

# BioBeat'21

## Movers & Shakers in BioBusiness 2021

Making Opportunities



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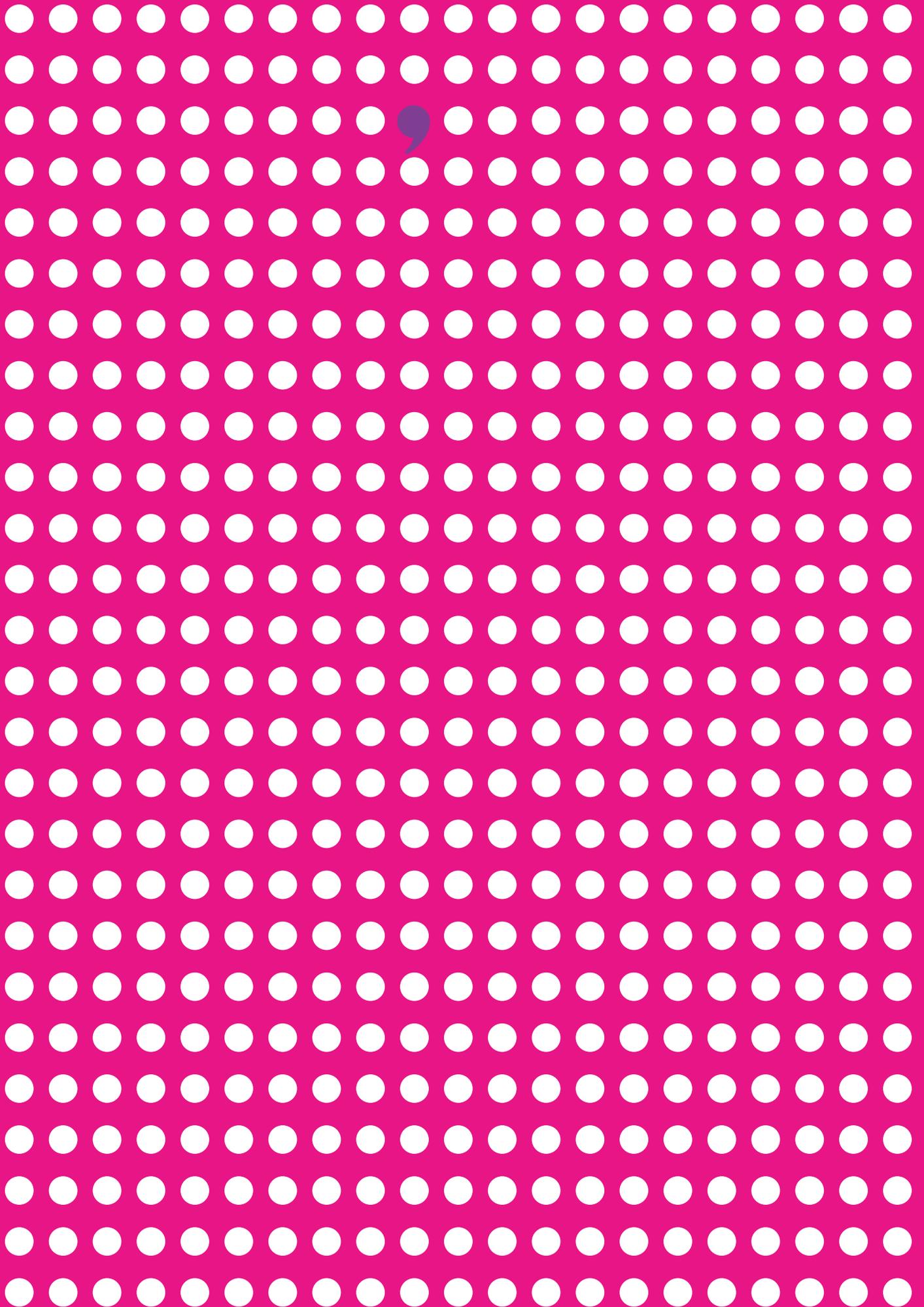
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**Hayaatun Sillem**  
CEO, Royal Academy of Engineering

**“The power of truly multidisciplinary collaborations makes the remarkable a reality”**

These extraordinary times have brought into sharp focus the vital role of innovation in addressing threats to health and wellbeing, and creating new opportunities to deliver societal benefit.

