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Please contact the OBN team, team@obn.org.uk, if you would like to contribute to the next CONNECT or place an advert.

MEMBERSHIP DIRECTORY

An easy **reference tool** to see all of the OBN current Members and their offerings.

OBN supporting and bringing together the UK's life sciences companies, corporate partners and investors

CONNECT



DDI & drug repurposing is saving time and costs for drug developers

SPOTLIGHT: **AI: Vive la Revolution!**

Dr Simon Haworth, CEO of Intelligent OMICS, shares his insights into the future of AI in Life Sciences.

BioSeed 2022

The Early-Stage Life Sciences Investment Event

SHOWCASE INVEST SPONSOR
LONDON JANUARY 25 2022

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CONNECT MAGAZINE

My name is John Harris, the CEO of OBN Group and I'd like to personally welcome each of you to this fifth edition of CONNECT, OBN's bi-annual magazine.

As our sector recovers from the constraints of the pandemic, we recognise the enormous contribution that our members and community have made to creating a roadmap back to normality, but the focus now turns to growth and embracing opportunity.

With this in mind, OBN has restarted its physical events programme and our next major event is the 2021 OBN Awards, held at Oxford's Ashmolean Museum on Thursday 25th November. There are very few tickets left now, so I would kindly suggest you move briskly if you wish to avail yourself of this excellent opportunity to re-connect. (<https://obn.glueup.com/event/obn-awards-2021-43912/>)

Autumn's CONNECT includes many forward-looking aspects such as A.I., expanding overseas, drug re-purposing, optimising clinical trials, a thorough review of science parks if you are looking to take on new space, and of course thought-provoking opinion.

We hope you find this **CONNECT** an informative and interesting read and as always, we very much welcome your feedback.

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Visit us online: www.obn.org.uk

CONNECT is OBN'S Membership Magazine produced twice a year. It is designed and printed by Incorporate Design. The main purpose of CONNECT is to provide updates on current sector issues and a listing of OBN Members and supporters. Our readers are from companies and organisations who operate within the life sciences industry in sectors such as Therapeutic Discovery and Development, Medtech, CXO/Consultancy, Academia, R&D Support and Supply, Investment, Charity and Government. The Members Directory was up-to-date at the time when this magazine was collated and will always be subject to change. Any opinions expressed by those quoted in this magazine are their own and do not necessarily represent or reflect those of OBN (UK) Ltd. No part of this publication may be reproduced or used in any form of advertising or promotion without permission of OBN (UK) Ltd.

OBN NETWORK NEWS

At the time of writing the key COVID-19 stats are trending in right direction – lower rates for positive tests, deaths and hospital admissions. Thank goodness for that! A trip to the cinema over the weekend suggested that most people think it's over (very few masks) and let's hope they are right. At OBN we are moving towards 'normal', in-person meetings, networking and events and are embracing the new digital environment that developed over the last year or so to enhance the value of Membership.

We are delighted to have held 3 in person events since the last edition of CONNECT (April 2020): BioTrinity (in London), the (delayed) 2020 OBN Awards (in London) and BioForward (Oxford). These were most welcome opportunities to see old friends and make new ones and they had a real buzz about them. Building on these we are looking forward to our next major event, the 2021 OBN Awards, which will be held in the beautiful surroundings of the Ashmolean. We have had high quality entries across the range of categories, and it will certainly be a celebration of excellence in our sector.

Next up in terms of high level events is our Christmas Lecture - 'The Impact of AlphaFold for Biology and Medicine'. We are delighted to welcome Prof. Dame Janet Thornton, Director Emeritus of EMBL-EBI, who will be talking about the collaboration between EMBL-EBI and DeepMind which has made the AlphaFold protein structure prediction program, source code and methodology freely and openly available to the global scientific community. Structure prediction from primary sequences is something that has taxed many brilliant minds over the last decades and it will be a treat to hear how this problem was solved and its implications. As mentioned in the last issue we have continued to support early-stage companies seeking investment through the BioSeed Lunchtime Express series – an on-line pitching event over a lunchtime hour. Our recent presenters were VeinSense, OncoNex, Fluroetiq and Neuro-Bio and there were 40 participants. Please just note that we will be putting our lunchtime sessions to one side as we will now be turning our attention to BioSeed 2021 (25 January, London). If you are interested in presenting, please take a look at the event website www.bioseed.co.uk – which takes us to our new platform – GlueUp.

GlueUp lets us amalgamate our CRM, OBN website, events management, campaigns and Membership management onto one platform. In addition, there is a Members Community which we will be developing over the next few months. Please take a look. Register (top right) allows you to get on our mailing list and, having registered, you can conveniently keep track of our events and register for them. We think it will be a great step forward – please let us know your thoughts or where it could be improved. Please visit our new website and Register so that we can keep in contact.

150+ Member companies together save more than £10 million every year!

Finally, the OBN Purchasing Consortium is going from strength to strength - 150+ Member companies together save more than £10 million every year! A new addition aimed at providing savings to medtech companies is RS Components. By way of reminder about the consortium:

Average savings up to 50% against list price

- **Big or small, office or laboratory – any type of business saves money**
- **Low cost of entry – all OBN Full Members eligible to take part**
- **UK's most comprehensive and cost-effective group purchasing solution for life sciences companies**

So, in summary things are on the up! We hope to see you at our events! For all the details please go to www.obn.org.uk

To keep track of OBN's activities why not sign up for our mailers [here? team@obn.org](mailto:team@obn.org)

We have welcomed many new members to the OBN Membership since the last edition of CONNECT - please see details below.

Sponsors

Syneos Health	Use their Biopharmaceutical Acceleration Model to assist clients with clinical and commercial development
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Full Members

Adaptate Biotherapeutics	An immunotherapy company developing an innovative portfolio of therapeutic antibodies designed to modulate the activity of a patient's own cytotoxic gamma delta T cells in situ
Exogene	Applying AI to discovery of T-Cell-Receptor-based cancer immunotherapies
Ikarovec	Ikarovec is a pre-clinical phase gene therapy company with programmes aimed at treating common eye diseases
MediMab Biotherapeutics	Using systems biology to identify significantly improved first-in-class immuno-oncology drugs that can actively target a range of advanced and solid tumours
MOA Technology	Aim to discover the next generation of sustainable herbicide chemistries with new modes of action from both natural and synthetic sources
NanoSyrinx	A discovery stage biotechnology company using synthetic biology approaches to develop a completely novel method for targeted drug delivery of therapeutic proteins and peptides
Oxford Silk Phage Technologies	Pioneering a unique antibacterial biomaterial technology combining silk and bacteriophages, offering solutions for the growing problem of surgical implant/wound infections
Phenotypeca	Provide novel biologics production strains of the regulatory friendly baker's yeast, <i>Saccharomyces cerevisiae</i> optimised for client recombinant products
Service Robotics	Provide technology to enable the delivery of more flexible and better quality care to combat loneliness within older adults whilst reducing demand on our health and social care providers
UCL Business	UCLB is the commercialisation company of University College London
York Glassware Services t/a YORLAB	Specialise in the production of high quality scientific glassware, the design and build of lab and plant apparatus and rigs, and the supply of consumables, chemicals and laboratory equipment

Network Members

Actimed Therapeutics	Bringing innovation to the treatment of cachexia in cancer and other serious chronic illnesses
AELLEBIO Ltd, Peterborough	Biotech advisory services
Arex Advisor, Sweden	Offer a combination of strategic advice and operational expertise to help clients from early development stages to commercialized product
Catalent, Wiltshire	A global CRO providing integrated services, delivery technologies and manufacturing solutions for the development of pharmaceuticals, biologics and consumer health products
Hays Specialist Recruitment	Specialist recruiters to the life sciences sector
Horton International	An executive search firm specialising in the recruitment of senior talent across numerous disciplines
Infinity BiologiX	IBX provides comprehensive services, from sample acquisition to data analysis, for researchers and organizations around the world
LifeSci Advisors	LifeSci Advisors is a unique investor relations consultancy founded to provide companies in the life sciences a comprehensive solution to investor communications and outreach
Mi3	Provide expert services in designing, developing and manufacturing end-to-end advanced medical and surgical solutions
Novai	Developing their proprietary DARC technology to identify cellular level disease activity initially in both Glaucoma and Age-Related Macular Degeneration (AMD)
Oxford MediStress	Commercialising a novel in vitro blood test device which provides the first objective, rapid, quantitative measurement of stress
Pangaea Data	Provide technology and services for unsupervised AI extraction of meaning from both structured and unstructured textual data to provide doctors and researchers with a full picture of an individual's health
PharmaVentures	A transaction advisory firm and a leading international company in partnering, M&A deals and strategic alliances
Precision BioSearch	Precision BioSearch is an executive search partner to the early-stage biotech sector
Sekisui Xenotech	Accelerate drug development by providing state-of-the-art drug metabolism and DDI testing programs to help drug developers understand as much as possible about their drug's metabolism and pharmacokinetics to properly
Thomas White Oxford	Managing the development of the Oxford North Project
World Courier	A logistics company which distributes pharmaceuticals and biological samples under strict temperature controlled conditions to locations around the world

HOW CAN WE USE TECHNOLOGY TO SUPPORT AGEING POPULATIONS AROUND THE WORLD



Dr Ewa Truchanowicz, Managing Director of Dignio UK who recently became an OBN Award 2021 winner, explains the difference this achievement has made to the company.

It was a massive pleasure to finally be able to welcome all our guests in person to the 12th OBN Awards which was held in London on Friday 11 June and seeing everyone interacting and having such a fabulous time. The prestigious surroundings of the Royal Lancaster Hotel were a perfect backdrop for celebrating the success of some of the most inspirational companies and individuals from across the life sciences industry.

One of these companies was Dignio UK who won the 'Most Transformative Digital Healthcare' category of the OBN Awards 2020. Dr Ewa Truchanowicz, Managing Director of Dignio UK, explains how this supported the rapidly growing company as it works to tackle one of the big questions of our time: how can we use technology to support ageing populations around the world?

"Dignio is a company with Norwegian roots. In 2013, we started working with the municipality of Oslo on a project to look after patients in their own homes, efficiently and safely.

Dignio Connected Care Platform is a comprehensive suite of tools to help patients

learn about what makes them better or worse, and to self-manage. Medical and other care professionals review the submitted information and if they spot a problem, they can step in.

In 2016, a report found that Oslo had almost halved the cost of looking after one patient for one month by using our technology; and that the users loved it. That kind of impact enabled us to expand in Norway.

Having established our position as the market leader in Norway, we started looking at other countries facing up to the global challenge of how to care for ageing populations living with an increasing burden of complex, long-term conditions. The UK offers a significant

Dr Ewa Truchanowicz,
Managing Director of
Dignio UK



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We are now looking forward to our next OBN Awards event which will be held on Thursday 25 November at The Ashmolean Museum in Oxford.

opportunity, because the government is committed to reforming health and social care and is open to digital innovation.

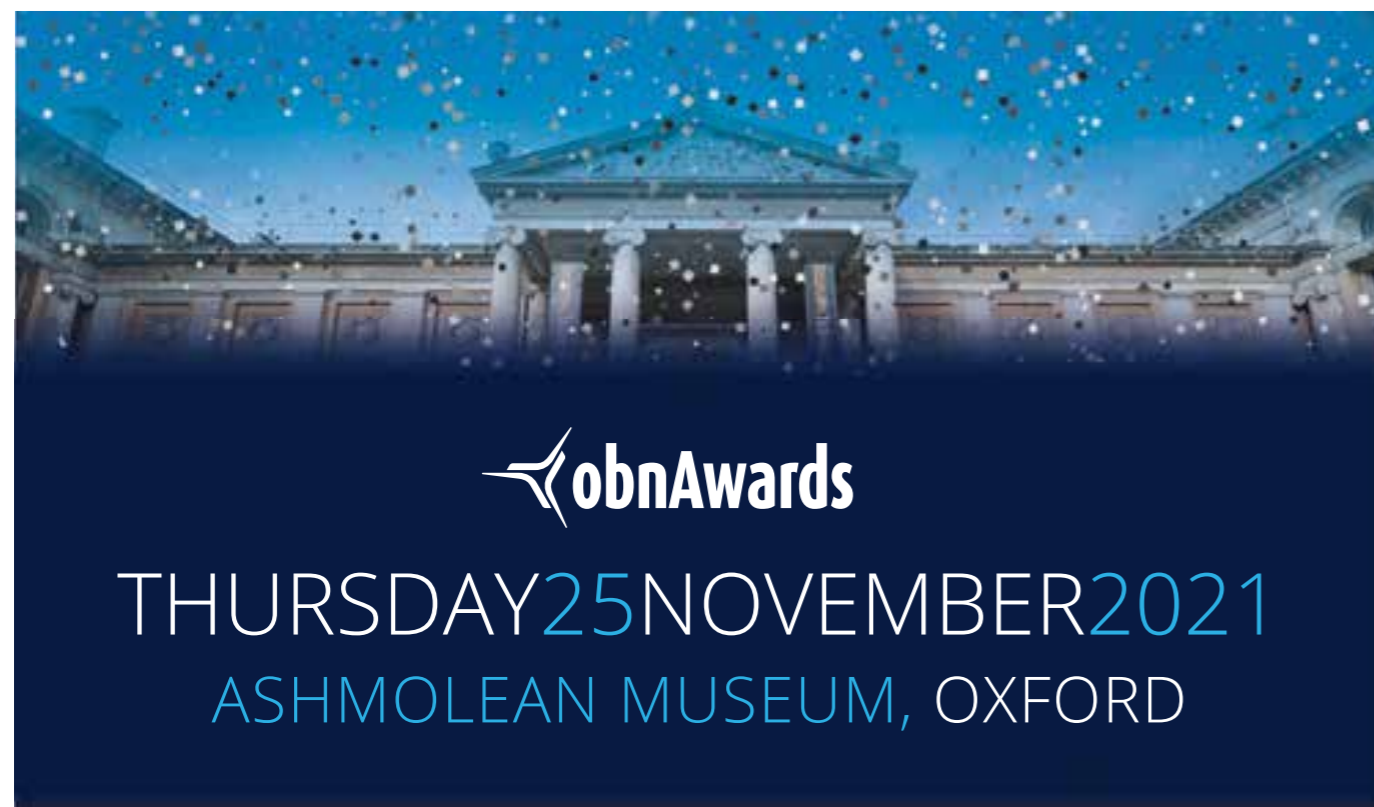
We entered the OBN Awards 2020 at the same time as we started work on a project funded by Stockport Council to reduce hospital admissions over the winter. Since then, our partner, a social enterprise Mastercall Healthcare has reported that it has cut admissions by 44%; and delivered savings of £6 million to the local healthcare economy.

We've also started working with Covid-19 patients in Dudley and heart failure patients in Salford. We would like to thank the judges for recognising our work and its transformative potential. This award has raised our profile

within the life sciences community and our credibility with investors and commentators.

Since the Award was revealed, we secured series A funding, we are working on projects in China, and we have just opened an office in the US. We were delighted to be the recipient of such a prestigious accolade and advise other companies to aim for this recognition."

At OBN we are now looking forward to our next OBN Awards event which will be held on Thursday 25 November at The Ashmolean Museum in Oxford. Now in their 13th year, our awards are highly regarded and coveted within the Life Sciences industry and celebrate individuals and companies who are making an outstanding impact in their field.



The OBN Awards shine a light on companies at all stages of development, recognising inspirational leadership, exciting innovation, novel and exciting approaches to unmet clinical need, outstanding company progression and the delivery of real-life tangible results. Categories include biotech, MedTech and digital health sectors, as well as recognising dealmakers and those who provide critical support to innovators across the industry. ■

OBN Purchasing



MAKING MEMBERS' MONEY WORK HARDER BY FACILITATING A GROUP – PURCHASING SOLUTION

Your money working smarter

One of the major services that we offer Members is our Purchasing Consortium. Read on to find out how it works and what kind of savings your company could be making

How does it work?

