BioBeat 17

# 50 Movers & Shakers in BioBusiness 2017

Thanks to our Partners









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### Foreword

### Introduction



Nikki Yates Senior Vice President, UK & Ireland Pharmaceuticals, GSK

Now more than ever, continued innovation in the life sciences sector is crucial. The UK is the heart of life sciences. A strong collaboration between the healthcare industry; government; the NHS and academia is crucial to ensure that the UK remains internationally competitive for the long term. We must capitalise on our country's world-class science base to retain our talent, drive economic growth and improve patient care.

50 Movers and Shakers in BioBusiness 2017 celebrates leaders whose dedication is about innovation in the healthcare business. It is fantastic to see that these are female leaders, and that they are recognised for the progress they have made over the past year. Their achievements demonstrate expertise in their specialised field, general management skills and an ability to collaborate across disciplines. Diversity of talent is critical to life sciences and it is great to see the contribution these women are making.

In many organisations like GSK, we are seeing an increasing number of women taking the lead and delivering great things. I feel extremely proud to be part of an organisation which develops talent and inspires female leadership, while improving people's lives. We must build on this momentum to encourage more and more women to take the lead and make an impact in their sector.

This report gives us the opportunity to pause and reflect on some great examples of innovation across different scientific areas. Congratulations to the talented 50 for their contribution to the industry and their efforts to inspire future generations. I look forward to following their career journeys over the next few years.



Miranda Weston-Smith BioBeat Founder

I am so excited to present 50 Movers and Shakers in BioBusiness 2017. Here are 50 outstanding women leaders who are giving us all a healthier world. They are transforming the pace, scale and ambition of what we can do to respond to global health challenges.

The report looks across the bioscience translational spectrum, from Great Science, through Financial Enablers, Collaboration, Patient Impact to Infrastructure Innovation. For success, each part needs the other, and the strengths of the UK shine through. The ten women in each area highlight advances strongly centred on making a difference to patients' lives.

Innovation energy abounds in the Top Trends the Movers and Shakers identify. There are opportunities and strategies for becoming involved and contributing to biomedical progress. Here is thought-leadership on the impact of technology convergence, making new healthcare developments more accessible, and the evolution of business models.

The report includes 16 Rising Stars who are bringing new agility in invention, translation and delivery. One of the most striking aspects of their work is their magnetic ability to build communities of likeminded people and in doing so shape our future health.

I would be really interested to talk with you about this report and explore how we can work together.

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Miranda Wester-Smith



### Partners



The Francis Crick Institute is delighted to host this year's BioBeat conference focusing on stepping up biotech partnering to have greater impact on health and wealth.

We look forward to welcoming scientists, entrepreneurs and investors at this event to explore how we change mindsets to boost successful translation between academia and the biotech sector.

This year's Movers and Shakers report is a wonderful celebration of inspiring female leaders in the UK life sciences sector. The diversity of skills and experience represented is helping create a rich, thriving environment for UK bioscience growth and innovation.

The Crick is a biomedical discovery institute dedicated to understanding the fundamental biology underlying health and disease, and we are open to new routes of translating discoveries into new ways to prevent, diagnose and treat illnesses. We believe our approach offers something that is new and allows translation to occur more easily.



The BioBeat Movers and Shakers report is an increasingly important celebration of the contribution and success of women working in life sciences. It reflects the diversity of skills, experience and innovation of those making an impact on a sector that needs them to be able to respond to rapid change and global challenges.

BioBeat has gained a reputation as a platform for pioneering discussions

on biotech innovation and business challenges which brings together both men and women working in the sector. Cambridge Judge Business School has been a keen supporter and partner of BioBeat since its creation because it specifically aligns with our aspirations to support and develop women in Cambridge and beyond through our entrepreneurship education programmes such as EnterpriseWISE (a women-only enterprise programme for STEM women).



Having the right people behind a brilliant idea is one of the key ingredients to successful innovation. Here is a celebration of 50 such individuals - dedicated women who are changing the future of science, entrepreneurship and business. Through their contributions in the life sciences, these Movers and Shakers are making a real difference to people's lives.