Innovation thrives on collaboration – across disciplines, sectors and borders – as reflected in so many of the partnerships behind our most pivotal pandemic response programmes. From military engineers working with the NHS to clinicians working with the automotive industry, we’ve seen the power of truly multidisciplinary collaborations to make the remarkable a reality.

Collaboration allows us to draw on the strengths and approaches of different groups and disciplines. This is also one of the reasons that embedding diversity into teams and organisations at all levels is so important. Such diversity is critical to ensuring that innovation results in inclusive outcomes for all parts of society, another issue brought to the fore by the pandemic.

The Movers and Shakers featured in this report are outstanding exemplars of diverse, innovative and inclusive leaders who are harnessing the potential of engineering, technology and science to create new opportunities for progress in the life sciences and healthcare.

Their work, achievements and personal stories are deeply inspiring and give grounds for optimism about the future. I have no doubt that these impressive leaders will be on the leading edge of change across biobusiness for many years to come.

# Introduction

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2021 has been a vindication of the power of science to make a difference to human health and the UK life sciences community continues to lead the way. This has been visible not only in response to the ongoing COVID-19 pandemic but across all aspects of health and wellbeing.

Within these pages you'll find profiles of 30 talented trendsetters who are tackling the biggest health challenges of our time. We also hear from five of our *Movers and Shakers* alumni who share their visions for what lies ahead.

All these exceptional leaders are creating new opportunities for growth by combining a human understanding of technology and data with the drive to make healthcare improvements more accessible.

Congratulations to everyone featured in this year's report and many thanks to the nominators and expert reviewers who provide their time and insights to make this such a valuable resource.

Now in our ninth year, the BioBeat community grows through you, your successes and journeys.



**Miranda Weston-Smith**  
**BioBeat Founder**

# Acknowledgements

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## The Reviewers

I am deeply grateful to the Reviewers of this year's report and all their support over the years. Many thanks to:



**Dr Barbara Domayne-Hayman**  
CBO, Autifony Therapeutics and Entrepreneur in Residence, Francis Crick Institute



**Dr Philip Jordan**  
Partner, Innovations, Wellcome



**Dr Marcel de Matas**  
Director and Founder, SEDA Pharmaceutical Development Services



**Dr Christine Martin**  
Acting Head of Seed Funds, Cambridge Enterprise



**Dr Andy Richards CBE**  
Biotechnology Entrepreneur and Investor



**Dr Iwan Roberts**  
CEO, Innovation Forum



**Professor Heather Wallace**  
Professor in Biochemical Pharmacology and Toxicology, University of Aberdeen



## Tribute **Howard Marriage**

Howard Marriage's wisdom and enthusiasm had a major impact on BioBeat. He was a Reviewer between 2015-2020 and is sorely missed. Most recently before his death in December 2020, Howard was Entrepreneur in Residence at The University of Edinburgh, an Honorary Fellow at the Francis Crick Institute and Owner of Biotech Innovation and Future Health.

## Advisors, nominators, supporters

Very many thanks to the people who have helped with the compilation of this report including:

Virginia Acha, MSD  
Kat Arney, First Create The Media  
Steve Bates, BioIndustry Association  
Anastassia Bolotkova, Innovation Forum  
Sylviane Boucharens, BioAscent  
Nicola Broughton, Óskare Capital  
Sue Charles, Consilium Strategic Communications  
Oriane Chausiaux, Heartfelt Technologies  
Lorna Cuddon and Sarah Jeffery, Zyme Communications

Cassie Doherty, Parkwalk Advisors  
Richard Hebdon, Innovate UK  
Victoria Higgins, GSK  
Danuta Jeziorska, Nucleome Therapeutics  
Bobby Kaura, Illumina  
Nicola Kinsey, Babraham Research Campus  
Lisa Melton, Nature Biotechnology  
Amy Mokady, University of Cambridge  
Zoe Peden, Ananda Impact Ventures  
Clare Terlouw, LifeArc  
Beverley Vaughan, University of Oxford  
Julia Wilson, JW Communications  
Julia Wilson, Wellcome Sanger Institute