- Average savings up to 50% against list price
- Big or small, office or laboratory – any type of business can save money
- Low cost of entry – all OBN full Members are eligible to take part
- UK's most comprehensive and cost-effective group-purchasing solution for life sciences companies
- 110 plus Member companies together saved more than £10 million in the last two years
- Managed by a full-time, in-house Procurement Manager
- Capital expenditure support

- Negotiation service
- Guidance and support on e-Procurement
- New suppliers regularly added
- OBN has a new online Purchasing Platform
- European Life Science companies can save money via our partner, ProcEurope

110 MEMBER COMPANIES TOGETHER SAVED MORE THAN £10 MILLION IN THE LAST TWO YEARS

Savings analysis

OBN has five levels of Membership fees depending on the size of your company.

See some example savings in the chart below.

Company Size	Spend without discount	Spend with discount	Savings	% Saved
Sole trader/Micro company (1-5)	£9,342	£3,134	£6,208	66.5%
Small company (6-20)	£131,673	£68,824	£67,849	47.7%
Medium company (21-50)	£172,977	£51,277	£121,750	70.4%
Large company (51-100)	£461,822	£327,388	£134,434	29.1%



For more information about Purchasing please contact the Head of Purchasing and Membership, Lee Pratley on Lee.pratley@obn.org.uk or call +44 (0)1235 420 876. Please contact leepratley@ProcEurope.com for more information about ProcEurope.

AI: VIVE LA REVOLUTION!



In the build up to our BioTuesday event on 16 November, Simon Haworth, CEO of Intelligent OMICS provides an insight into how AI can be used in de novo discovery research.

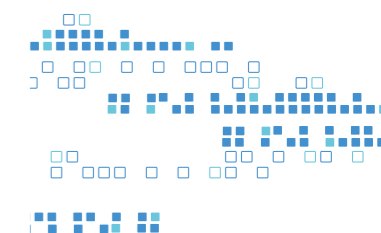
AI is a broad term – too broad I think – for the set of technologies that enable machines to achieve objectives. In Life Sciences, AI is penetrating every nook and cranny of our industry and our inboxes are stuffed full of stories about AI-driven literature mining, process automation, image analysis and diagnostics. Most of these applications are designed to replace humans, but what about the drug discovery AI designed to help humans achieve tasks that could never before be done – AI for augmentation, as opposed to AI for automation?

This is the subject of an upcoming OBN BioTuesday: 'A Revolution in AI-Enabled Drug Discovery' kindly hosted by the Oxford Science Park on 16 November. [See panel for details].

We know that the AI revolution is coming, and the event's panel of experts can prove it: Professor Graham Ball of Intelligent OMICS, Martin Bittner of Arctoris and Professor Chris Molloy of MDC collaborated on a 6-month drug discovery program, funded by an Innovate grant, that resulted in creation of three new lung cancer drugs. The program also demonstrated how AI in drug discovery can improve the carbon efficiency of our industry, reduce the need for animal testing, accelerate identification of novel biological targets and molecules linked to those targets and de-risk clinical trials.

During the BioTuesday event we will use the lung cancer program as a specific case study to illustrate what AI can do, but our real task is to share our analysis of the wider implications for our industry. Questions for the panel and audience include:

- **Speed:** does AI really reduce drug discovery time?
- **Regulation:** can regulators cope with AI-derived data?
- **Is RNA the answer:** how can understanding of signaling pathways cure disease?
- **Value:** will pharma buy it?
- **Impact:** is AI gunning for your job?



EVENT DETAILS

OBN BioTuesday:
'A Revolution in AI-Enabled Drug Discovery'

Tuesday 16th November 2021

Hosted by the Oxford Science Park

18:00 - 21:30

Link to register:
www.obn.org.uk/events



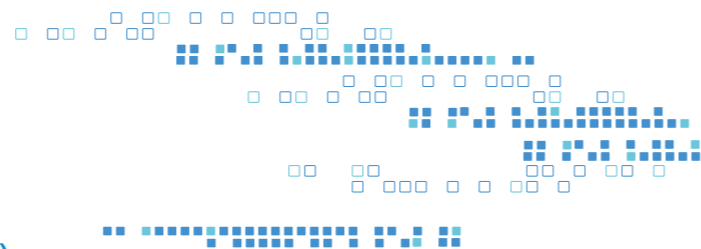
Dr Simon Haworth, CEO
Intelligent OMICS



Professor Graham Ball
of Intelligent OMICS

Case study

KRAS and Non-Small Cell Lung Cancer (NSCLC)



Our lung cancer project started with analysis of 9 separate lung cancer datasets including transcriptomic data for over 2,000 lung cancer patients and disease-free controls by my colleague Professor Graham Ball and his team at Intelligent OMICS.

Step 1: Identification of novel biological targets:

Graham's proprietary artificial neural networks platform modelled the data to discern the underlying systems biology. The first task was to identify the most influential biological targets in the disease pathway, and then to show how these targets link together in the KRAS and MEK signaling pathways. Approximately 50% of the most important biological targets identified by our AI – the drivers of the disease – were already known to be involved in NSCLC. This confirmation in the literature goes some way to validating the research. The other 50% however appear to be unknown and, following internal review of the evidence, 7 biological targets were taken through to initial wet lab validation.

Step 2: Initial validation and drug matching:

Wet lab validation was undertaken by Arctoris, in their robotics-enabled cell line facilities in Oxford. Arctoris knocked down the targets in two lung cancer cell lines (for KRAS wild type and mutated forms) and confirmed the expected impact on cell viability. Meanwhile the Medicines Discovery Catapult team completed a detailed analysis of the Step 1 results via literature review and through application of cheminformatics analysis using their internal, curated data sets and algorithms. MDC's analysis assessed a large number of molecules, applying computational chemistry techniques to optimize the selection of suitable molecules known to modulate the biological targets, and indicated that four

particular molecules should be taken forward.

These four most promising candidates from the wet lab validation and computational chemistry were then taken forward to Step 3.

Step 3: Validation of molecules:

Arctoris undertook the second phase of wet lab validation, applying the drug candidates to the same lung cancer cell lines. The three top results include a reprofiling opportunity for a proven drug applied in an entirely different disease and identification of two novel chemicals for development. Patents have now been filed on all three.

IMPLICATIONS AND PHARMA INTEREST

Maybe it was luck. Or maybe the rapid turnaround time of the Intellomx technology allowed us to pick a hot topic for analysis. Either way, this KRAS lung cancer work has proved to be the most exciting analysis that the company has undertaken, and we enjoyed a new experience as soon as we shared the results online – pharma companies started to approach us, without the need for us to chase them. This is a nice moment for any biotech and an indication of the power of such analyses.

Many of the greats are progressing KRAS oncology assets right now and our work could not have been timelier. Amgen, Boehringer Ingelheim, Roche, Merck, Novartis, J&J, Mirati Therapeutics, CRUK and many others all have keen interest and allocated budgets in this area. Delightfully we are in discussion with many of them.

Meanwhile many pharma companies are developing their own AI teams and we do occasionally encounter a 'not invented here' attitude from newly appointed bioinformaticians. But for the most part pharma companies are focusing their AI on later stages of the drug discovery and

development pipeline and recognize that companies like Intelligent OMICS will continue to create new drugs. In our case we now start a new batch of analysis in a new therapy area every month. Projects like our lung cancer work will generate a monthly output of new drugs across multiple disease areas - from intelligent OMICS alone and presumably from others too.

LAND GRAB

In fact, we recognise that we are in a race now: to secure IP in as wide a set of therapies as we can, before others can do so. Our de novo research allows us to command the IP from the outset, but we can't achieve maximum value from our work alone. We need collaborators – like Arctoris and MDC – to help us reach the critical value inflection points before out-licensing.

For the industry as a whole, AI for drug discovery needs to be integrated into all systems. We see sector experts, such as Cumulus Oncology, as natural partners with knowledge of systems biology that complements our own capabilities. We see real possibilities for vertical integration perhaps even with other data companies: current discussions with Imagen Therapeutics concerning their patient derived oncology samples will result in generation of more data on the lung cancer assets – and our relationship may extend to a wide range of other cancer assets in future. Hopefully one or two option agreements with pharma will follow soon – with a period of co-funded co-development leading to out-licensing of assets to pharma. We will begin to see such patterns more frequently, as AI companies create proprietary assets or assist pharma with their own drug discovery.

Comments from the team back this up.

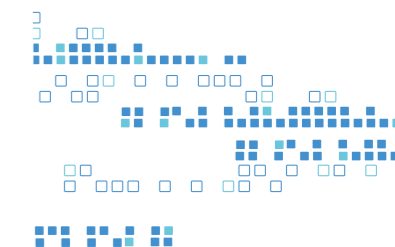
"The project actually achieved three results from our point of view," Chris Molloy, CEO of Medicines Discovery Catapult said, "It provides proof of the contribution that can be made by MDC, proof of the ability of the combined team to identify and validate novel lung cancer drugs and proof of concept for

the new drug discovery platform developed by Intelligent OMICS. We expect to see wide application of this technology in future, to the benefit of the industry as a whole."

"We were pleased to play our part in this important project," said Martin-Immanuel Bittner, CEO of Arctoris. "Our system validated the targets and then tested drugs against those targets. Results were clear – the targets identified by Intelligent OMICS are indeed important, previously unknown targets in lung cancer and the novel drugs identified by the team modulate those targets, all as predicted by the AI."

"The results prove the carbon efficiency of AI methods and create new lung cancer drugs per se, but most of all they herald the AI-driven future of drug discovery," commented Intellomx CSO Professor Graham Ball, and founder of the I³ technology platform used in the project.

The lung cancer project demonstrated the environmental efficiency, time saving and de novo research value of AI in drug discovery. For Intelligent OMICS we are now scaling up to address the land grab, seeking out partners for asset development and offering both assets and services to pharma for cancer, autoimmune disease, diabetes/NASH, Alzheimer's and many other areas.



AND FINALLY, DO YOU WANT MY JOB?

Scale up means that it is time for Intelligent OMICS to recruit a full time CEO. I am remaining in my part time role for the next 12 months whilst we recruit a senior business development exec who can prove their commercial capabilities in post and then step up to the CEO role – hopefully before the close of 2022. I expect to relocate to the US for family reasons as soon as the new CEO steps up and will thereafter provide whatever support is needed - particularly for US and China – to enable the new CEO to thrive.

If you can't beat us, then join us – and come and say hello in person on 16th November. Vive la Revolution! ■

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www.intellomx.com



ABOUT INTELLIGENT OMICS

Intelligent OMICS is a privately owned technology company and spin out from the J van Geest Cancer Centre, Nottingham Trent University. The business has operations in Nottingham and Cambridge UK, plus Wuhan in China. Intelligent OMICS creates new drugs and diagnostics for the pharma industry – either on a fee-for-service basis for third parties or as the originator of new drugs and diagnostics as a result of in-house research.

www.intellomx.com



ABOUT ARCTORIS

Arctoris Ltd is an Oxford-based research company that is revolutionising drug discovery for virtual and traditional biotechnology companies, pharmaceutical corporations and academia. Arctoris has established the world's first fully automated drug discovery platform, offering pre-optimised and fully validated processes for its partners and customers globally. Accessible remotely, the platform provides on-demand access to a wide range of biochemical, cell biology and molecular biology assays conducted by robotics, enabling rapid, informed decision-making in basic biology, target validation, toxicology and phenotypic screening. These assay capabilities are accessed using a powerful online portal that streamlines experiment planning, ordering, tracking and data analysis. Thanks to the Arctoris platform, clients can rapidly, accurately and cost-effectively perform their research and advance their drug discovery programmes.

www.arctoris.com @Arctoris



ABOUT THE MEDICINES DISCOVERY CATAPULT

Medicines Discovery Catapult is a national facility connecting the UK life sciences community to accelerate innovative drug discovery.

MDC provides unique scientific capabilities and acts as a gateway to UK resources and expertise, supporting UK SMEs to drive the development and industrialisation of new approaches for the discovery of new medicines. By validating new ways of discovering medicines and driving key talent and expertise across the sector, MDC supports the UK life sciences industry, SMEs and innovators to deliver growth for the UK economy and maintain the UK's heritage position as a global leader in medicines R&D. Ultimately, new industrialised technologies are vital for delivering new medicines to patients, faster.

md.catapult.org.uk @MedDiscCat



ABOUT INNOVATE UK

Innovate UK is the UK's innovation agency and is part of UK Research and Innovation, a non-departmental public body funded by a grant-in-aid from the UK government. Since 2007, Innovate UK has invested around £2.5 billion to help businesses across the country to innovate, with match funding from industry taking the total value of projects above £4.3 billion. Innovate UK has helped 8,500 organisations create around 70,000 jobs and added an estimated £18 billion of value to the UK economy.

www.gov.uk/government/organisations/innovate-uk/about



Partner4Pharma®

Partner4Pharma® events are tailored to meet the demands of mid-to-large size pharmaceutical organisations, who are seeking early stage assets in the UK life sciences sector.

The Partner4Pharma® platform allows access to OBN's network and sector knowledge to reach companies, organisations and academics in your target areas. The expertly delivered event will be organised to your specifications, bringing together your company's key personnel and your target organisations.

The OBN Partner4Pharma® service is developed to meet your core objectives and includes:

- The design of a bespoke search process that reaches new potential assets as identified in the project brief
- Driving the search process utilising the support of our in-house resources and experienced analyst
- Delivering results via the delivery of a digital or in-person event solution



Get in touch to find out how we can tailor an event for you

events@obn.org.uk

WHY ARE CHO CELLS CRITICAL IN BIOPROCESSING?



OBN Corporate Sponsor, GenScript provide an insight into the success story of using CHO cells for scientific discovery

*“CHO cells” or Chinese Hamster Ovary cells have a long history as tools for scientific discovery. These cells were first introduced to biomedical research in the ‘50s and currently represent the most frequently used non-human mammalian cell line for the generation of biological therapeutics (i.e., **monoclonal antibodies**, enzymes, cytokines, and hormones).*

For example, the majority (~84%) of **monoclonal antibody therapeutics** approved between 2014 and 2018 were produced using CHO cells (Walsh, 2018). CHO cell-derived monoclonal antibodies have been approved to treat a broad range of indications, including cancer, multiple sclerosis, asthma, HIV, and neuroblastoma.

Other mammalian cell lines typically used in bioprocessing include baby hamster kidney (BHK21) cells and NS0 or Sp2/0 murine myeloma cells (Chin et al. 2019). Nonetheless, several favourable properties have driven CHO cells’ increased use in bioprocessing, including their resilience to growth conditions, resistance to viral infections, and high protein synthesis capacity. Significantly, protein-processing by CHO cells more closely conserves the post-translational modifications (e.g., glycosylation) and folding found in human proteins.

Increased use of human cell lines is a more recent bioprocessing trend, including human embryonic kidney 293 (HEK293) cells and HT-1080 human sarcoma cells, among many others (Chin et al. 2019). This approach is increasingly favoured due to non-human mammalian cell lines’ inability to fully replicate human-like glycosylation patterns. For example, CHO cells do not express several glycosylating enzymes, including GnT-III, Gal alpha2,6 ST, and alpha 1,3/4 fucosyltransferase, present in humans cells (Goh & Ng, 2018). Moreover, mammalian cell lines like CHO cells produce post-translational modifications do not present in human proteins, such as the addition of alpha-gal and NGNA glycans. These non-human glycosylations ultimately increase the risk for adverse immunological reactions towards biotherapeutics (Dumont et al. 2016). Additionally, because post-translational modifications influence the yield, activity, and pharmacokinetic properties of

recombinant proteins, deficiencies in human-like glycosylation patterns may negatively affect production efforts and therapeutic efficacy.

HEK293 VS. CHO CELL LINES IN BIOPROCESSING

HEK293 derived clones are among the most used human cell lines in therapeutic protein production. HEK293 cell clones have been isolated or developed through genetic manipulation and offer improved properties, including increased-transfection efficiency, -growth rate, and -protein production. Perhaps the most significant limitation when using human cell lines is the greater risk for viral contamination and subsequent transmission.