At Innovation Forum our mission is to accelerate technology development by fostering synergy amongst academics, start-ups, investors and industry. We are proud to support BioBeat. The BioBeat summit is always inviting and inspiring to all from the curious PhD researcher to seasoned CEOs and entrepreneurs. We see this reflected not only on the day, but also in the lasting legacy of this report. It represents young leaders who are just beginning their journey through to the senior and experienced. In doing so, BioBeat has the power to forge invaluable mentoring relationships and instil dynamism in biobusiness.

As a grassroots network organisation run by young researchers and entrepreneurs, we are particularly excited to see many Rising Stars emerging as Movers and Shakers this year. We look forward to following their stories in the years to come.

### Acknowledgments

#### **The Reviewers**

The Reviewers are key to this report: their inspiration, thoughtfulness, and wisdom give huge benefits to us all. Deep thanks to:

Dr Andy Richards CBE, Serial Biotechnology Entrepreneur and Business Angel Dr Lars Gredsted, Partner, Innovations, The Wellcome Trust Professor Heather Wallace, University of Aberdeen who reviewed the senior nominations.

For the Rising Stars, the Reviewers were Dr Anne Dobrée, Head, Cambridge Enterprise Seed Funds Dr Barbara Domayne-Hayman, CBO, Autifony and Chair, Puridify Dr Howard Marriage, Entrepreneur in Residence, the Francis Crick Institute Dr Marek Tyl, CEO, Innovation Forum.

#### Advisors, nominators and supporters

Dr Virginia Acha, and colleagues, Association of the British Pharmaceutical Industry Steve Bates and Ed Sexton, BioIndustry Association Professor Véronique Birault and Dr Tamsin Sayer, the Francis Crick Institute Dr Claire Button CB Partners Sue Charles, Instinctif Partners Dr Clive Dix, C4X Discovery Victoria English, MedNous Harriet Fear, MAP BioPharma Dr Alison Fielding, IP Group David Gill, St John's Innovation Centre Dr Melanie Goward, Maven Capital Partners Sarah Haywood, MedCity Dr Chris Hollowood, Syncona Hanadi Jabado, Entrepreneurship Centre, Cambridge Judge Business School Dr Tony Jones, One Nucleus Elizabeth Klein, Klein-Edmonds Associates Miranda Knaggs, Stevenage Bioscience Catalyst Jo Pisani, PwC Strategy& Maxine Mackintosh, One HealthTech Dr Lisa Melton, Nature Biotechnology Dr Carolyn Porter, OxStem Dr Gaia Schiavon and colleagues, AstraZeneca Dr Melanie West, NHS Leadership Academy Dr Mike Westby, Dr Chris Pickford, Centauri Therapeutics Dr Clare Wilson

RISING

The Rising Star signifies Movers and Shakers who are under 40

# 50 Movers and Shakers in BioBusiness 2017



### Great Science



#### Sumi Biswas, CEO and Co-founder, SpyBiotech and Associate Professor, Jenner Institute, University of Oxford

Sumi is leading the development of novel vaccines by applying biochemical superglue technology. This technology, which splits a protein from *Streptococcus* pyogenes (Spy), is now being used by Sumi and her team to achieve fast and efficient attachment of disease antigens to vaccine delivery platforms. She was instrumental in securing funding from Oxford Science Innovation and Google Ventures for the company. Sumi's academic group works on the development and clinical testing of vaccines against malaria and outbreak pathogens.

Sumi moved to the UK in 2005 from India to pursue a Masters and DPhil at the University of Oxford.



#### Professor Lindy Durrant, CSO and Founder, Scancell and University of Nottingham

Lindy and her team have developed a platform that uses DNA encoding human antibodies, engineered to express tumour antigens, to stimulate potent killer T cells for the treatment of melanoma and lung cancer. Her team is the first group to show that immune responses to stress-induced modifications cause strong anti-tumour responses against breast, ovarian and bone cancers. Her vision is to ultimately use these therapies much earlier in the disease course, to prevent cancer recurrence following surgery.

Lindy also has a personal chair in cancer immunotherapy at the University of Nottingham and has published over 200 original papers and patents.