## Movers and Shakers in BioBusiness 2021

BioBeat'21

# Science & Technology

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## Developing revolutionary bioscience products for healthcare



### **Jenny Barnett, CEO and Founder, Monument Therapeutics**

Expanding neuroscience drug development through digital biomarkers

Jenny founded Monument Therapeutics to develop unique digital biomarkers for neuroscience drug discovery. Licensed from Cambridge Cognition, Monument's cognitive tests define subgroups of patients for matching with repurposed and reformulated drugs. So far, Jenny has raised £2.6 million in seed funding to take the first two biomarker-drug combinations - targeting schizophrenia and neuroinflammation - through to clinical development.

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### **Alexandra Johnstone, Rowett Institute, University of Aberdeen**

Understanding the importance of meal timing for health

Alex's work in the emerging field of chrono-nutrition is exploring the relationship between when we eat and our health. Her latest research is revealing insights into the interplay between metabolism, meal timing and calorie intake, showing that eating more in the mornings improves appetite control. Funded by the Medical Research Council, her findings provide practical evidence to guide public policy and healthy living advice.

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### **Helen Philippou, Professor of Translational Medicine, University of Leeds**

Developing safer anticoagulant therapy

By targeting activated Factor XII in blood clotting, Helen initiated and led the development of first-in-class anticoagulant treatment with minimal risk of bleeding. Thanks to her team's work, new small molecule inhibitors are now in preclinical development. Alongside Richard Foster, Helen has spun out LUNAC Therapeutics, raising £13 million from Innovate UK, Epidarex and other investors since 2019.

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### **Caroline Phillips, Head of Oncology, Redx**

Identifying patients who could benefit from a new investigative bowel cancer drug

Preclinical evidence suggested that Redx's RXC004 drug is effective in colorectal cancer patients with R-spondin (RSPO) gene fusions. Caroline led her team to build a novel assay to identify patients with these fusions, enabling the stratification of patients for the planned Phase 2 trial of RXC004. Her work has accelerated the progression of Redx's investigational drug for cancers with high unmet needs and poor survival rates.

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### **Holly Reeve, CEO and Founder, HydRegen**

Cleaning up pharmaceutical manufacturing

Since spinning out from the University of Oxford in 2021, Holly has raised £620K in seed funding. She has developed a system that decarbonises biocatalytic processes and replaces toxic metal catalysts, transforming the production of drugs and speciality chemicals. By switching the power source for biocatalysis from glucose to hydrogen, HydRegen's technology enables clean and efficient continuous manufacturing processes.

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### **Ola Wlodek, CTO and Co-founder, Reflection Therapeutics**

Pioneering cell therapies for neurological diseases

Ola and her team are creating new cell therapies for devastating neurological conditions. She is using synthetic DNA to direct anti-inflammatory regulatory T cells to motor neurons and remain in the brain. This approach has been validated in models of multiple sclerosis and amyotrophic lateral sclerosis. Alongside developing the new therapy, Ola has helped Reflection Therapeutics raise £700K in grants and private investment.

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## Shaping entrepreneurial bioscience through investment



**Ana Bernardo-Gancedo, Healthcare Analyst, Amadeus Capital Partners**

Unlocking growth for life sciences

Ana partners with entrepreneurs to transform healthcare delivery and fast-track fundamental science into outcome-driven products. Specialising in deeptech, she leads scientific and commercial due diligence while supporting companies to develop business strategies. Her investments include sequencing technology company Oxford Nanopore and Charco Neurotech, whose non-invasive, wearable device helps alleviate symptoms of Parkinson's disease.

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**Ailsa Craig, Joint Lead Manager, International Biotechnology Trust**

Leading UK investors into global biotech

Through a £300 million portfolio, Ailsa invests in innovative businesses addressing high unmet medical needs. She backs companies making differences to patients with rare diseases such as PTC Therapeutics, which is developing drugs for rare childhood diseases. Other investments currently include Seagen's pioneering antibody-drug conjugates for cancer, and Alnylam's RNAi therapeutics for genetic and cardio-metabolic diseases.