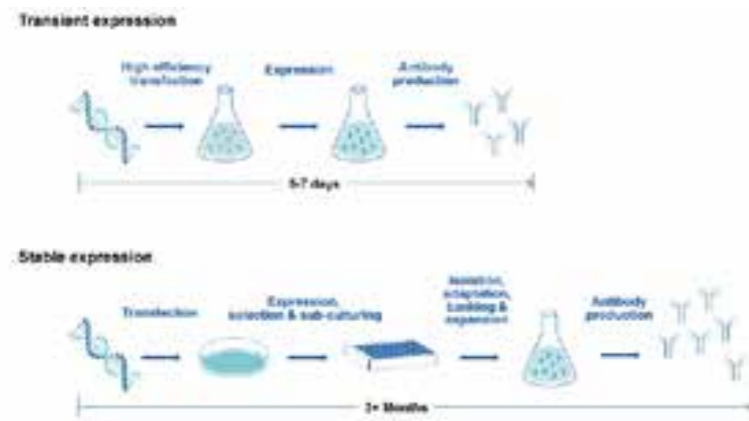
Several CHO cells lines have been developed to date; CHO-K1 and CHOK1SV are frequently used to produce biotherapeutics. CHO cell lines have been genetically engineered to increase productivity, reduce apoptosis, and improve glycosylation (Zhu et al. 2017). While using non-human mammalian cells in bioprocessing carries some disadvantages, when it comes to CHO cells, enough evidence



has been accumulated over decades on their safety. CHO cells have been successfully used to produce glycoproteins that are both active and well tolerated by patients (Jayapal et al. 2007). Therefore, CHO cells' predominance in the bioprocessing workflow is projected to continue, backed up by a clear path towards regulatory approvals.

FROM TRANSIENT TO STABLE CHO EXPRESSION

Ultimately, cell line selection for bioprocessing is influenced by factors such as the protein-type being produced and the recombinant protein's glycosylation profile. Significant differences in glycosylation and glycostructure have been reported for proteins produced by CHO vs. HEK293 cells (Croset et al. 2012, Goh & Ng, 2018). Therefore, consistent use of a specific cell expression system across the early and late biopharmaceutical protein development stages is critical. For example, the use of **CHO transient expression** in therapeutic monoclonal antibody development expedites the availability of smaller quantities of antibody candidates, ideal for preliminary in vitro testing. Higher-yield stable CHO expression of lead **recombinant monoclonal antibodies** is a recommended path towards later preclinical stages. This approach increases the probability that candidates for pharmacological and toxicological characterization conserve established glycosylation patterns supporting IND and therapeutic development (Jain et al. 2017, Sifniotis et al. 2019). ■



Comparison of workflow and timeline for transient vs. stable antibody expression.

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Mammalian CHO Expression

Introducing the next generation transient CHO expression

For ug to kg protein/antibody expression.
Start and finish in the same CHO system



Higher Yield
Reach 2+g/L for transient expression



Shorter TAT
Production time includes gene synthesis



Superior Quality
Full range QC and characterizations



Cost-Effectiveness
Taking advantage of our rich experience



0 Error Rate
Unique QR code tracking and automation



Validated Consistency
Scale-up in the same CHO cell line.



CELEBRATING INNOVATION ACROSS THE UK VIA OUR MEMBER SCIENCE PARKS

Life sciences has flourished despite of, or because of, the pandemic and so the demand for space remains strong for life sciences companies. Some of our OBN Member Science Parks have kindly shared the impact of COVID-19 has had on them and what it means for their future.

Milton Park
www.miltonpark.co.uk

1

Milton Park are committed to building with the future in mind, nurturing strong relationships and creating an attractive place to work and belong for our occupiers.

Since lockdown restrictions have eased, they have been hard at work developing spaces on the park that will help to foster collaboration between their occupiers. One key example of this is their Bee House Collaborative Workspace, set for completion in early 2022, where members of the park will be able to work and socialise together.

Background points

For more information on the Bee House, please visit

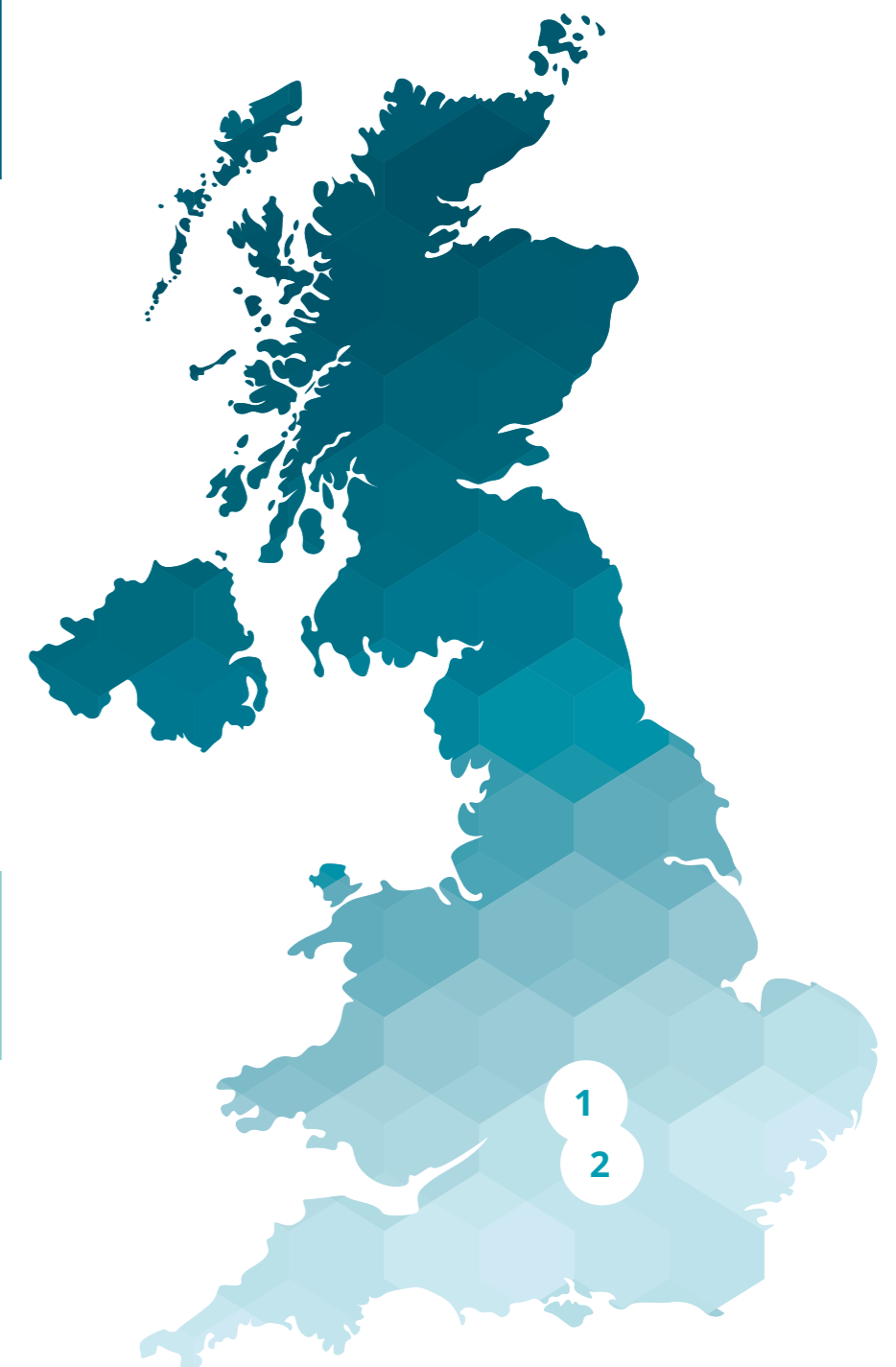
www.miltonpark.co.uk/bee-house

Oxford BioEscalator
www.bioescalator.ox.ac.uk

2

Since the Oxford BioEscalator opened its doors in 2018, 24 companies have started their journeys in this nurturing biotech incubator right in the centre of Oxford University's medical campus. Ten are Oxford University spinouts, representing 9 academic departments. The steadily growing and supportive community has matured to a diverse mix of biotech SMEs, working on novel diagnostics, therapeutics and platform technologies applicable to a wide range of diseases, including cancer, infectious diseases, autoimmune and metabolic disorders. Despite the disruption caused by the pandemic, resident companies attracted a record high of £1.2B over the past year.

High-quality lab space remains in high demand and the BioEscalator is looking forward to opening a new lab unit in Q4 2021 and planning for a BioEscalator 2 in the future.



At Milton Park, we are committed to building with the future in mind, nurturing strong relationships and creating an attractive place to work and belong for our occupiers.

The laboratories were opened by the High Sheriff of Oxfordshire in July, and we now have two growing biotech start-ups under our roof

The Oxford Trust
www.theoxfordtrust.co.uk

3

The reassessment of workspace has been one of the most notable things to emerge from the COVID-19 situation. It has highlighted that enhanced flexibility is key, especially at the early stages of company development. By providing mainly licensed, rather than leased, office, R&D labs and technical workspace for fledgling science and tech companies, the Trust can offer that flexibility and limited liability that young companies are looking for in our two innovation centres – the Oxford Centre for Innovation in the centre of town and the Wood Centre for Innovation in Headington's Health and Life Sciences District. Even during the height of lockdown, we welcomed five new occupiers.

Earlier this year, with thanks in part to funding from the Local Growth Fund, the Trust developed 3,300 sq ft of class II R&D labs at the Wood Centre plus ancillary non-class II spaces. The laboratories were opened by the High Sheriff of Oxfordshire in July, and we now have two growing biotech start-ups under our roof: DJS Antibodies – working on new therapeutics to treat the world's most critical inflammatory diseases – and Samsara Therapeutics – discovering new therapies for treating age-related genetic diseases and a new company just about to move in.

The Trust now has further Government funding to develop the second similarly sized phase II of its conversion to dedicated high spec laboratory facilities at its Wood Centre for Innovation, which are planned to open by early Spring next year with lots of interest already. Exciting!

The Oxford Science Park Limited
www.oxfordsp.com

4

Looking at the News section of The Oxford Science Park website since the pandemic, there are two types of press release – one

set discussing work our occupiers are doing to counter COVID-19, and another showing companies going from strength to strength as they fund raise and advance their pipelines. Life sciences has flourished despite of, or because of, the pandemic. Demand for space remains strong, driven by new enquiries and existing occupiers who have recruited strongly over the past 18 months. With companies such as ATDBio, Exscientia, Oxford Nanopore and Vaccitech working on COVID-19 countermeasures, and others doing as much as they could to reach milestones, The Oxford Science Park stayed open to support their activities as much as possible. New work patterns and ways of working emerged, some of which may well be retained. One thing is for certain – the pandemic has tested the resilience and preparedness of all companies, and they are much stronger as a result.

Oxford Innovation
www.ocfi.co.uk

5

Oxford Innovation is the UK's leading operator of innovation centres with 26 managed facilities around the British Isles. Five of the Centres offer flexible wet lab space, from dedicated labs with shared facilities, to shared benches, where life science companies can start without investing in expensive equipment. One recent example of this is DJS Antibodies who started life sharing one bench between the two founders at Heyford Park and who have progressed to bespoke new lab space at the Wood Centre for Innovation.

We provide business coaching and mentoring services and manage investment networks that link investors with entrepreneurs seeking funding from £20,000 to £2m.

Bruntwood SciTech
www.bruntwood.co.uk/scitech/

6

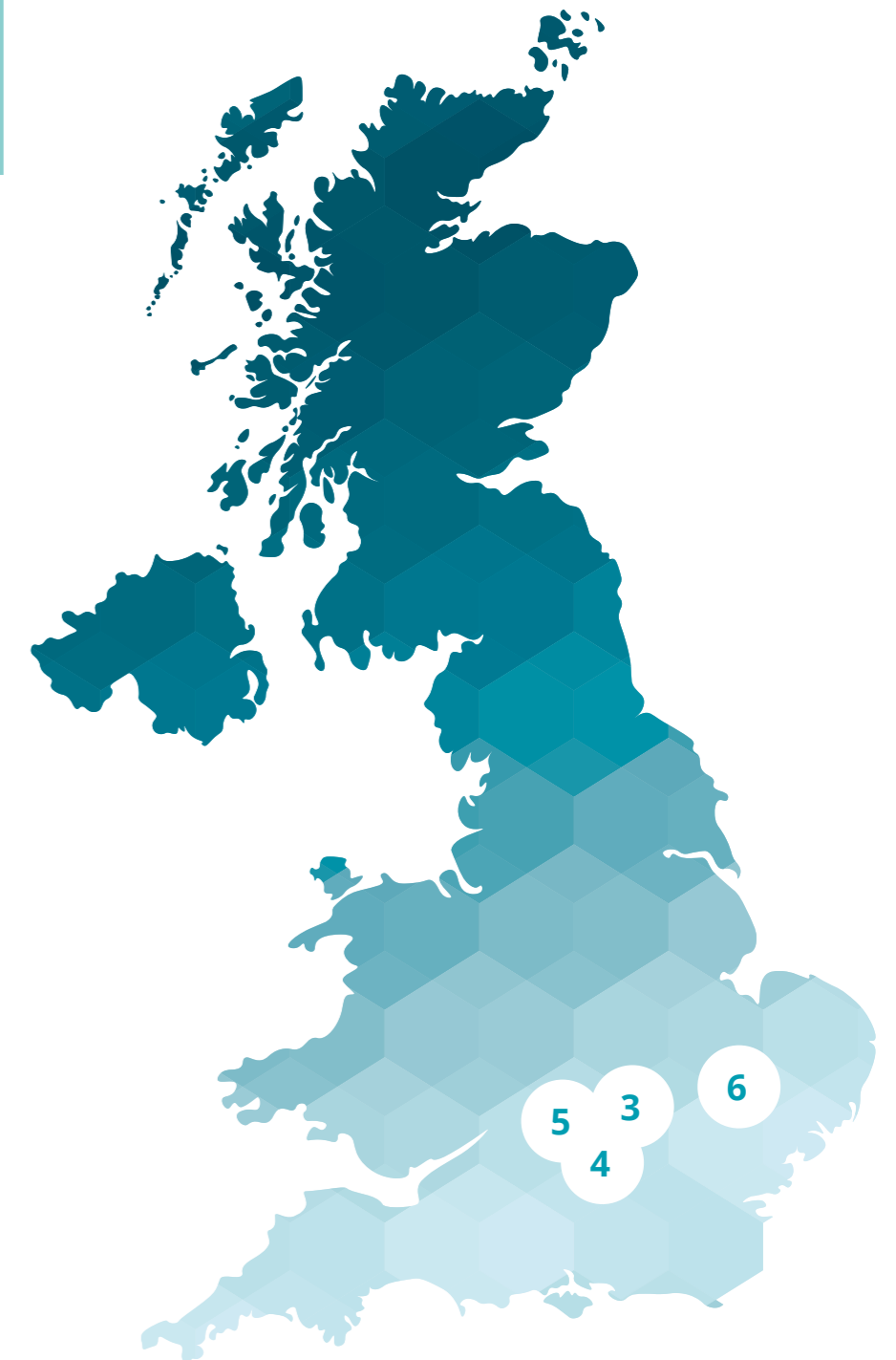
The 50:50 joint venture between Bruntwood and Legal & General which currently has locations in Manchester, Liverpool, Birmingham, Leeds and Cheshire has recently announced its expansion into the 'Golden Triangle' through the acquisition of Melbourn Science Park in Cambridge, growing its national network of innovation districts and forming a new strategic partnership with leading independent technology and product development company TTP plc (TTP).

Bruntwood SciTech, the UK's leading property provider dedicated to the growth of the science and technology sector, has acquired a long leasehold over Melbourn Science Park from TTP for £46.2m and will work closely with the local planning authority in the coming months to develop a new ambitious masterplan for the 16.4 acre site; creating a long term vision for the future growth of the science park as a leading science and technology cluster in Cambridge.

The new strategic partnership will see Bruntwood SciTech and TTP, which has many years of experience of working in life sciences, combine forces to support the further growth and development of the Park and establish a new Innovation Services programme which will provide Bruntwood SciTech's community of over 500 science and technology businesses with additional access to venture capital, new markets, products and prototyping opportunities.

This will complement the Park's new life sciences incubator, further leveraging TTP's expertise in science and engineering innovation and helping to create new exclusive links across Bruntwood SciTech's network of innovation districts.

Located nine miles south of Cambridge city centre, Melbourn Science Park is currently home to the Park's freeholder TTP, as well as companies including AstraZeneca, SPT Labtech, Cellular Highways and LEX Diagnostics.