#### Jasmin Fisher, Associate Professor, Department of Biochemistry, University of Cambridge and Senior Researcher, Microsoft Research, Cambridge

Jasmin created the field of Executable Biology to change drug discovery from data-centric to mechanism-centric. The core of the approach is to devise models based on reverse engineering of cellular mechanisms, drawing in data as needed, rather than data being the starting point. In collaboration with AstraZeneca, she developed a model for cell signalling in Acute Myeloid Leukaemia which has led to personalised tailoring of drug combinations to increase sensitivity and successfully overcome drug resistance in patients.

Trained as a neuro-immunologist, Jasmin's main interest is to understand how cancers evolve and respond to specific treatments.



#### Professor Rebecca Fitzgerald, MRC Cancer Unit, University of Cambridge and Honorary Consultant in Gastroenterology, Addenbrooke's NHS Trust

Rebecca works on the rapid early detection of cancer to improve cancer outcomes. She and her team have created CytoSponge and associated molecular tests to identify early stage oesophageal cancer. A patient swallows a pill-sized capsule with a sponge inside, this travels to the stomach where the capsule opens. The nurse pulls the sponge out and as it moves up the oesophagus it collects cells for molecular testing. The device has been licensed to Covidien GI Solutions and is in late stage primary care trials for Barrett's oesophagus.

Rebecca has held research and clinical posts at Stanford University, St. Barts and The Royal London Hospitals.



#### Mel Glossop, Head of Chemistry, Centauri Therapeutics

Mel is using programmable immunity to develop highly disruptive approaches to discovering drugs for the treatment of antimicrobial resistance and cancer. She has created tuneable, multivalent antibodyrecruiting molecules that simultaneously redirect pre-existing antibodies to a specific target, triggering the natural immune response for target elimination. These bi-functional molecules combine several chemical disciplines, enabled through multiple global chemistry partnerships, and Mel has created a diverse patent portfolio leading to both private and public investment.

Together with the Royal Society of Chemistry, she is committed to enthusing and developing the next generation of chemists.



#### Natalie Mount, CSO, GammaDelta Therapeutics

Natalie specialises in cell and gene therapies and leads the translation of a novel tissue tissue-derived gamma delta T cell immunotherapy platform for treating solid tumours and autoimmune diseases. Gamma delta T cells perform a critical immune-surveillance function, recognising stressed and malignant cells. GammaDelta Therapeutics spun out from King's College, London and the Crick Institute with backing from Abingworth and executed a major collaboration deal with Takeda Pharmaceuticals in May 2017.

Natalie was previously Chief Clinical Officer at the Cell and Gene Therapy Catapult and spent 16 years at Pfizer. Natalie holds degrees from the University of Cambridge and University College, London.



#### Professor Alison Noble OBE FREng FRS, Institute of Biomedical Engineering, University of Oxford and CTO and Co-founder, Intelligent Ultrasound

Alison's academic research aims to make ultrasound an accessible technology to non-expert clinicians via automating image analysis. She has published extensively on this topic both in engineering and clinical literature. Alison's spin-out company, Intelligent Ultrasound, is focused on machine-learning based solutions for automated quality assurance of routine scans and to support sonographers in decision-making, with its ScanNav® product under clinical evaluation.

Alison has combined interests in training, biomedical engineering research, and its commercialisation throughout her career. She is a Trustee of the Institution of Engineering and Technology.



#### Cath O'Neill, CEO and Founder, SkinBioTherapeutics

Cath is passionate about bringing innovation to dermatology. Together with Professor Andrew MacBain at the University of Manchester, she has identified a probiotic, or friendly bacterium from the gut, which can prevent and control diseases in models of skin. The probiotic platform, SKINBIOTIX, enhances the skin's barrier and is in pre-clinical trials for eczema and anti-infection control. Cath founded the company in 2016 and led SkinBioTherapeutics' £4.5 million IPO in 2017. She also co-founded Curapel, a dermatology business developing natural skin care products, in 2011.

Cath is also an academic at the University of Manchester and is deputy associate dean for business engagement.



#### Ruchi Sharma, CEO and Founder, Stemnovate

Ruchi founded Stemnovate in 2016 to provide innovative organ-on-a-chip technology as an alternative to animal research for drug discovery. The company is integrating stem cell research and engineering to develop miniature models of human organs that mimic biological functions. The advantage of such models is reduced research and development costs, targeted drug development and improved safety. She led the company to raise over £1 million for developing a 'liver on a chip' with Innovate UK funding, and equity investment, and has established industrial collaborations.