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**Samantha Roberts, Managing Director, Health and Care, Legal & General**

Building NHS-ready health tech

Sam helps health tech companies bridge the 'valley of death' between proof of concept and scale-up. Drawing on her experience as national innovation lead for NHS England, she partners with potential and current investee companies to refine their use case, validate their technology and develop their reimbursement model, making them more likely to succeed in bringing innovations to patients.

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**Uciane Scarlett, formerly Investment Principal, Oxford Science Enterprises, now at MPM Capital**

Going beyond the business plan

Uciane forms biotech companies alongside industry experts to incorporate scientific operations early into their business plans. At T-Cypher Bio, she brought in an operator from Immunocore to assist in building the core scientific aspects of the business. She also created the role of Scientist-in-Residence at OSE and evolved the Entrepreneur-in-Residence model to bring entrepreneurially minded operators from leading biopharma companies into the investment firm.

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**Melissa Strange, CFO, Closed Loop Medicine**

Changing how investment decisions are made to transform care

By re-designing Closed Loop's approach to strategic planning and financial management, Melissa has embedded rapid decision making and prioritisation. Her approach is underpinning the company's ambition to get the first combination drug and digital product to market within the next year. These integrated therapeutics have the potential to transform healthcare for individuals and health systems.

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**Clare Terlouw, Head, LifeArc Ventures**

Putting patients at the heart of investing

As a medical research charity, LifeArc can take long term positions in early-stage innovation to bridge the funding gap in early translational research and bring new ideas to the clinic. Clare is creating LifeArc's investment strategy to focus on unmet patient needs alongside financial returns through direct investing in new, growing companies and indirect investing via long term commitments.

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# Collaboration

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## Accelerating the innovation pipeline



### **Emily Adams, Reader in Infectious Diseases, Liverpool School of Tropical Medicine**

Building trust in rapid COVID-19 testing

After designing a way to evaluate diagnostic tests for SARS-CoV-2, Emily and her team assessed more than 50 types of rapid COVID-19 tests to ensure they're fit for purpose. Their data is contributing to the Foundation for Innovative New Diagnostics and WHO regulatory approvals. Taking the fight against COVID-19 beyond the UK, Emily and her team are starting trials in Brazil, Nigeria and Indonesia.

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### **Burcu Bronner-Anar, Technician Commitment Manager, Wellcome Sanger Institute**

Championing the technical community

Burcu is challenging scientific culture by improving the visibility of technical staff at the heart of research. She is embedding a career framework for the 600-strong team of technical staff at the Institute, reshaping job descriptions for 200 Research Assistants and creating a role solely dedicated to retaining highly skilled technical specialists. She is sharing the model of championing recognition and visibility of technical staff with eight further research institutions.

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### **Maria Chatzou Dunford, CEO and Founder, Liferbit**

Overcoming barriers to secure data analysis

Tackling the issues around data sharing head on, Maria created software to securely analyse sensitive patient data from multiple large-scale projects and organisations. A cloud operating system brings computation to where the data is, enabling users to perform multi-omics analyses in a collaborative way. With a \$60 million raise in September 2021, Liferbit's client-base is global, including Genomics England, the Hong Kong Genome Project and Boehringer Ingelheim.

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### **Julie Huxley-Jones, Vice-President, Research Solutions, GSK**

Providing space and focus for scientists

Since 2020, Julie's team has freed up 40,000 hours per year for scientists to focus on their research by introducing simpler digital ecosystems. Julie is unlocking the speed and power of scientific collaborations through enabling AI and GSK-in-a-box strategies. She is also shaping wider industry collaboration in data through leadership on the boards of the Pistoia Alliance and the Allotrope Foundation.

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### **Fiona Marston OBE, Royal Society Entrepreneur in Residence, Liverpool School of Tropical Medicine**

Galvanizing academic engagement with industry

Fiona is building responsive relationships between the Liverpool School of Tropical Medicine and its commercial partners, navigating external and internal negotiation challenges. In the last 18 months, Fiona secured collaborations around vaccine development with associated revenues of £3 million. This includes commercial engagement with Pfizer as part of the COVID-19 SAFER and FASTER clinical trials.