The shortage of research and development laboratory space before the current coronavirus pandemic has been exacerbated by an increase in demand from life science occupiers.

The coronavirus pandemic has accelerated momentum and demand for high quality research and development laboratory space from healthcare and life science occupiers.



Discovery Park
www.discovery-park.co.uk

7

The shortage of laboratory space pre-pandemic has been exacerbated by an continued investment from both public and private sector.

Discovery Park has seen unprecedented demand for our life science facilities, from small scale research and development wet labs, through to cleanrooms and GMP manufacturing space. With around 250,000 sq.ft. of specialist laboratory, cleanroom and production space, coupled with a highly skilled workforce and desirable quality of life, Discovery Park is well positioned to capitalise on this demand

Ramsgate Rd, Sandwich ■

Discovery Park has seen unprecedented demand for our life science facilities, from small scale research and development wet labs, through to cleanrooms and GMP manufacturing space.

If you are interested in becoming part of our OBN Network then please contact Nicola Westgate, our Membership Manager, on nicola.westgate@obn.org.uk

OBN Membership

JOIN OVER 400 MEMBER COMPANIES BENEFITING FROM OUR SERVICES

Membership to OBN gives you access to partnering, purchasing, training, advice and advocacy. Learn from your peers and grow your business.

Membership criteria

OBN Membership is open to:

- UK and international companies
- Investors
- Academic and research institutions
- Independent consultants
- Contract research organisations
- Public bodies
- Government departments
- Associated service providers in the life sciences sector

Membership Benefits

Networking - Attend OBN events

- Connect with life sciences companies, their corporate partners and investors
- Expand your company's presentation opportunities
- BioTuesdays – evening meetings with a sector-relevant theme or a Company Showcase format
- BioThirstdays – evening social events to meet informally
- Senior Executive Club – Breakfast, Lunches and Dinners: invitation events, high level focus materials

Plus many more..

Advocacy

- Promoting Members' interests at local, regional and international level
- Attend exclusive events to connect with influencers and key decision makers

Partnering

- £300 discounted registration at BioTrinity – OBN's flagship event and Europe's leading Biopartnering and Investment Conference. Engage with 1,000+ delegates from 30 countries
- Access conference discounts worth over £1,000 per person
- Request introductions to key personnel

Purchasing

- Access average savings of 50% off list price through the OBN Purchasing Consortium
- Buy alongside 140+ eligible Member companies
- Process managed by an in-house Procurement Manager

Training

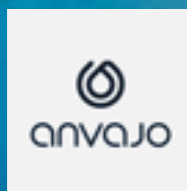
- Use BioLearn® to access high level training tailored to the needs and requirements of life sciences staff at discounted prices

Advice

- Find facilities, equipment, expertise within the OBN Membership and in other geographical areas
- Make contacts through our partner organisations
- Canvass opinion and consult on key issues for your company
- Commission OBN Intelligence to address key issues for your organisation

To find out more about OBN Membership benefits visit: obn.org.uk or contact Nicola Westgate, Membership Manager, nicola.westgate@obn.org.uk or call +44 (0)7795 233 883

WELCOMING ONE OF OUR NEW MEMBERS – ANVAJO!



Anvajo provide an insight into their company and what they are doing to make their technologies accessible to the life sciences community.

WHO ARE ANVAJO!

Founded in 2016 as a spin-off of the Technological University of Dresden in Germany, our mission is to revolutionize the point of care market by providing solutions that can be accessed by everyone, everywhere. By creating products that allow analysis of a wide range of liquids, are fully portable, small in size and include innovative technologies then we believe we can achieve our aims.

We have grown rapidly since our inception. More than 70 anvajonauts spanning 12 different nationalities work at anvajo and each of us is passionate about developing, manufacturing, and distributing our solutions globally. In the coming years we look forward to welcoming more anvajonauts to our cause and seeing more and more people benefit from our solutions.

In October anvajo shared details of their next generation cell counter, the fluidlab R-300 which uses holographic microscopy to avoid cytotoxic effects. If you would like to find out more about this fascinating technology please go to www.obn.org.uk where OBN Members can access the webinar content.

WHERE WE CAME FROM

Our success story starts with our founder Stefan Fraedrich. After his civilian service and EMT training, he went to Ghana to work in the emergency department of a hospital. It was while there that he realized that studying medicine only helps individual patients. He wanted to think bigger: "I have always been interested in technology. So, I asked myself: where do I really want to go? What do I want to change? I saw it in Ghana. Laboratory medicine, blood tests and urine tests are still a limiting factor in the clinical diagnosis process for 5 billion people. This is partly due to the price, but also to the centralization of the in vitro diagnostic industry. Everything goes to large analytical labs. Instead, I think we need smaller devices that are low-cost and more importantly easy to use at the bedside. That's why I continued my studies in electrical engineering."

With a lot of diligence, scientific knowledge and some creativity, the idea for the first vet fluidlab was born. After a successful start in the veterinary market in 2019, our biotech product the fluidlab R-300 now also inspires users around the world.

So, I asked myself: where do I really want to go? What do I want to change? I saw it in Ghana. Laboratory medicine, blood tests and urine tests are still a limiting factor in the clinical diagnosis process for 5 billion people. This is partly due to the price, but also to the centralization of the in vitro diagnostic industry.



Main image:
Anvajo founder, Stefan Fraedrich



As Stefan says:
"It is important
for us, for all our
employees, to
move the world
forward in one
way or another
with our products."

WHAT WE LOVE DOING

Anvajo is built around 3 pillars: Scientific Research, Veterinary and Human Health.

With the fluidlab R-300 we have the possibility to bring innovation and optimization to scientists and laboratories. Our device for the biotech market combines an automated cell counter and a spectrometer in a handy pocket format that can be used even under the clean bench.

With its innovative technology of digital holographic microscopy, the portable device enables rapid cell counting and staining-free viability measurements. The integrated spectrometer supports a wide range of measurements such as kinetics with time series measurements as well as colorimetric and turbidimetric assays (e.g., OD-600 measurements and more).

This combination of spectrometry and holographic microscopy means the fluidlab can be used in many different research areas with biotechnological, biochemical, and microbiological laboratories being just a few examples. Ultimately the fluidlab can be used in all areas where cells are grown, or where liquids are chemically analysed based on absorption or scattering of light.

Our second pillar is veterinary medicine with our vet fluidlab 1 being a POC solution for urine microscopy. With the vet fluidlab 1 we can analyse particles and cells in animal urine and provide diagnostic information to the vet. Until now this has been done manually, however, automated analysis is much faster, less prone to error, and so helps veterinarians make clearer diagnoses for better patient care.

Anvajo recently kindly hosted a webinar 'Bye Bye Dye - Cell Viability Without Cytotoxic Effects' which was designed to introduce their revolutionary instrument the fluidlab R-300.

Sensitive and reproducible assays to measure cell viability are essential in many biological or medical research. There are several ways to measure cell viability, most of which rely on the use of markers to distinguish between live and dead cells. This involves additional steps in your protocols and incubations with often cytotoxic agents, which can affect your results, and thus the determination of the actual cell viability.

In this webinar anvajo show how their next generation cell counter, the fluidlab R-300, uses holographic microscopy technology to avoid cytotoxic effects and thus optimize your workflows, in the lab or elsewhere. Please go to www.obn.org.uk for the recording from that webinar for all the details.

WHERE WE ARE HEADING

After success in the biotech and veterinary sector we can now also focus on our original mission, making Stefan's original dream a reality. Today we are currently working on an entry into the human health market.

As Stefan says: "It is important for us, for all our employees, to move the world forward in one way or another with our products."

That is why we are working on new solutions that not only help the scientific research and veterinary sector, but also sustainably improve people's lives. What will be released soon is still a bit of a secret, but we can reveal this much: A handy POC device with a lot of added value for the patient. So, stay tuned! ■

For more information please contact:

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United Kingdom & Ireland

Tel: +44 (0) 7960 243360

Mail: neil.darroch@anvajo.com

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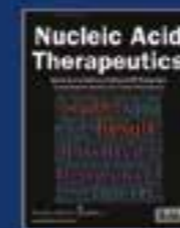
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GROWING YOUR BUSINESS IN NORTH AMERICA



Charles Macdowell, UK Representative for Virginia Beach Bio explains about the process of moving into the USA and what this can mean for your business.

A NEW US HOME-FROM-HOME FOR OBN MEMBERS

Most British life sciences companies would like to get into the USA at some point in their evolution. As the world's most valuable and sophisticated bio market, the potential rewards are enormous, but so too are the challenges.

"One of the big issues that foreign companies have to face is when and where to have a physical location 'over there,'" says Charles Macdowell, who represents the City of Virginia Beach in the UK. "Without a US address, it can be difficult to be build a customer base. But without customers, it's hard to justify setting up. It's chicken and egg".

Partly to get bio companies over this hurdle, Virginia Beach Bio - the city's life sciences initiative, has just opened its first Bio Accelerator facility. By hosting up-and-coming innovators from local universities and medical schools, it provides inexpensive easy-in, easy-out flexible offices and labs, co-working and virtual membership with shared conference rooms, kitchen and services.

READY FOR NEW CHALLENGES

Facility Logix, a life sciences consulting services firm, was engaged to setup and run the facility. Their Director of Project Management Services, Lynne Cooper, says the challenge wasn't just flexibility, but foresight. "Because we're not privy to the specific science that will be taking place in the lab, a lot of thought went into making these labs ready to accept new challenges as new tenants come in. If it ever needs a little construction to accommodate future clients, we're set up to do that."

This translates to the offices and meeting areas. The design team used strategies to quickly allow Virginia Beach Bio and Facility Logix to flip spaces from lab to office, or vice versa. Since typical office spaces do not easily convert to labs, several offices were designed around lab planning modules.

The Bio Accelerator's benefits are soft as well as hard. It offers mentoring, networking and seminars on IP, legal and other key subjects, bringing a 360 approach to the facility.

"The Bio Accelerator as a whole is just a phenomenal resource. Unless you're looking at a laboratory for specific companies, you don't get a space like it for the public to rent outside of college campuses."

Lauren Eaton,
Laboratory Planner,
Hanbury

Main image: The suspended lights create shapes inspired by molecule formations.





US Life Sciences Industry Update - Opportunities for UK Companies:

- Expert panel and 1-to-1 'surgery'
- 30 November 2021, London
- Look out for registration details at www.obn.org.uk/events

- FACILITIES:** Wet/Dry Labs, BSL-2-Capable Level Lab Space, Offices, Conference Rooms
- SPACES:** 150 - 5,700 square feet (14 - 530 square metres)
- EQUIPMENT:** Fume hoods, BMT Sterivap Steam Steriliser, Miele Glassware Washer, Purelab Chorus DI Water System, high-speed internet.

VIRGINIA WHERE?

Located strategically between Washington DC and the Research Triangle, and about the size of Bristol or Edinburgh, Virginia Beach's famed quality of life is a draw for top level talent, as is its established network of VCs, FDA advisers, recruiters and specialist business services. Companies and entrepreneurs have access to a variety of state and local incentive programs as well as private capital.

While many foreign biotech firms have been drawn historically to the Boston or San Francisco areas, cost and congestion is helping drive growth elsewhere. In Virginia, 35,900 people now work in biomedical and life sciences, turning over \$8.1 billion annually. ■ (Source: VEC, Virginiabio.org, 2021).



Map data ©2021 Google

For more information, please contact:
Charles Macdowell at: cmacdowe@vb.gov

BioTrinity 2022

Catalysing Growth in the Life Sciences Industry



SPONSOR SHOWCASE ATTEND LONDON APRIL 26-27 2022

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DDI & DRUG REPURPOSING



Dr Andrew Taylor (Technical Manager) with the support of David Webster (South EU BDM) from Sekisui XenoTech provide an insight how the practice of repurposing (repositioning, re-profiling, or retasking) drugs has been saving drug developers cost and precious time

Many drugs on the market today were originally developed for something different than what they currently treat. This practice of repurposing (repositioning, re-profiling, or retasking) drugs has been saving drug developers cost and precious time by taking an existing de-risked compound and applying it to a new indication.

This practice can potentially save years of previous testing from going to waste and has the potential to provide a higher chance of success for the drug to be approved. "Perhaps most importantly, the risk of failure is lower... because the repurposed drug has already been found to be sufficiently safe in preclinical models and humans...it is less likely to fail at least from a safety point of view in subsequent efficacy trials."¹

A large pharmacopoeia of drugs exist that have undergone a full complement of preclinical safety testing showing that they are safe for administration to humans, yet failed due to lack of efficacy for their first intended indication. When one of these failed drugs is selected for repurposing, the efficacy for the previous indication is often irrelevant.

This makes the drug no longer a failure, but rather a safe drug that just requires testing for efficacy against a new indication. This provides the drug developer a head start, inasmuch as they can waive a great deal of preclinical studies that would normally be required for a new chemical entity.

However, the repurposing of a drug is not as simple as identifying a potentially effective candidate and moving straight to clinical testing. A thorough examination of the existing data must take place before a data package is submitted for regulatory approval to ensure that all safety data and risk assessments can withstand current regulatory scrutiny. This holds even where the drug was previously approved for market, as the regulatory requirements for drug safety are constantly



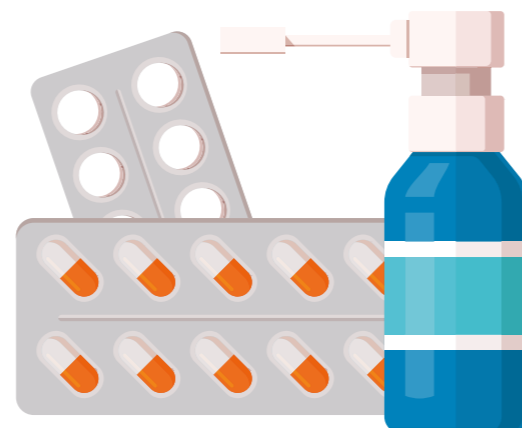


evolving. While sponsors may utilise the 505(b) (2) pathway as an efficient way to repurpose their drug and supply previous safety data and studies to support their New Drug Application (NDA) or MAA, all data are required to meet current regulatory standards.

The adherence to current standards holds especially true for the evaluation of potential drug-drug interaction (DDI) risk. Non-clinical in vitro DDI studies provide the drug developer with information to anticipate any potential problems in the clinic by evaluating the drug's victim or perpetrator potential in a metabolism - or transporter mediated DDI. In addition to satisfying the current regulatory guidance requirements, a comprehensive evaluation prevents any unnecessary exclusion of patients from clinical trials and can illuminate any

potential safety issues for clinical volunteers or patients in the future.

Maximising insight from reviews is a complex process, requiring expertise and familiarity with the updated regulatory guidance, how the guidance may have changed since the drug was first approved, and understanding of testing and data available to evaluate the full risk profile of a compound. More in-depth information on the types of in vitro DDI testing, and how they relate to drug repurposing, can be found at www.xenotech.com/blog/ddi-drug-repurposing/. ■



[1] Pushpakom, Sudeep, et al. "Drug Repurposing: Progress, Challenges and Recommendations." *Nature Reviews Drug Discovery*, vol. 18, no. 1, 2018, pp. 41-58., doi:10.1038/nrd.2018.168



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For more information contact
Nicola Westgate, Membership Manager
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THE BIOTECH BULLDOG



A new UK Life Sciences Flagship?

In terms of the UK Life Sciences sector the last day of September 2021 closed to the sound of applause, as gene sequencing specialist Oxford Nanopore (ticker "ONT") successfully listed with a market cap of £3.5bn, rising to £4.8bn by the end of its first day of trading. £524m was raised, of which £350m was 'new equity', the remainder being used to purchase shares from existing shareholders.

The strong share price performance was perhaps not a surprise, given that the listing was supported by 8 banks (Bank of America, JP Morgan Chase and Citigroup as global coordinators with Berenberg, Barclays, Guggenheim, Numis and RBC also helping the build the book), so after a period of protracted 'selling' there was always likely to be a degree of pent up demand, and (more pragmatically) those that foresaw this share price movement and jumped on board. Moreover, existing, pre-IPO investors included many of the 'great and the good' of the UK investment and Life Sciences community, who had stood to make a considerable return from the IPO.