Ruchi qualified as a veterinary surgeon and has over eight years' stem cell research experience.



#### Professor Caroline Springer, Director, Drug Discovery Unit, Cancer Research UK Manchester Institute

Caroline discovers, and delivers to the clinic, novel cancer therapies. She led the development of new panRAF medicines that overcome resistance in melanoma to BRAF drugs that inhibit cancer cell growth, a programme now licensed to Basilea Pharmaceutica. She also ran the development of various cancer treatments, including antibody, oncolytic viruses, metastases and cancer stem cell inhibitors. Her work has led to five clinical trials in antibody-directed and small molecule cancer therapies as well as nine preclinical candidate nominations and collaborations with pharmaceutical companies including Astra Zeneca, Novartis and GSK.

Earlier, she worked as Team Leader in Cancer Therapeutics at ICR, London.

# Top Trends

#### Professor Lindy Durrant, CSO and Founder, Scancell

and University of Nottingham Third generation cancer vaccines, based on stimulating the patient's own immune response are showing great promise and within five years it should be possible to develop effective vaccines to treat every cancer.

#### Mel Glossop, Head of Chemistry, Centauri Therapeutics

Recent approvals of Antibody Drug Conjugate, RNA and T-Cell therapies are the result of exploration at the chemistry and biology interface. Harnessing the power of the natural immune response against critical diseases through programmable immunity may prove even more powerful.

#### Professor Alison Noble OBE FREng FRS, Institute of Biomedical Engineering, University of Oxford, CTO and Co-founder, Intelligent Ultrasound

Today's greatest challenge is to take appropriate healthcare diagnoses and therapies into the community setting. Making specialist technology more accessible to the non-expert medical professional will ultimately underpin success.

#### Ruchi Sharma, CEO and Founder, Stemnovate

Personalised medicine has been advocated by FDA to improve safety and drug effectiveness. Stem cell research, bioengineering and artificial intelligence are trending technologies that will change the way drugs are developed and used in the near future.

#### Professor Caroline Springer, Director, Drug Discovery Unit, Cancer Research UK Manchester Institute

New effective treatments for melanoma have been gamechangers in malignant melanoma. However, many patients relapse after initial responses. New drugs that target drug resistance are currently being trialled in the UK.

# Financial Enablers



Claire Brown, Head, Investment, BioCity

Claire joined Biocity in 2015 to develop the investment strategy and lead the activity to become focussed on the operational needs of the biopharmaceutical industry. She has led eight investments in areas of high unmet need including immuno-oncology and infection (with FasT BioPharma and Metalinear) and established three companies where she has helped build the investment team. She supports emerging entrepreneurs and particularly first-time CEOs assisted by experienced individuals.

Prior to joining BioCity from AstraZeneca, Claire spent a large part of her career in the USA (UCB Group and Sanofi-Genzyme) and also learnt to line dance.



#### Lucinda Crabtree, Senior Investment Analyst, Woodford Investment Management

Lucinda researches new investment opportunities in young and exciting British life sciences businesses and works to connect the science with innovative financing. She believes passionately in the quality of British science and is delighted to be helping young businesses, such as AMO Pharma, Inivata and Mission Therapeutics among others, fulfil their long-term commercial potential.

Before joining Woodford, Lucinda worked in analytical roles in international banks focussed on the pharmaceutical and biotechnology sectors, as well as the pharmaceutical industry.



#### Anne Dobrée, Head, Cambridge Enterprise Seed Funds, University of Cambridge

Anne leads the drive to develop new companies from University research in life sciences so this world-class technology brings societal impact across healthcare sectors, including therapeutics (XO1), diagnostics (BlueGnome), and mental health (Psyomics). Anne guides the early years of the companies to ensure that their novel technology approaches are attractive to investors. In the last three years, Anne has led her team in investing £6.3 million and attracted over £90 million into new life science companies.

Anne has worked in technology transfer and investing since 1999, with previous roles in research and vaccine development.



Laura Ferguson, UK Director, Capital Cell

Laura launched Capital Cell UK in June 2017, following on from its establishment in Spain in 2015 as Europe's first life science crowdfunding platform. Laura led a raise of £650K for the UK platform including significant UK angel investment, and has built many partnerships including with MedCity and NHS Innovation. Capital Cell took part in an £800K round for Ducentis Biotherapeutics, and has a pipeline of companies seeking over £6 million lined up for launch over the next 5 months.

