unexpected considering the amount of work they already have to do for their own studies. It was very encouraging to see such enthusiasm from the next generation of potential science entrepreneurs from Oxford."

Organisations and Network groups that regularly hold meetings at the Park are RESBIG, OxIT and the Oxfordshire Bioscience Network and their background and details of the type of meetings they organise are described below.

### RESBIG

The REsearch and Science Based Industry Group (RESBIG) holds regular meetings at the Science Park. RESBIG is a special interest group of the Oxfordshire Chamber of Commerce. Membership to the group is free of charge and open to all members of the Thames Valley Chamber. Non-Chamber members are invited to attend meetings to assess the relevance of the group's activities to their own requirements.

Meetings focus on topics of perennial interest, such as 'Raising Venture Capital' and 'Managing Intellectual

Property'. However, recent seminars have also included a presentation by Proctor and Gamble on corporate venturing and one by ORRA, a company spun out of the University Zoology department, and which conducts research into the psychology of risk and decision-making for companies.

For further information see [www.oxfordsp.com/news\\_seminar\\_news.html](http://www.oxfordsp.com/news_seminar_news.html)

### OxIT

Another group that meets regularly at the Science Park is the Oxfordshire Information Technology (OxIT) enterprise network. It is an 'industry led' organisation that represents the collective interests of IT-related companies and departments in Oxfordshire. OxIT works with local and national organisations to promote Oxfordshire as a centre of IT creativity and excellence.

Recent meetings have covered topics such as 'An assessment of the developments, trends and some surprises in the market place for ICT' and the most recent meeting covered 'The dilemma of public procurement'.

For further information see [www.oxit.org.uk](http://www.oxit.org.uk).

### Oxfordshire Bioscience Network

The Oxfordshire Bioscience Network holds many regular events throughout Oxfordshire. It is a unique public-private partnership, managed by Oxford Brookes University, promoting biotechnology business and research enterprise across Oxfordshire.

The Network provides a range of services that facilitate networking and communication, providing a gateway service that partners industry, academia, research and service providers, and which helps to ensure continued sector growth and sustainability.

A recent Network meeting at the Park covered the topic of 'Recruitment in the BioIndustry', which focussed on issues of outsourcing recruitment and using contract scientific staff.

For more information on the Network see [www.oxfordshirebioscience.com](http://www.oxfordshirebioscience.com).

THE OXFORD  
SCIENCE PARK

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