The Financial Times quoted Numis analyst Stefan Hamill as saying "It's an urban myth that London can't compete with Nasdaq on a capital raising like this", and further quoting him as saying "There's no reason why we can't build these companies here". Stefan is a longstanding trusted analyst of some repute, who has been highlighting a potential multibillion public market valuation for ONT for at least five years, and clearly has the best interest of the UK Life Sciences and UK banking industries, at heart. The FT article went on to say that the float would bolster the hopes of ONT's CEO Sanghera and others that "London can become a destination to rival New York for life-sciences IPOs, overcoming concerns about more burdensome regulations for new listings and a sense that British investors are more risk averse". Here be dragons as old maps used to say. Whilst 'IPO regulations becoming more burdensome' may be a factor, many wiser heads would argue that "regulation" pales into insignificance compared to lack of liquidity, specialist investors, a reliable analyst community (also happy to write 'SELL' and 'HOLD' notes versus the 'BUY' and 'HOUSE BROKER' recommendations currently produced as part of UK corporate broker led research) and sustainable quantum of deployable capital. More importantly, the New

York stock market has the world's largest, and most heavily capitalised, Life Sciences industry on its doorstep, not to mention the world's largest, and most successful, pharmaceutical companies. Without these more tangible components London will never be able to compete on an equal footing with New York in terms of IPOs. Whilst it is nice to dream, the first step with regard to London becoming more competitive should be to recognise these more addressable hurdles, and we should not, either as an industry, or as bankers that support it, become unduly influenced by a single relatively 'big ticket' IPO. That is not to say that there isn't an important place for the UK markets for Life Science companies, albeit that such a place is certainly somewhat more nuanced than a decade or so ago. However, it is perhaps wise to keep things in perspective when looking at future potential.

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Regardless of the suitability of the UK markets for further floats, it is likely fair to say that ONT is now the new Flagship for UK Lifesciences, and its performance is likely to colour the perspectives of those investing in the sector. ONT's recognised capability to 'duplex sequence', its ability to sequence very long strands of DNA and its portable sequencer are all appealing, although this theoretical advantage is still on its way to proving itself commercially. However, if valuation is anything to go by in terms of progress, ONT enjoyed a stellar period since May 2021, when the company raised £195m with a post money valuation of just £2.5bn (i.e. circa £2bn of value was accrued between

Look out for the Biotech Bulldog's report in our next issue of CONNECT



this final private investment and IPO!). Over 2020 sales commendably increased to £114m (versus £52m in 2019), although profitability may not be achieved until 2026. In terms of valuation multiples ONT currently trades on circa 37x sales, versus the sector leader, US based Illumina (\$60bn market cap; EV of c\$63.7bn; \$3.2bn sales and EBIT of c\$580m) which trades on just 20x. As such ONT, at the current valuation, has a lot to live up to, and in order to justify its premium needs to execute and deliver. It seems to be doing so, in mid-October ONT announced an upgrade in expected 2021 sales growth from 30-40% to 60-70% (albeit with a footnote about increasing costs). The company share price enjoyed a bit of a 'bounce' off of the news, to some extent countering the recent easing in share price since IPO. As such it looks like the pre-IPO numbers weren't perhaps unduly window dressed which heralds well for the future, and only a churl would wish the company anything other than success.

Nevertheless, as Christmas approaches it's hard to ignore the Ghosts of Christmas Past, including the spectres of British Biotech and Circassia. The latter is of particular interest, given that almost every sector specialist in the City realised that the share price of the stock

was massively over-inflated, although the few analyst notes that were written were 'BUY's as brokers, with the exception of Hardman (who had no 'skin in the game' and noted the over inflated price) jostled for advisory roles. To date seven analysts are covering ONT, with first research scheduled from the second week of November following lifting of a 'research blackout' (NB: The lock-up period is three months). All of the banks involved in the listing (see above), except Guggenheim, are covering the stock. Having just placed investors into the stock their recommendations are unlikely to be negative. If things go poorly for ONT (which hopefully they won't) we must hope that analysts trim their forecasts and recommendations accordingly, rather than jostling for advisory roles with unrealistic targets.

Whilst flagships are all very well, one can't help remembering the chilling words of the Russian Admiral Kuznetsov as he described the new British carrier HMS Queen Elizabeth as a convenient, large target. Whether or not Oxford Nanopore will be a new symbol of UK Life Science success, or a target for aggressive shorting, remains to be seen, although for the sake of the reputation of the UK as a place to list Life Science stocks, we must very much hope that it is the former. ■



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The listing below shows our Member companies arranged by sector.

Therapeutics Discovery and Development

Actimed Therapeutics

www.actimedtherapeutics.com

Bringing innovation to the treatment of cachexia in cancer and other serious chronic illnesses

Activatec

www.activatec-bi.com

Focus on the evaluation of processes for the manufacture of active biobased compounds and ingredients for nutraceutical and cosmetics products from currently unused and low-value organic sources

Adaptate Biotherapeutics

www.adaptate.com

An immunotherapy company developing an innovative portfolio of therapeutic antibodies designed to modulate the activity of a patient's own cytotoxic gamma delta T cells in situ.

Adaptimmune

www.adaptimmune.com

A clinical-stage biopharmaceutical company focused on the development of novel cell-based cancer immunotherapy products

Antikor Biopharma

www.antikor.co.uk

Developing innovative antibody fragment-drug conjugates for improved tumours treatments. The company's proprietary lysine-based conjugation platform, OptiLink™, enables high payload loading of the antibody fragment, more effective penetration of tumours and rapid clearance from normal tissue

Antiverse

www.antiverse.io

Developing an AI driven antibody discovery platform to predict antibody-antigen binding and provide antibody drug candidate selection

Arecor

www.arecor.com

Developing a portfolio of proprietary products that will enable improved treatments for diabetes via the reformulation of approved proteins and peptides

Argonaute RNA

www.argonauterna.com

Developing safe and reliable methods or temporarily silencing target genes in different tissue or cells

Bayer AG

www.pharma.bayer.com

Bayer is a long-established global pharmaceutical company with diverse interests including pharmaceuticals, consumer health and crop sciences

BenevolentAI

www.benevolent.ai

Focus on bringing together artificial intelligence technology and scientific research to enable more rapid creation of better medicines

Bioarchitech

www.bioarchitech.com

Developing oncolytic viruses for cancer treatment

Blueberry Therapeutics

www.blueberrytherapeutics.com

A drug discovery and development company, engaged in the development of therapies to treat infectious and inflammatory diseases

Carocell Bio

www.carocellbio.com

Carocell Bio is developing novel combination medicines for serious inflammatory conditions, including atopic dermatitis, inflammatory bowel disease and burns

CHAIN Biotechnology

www.chainbiotech.com

Focused on the development of its Clostridia-based proprietary CADD™ platform for delivery of therapeutics and vaccines to the lower gastrointestinal tract

CN Bio Innovations

www.cn-bio.com

Develops human organ-on-a-chip technologies and devices that enable the formation of miniature models of human organs which can be used in the drug discovery and development process

coding.bio

www.coding.bio

Accelerating development of cell therapies through better approaches to biomolecule selection

ConserV Bioscience

www.conservbio.com

A late-stage vaccine development company focused on advancing safe and effective vaccines that protect against endemic and emergent infectious diseases

Creoptix AG

www.creoptix.com/

Provides technologies and expertise for gathering data on a wide range of biological interactions including to detect and quantify biological interactions in real-time, providing both binding affinity and kinetics

Crescendo Biologics

www.crescendobiologics.com

An oncology-focused drug discovery and development company using its proprietary Humabody™ VH technology to develop novel targeted T-cell engaging therapeutics

Cumulus Oncology

www.cumulisoncology.com/

Cumulus is developing novel anti-cancer therapies

CytoSeek

www.cytoseek.uk

CytoSeek's mission is to use cell membrane augmentation technology to unlock the potential of next generation advanced therapies. Proof of principle studies to demonstrate enhancement of cell therapies for cancer, heart disease, osteoarthritis and diabetic wound healing

DJS Antibodies

www.djsantibodies.com

Discovery and development of functional antibodies to GPCRs

e-Therapeutics

www.etherapeutics.co.uk

A drug discovery company with a proprietary computational drug discovery platform based on advances in network pharmacology and chemical biology

Eli Lilly & Company

www.lilly.co.uk

A research based global pharmaceutical company with diverse interests including oncology, neuroscience and diabetes and related complications

Enara Bio

www.enarabio.com

Exploiting novel insights into the expression of human endogenous retroviruses in different cancers to develop a pipeline of first-in-class cancer vaccines

Enesi Pharma

www.enesipharma.com

A clinical-stage pharmaceutical company focusing on the development of solid dose vaccines and other injectable solid dose drug-device combination products

Evgen Pharma Plc

www.evgen.com

Evgen is a clinical stage drug development company focussed on the development of sulforaphane-based compounds, a new class of pharmaceuticals which are synthesised in a proprietary, well-tolerated, stable formulation

Evox Therapeutics

www.evoxtherapeutics.com

A biotechnology company focused on harnessing and engineering the natural delivery capabilities of exosomes to develop an entirely new class of therapeutics

Exogene

www.exogene.co.uk

Applying AI to discovery of T-Cell-Receptor-based cancer immunotherapies

Exonate

www.exonate.com

Developing drugs that modulate alternative mRNA splicing to address diseases of high unmet medical need with an immediate focus on alternative splicing of VEGF to treat wet Age-Related Macular Degeneration (wAMD) and Diabetic Macular Oedema (DME)

Exscientiawww.exscientia.ai

Applying its proprietary AI platform to big data to accelerate the drug discovery and design process

Fast Biopharmawww.fastbiopharma.com

Established to address new targets in immuno-oncology. The company's lead product is an optimised antibody against a key oncology target

Ferryxwww.ferryx.com

Live biotherapeutic products for the treatment of gut inflammation

Grey Wolf Therapeuticswww.greywolftherapeutics.com

Develops immunotherapies that illuminate non-responsive tumors for destruction by the immune system. The company is developing small molecules to target ERAP1 and 2, targets of growing academic interest for multiple cancers

GyreOx Ltdwww.gyreox.com

GyreOx's proprietary discovery platform creates unique 'Gyrocycle' highly modified macrocyclic peptides, which combine the target-engagement power of biologics with the cell-entry ability of small molecules

Haemostatixwww.haemostatix.com

Developing and commercialising active clotting agents/haemostats for the control of bleeding

Hairclonewww.hairclone.me

Working to development hair rejuvenation and regeneration treatments

HOX Therapeuticswww.hoxtherapeutics.com/

Developing novel treatments for cancer through targeting HOX family proteins which frequently have aberrant biological activity in tumours

Ikarovecwww.ikarovec.com

Ikarovec is a pre-clinical phase gene therapy company with programmes aimed at treating common eye diseases

ILC Therapeutics (formerly Alfacyte)www.ilctherapeutics.com

Focused on developing new treatments for cancer, atopic dermatitis and psoriasis using novel peptides that modulate the innate immune system

Imophoronwww.unitdx.com/novel-vaccine-technology-interview-fred-garzoni-imophoron

Developing a novel vaccine platform for use on emerging infectious diseases. The platform is based on a single component of the human Adenovirus that spontaneously forms a superparticle, the ADDomer

Innaxon Therapeuticswww.innaxon.com

Working in the area of innate immunity and has lead products in cancer and inflammatory disease. These are the Toll-like Receptor 4 (TLR4) agonists (Dendrophilin® and Novo-Pyrexal®) and an in-licensed small molecule inhibitor (an IAXOTM compound)

Ipsen Bioinnovationwww.ipsen.com/uk

A global pharma company with three main areas of focus: oncology, neurosciences and rare diseases

Ixakawww.ixaka.com

Developing autologous cells therapies with a focus on peripheral vascular disease

Kalvista Pharmaceuticalswww.kalvista.com

A pharmaceutical company focused on the discovery, development and commercialisation of small molecule protease inhibitors as new treatments for hereditary angioedema (HAE), diabetic macular edema (DME), and other plasma kallikrein-associated diseases

Karus Therapeuticswww.karustherapeutics.com

Designs and develops small-molecule drugs that combine targeted therapy and immunotherapy activity for the effective treatment of a diverse range of solid and hematological cancers

Locate Biowww.locatetherapeutics.com

A specialist regenerative medicine and device company which has developed TAOS™, a patented platform polymer technology with multiple medical applications

LUNAC Therapeuticswww.lunactherapeutics.com

Developing advanced life-saving anticoagulants with minimal risk of bleeding

Macrophage Pharmawww.macrophagepharma.com

an immuno-oncology company focused on the discovery and development of novel therapies designed to enhance anti-tumour immune responses

MediMab Biotherapeuticswww.medimabbio.com

Using systems biology to identify significantly improved first-in-class immuno-oncology drugs that can actively target a range of advanced and solid tumours

metaLinearwww.metaLinear.co.uk

metaLinear is active in discovering novel targets for anti-bacterial drugs and antibiotic re-sensitisers through proteome engineering

MiroBiowww.mirobio.com

A 2019 OUI spinout working on treatments for autoimmune and inflammatory disorders

Mironidwww.mironid.com

Developing new medicines for degenerative kidney diseases, chronic inflammatory diseases and cancer

Nanomericswww.nanomerics.com

Mainly develops drug delivery solutions for poorly water soluble drugs, nucleic acids and peptides using proprietary pharmaceutical nanotechnology

NanOptima

A biotechnology startup based in Alderley Park BioHub developing novel formulations that include peptidic hydrogel and/or nanoparticle technologies to improve ophthalmic drug delivery

NanoSyrinxwww.nanosyrinx.com

A discovery stage biotechnology company using synthetic biology approaches to develop a completely novel method for targeted drug delivery of therapeutic proteins and peptides

NestTeckwww.biocity.co.uk/company/nestteck

Developing environmentally responsible antimicrobial and insecticide technologies for a range of industrial and consumer applications, including the veterinary, industrial and healthcare sectors

Neuro-Biowww.neuro-bio.com

Involved in drug discovery and development in the area of degenerative brain disease. Their unique strategy has produced a novel 14 amino acid bioactive peptide (T14) derived from the C terminus of AChE. T14 is neurotoxic in the adult brain and published data shows it to be a potential key driver of neurodegeneration

Novaiwww.novai.co.uk

Developing their proprietary DARC technology to identify cellular level disease activity initially in both Glaucoma and Age-Related Macular Degeneration (AMD)

Novo Nordiskwww.novonordisk.com

A global pharma with diverse interests particularly in the area of diabetes and associated diseases

Nucleomwww.nucleome.com

Developing therapeutics based on a proprietary 3D nuclear architecture and AI powered computational genomics drug discovery platform

NuVision Biotherapieswww.nu-vision.co.uk

Established to commercialise biotherapies for treating 'front of the eye' disease and trauma

Ochre Biowww.ochre-bio.com

Developing genomic medicines to reprogram liver metabolism

OMass Therapeuticswww.omass.com

Focused on structural mass spectrometry to discover novel medicines

Orbit Discoverywww.orbitdiscovery.com

Utilises its proprietary display platform to identify robust peptide drug candidates for internal industry drug discovery programs and via collaborative research

Ossianixwww.ossianix.co.uk

Developing biotherapeutic products based on the single domain VNAR antibody from the shark. Current programs focus on autoimmunity, neurodegeneration, ALS, pain and botulism

Oxford BioMedicawww.oxb.com

A gene and cell therapy company focused on developing life changing treatments in the areas of oncology, ophthalmology and CNS disorders

Oxford Stemtechwww.oxfordstemtech.com

Developing innovative approach to produce induced pluripotent stem cells for research

Oxford Vacmedixwww.oxfordvacmedix.com

Developing therapeutic agents for the treatment of cancer based on Recombinant Overlapping Peptides (ROPs)

Oxgenewww.oxgene.com

Developing a range of technologies to enable precise and robust mammalian cell engineering to enable more rapid development of gene therapies, antibody-based therapeutics and CRISPR / gene editing

OxSonics Therapeuticswww.oxsonics.com

Developing an ultrasound based platform to enhance the delivery of anti-cancer agents to tumours by disrupting the structure of the tumour

OxStemwww.oxstem.co.uk

A drug discovery company with the vision of developing in-situ cell re-programming therapies to treat dementia, heart failure, macular, diabetes and oncology