Before joining Capital Cell Laura carried out research in evolutionary genetics at the Universities of Cambridge and Oxford.



#### Eleanor Fung, Global Analytics and Intelligence, Global Product and Portfolio Strategy, AstraZeneca

Eleanor leads competitive intelligence for the Respiratory Franchise at AstraZeneca, where she assesses external scientific and commercial developments in the asthma and COPD markets. She is a key contributor to therapy strategy development, driving brand team commercial recommendations, and business reviews. She is also an Honorary Visiting Researcher at the University of Leicester.

Earlier, Eleanor worked as an equity research analyst covering the European pharmaceutical and biotechnology sectors, and as a strategy consultant.



#### Elizabeth Klein, Director, Klein-Edmonds Associates

Liz is challenging perceptions of investibility in the UK's bio sector through deepening investors' understanding of the impact of scientific advances and matching up the languages of investors and biotechs. She steers her bio-industry clients into a more positive dialogue with the investment community, while at the same time helping investors access and invest in UK-based life sciences businesses.

Liz spent over 15 years working as a small/ mid-cap life sciences investment analyst. Since starting her own business, Liz's background in genetics, City experience, and work with life sciences businesses has allowed her to promote this sector.



Elisa Petris, Partner, Syncona

Elisa played a leading role in founding Blue Earth Diagnostics, which is developing novel PET imaging agents to deliver more accurate assessment of cancer patients. Over the last year, she developed an integrated working model for the company and its distribution partner, to support the successful launch of its first FDA-approved product, now used by thousands of prostate cancer patients. Elisa also co-led the founding of Achilles Therapeutic which is developing therapies to target neoantigens generated by tumours.

Previously, Elisa worked in investment banking, and strategy consulting. She has a PhD in molecular biology from Imperial College London and an MBA from London Business School.



#### Tara Raveendran, Head, Healthcare and Life Sciences Research, Shore Capital

Tara is working to raise the profile of exciting bioscience companies with investors across the spectrum, including those that do not usually invest in healthcare. Recent examples include an orphan drug company, Amryt Pharma, whose lead asset is in Phase 3 clinical trials for the treatment of a rare genetic disease, and Oxford Biodynamics, which has a novel epigenetic platform. Tara also manages her own life sciences consultancy SSquared Consulting.

Tara has over 11 years' experience of working with healthcare companies and investors and is a biochemist by training with a BSc and PhD from Imperial College London.



#### Laura Taylor, CFO, Congenica

Laura joined Congenica in 2015 to shape the financial strategy and promote the long-term success of the company. She played a key role in securing £10 million in Series B funding in early 2017. A surprising number of people currently have an undiagnosed disease – 3.5 million people in the UK alone. Congenica's Sapientia<sup>™</sup> platform allows clinicians to rapidly screen an entire genome to identify potentially pathogenic mutations – helping these patients get faster diagnoses.

After an early career at Deloitte, Laura held senior positions at the ink-jet printing company Xaar and then Abcam, which supplies protein-research tools, gaining financial and investor relations experience.



#### Melanie Welham, CEO, BBSRC

Melanie oversees development and delivery of BBSRC's strategy – investing over £400 million annually in research, training and infrastructure at UK institutes and universities. She led a review of BBSRC's Bioscience for Health portfolio, identifying nutrition and the microbiome as emerging yet under-supported opportunities. BBSRC now recognises these as priorities and has established The Quadram Institute as a Centre of Excellence in food, nutrition and health research.

Melanie studied Biochemistry at Imperial College London, has a PhD in cancer cell biology and is a visiting Professor at the University of Bath, where she led a research group for over 15 years.

### Top Trends

#### Claire Brown, Head, Investment, BioCity

It's no longer unusual for companies to raise over \$50 million from day one and, where such opportunities would have traditionally been funded by venture capital, increasingly sources like high-net worth individuals, venture capital trusts and crowdfunding are becoming viable options.

#### Laura Ferguson, UK Director, Capital Cell

Equity based crowdfunding deals in the UK life sciences sector have grown to around £245 million in 2015. As most of these deals are for early-stage companies, crowdfunding can act as a catalyst for innovation in life sciences.