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### **Laura Roca-Alonso, CBO, e-therapeutics**

Staying on target

By working to change the views of partners and investors, Laura is taking e-therapeutics' computational biology platform beyond a drug discovery service. While leading a collaboration to identify novel therapeutics in fibrosis, her commitment ensured the project remained a priority during the pandemic to hit milestone targets. Since 2020, Laura has helped e-therapeutics raise £34 million, double its headcount and expand into RNA interference.

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# Patient Impact

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## Transforming patient access to healthcare



### **Louise Allen, Consultant Ophthalmic Surgeon, Cambridge University Hospitals NHS Trust**

Using digital technology to save sight

Cataracts in newborn babies are the leading preventable cause of childhood blindness in the world. Invented by Louise, Neocam is a handheld, infrared digital imaging device which will use AI to improve screening for newborn cataracts. Following proof-of-concept trials in Cambridge and Tanzania, Louise is leading a £1.5 million NIHR-funded evaluation trial of Neocam to screen 140,000 babies in 25 UK maternity centres.

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### **Cristina Durán, Chief Digital Health Officer R&D, AstraZeneca**

Embracing digital technology to bring trials to patients

Under Cristina's leadership, AstraZeneca is on track to achieve its 2021 target of 90% of studies having a digital health strategy, with a 20% improvement in patient experience. She is passionate about co-creating digital solutions with patients and enabling clinical trials to fit into their lifestyle. An example is the Unify platform, which is now in multiple studies, 31 countries and 40 languages.

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### **Chiara Heide, CEO and Founder, BrightCure**

'Good bugs' for better intimate health

Founding BrightCure in 2019, Chiara has already raised a \$250K pre-seed round and a further seed round of \$1 million. She is using a strain of microbes for proactive urinary tract care without disrupting the vaginal microbiome. A cream based on these 'good bugs' will be available over the counter from the end of 2022.

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### **Amber Hill, CEO and Founder, R.Grid**

Clinical trials running like clockwork

Photo credit: Muffadal Abbas

Amber is speeding up time-intensive clinical trial processes using AI. One system accelerates clinical trial operations from months to minutes. Another streamlines patient engagement workflow and accessibility. Both systems share a database of over 500 million community members across 137 countries. R.grid raised £1.2 million in 2020, led by Ada Ventures.

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### **Anita Lim, Senior epidemiologist, Cancer Prevention Group, King's College London**

Expanding cervical screening through self-sampling

By making cervical screening simpler and offering the option of doing it yourself at home, Anita is expanding screening and protecting more women from cervical cancer. She designed the YouScreen clinical trial - the first time that DIY cervical screening has been offered in the NHS. When the trial finishes in December 2021, up to 31,000 women in London will have been invited to take part.

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### **Isla Mackenzie, Professor of Cardiovascular Medicine, University of Dundee**

Increasing diversity in clinical trials

Isla is making trials more patient-centred through digital technologies that allow them to participate from home. This should lead to greater inclusion and diversity in trials, making results more generalisable and relevant to patients in real world settings. As part of the IMI Trials@Home project, Isla's team published best practices and recommendations for remote decentralised clinical trials in September 2020.

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# Infrastructure

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## Supporting innovation from concept to market



**Gemma Buckland-Merrett, Science & Research Lead, Drug Resistant Infections, Wellcome**

Turning data into action in Africa

In 2020, in collaboration with Pfizer, Gemma led the Wellcome effort to establish SPIDAAR – a Surveillance Partnership to Improve Data for Action on Drug Resistant Infections. SPIDAAR is the first public-private research collaboration to operate across eight hospitals in Ghana, Kenya, Malawi and Uganda. The programme is putting actionable data in the hands of decision makers to guide patient care and tackle the spread of drug resistant infections.