Oxularwww.oxular.com

Developing novel retinal treatments engineered to access specific small spaces in the eye and to provide unique drug distribution to tissues specifically involved in retinal diseases

Pathios Therapeuticswww.pathios.com

Pathios Therapeutics is an early-stage drug discovery company pursuing novel small-molecule drugs that target acid-sensing GPCRs on cells of the adaptive and innate immune systems

Pedanius Therapeuticswww.pedaniustherapeutics.com

Developing RNAi therapies for Gram-negative bacterial infections

PepGen

Developing cell-penetrating peptides for treatment of muscular dystrophies

Phylo Biosciencewww.phylos.bio

A plant biotech company aiming to apply genomics and statistics to revolution the future of cannabis

Platelet Serviceswww.plateletservices.com

Provides products and services for platelet function testing which is useful for diagnosis of abnormal bleeding and to monitor platelet function in those who are at-risk of cardiovascular events

Polymaths AItwitter.com/polymathsai

An Oxford University spinout developing and providing AI augmented model-informed drug discovery and development services

Precision Medicineswww.precimed.com

Focuses on in-licensing innovative drug candidates which are undergoing or have already completed initial clinical testing for the treatment of various forms of cancer and then seek to further develop these drug candidates for commercial use

Precision NanoSystemswww.precisionnanosystems.com

Working on the discovery, development, and manufacture of novel nanoparticle medicines

ProFactor Pharmawww.profactorpharma.com

Develops, commercialises, and supplies recombinant blood factors for the treatment of haemophilia

PsiOxus Therapeuticswww.psioxus.com

Focused on discovering and developing gene-based immunology treatments for solid tumors using its proprietary intravenously administered T-SiGn virus platform

Redx Pharmawww.redxpharma.com

Focuses on the development of small molecule therapeutics in particular for cancer and fibrosis

Replimunewww.replimune.com

Develop novel, proprietary oncolytic immunotherapies intended to improve both the direct anti-tumor effects of selective virus replication and the potency of the immune response to the tumor antigens released

Samsara Therapeuticswww.samsaratherapeutics.com

Developing therapeutics for diseases of aging, neurodegeneration and rare genetic disease

Scancellwww.scancell.co.uk

Scancell is focused on developing a pipeline of DNA-based cancer immunotherapies that encode a human antibody or fusion protein engineered to express helper cell and CTL epitopes from tumour antigens over-expressed by cancer cells

Sigma Aldrich/Merckwww.sigmaaldrich.com

A leading global life science and high technology company with their products being used worldwide to enable science that improves the quality of life

Sitryx Therapeuticswww.sitryx.com

A biopharmaceutical company focused on regulating cell metabolism to develop disease modifying therapeutics in immuno-oncology and immuno-inflammation

Sporegensporegen.com/

Sporegen is working on a number of products including the development of vaccines based on Bacillus subtilis

Stark Labswww.starklabs.eu

STARKLABS was the first team to develop an alternate method for the depletion of senescent cells in age-related pathologies using immunotherapy.

Theolyticswww.theolytics.com

A start-up biotech company focused on development of oncolytic viral therapies

UCB Pharmawww.ucbpharma.co.uk

Dedicated to the research, development and commercialisation of medicines with a focus on the diseases of the central nervous system (CNS) and immunology disorders

Vaccines Manufacturing & Innovation Centrewww.vmicuk.com

VMIC is a not for profit research company within the national scientific infrastructure providing strategic vaccine development and manufacturing capability

Vaccitechwww.vaccitech.co.uk

Develop leading T cell-inducing vaccine products to improve global health. It is engaged in Phase 2 clinical programs for universal influenza and prostate cancer, Phase 1 for MERS, and preclinical programs for 3 other therapeutic infectious diseases indications

Valo Therapeuticswww.valotx.com

Developing cancer therapies using the PeptiCRAd (Peptide-coated Conditionally Replicating Adenovirus) platform which combines two clinically proven cancer immunotherapy approaches: an oncolytic Adenovirus and a peptide vaccine, to take advantage of the best features of both technologies

Vertex Pharmaceuticals (Europe)www.vrtx.com

Focused on the discovery and development of small molecule drugs for serious diseases. Has a very strong pipeline in cystic fibrosis but also has interests in pain and haemoglobinopathies

Viatemwww.birminghamresearchpark.co.uk/tenants/viatem-ltd

Aiming to develop the potential of peptimem, a short peptide, that plays a role in controlling inflammation

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Medtech

Abingdon Healthwww.abingdonhealth.com

A diagnostics group, working across multiple industry sectors, developing, manufacturing and commercialising lateral flow immunoassay tests and reader system internally and for contract customers

AccendoLab Limitedwww.accendolab.co.uk

A diagnostics company operatin an approved Covid-19 testing laboratory

Accentus Medicalwww.accentus-medical.com

Develop novel surface technologies to address the challenges of implantable medical device design and performance

Accuneawww.accunea.com

A point-of-care diagnostics company which combines a small bedside bioanalytical system with artificial intelligence to enable the continuous and real-time monitoring of a patient's kidney function

Advanced Molecular Diagnosticswww.am-diagnostics.co.uk

A molecular diagnostics company that develops, manufactures and supplies molecular diagnostic instruments, kits and consumables

Anaphitewww.anaphite.com

Developing a nanomaterial ('Anaphite') that is a combination of graphene and anastase. The nanocomposite is a photocatalyst that can be used for air purification and battery technology

APA Parafrictawww.parafricta.com

A wound care company which markets a range of skincare products made from its proprietary, low-friction fabric, Parafricta®

Base Genomics Limitedwww.basegenomics.com

Developing the proprietary TAPS platform that generates both genetic and epigenetic information at base resolution. Multiple applications in diagnostics, patient monitoring and many other areas

Biocleavebiocleave.com

A renewable chemicals company focused on developing and delivering new green alternatives for everyday products providing clients with more sustainable products compared to petroleum-based alternatives

Blue Earth Diagnosticswww.blueearthdiagnostics.com

A molecular imaging diagnostics company focused on the development and commercialisation of novel PET imaging agents to inform clinical management and guide care for cancer patients

Carbometricswww.carbometrics.com

Using proprietary Biomimetic Glucose Binding Molecules (GBM) to develop a new glucose sensor chemistry that will enable market-leading Continuous Glucose Monitors (CGM)

Cernotaswww.cernotas.com

Developing a new microbiology testing platform capable of determining the presence of microorganisms

Edinburgh Molecular Imagingwww.edinimage.com

A clinical phase biotechnology company focused developing imaging agents that can be used to detect diseased tissue in real-time with the potential for use during interventional procedures including surgery

Endomagwww.endomag.com

Produce diagnostic technology for more effective breast cancer localisation within breast tissue and sentinel lymph nodes thereby help women with breast cancer avoid surgery when it isn't needed, and experience better outcomes when it is

FluoretiQwww.fluoretiq.com

Developing a rapid diagnostic platform for detection of bacteria at the PoC. Their platform is based on advances in glycan chemistry and quantum optics

Future Geneticswww.futuregenetics.co.uk

A non-profit focused on the discovery and development of disease biomarkers in areas of unmet clinical need

Genomics plcwww.genomicsplc.com

A genome analysis company building analytical platforms for optimising genome sequencing and integrating DNA data with diverse biological information to enable better discovery of new drug targets and to deliver precision health

GM Scientificwww.linkedin.com/company/gm-scientific/about

Specialises in the distribution and marketing of innovative healthcare products

Hutano Diagnosticswww.linkedin.com/company/hutano-diagnostics

A start-up developing a diagnostic and surveillance platform for diseases caused by emerging and dangerous pathogens which cause recurring epidemics in Africa

Inivatawww.inivata.com

A global clinical cancer genomics company. Its InVision® platform unlocks essential genomic information from a simple blood test to help realise personalised care for cancer patients

Intelligent OMICSwww.intellomx.com

Using an in house data analysis algorithm to identify patterns in healthcare datasets to find new disease markers and drivers of disease pathways that will lead to new diagnostic tools and targeted therapies

Inviziuswww.invizius.com

Developing a coating for kidney dialysis membranes that prevents activation of the immune system and its undesirable effects on the patient

Iota Scienceswww.iotasciences.com

Are pioneering the development of technologies that facilitates the rapid shaping of liquids on surfaces used to maintain and analyse cells, i.e. polystyrene and glass

Isansys Lifecarewww.isansys.com

Developing and commercialising wireless monitoring devices and systems for real time and predictive indications of patient status in the hospital and home setting

Manchester BIOGELwww.manchesterbiogel.com

Developing biocompatible and biodegradable graft materials that provide the ideal matrix for implanted cells to carry out tissue repair and regeneration

Marker Diagnostics

A biotech startup developing microRNA biomarkers for use in molecular neuroscience

Medherantwww.medherant.co.uk

A clinical-stage company developing drug-in-adhesive patch products for pain and CNS diseases based on their TEPI® technology in combination with already approved drugs

Momentum BioSciencewww.momentumbio.co.uk

Develops rapid tests for critically-important clinical specimens within the hospital microbiology laboratory

NuNanowww.nunano.com

A UK-based company specialising in the design and manufacture of probes for atomic force microscopy and cantilever-based sensor devices

Onca XTwww.oncaxt.com

Developing a unique type of blood test for cancer which, used in conjunction with existing methods of screening and diagnosis, could improve their accuracy of diagnosis

Oncimmuneoncimmune.com

Oncimmune is developing early cancer detection technologies for more effective disease management

Orthoxwww.orthox.co.uk

Developing a range of novel orthopaedic products for the repair of knee cartilage formed from FibroFix™, a patented, biomaterial with a molecular structure, strength and resilience that emulates human knee cartilage

Oxford Cancer Biomarkerswww.oxfordbio.com

Developing a suite of drug-specific companion diagnostic tests using its predictive biomarker technologies CancerNav®

Oxford Endovascularwww.oxfordendovascular.com

A medical device company developing a next generation flow-diverter for the minimally invasive treatment of intracranial aneurysms which cause death or disability due to brain haemorrhage

Oxford Gene Technologywww.ogt.co.uk

Provides genetics research solutions to clinical and academic research institutions

Oxford Immunotecwww.oxfordimmunotec.com

A global, commercial-stage diagnostics company committed to improving patient care by providing advanced, innovative tests in the field of immunology

Oxford MediStresswww.oxford-medistress.com

Commercialising a novel in vitro blood test device which provides the first objective, rapid, quantitative measurement of stress

Oxford Nanopore Technologieswww.nanoporetech.com

Developing a new generation of nanopore-based electronic systems for analysis of single molecules, including DNA, RNA and proteins

Oxford Silk Phage Technologieswww.oxfordsilkphages.co.uk

Pioneering a unique antibacterial biomaterial technology combining silk and bacteriophages, offering solutions for the growing problem of surgical implant/wound infections

Pangaea Datawww.pangaeadata.ai

Provide technology and services for unsupervised AI extraction of meaning from both structured and unstructured textual data to provide doctors and researchers with a full picture of an individual's health

Presymptom Health Limitedwww.presymptom.com

Developing life-saving diagnostic technology to detect sepsis earlier than current technologies and which will be able to significantly improve outcomes

Psyros Diagnosticswww.psyros.com

Developing an ultra-sensitive point-of-care diagnostic technology platform

Renovos Biologicswww.renovos.co.uk

Commercialising the research undertaken at the University of Southampton on skeletal stem cells, translational orthopaedic research and materials for tissue repair

Rosa Biotechwww.rosabio.tech

Developing new sensing devices that mimic the properties of the olfactory systems of mammals. The key components are self-assembling peptide barrels capable of binding a huge range of analytes and these are linked to a colorimetric measurement system

Safeguard Biosystems Holdingswww.sgbio.com

Commercialising molecular diagnostic technologies and tests for mass surveillance and selective screening for pathogens and other agents for agriculture, food safety, genetic screening and human health applications

Sense Biodetectionwww.sense-bio.com

Developing a range of point of care diagnostics

SeraScience Limitedwww.abingdonhealth.com/medical-diagnostics/seralite

SeraScience operates as a part of Abingdon Health. They work in the diagnostic space and have a lead product 'Seralite' for detection of multiple myeloma

Service Roboticswww.serviceroboticsltd.co.uk

Provide technology to enable the delivery of more flexible and better quality care to combat loneliness within older adults whilst reducing demand on our health and social care providers

Spintex Engineeringwww.spintex.co.uk

Spintex, a spin out from the University of Oxford, manufactures pure and tough silk fibres and materials for medical devices and regenerative medicine

The Electrospinning Companywww.electrospinning.co.uk

Design, develop and manufacture materials for use in regenerative devices and in 3D cell culture

Other biotechnology**Azotic Technologies**www.azotictechnologies.com

Their natural nitrogen fixing technology, which is based on a food grade bacteria, provides a sustainable solution to fertiliser overuse and nitrogen pollution

Fixed Phage Ltdwww.fixed-phage.com

To design, development and commercialise applications which use stabilised phage to solve bacterial challenges

Folium Food Sciencewww.foliumscience.com

Developing 'Guided Biotics' to alter the composition of complex microbiomes. Applications envisaged include removal of undesirable bacteria from animals and plants and from the environment and food

Glaia Limitedwww.glaia.co.uk

Aiming to enhance agricultural productivity and reduce pressure on natural resources by optimising the performance of plants

Jellagenwww.jellagen.co.uk

Offer high grade native collagen sourced from jellyfish. This is applicable for tissue engineering, regenerative medicine, stem cell research and a wide variety of cell culture application

MOA Technologywww.moa-technology.com

Aim to discover the next generation of sustainable herbicide chemistries with new modes of action from both natural and synthetic sources

Myconeoswww.myconeos.com

Production of fungal spores for use in the food industry

Worn Again Technologieswww.wornagain.co.uk

Pioneering polymer recycling technology that can separate, decontaminate and extract polyester polymers, and cellulose from cotton, from non-reusable textiles and PET bottles and packaging and turn them back into new textile raw materials as part of a continual cycle

Zentraxazentraxa.com

Developing a range of new peptides products based on a detailed knowledge of marine mussels adhesion protein and a novel production that enables their exploitation. Applications include in medicine, personal care product ingredients and nutraceuticals

CXO/Consultant**AELLEBIO**

Biotech advisory services

Aigenpulsewww.aigenpulse.com

A data management and analytics platform for scientific data generated within the field of life sciences

Alderley Analyticalwww.alderleyanalytical.com

Offer specialist bioanalytical services to support drug development programmes, from discovery through to late stage clinical development, focusing on small or large molecules, peptides and biomarkers

Antibody Analyticswww.antibodyanalytics.com

Provide innovative solutions for the effector function characterisation of therapeutic antibodies with a specific focus on biosimilars

ApconiXwww.apconix.com

An integrated toxicology and ion channel company at the forefront of nonclinical toxicology and safety science related to ion channels in particular

Apex Healthcare Consultingwww.apex-consulting.co.uk

An analytical healthcare consultancy which provides strategic business evaluations and analysis the healthcare sector in Europe and the US

Apex Molecularwww.apexmolecular.com

A synthetic chemistry company providing specialist services for the pharmaceutical, biotechnology and applied chemical sectors

Aptus Clinicalwww.aptusclinical.com

Provide a range of services including full clinical study design, oversight and delivery and individual consultancy projects

Aquila BioMedicalwww.aquila-bm.com

Aquila BioMedical is a preclinical contract research organisation, offering clients world-leading research expertise in immunology, immunology and multiplex histology

Arctoriswww.arctoris.com

Provides a range of automated/roboticised services to support drug discovery and development particularly within oncology

Arex Advisorwww.arexadvisor.com

Offer a combination of strategic advice and operational expertise to help clients from early development stages to commercialized product

Aurelia Biosciencewww.aureliabio.com

Provide services in biological assay development, biological screening and laboratory equipment consultancy to SMEs, universities, medical charities, pharmaceutical companies and screening equipment manufacturers

BioAscent Discoverywww.bioascent.com

Has extensive capabilities encompassing medicinal chemistry, computational chemistry, in vitro biosciences, DMPK, compound management

BioDividewww.biodivide.com

Aim to transform the regenerative medicine field by addressing challenges in the complete workflow from stem cell harvest, manufacture, cryostorage to clinical administration