#### Elisa Petris, Partner, Syncona

For the first time, 'third wave technologies' like gene and engineered cell therapy are making their way into clinical practice. Companies developing these treatments will face tough pricing decisions. They will need to work with payers to develop a reimbursement model that works for all stakeholders whilst giving patients access to these products.

#### Tara Raveendran, Head, Healthcare and Life Sciences Research, Shore Capital

While the UK has always been preeminent in academic science, the translation of this dominance into the private sector has been challenging. Part of the issue can be addressed by expanding the investor base. Financing incentives, such as EIS/VCT, help to attract generalist investors to healthcare.

#### Melanie Welham, CEO, BBSRC

In April 2018 all seven Research Councils, Innovate UK and Research England will come together to form UK Research and Innovation, enabling even closer interdisciplinary collaboration. Disruptive technologies often emerge at such disciplinary interfaces - Synthetic Biology is a key area to watch.

# Collaboration



#### Professor Véronique Birault, Head of Translation, the Francis Crick Institute

Véronique leads one of the five strategic priorities of the Francis Crick Institute. With her team she is pursuing an approach to translation that offers something new with a determination to accelerate the translation of discoveries made in the Institute into disease diagnostics or treatments backed by industry. The institute has established a 'close distance translation relationship' with the two largest UK drug companies, GSK and AstraZeneca.

Véronique has 16 years of drug discovery expertise. She has led multidisciplinary research teams including a Discovery Performance Unit at GSK, and delivered programmes to the clinic and translational projects with academic partners.



#### Celia Caulcott, Vice-Provost (Enterprise and London), University College London

Celia is changing how UCL collaborates with its life science partners, encouraging interactions that put the outcome - the patient, societal benefit, the wider ecosystem – at the heart of the relationship. She is also enhancing UCL's flexibility and responsiveness to partner opportunities, encouraging joined-up approaches to interdisciplinary partnerships and ensuring that its friends and partners, from major pharmaceuticals through to biotechs, are excited by working with UCL.

Previously Celia has been involved in the human genome project at the Wellcome Trust, the application of genomics and the biopharmaceuticals industry.



#### Jane Dancer, CBO, F-star

Since joining F-star in late 2011 Jane has led a series of significant and innovative transactions with BMS, AbbVie, Denali and Merck KGaA raising almost \$200 million in non-dilutive financing and advancing F-star's drug pipeline. By establishing asset-centric-vehicles, F-star has been able to realise the value of its individual assets through flexible deal structuring.

Jane has over 15 years' experience in Business Development gained from roles in both biotech and pharma. She has a first class degree, a PhD and an MBA from the University of Cambridge and spent the first part of her career in the agrochemical industry.



#### Barbara Domayne-Hayman, CBO, Autifony Therapeutics and Chair, Puridify

At Autifony Barbara forges collaborations in high risk/high reward areas, being responsible for strategic partnering of new drugs to treat schizophrenia, and potentially hearing disorders, with a totally novel pharmaceutical approach. Barbara has been involved with Puridify since the very beginning and is now Chair, as the company develops its breakthrough purification solutions for biotherapeutic manufacturing. She is also on the Board of Yaqrit and is a member of the Cambridge Enterprise Seed Fund Investment Committee.

Barbara has a BA and D Phil in Chemistry from the University of Oxford, and is a Sloan Fellow from London Business School.



#### Barbara Ghinelli, Business Development Director, Harwell Science and Innovation Campus

Barbara is creating opportunities for fundamental change in healthcare through cross-disciplinary innovation. The HealthTec Cluster that she is creating on the Campus encompasses major national facilities, such as the Diamond Light Source, and taps into the broad skill base in physical sciences and engineering. She is driving engagement with healthcare companies so they can benefit from the multidisciplinary environment.

Barbara has a PhD in space engineering and artificial intelligence, and since 2010 has been leading the development of the national science and innovation campus at Harwell, including the Space and EnergyTec cluster.