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**Francesca Gliubich, Director London Advanced Therapies, UK Advanced Therapies**

Building a network to advance cell and gene therapies

During the lockdown over the autumn and winter of 2020/21, Francesca led the mobilisation of a UK-wide network of networks focused on cell and gene-based therapies. Launched in July 2021, UK Advanced Therapies creates opportunities and knowledge exchange between academia, the NHS, companies and investors to accelerate the delivery of these exciting new therapies to patients.

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**Farzana Rahman, CEO and Co-founder, Hexarad**

Innovating in radiology diagnosis

Recognising that workflow management is as much of a challenge in radiology as diagnosis, consultant radiologist Farzana and her co-founders set up Hexarad to address this bottleneck. Their diagnostic platform connects healthcare providers with radiologists around the UK, reporting nearly 10,000 scans every month and reducing the time it takes for patients to get results. Farzana also led Hexarad's £2.3 million investment round in 2021.

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**Kristen McLeod, Director, Office for Life Sciences, Departments for BEIS and DHSC**

Leading the delivery of the UK's Life Sciences Strategy

In implementing the Government's Life Sciences Strategy, Kristen is driving the creation of opportunities in early detection of disease, digital and AI, and advanced therapies. She played a key role in setting up the COVID-19 testing programme. Most recently, she brought together government, industry, charity and academic stakeholders to agree an ambitious new life sciences vision for the UK.

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**Jo Parfrey, Chair, Babraham Research Campus**

Building solid foundations for start-ups to scale

Limited management resources and lack of financial discipline can hinder the speed and success of the scale up journey. In response, Jo is steering campus development to support fast-growing life sciences companies. The Accelerate@Babraham programme provides mentorship at the start of this journey, identifying key milestones and instilling robust financial and management processes in the crucial early phases of development.

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**Clare Wareing, CEO and Founder, Cumulus Oncology**

Pioneering a capital-efficient model in early-stage biotech

Clare founded Cumulus to put oncology expertise and entrepreneurship at the heart of biotech creation, with Cumulus' centralised team globally founding and managing early-stage companies. One example of success is university spin-out Modulus Oncology, which is developing a first-in-class asset from university research. This capital-efficient approach helps deliver value against the £3 million raised to date, including Clare's personal investments.

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# Alumni Insights

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## Five Alumni talk about the opportunities of doing things differently



**Sumi Biswas, CEO, CSO and Co-founder, SpyBiotech**

One positive outcome of the pandemic is the development of rapid response vaccine platform technologies. The growing consensus is that we need to be ready for future outbreaks. This is tied to a recognition of the need for technologies that can generate vaccines rapidly and safely, not only for future variants of COVID-19 but for a broad range of infectious and non-communicable diseases.

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**Sylviane Boucharens, COO and Co-founder, BioAscent**

Better drug discovery comes through greater collaboration, bringing skilled medical, analytical and computational chemists and bio scientists together to pool expertise, capabilities and knowledge to solve problems together. By sharing a common purpose and clear understanding of the strengths each party brings, these synergies can lead to greater success in drug discovery projects, more opportunities and growth across the sector.

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**Aisling Burnand MBE, CEO, Association of Medical Research Charities**

The impact of the pandemic on the charity sector has been horrible. Opportunities dried up as many cut staff and research funding. However, new ones were created through adversity, bringing fresh collaborations, innovative ways of raising funds and different delivery mechanisms. The sector pivoted towards more creative solutions to make sure hope of new treatments didn't get lost in the noise of crisis.

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**Nadine Hachach-Haram BEM, CEO and Founder, Proximie**

Your mission is everything. It wasn't my intention to build a business – I wanted to fix a problem. I had seen first-hand how a lack of access to safe surgery could cost lives, and I knew there had to be a more efficient way to scale expertise and reduce variation in care. Proximie was a by-product of my mission.

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**Ipshita Mandal-Johnson, CEO and Founder, Global Bio Fund**

Venture investments are no longer just about financial returns and tech trends but are evolving to achieve real outcomes for social and environmental challenges. This shift drove me to build a 'value capital' fund, collaborating with a network of purpose-driven investors, entrepreneurs, scientists and experts to support gender-smart bioventures that are growth and impact oriented.