Biomedhawww.biomedha.com

A CRO offering a range of pre-clinical drug development services to clients in biotech, pharma and virtual companies as well as spin-outs and academic institutions

BioPharma Stability Testing (BSTL)www.biopharmastabilitytestinglaboratory.co.uk

Perform analytical and biological testing services and provides access to high throughput analytical and bio-analytical testing equipment

BioPharmaLogicwww.biopharmalogic.com

Offer services to facilitate all aspects of nonclinical drug development

C4X Discoverywww.c4xdiscovery.com

Exploits cutting edge technologies to design and create small-molecule candidates in a range of therapeutic areas

Catalentwww.catalent.com

A global CRO providing integrated services, delivery technologies and manufacturing solutions for the development of pharmaceuticals, biologics and consumer health products

CatSciwww.catsci.com

A process research and development CRO working in the drug discovery and development area

Celentyxwww.celentyx.com

A CRO offering bespoke assay services in human immunology, including immuno-oncology, autoimmunity and inflammation, fibrosis and neuroinflammation

Cello Health Consultingwww.cellohealthconsulting.com

Focuses on the Healthcare industry (RX / OTC & Animal Health) helping companies unlock the potential of organisations, people, assets and brands

Cellomatics Biosciences Ltdwww.cellomaticsbio.com

Provides expert preclinical in vitro services within oncology/immuno-oncology, immunology/inflammation and respiratory therapeutic areas

CEM Analytical Services (CEMAS)www.cemas.co.uk

A contract analytical company specialised in generating registration data on behalf of the pharmaceutical, agrochemical and biocides industries

Charnwood Molecularwww.charnwood-molecular.com

Provide medicinal and synthetic chemistry services to the global pharmaceutical, biotechnology and chemical industries

Cobra Biologicswww.cobrabio.com

A CDMO providing biologics and pharmaceuticals for clinical and commercial supply

CRA Internationalwww.crai.co.uk/industry/life-sciences

A global consultancy serving diverse sectors including the life sciences

Data Magikwww.datamagik.co.uk

Offer a full clinical trial design and management service, including a complete range of statistical and data management support services

Diamond Pharma Serviceswww.diamondpharmaservices.com

Diamond Pharma Services is a technical services and consulting group, providing expert support and advice to pharmaceutical and biotechnology companies with expertise in the cell and gene therapy space. Their three core areas are regulatory affairs, pharmacovigilance and compliance

Diligent Business Consultingwww.diligentglobal.com

Assist clients with various industry related projects, including outward and inward licensing, and supporting early/mid-stage companies wishing to become investor ready

Domainexwww.domainex.co.uk

Domainex offers a range of integrated approaches to medicinal chemistry, biochemistry and computational chemistry to assist rapid development of new therapeutics

EUDRACwww.eudrac.com

A specialised regulatory affairs consultancy company providing support to drive products through development, registration, market launch and post-approval activities across all EU countries

Evotecwww.evotec.com

Evotec is a well established CRO in the drug discovery and development space with European and US presence

Excellerate Biosciencewww.excelleratebio.com

Provide molecular pharmacology services to drug discovery companies, specialising in kinetic assay design and ligand characterisation

Fidax Limited

Provide international technology and life sciences senior executive experience, with extensive PLC board level and Public Sector Service. In depth background in licensing, corporate financing, IPO's, M&A and managing strategic change with blue chip companies worldwide

Food and Drug Analytical Services (FDAS)www.fdas.org

A contract testing laboratory, providing independent, GMP analytical services. The company's MHRA-accredited laboratories offer a full range of analytical methodologies, ICH stability storage, development and validation expertise

GenScript Biotech BVwww.genscript.com

Provide a range of services and products in the areas of synthesis of genes, proteins, antibodies and molecular biology

Gentronixwww.gentronix.co.uk

A biotechnology service company offering early screening, mechanistic follow-up and regulatory genotoxicity assays for a range of industries including pharmaceuticals, chemicals, agrochemicals, personal care, consumer products, flavours, fragrances and taste enhancers

Gifford Biosciencewww.giffordbioscience.com

A preclinical CRO providing receptor occupancy studies, radioligand binding assays and autoradiography

HC Pharma Consultancywww.helencohen4.wixsite.com/hcpharma

Provides personal guidance and support to pharma and biotech for all partnering activities for pharma products; developing partnering strategies, leading out-license campaigns, in-license searches, due diligence, negotiation of contracts or management of alliances

Hematogenix Laboratory Serviceswww.pharma.hematogenix.com

A GCP compliant and CAP and CLIA certified laboratory offering clinical trial biomarker services including flow cytometry, FISH, IHC, mRNA ISH, PCR, sequencing, and many more

High Force Researchhighforceresearch.com/

Provide bespoke chemical design and synthesis services

HistologiXwww.histologix.co.uk

A privately owned GLP/GCP accredited contract research organisation that provides pathology services for the pharmaceutical and biotechnology industry. They provide human tissue based solutions in support of regulatory preclinical programmes, clinical trials in addition to biomarker projects

Horizon Discoverywww.horizondiscovery.com

Provide a range of services to support drug discovery including functional genomics and high throughput screening using sophisticated CRISPR generated lines, animal models and gene editing (using CRISPR technology)

Imagen Therapeuticswww.imagentherapeutics.com

Provide a complete high content screening service for large pharma and small biotech. The company offers a wide range of image-based assays including neuronal, angiogenic, cellular signalling, and other complex morphological assays.

InClinicawww.inclinica.com

A global clinical CRO that specialises in leading companies through clinical trials and applying their in-depth experience and expertise in clinical research and drug development

Infinity BiologiXibx.bio

IBX provides comprehensive services, from sample acquisition to data analysis, for researchers and organizations around the world

Invicrowww.invicro.com

An imaging science company that provides advanced data analysis services and software in the growing field of pre-clinical imaging research

Invivo Clinical T/A Bionomicswww.invivoclinical.co.uk

A healthcare company that offers the latest advancements in bioscience, diagnostics and therapeutics to healthcare practitioners and their patients

Jon Rees Associateswww.jonreesassociates.com

A specialist consultancy with a focus on the interface between investment and innovation.



We use our sector insight and experience to tailor each solution to the needs of your business. Contact our Life Science and Biomedical expert, Ryan Legge, to find out how we can help you.

0117 930 1698 | 07889 561 418 | r.legge@hayesparsons.co.uk | hayesparsons.co.uk

Kaleidoscope Consultantswww.kaleidoscopeconsultants.com

Data privacy consultants

Kelyonwww.kelyon.com

An ICT company which specialises in the design and development of software medical devices, web and mobile applications based on open source technologies, for big pharmaceutical companies, medical-scientific associations, and healthcare facilities

Kinomicawww.kinomica.com

Kinomica is a proteomic-data science and diagnostics company specialising in cell signalling. They offer a suite of advanced proprietary bioinformatics and phosphoproteomics analytical methods that can provide direct activity measurements of multiple endogenous kinases and comprehensive cell signalling network coverage

Lonza Biologicswww.lonza.com

Operates as a contract manufacturer of monoclonal antibodies and recombinant protein and engages in protein engineering, viral testing, toxicology studies, and clinical trials.

Ludgerwww.ludger.com

Specialises in analytical technology for medical applications of glycobiology and manufactures a comprehensive range of kits and reagents for ICH-compliant glycoprofiling of biopharmaceuticals throughout the drug development cycle

Manentiawww.manentia.co.uk

A full service CRO that delivers clinical development service for whole programmes or individual projects

Menarini Biotech UKwww.menarini-biotech.com

A CDMO that provides expertise in production of biosimilars, innovative monoclonal antibodies and other recombinant proteins

Mi3www.mi-3.co.uk

Provide expert services in designing, developing and manufacturing end-to-end advanced medical and surgical solutions

MicrobesNGmicrobesng.com

Provide a range of Illumina based genome sequencing services

Molecule 2 Medicinemolecule2medicine.com/

Professional consulting services for small biotech companies to help them develop robust drug discovery and development programmes

Mologicwww.mologic.co.uk

A CRO working in the diagnostics space. It offers services in the research, development and manufacture of lateral flow based in vitro diagnostic devices

myClin Europewww.myclin.com

Offers a clinical oversight platform that allows users to share documents efficiently, improve engagement and stay audit-ready at all times

Mytoswww.mytos.bio

Developing technology for automation of cell culture

NDA Regulatory Sciencewww.ndareg.com

A leading regulatory and drug development consultancy with a dedicated team of over 150 consultants supported by an expert network and a specialist Advisory Board

Oxford Expression Technologieswww.oetltd.com

CRO with expertise in baculovirus protein expression

Patheon, part of ThermoFisherwww.patheon.com

Patheon, now part of ThermoFisher, provides drug development and manufacturing services to the ThermoFisher group and works in close association with Fisher Clinical Services

Peak Proteinswww.peakproteins.com

Provides protein supply and structure based drug discovery services to clients

Pharmidex Pharmaceutical Serviceswww.pharmidex.com

Provide translational solutions using its expertise in CNS/oncology/respiratory, DMPK, drug discovery and ADMET/pharmacokinetics

Phastarwww.phastar.com

A global CRO offering statistical consulting, clinical trial reporting, data management and data science services by providing expert consultants and managing and delivering in-house projects, FSP-style arrangements and preferred partnerships

Phenotypecawww.phenotypeca.com

Provide novel biologics production strains of the regulatory friendly baker's yeast, *Saccharomyces cerevisiae* optimised for client recombinant products

Phosphonicswww.phosphonics.com

Developing custom and off-the-shelf technologies for removal or recovery of traces of a wide range of metals in product, process or waste stream. Applications in pharmaceutical preparation and chemical production

Physiomicswww.physiomics-plc.com

Provide outsourced systems and computational biology services to pharmaceutical companies including Virtual Tumour, Virtual Tumour Preclinical and services to predict cardiac toxicity

Precision for Medicine, Oncology and Rare Diseasewww.precisionmedicinegrp.com/pfmord

An oncology specialty CRO that provides clinical research services and application of metrics-driven project management to optimise oncology drug development

Prisma Limitedwww.prisma.com

Prisma is a biotech software development company with experience in research informatics, biology, software and mathematics and offering consulting services to solve one-off complex problems up to crafting efficient, everyday, elegant solutions

Q3 Analyticalwww.bioanalysisforresearch.com

Provide non-regulated bioanalytical support for small pharmaceutical companies carrying out drug discovery and research and also analyse in-vitro samples generated by the client's own in-house biological assays

Quotient Scienceswww.quotientsciences.com

Provide CRO and CDMO services including formulation development, clinical pharmacology trials, and clinical and commercial manufacturing services to the pharmaceutical and biotech industry

Reach Separationswww.reachseparations.com

Specialise in chromatography techniques for the analysis and purification of small molecules, offering screening, method development and purification for chiral and achiral molecules

RenaSciwww.renasci.co.uk

Provide highly specialised consultancy and preclinical experimental services to the global pharmaceutical industry in the areas of abuse and dependence, CNS, obesity, diabetes, NASH and kidney disease

RSSLwww.rssl.com

Provide analytical, investigational, consultancy and training services to clients in the global biopharmaceutical, pharmaceutical and healthcare industries

S-cubedwww.s-cubed.co.uk

S-cubed provides consultancy and support services to pharmaceutical and healthcare clients across a comprehensive range of regulatory, quality assurance and biometrics activities

SAL Scientific Limitedwww.salscientific.com

Cell biology specialists providing contract research services and animal-component-free cell culture media supplements to a global client base

Seda Pharmaceutical Development Serviceswww.sedapds.com

Seda Pharmaceutical Development Services provide pharmaceutical development and clinical pharmacology services and consultancy to the pharma and biotechnology industry

Sekisui XenoTechwww.xenotech.com

Accelerate drug development by providing state-of-the-art drug metabolism and DDI testing programs to help drug developers understand as much as possible about their drug's metabolism and pharmacokinetics to properly evaluate related drug safety risks

Shanghai Medicilon Incwww.medicilon.com.cn

Provide a wide range of contract services for development of new drugs

SPG Innovationwww.SPGinnovation.co.uk

Commercialisation of Intellectual Property in food, life sciences and agritech providing wide range of services in this area

Syneos Healthwww.syneoshealth.com

Use their Biopharmaceutical Acceleration Model to assist clients with clinical and commercial development

Tetrad Discoverywww.t4bio.com

A CRO providing bespoke bio-analysis solutions tailored and integrated to the sponsors requirements, using state-of-the-art technologies

TranScrip Partnerswww.transcrip-partners.com

Provide support for the development and lifecycle management of biopharmaceutical products in the field of oncology, respiratory, internal medicine, and CNS

Upperton Pharma Solutionswww.upperton.com

A research and development company that specialises in the formulation and spray drying of pharmaceutical and biotechnology products

Vivonics Preclinical www.vivonics-preclinical.com

A CRO providing preclinical services and consultancy to the biotech and pharmaceutical industry

Williamson Biotech Solutions www.williamsonbiotechsolutions.com

Offer facilitating services to biotech, medtech, pharma and academic institutions delivering communication, marketing and business development services

Wuxi AppTec www.wuxiapptec.com

A pharmaceutical, biotechnology, and medical device R&D service provider with operations in China and the United States

XenoGesis www.xenogesis.com

Specialises in preclinical drug metabolism and pharmacokinetics, quantitative bioanalysis, and data interpretation services

Academic Institution

Oxford Brookes University www.brookes.ac.uk

One of the UK's 'modern' universities and provides teaching and innovation as well as strong links with business and industry

Queen Mary Innovation www.qminnovation.co.uk

Queen Mary Innovation Ltd (QMI) is Queen Mary University of London's (QMUL) wholly-owned technology transfer company and responsible for the commercialisation and management of the University's intellectual property and portfolio of spinout companies

Queen's University Belfast Research and Enterprise Directorate www.qub.ac.uk/Research/Research-contacts/

Help to deliver research and enterprise activities through the development of research strategy and policy.

Rosalind Franklin Institute www.rfi.ac.uk

A new Research institute dedicated to transforming life science through interdisciplinary research and technology development

Royal Veterinary College Business www.rvc.ac.uk/business

The Royal Veterinary College's interface with business and industry

UCL Business www.uclb.com

UCLB is the commercialisation company of University College London

University of Birmingham Enterprise www.birmingham.ac.uk/enterprise

Supports academics who want to innovate, take their ideas to market, work with businesses and social enterprises, or enrich their professional lives by doing academic consultancy projects.

Warwick Ventures www.warwickventures.com

Is the technology transfer business unit of the University of Warwick and supports them throughout the process of generating impact and a commercial return from their research.

R&D Support

2BScientific Ltd www.2bscientific.com

Europe's fastest growing distributor of life science reagents

4T2 Sensors www.4t2sensors.com

Developing an in-line flow sensor system that can detect concentrations, contaminations and mixtures of fluids

Absolute Antibody www.absoluteantibody.com

Develop engineered antibodies for the research and diagnostics markets

ACE Cells Lab www.ace-cells.co.uk

A biomolecular lab specialised in providing bioactive peptides and proteins from a range of different cells and tissues

Air Liquide UK www.uk.airliquide.com

A producer and supplier of industrial and medical gases and related services

Air Products www.airproducts.co.uk

Provides atmospheric and process gases and related equipment to manufacturing markets and is also a supplier of liquefied natural gas process technology and equipment

AMS Biotechnology (Europe) www.amsbio.com

Specialise in genomics, proteomics, cell culture and stem cell sciences, providing products and custom services for life sciences research

anvajo GmbH www.anvajo.com

A technology company that develops, manufactures and sells innovative solutions for the analysis of liquid samples

ATG Scientific www.atgscientific.co.uk

A supplier of laboratory products and equipment solutions to support life sciences research

Aver Decommissioning & Environmental www.averdecom.com

A specialist decommissioning and environmental consultancy working across a wide range of industrial sectors in the UK and overseas

Avidity IP avidity-ip.com

Commercially focused European & UK patent attorneys specialising in Life Sciences and Medical Technologies with a growing Engineering initiative.

Bio-Rad AbD Serotec www.bio-rad-antibodies.com

Provide a wide range of reagents, particularly antibodies, for life sciences research

Biogelx www.biogelx.com

A biomaterials company which designs and supplies peptide hydrogels tuned to the requirements of cells to be used for 3D cell culture and bioprinting

Bruntwood SciTech bruntwood.co.uk/about-bruntwood/scitech

The UK's leading property provider dedicated to driving the growth of the science and technology sector

Enplas www.enplasilifetech.com/

A global corporation with diverse interests. Enplas Life Tech is the leading single-source manufacturer of high-quality custom plastics parts for global OEMs in the medical, biotech, pharmaceutical, and life science industries

Fisher Scientific UK www.fishersci.co.uk

Manufactures and supplies laboratory chemicals and laboratory equipment.

Merck www.merckgroup.com/en

Merck is a long-established major pharmaceutical giant with diverse interests spanning healthcare/medicine development, diagnostics, support of biotech, pharma and biopharma manufacturing and running through to cosmetics

New England Biolabs (UK) Ltd www.neb.uk.com

Provide a wide range of lab reagents and kits to support R&D

NgaChi

A biotech startup hosted in The Biohub Birmingham and is currently working on the development of a new laboratory consumable

Nikalyte Ltd www.nikalyte.com

Nikalyte Ltd is a leading supplier of various nanoparticles coatings for R&D and commercialization in a wide variety of application areas including cell binding, cell separation, drug delivery, catalysis, metamaterials, nano-photonics, electrochemistry, and batteries

Nonacus www.nonacus.com

Focus on delivering technologies to the genomic healthcare sector through the use of cell free circulating DNA as a non-invasive diagnostic tool

Northern Balance www.northernbalance.co.uk

One of the UK's leading independent distributors of weighing equipment, supplying, servicing and calibrating some of the worlds most trusted brands

PeproTech EC www.peprotech.co.uk

Focus on the development and manufacturing of cytokine products for the life-science and cell therapy markets.

RS Components www.uk.rs-online.com/web

Provides a vast range products, in particular electronic, electrical and industrial components

Thermo Fisher www.corporate.thermofisher.com

Provide a vast range of consumables, reagents and equipment to the life sciences industry

Tissue Solutions www.tissue-solutions.com

Is an ISO 9001:2015 accredited provider of high quality human biomaterials for pre-clinical and discovery biomarker research

York Glassware Services t/a YORLAB www.yorlab.co.uk

Specialise in the production of high quality scientific glassware, the design and build of lab and plant apparatus and rigs, and the supply of consumables, chemicals and laboratory equipment.

Charity Organisation

Kirkhouse Trust www.kirkhoustrust.org

Is a small charity which aspires to improve the food security and livelihood of the rural poor in sub-Saharan Africa and India

Oxford Trust www.theoxfordtrust.co.uk

Encourage and facilitates the study, application and communication of science, technology, engineering and mathematics

Investors and Advisors

Akesios Associateswww.akesiosassociates.com

Provides financial strategy, representation and commercial development advice to life science companies.

Cambridge Innovation Capitalwww.cambridgeinnovationcapital.com

An investment fund that invests in high-growth technology companies in diverse sectors

Downingwww.downing.co.uk

Offer management of investment products for investors such as venture capital trusts, enterprise investment schemes, inheritance tax mitigation funds, business premises renovation allowance schemes, and an open ended investment company

LifeSci Advisorswww.lifesciadvisors.com

LifeSci Advisors is a unique investor relations consultancy founded to provide companies in the life sciences a comprehensive solution to investor communications and outreach

Longwall Venture Partnerswww.longwallventures.com

An Oxford based, venture capital fund management company that specialises in managing early stage investments in science, engineering and technology start-ups

Midvenwww.midven.co.uk

Is a private equity and venture capital firm specialising in start-up, early stage, growth, management buy-outs, and management buy-ins investments in small and medium sized enterprises

Norgine Ventures Managementwww.norgineventures.com

Provide debt and debt-like financing to companies in the fields of healthcare and life sciences, in Europe and the US

Oxford Science Innovationwww.oxfordsciences.com

An investor in science-based discoveries from the University of Oxford and other academic institutions

Pharma Ventureswww.pharmaventures.com/

A transaction advisory firm and a leading international company in partnering, M&A deals and strategic alliances

Results Healthcarewww.resultshealthcare.com

Provide corporate finance expertise and strategic business advice to the healthcare sector

Silicon Valley Bankwww.svb.com

Provide a full range of financial services to companies of all sizes in innovation centers around the world

SR Onewww.srone.com

Specialise in investing in seed, start up, early and mid venture; and emerging growth companies

SV Health Managerswww.svlsa.com

Is a healthcare and life sciences venture capital and growth equity firm managing over \$2 billion in capital in seven private healthcare funds in the US and Europe

Associated Industry

AggioSergeantwww.aggiosergeant.com

Specialise in life sciences executive search and company culture change

Alderley Parkwww.alderleypark.co.uk

Offer bioscience facilities for R&D focussed life science companies at every stage of their life-cycle, from start-up to global corporate.

BDOwww.bdo.co.uk

Global accounting and financial consultancy

BioCity Groupwww.biocity.co.uk

A bioscience incubator, providing the conditions that sustain more than 80 fast-growing businesses. incubator, providing the conditions that sustain more than 80 fast-growing businesses. It has centres in Nottingham, Alderley and Glasgow

BioHub Birminghamwww.thebiohub.co.uk

A fully serviced biomedical research laboratory providing entrepreneurs and innovative start-ups with access to affordable laboratory facilities and equipment

Biotech Personnelwww.biopers.co.uk

An HR consultancy business which specialises in start-up assistance, recruitment, reward management, policy and procedures and culture change programmes

Biotechgatewww.biotechgate.com

Provide a business development database for the life sciences industry

British Columbia Trade and Investmentwww.britishcolumbia.ca/global/trade-and-investment-representatives/

Trade and Invest B.C. works with international enterprises to help them build strong links to the resources, skills and businesses that make British Columbia an attractive place to work and invest

Bulb Laboratorieswww.bulblaboratories.com

Build and furnish commercial interiors from corporate offices to high-tech laboratories

Cleveland Scott Yorkwww.csy-ip.com

A global IP firm

Coulter Partnerswww.coulterpartners.com

An executive search and management consulting firm assisting healthcare, pharmaceutical, biotechnology, and financial services sectors

Dehnswww.dehns.com

A UK firm of Patent and Trade Mark Attorneys advising on all aspects of patenting innovative technology, registering words, logos and other marks and registering original designs

DiagnOxwww.diagnox.co.uk

An incubator facility based at the Cherwell Innovation Centre in North Oxfordshire. Owned by Oxford Innovation

Discovery Park Limitedwww.discovery-park.co.uk

A science park based on the old Pfizer site at Sandwich and home to a growing number of life sciences companies

EFR Travelwww.efrtravel.co.uk

Specialise in corporate travel as well as high end leisure and golfing holidays, private jet travel and a concierge division providing tickets for sold out events. EFR is a provider to the OBN Purchasing Consortium

Elcom Systemswww.elcom.com

The world's first cloud-based procurement technology company. They provide solutions for e-invoicing, e-procurement, and e-funding to optimise the clients' Supply Chain processes and are the providers of the OBN Purchasing Platform

Elementa Consultingwww.elementaconsulting.com

MEP building services and sustainability consultancy specialising in low energy building design

SURFACE PLASMON RESONANCE (SPR)



- ✓ Highly Flexible, Modular Instruments
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2- or 4-Channel Instruments

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T: 01865-261423 E: enquiries@atgscientific.co.uk



Ethical Medicines Industry Group (EMIG)www.emig.org.uk

A multi-stakeholder network and trade industry association that represents the interests of the full span of life sciences companies in the UK

Fieldfisherwww.fieldfisher.com

A multinational law firm which has practices in sectors including Real Estate, Energy, Financial Services, Government & Public Services, Hotels & Leisure, Life Sciences, Media, Telecoms and Technology.

Focus Oxford Risk Managementfocusorm.co.uk

Provide bespoke insurance solutions for commercial, business and private clients

Fourtold Ltdwww.fourtold.eu

Experts in corporate, reputation and political communications

FTI Consultingwww.fticonsulting-emea.com

Provide legal tax advice to UK based life sciences companies

Gallagherwww.ajginternational.com

Is active in insurance brokerage and risk management providing insurance solutions for a wide range of different businesses including the life sciences

george jameswww.georgejamesltd.co.uk

Provide European recruitment and global strategic consulting and training services covering the biotechnology, pharmaceuticals, medical devices, diagnostics, instrumentation, scientific software, fine chemicals and chemical technology markets

Greaves Brewsterwww.greavesbrewster.co.uk

Handles the preparation, filing, prosecution and maintenance of patent, trade mark and design applications

Hayes Parson Insurance Brokerswww.hayesparsons.co.uk

Independent insurance brokers for the South West of England

Hays Specialist Recruitmentwww.hays.co.uk

Specialist recruiters to the life sciences sector

Helixrwww.helixr.com

Helixr is a business consulting firm offering services to life sciences companies across business restructuring, global tax technologies and ERP programs, including end-to-end project management solutions

Horton International UKwww.hortoninternational.com

An executive search firm specialising in the recruitment of senior talent across numerous disciplines

Instinctif Partnerswww.instinctif.com/uk

Instinctif Partners provides communications consultancy services for science based sectors including corporate, healthcare, and marketing communications, as well as financial communications

IP Asset Partnership, Thewww.ipasset.com/

A specialist practice of patent attorneys that provide specific advice or assistance on all IP related matters

Jackson Hoggwww.jacksonhogg.com

Recruitment and outsourced staffing, HR consultancy, training provider

James Cowper Krestonwww.jamescowper.co.uk

A firm of accountants and business advisors based in Henley, London, Newbury, Oxford, Reading and Southampton

Mary Ann Liebert Publisherswww.liebertpub.com

A leading independent publisher known worldwide for its peer-reviewed journals, books, and trade publications

MediCity Nottinghamwww.biocity.co.uk/locations/medicity-nottingham/

Provide a stimulating and supportive business development environment for innovators in consumer healthcare, medical technology, diagnostics and beauty products

MEPC Milton Parkwww.miltonpark.co.uk

A premium business and science park located near Abingdon. Part of the MEPC group

Mills & Reevewww.mills-reeve.com

A commercial law firm offering corporate, commercial, property, litigation and private client services to a mix of regional, national and international businesses

North 51www.north-51.com

Engages in building, managing, and motivating sales teams including contract sales teams, nurse adviser teams, NHS liaison teams and specialist hospital teams

Osborne Clarkewww.osborneclarke.com

Provide legal services to meet clients' advisory, litigation and transactional needs in an international business environment that is reshaping to meet new digital, economic, environmental and political challenges

Oxford Bioescalatorwww.bioescalator.ox.ac.uk

Provide flexible lab space near the centre of Oxford to early stage biomedical science companies

Oxford Innovation Limitedoxin-centres.co.uk/

The UK's leading innovation and incubation centre operator. Also providing feasibility and consultancy services and design and financial modelling

Oxford Science Parkwww.oxfordsp.com

Is designed for science, technology and business occupiers, maintains links with the University of Oxford and currently contains just over 70 companies

Oxford Seating Cowww.oxfordseating.co.uk

Designs and manufactures seating and related furniture for companies in many different industries

Oxford Technology Parkwww.oxfordtechnologypark.com

New science and technology park in Oxford

Penningtons Manches Cooperwww.penningtonslaw.com

Is a law firm providing legal services to ultra high net worth individuals and growing mid-market companies.

PharmaGuidewww.pharmaguide.co.uk

Offer drug discovery courses to a range of clients from professionals with no scientific background, up to PhD level scientists

Phoenix IFDwww.linkedin.com/in/james-robson-943ab41/?originalSubdomain=uk

A life sciences and healthcare consulting business that focuses on innovative start ups in the pharmaceutical, healthcare and medtech sectors

PIA Life Science Insurance Brokerswww.piacommercial.com

Provide a range of specialist insurance products for individuals and businesses, including those in the life sciences sectors

PiRwww.pir-intl.com

A specialist recruitment company serving the international life sciences industry through executive search, interim management and talent management/mapping

Precision BioSearchwww.precisionbiosearch.com

Precision BioSearch is an executive search partner to the early-stage biotech sector

ProcEuropewww.proceurope.com/

Providing the power of a purchasing consortium to the life sciences sector in Europe through providing negotiable rates and specially selected suppliers

Release Life Sciences and Diagnosticswww.releaselifesciences.com

Help life science and diagnostics companies by providing commercial and marketing management services, interim management, training and development and career development and coaching

Restore Harrow Greenwww.harrowgreen.com

Laboratory relocation/storage and distribution

Richardsons Chartered Accountantswww.richardsons-group.co.uk

Provide accounting, audit and taxation advice (compliance and planning) to enterprises and individuals, along with payroll and financial services

Ridgefield Consultingwww.ridgefieldconsulting.co.uk

An independent firm of Chartered Accountants provides accounting, tax advice and planning to businesses and individuals

SJB Technical Recruitmentwww.sjbtechnical.co.uk

Specialises in recruiting engineers and scientists to start-ups and SMEs with particular focus on medical engineering, engineering design consultancies, entrepreneurial firms and new technology

SRGwww.srg.co.uk

Is UK supplier of scientific, clinical and engineering recruitment solutions to the pharmaceutical, biotechnology, medical devices, FMCG, renewable energy, chemical and food processing industries

Starleafwww.starleaf.com

Video conferencing

Taylor Wessingwww.taylorwessing.com/en

A global law firm providing services across many sectors including the life sciences

TBAT Innovationwww.tbat.co.uk

An independent consultancy that provides services and advice on grant funding, R&D taxation, and project management

Thomas White Oxfordwww.oxfordnorth.com

Managing the development of the Oxford North Project

Unit DX

www.unitdx.com

A Bristol-based scientific innovation centre, catering for start-ups, SMEs and industrial team providing lab space, equipment, analytical services, expert support and facilitates cooperation between companies

VA Beach Bio

www.vabeachbio.com

A business organisation that aims to market the Virginia Beach area as a prime location for life sciences companies moving to the US

Venner Shipley

www.vennershipley.co.uk

Is a firm of European patent and trade mark attorneys, representing a broad range of clients including major domestic and international corporations, SMEs, universities and individual inventors

VirdisGroup

www.virdisgroup.com

Is an executive search firm specialising in the lifescience and healthcare sectors

World Courier

www.worldcourier.com

A logistics company which distributes pharmaceuticals and biological samples under strict temperature controlled conditions to locations around the world

Governmental Organisation

AMR Centre UK

www.amrcentre.com

AMR Centre is a key part of the UK's response to the global threat from antimicrobial resistance to accelerate the development of new antimicrobial drugs and diagnostics

Embassy of Belgium

www.diplomatie.be

The London embassy of the Belgian Government and is active in the area of life sciences and collaboration between the UK and Belgium

Embassy of Switzerland, London - Office of Science, Technology and Higher Education

www.eda.admin.ch

The Office serves as an interface between the science and technology communities in Switzerland and the UK by providing information and facilitating contacts. The office works with government, universities and business to organise bilateral networking, matchmaking events and joint projects

HR Dept

www.hrdept.co.uk/newbury

Provide HR services to support companies with employment contracts, managing disciplinarys or other employment issues

Innovate UK

www.innovateuk.org

Work with people, companies and partner organisations to find and drive the science and technology innovations that will grow the UK economy and provides invaluable support to the life sciences through its grants programmes

Medicines Discovery Catapult

www.md.catapult.org.uk

Is a national facility for collaborative R&D projects and developing new approaches to the discovery and proof of utility of medicines, diagnostics and biomarkers

Netherlands Foreign Investment Agency

www.investinholland.com

The inward investment agency for The Netherlands

Public Health England

www.gov.uk/government/organisations/public-health-england

Their mission is to protect and improve the nation's health and to address inequalities through working with national and local government, the NHS, industry and the voluntary and community sector

Other

Aliksir

www.aliksir.co.uk

Develop sensor systems to drive improvements in water quality testing

Check out our NEW website at www.obn.org.uk for all the latest OBN news and events.



NEXT ISSUE

CONNECT issue 6 will be available Spring 2022

Please contact the OBN team, team@obn.org.uk if you would like:

- to contribute to the next CONNECT
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- provide feedback

We look forward to hearing from you!



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