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# BioBeat Community

## Celebrating the power of connection

Photos courtesy of Stephen Bond

Over the past eight years BioBeat has grown into a rich network of scientists, investors, leaders and entrepreneurs that are creating the next generation of healthcare.

Each year, a summit is held on a hot topic and the Movers and Shakers in BioBusiness report is published identifying trendsetters.



As we look to the future, we must take the lessons we have learned during the pandemic about agility, urgency and collaboration and apply them to all diseases, so we can make a real difference to global health.





Photos courtesy of Keith Heppel and Genome Research Ltd



BioBeat has grown into a rich network for next generation healthcare.



Photos courtesy of Alice Vickers of Innovation Forum



## Talking permeability for success in biotech careers



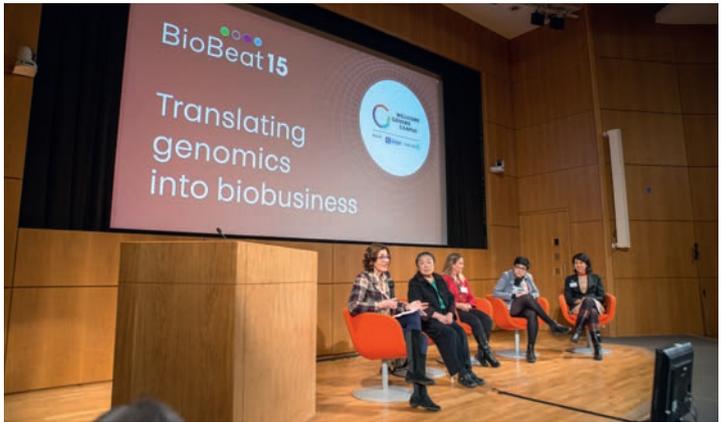
Photos courtesy of Nigel Luckhurst, courtesy of Cambridge Judge Business School



## Discussing Top Trends and celebrating success



Photos courtesy of EMBL-EBI



Photos courtesy of ©Alan Bennett/Media Imaging Solutions



Big thanks to BioBeat's Partners. They make it possible.



## Appleyard Lees<sup>®</sup>

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We are delighted to sponsor BioBeat21 and celebrate the achievements of female life sciences innovators. Appleyard Lees is committed to supporting women, and other under-represented groups, in the STEM professions. With over 50 patent and trademark attorneys and litigators, Appleyard Lees is a leading intellectual property law firm. Who we are, and what we do – but also how we do it – makes us distinctive. We offer broad sector, industry and commercial knowledge, enabling us to respond to client requirements in an efficient, agile way.



At AstraZeneca, we are driven by science, united by science, and every day, we push the boundaries of science to deliver life-changing medicines. We know that however innovative our science, however effective our medicines and delivery, to achieve all we want to achieve, we cannot do it alone. We create open research environments, for example through our Open Innovation programme, where scientists both inside and outside of AstraZeneca can share their ideas and collaborate to drive innovation and impact new health advances. This is why we are proud to support and sponsor BioBeat in encouraging new start-ups and entrepreneurs.

## COVINGTON

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Covington is pleased to continue its support of BioBeat and to sponsor BioBeat21. As a law firm with one of the world's largest and most comprehensive life sciences industry-focussed practices, and a proven commitment to diversity, Covington supports BioBeat's recognition of the women who help make the UK's life sciences sector such a vibrant industry.

## Entrepreneurship Centre



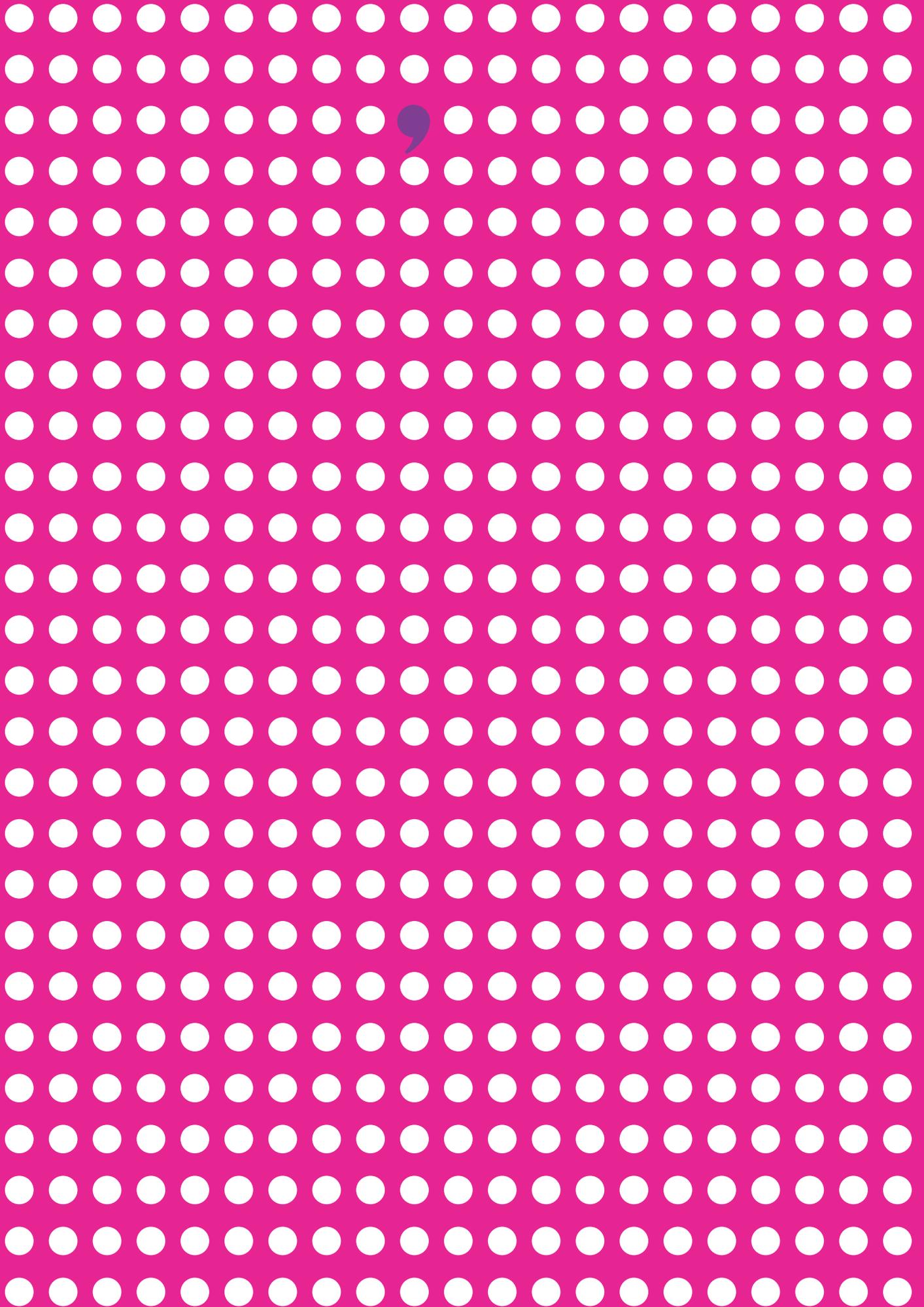
Cambridge Judge Entrepreneurship Centre has been a keen supporter and partner of BioBeat since its creation. BioBeat has gained a reputation as a platform for pioneering discussions on biotech innovation and business challenges. The Movers and Shakers report shows the breadth of skills, experience and innovation of those making an impact.



The BioBeat Movers and Shakers report is a celebration of 30 individuals dedicated to changing science, entrepreneurship and business. The goals of BioBeat strongly align with those of the Innovation Forum which are to empower and connect industry leaders, entrepreneurs, academics and investors to further strengthen the life sciences sector. As a network and an accelerator for early-stage companies, the Innovation Forum is a strong advocate of celebrating female role models to advance diversity within the healthcare industry.



One Nucleus is a not-for-profit life sciences membership organisation and proud partner of BioBeat21. We support Europe's largest life science cluster encompassing the London-Cambridge-East of England region via knowledge transfer, connectivity, inward investment and growth.



# BioBeat'21