#### Letizia Goretti, Director for Portfolio Management and Business Operations, Johnson & Johnson Innovation, London

Letizia's mission is to sharpen the conversation around value creation, keeping sight of all stages of an opportunity to ensure it addresses an unmet healthcare need and feeds J&J's future pipeline. Letizia joined the team in 2017 and has begun to reshape the team's operating rhythm and metrics to keep focusing on its core business, while starting the journey for strategy renewal to further grow the collaboration model of J&J Innovation.

Letizia brings extensive pharma experience, including overseeing a products portfolio in excess of \$1 billion and the launch of several new products and technologies sourced from external partnerships.





Joanne is creating the collaborative commercial strategy for Genomics England. Her approach is to ensure that clinicians, academics and industry deliver benefits from the 100,000 Genomes Project. For example, a collaborative analysis of a cohort of rare disease patients identified three potential candidate novel genes, and Joanne ensured this was followed up with questions on additional phenotyping of clinical relevance. This work is part of the bigger ambition of the Genomics England programme to demonstrate the utility and value of the data asset as well as access to the NHS.

Joanne is a serial entrepreneur, investor, academic and yoga instructor.



#### Bhavna Hunjan, Head, Corporate Strategy and Development, C4X Discovery

Bhavna is building the commercial team having, together with the CEO, re-shaped the company's strategy, and supported the recent  $\pounds 7$  million raise. Bhavna is establishing collaborations with international organisations to harness the best drug discovery capabilities for the development of new treatments. She is also developing alliances with UK non-profit organisations to maximise the impact of intellectual value developed by academics and in-house at C4X.

After studying Biochemistry at the University of Oxford, Bhavna's early career was in investment banking. She gained significant strategic advisory experience in senior roles at PwC and Cancer Research UK.



#### Ann Kramer, CEO, The Electrospinning Company

Ann has grown the Electrospinning Company by developing core competence in reproducible, scalable manufacture of biomaterial scaffolds and by collaborating with medical device companies, academics and clinicians to bring novel regenerative medical devices to an ageing, yet active, population. The polymer nanofibrous scaffolds are designed to promote tissue repair by recruiting patients' own cells, to be incorporated into devices and to degrade after healing. The first example, built into an orthopaedic device by an American company, has achieved FDA approval and is on sale.

Before Electrospinning, Ann worked in techno-commercial roles in Syngenta, Oxitec, Immunocore and Biosyntha.



#### Ursula Ney, Portfolio Non-Executive Director

Ursula's work as a Non-Executive Director centres on changing how people within organisations collaborate internally and externally with contractors and pharma partners. Biotech specialisms continually evolve, and so does the need to challenge the rationale for corporate divisions of activity. She is a Non-Executive Director of Discuva, a Cambridge UK based start up and the AIM listed Proteome Sciences plc. Ursula has also led integration of merging companies where cross company collaboration has been a key priority to drive a common culture.

Over the last 30 years she has been an Executive Director at Celltech plc and Antisoma plc and CEO of Genkyotex.

### Top Trends

#### Celia Caulcott, Vice-Provost (Enterprise and London), University College London

The announcement of the Life Sciences Industrial Strategy represents a truly exciting opportunity for industry, the NHS and universities to collaborate in discovering, developing and delivering novel therapeutics with real health benefits.

#### Letizia Goretti, Director, Portfolio Management and Business Operations, Johnson & Johnson Innovation, London

In the quest to fill a void between big corporates, start-ups, innovators and investors, we are learning that this is not just about funding power. To serve unmet healthcare needs globally, the inclusion of radically different views and capabilities is crucial. Only when the initial hurdles of such diversity are overcome, collaboration thrives and results flow.

#### Professor Joanne Hackett, CCO, Genomics England

Very few entities can do everything themselves, which is why collaboration is key going forward. The UK's Life Science Industrial Strategy is encouraging collaboration for translation and impact.

#### Bhavna Hunjan, Head, Corporate Strategy and Development, C4X Discovery

Inertia in our sector must be challenged by bringing innovative ideas in from other industries including finance, gaming, and linguistics. Revolution in healthcare relies on exposing our imperfections and encouraging open discussions to uncover new pathways to better treatments.

#### Ann Kramer, CEO, The Electrospinning Company

The world's population is ageing and putting pressure on healthcare budgets. Investment in accessible, affordable, and curative approaches will be required to keep people active.

### Patient Impact



#### Jean Abraham, Academic Honorary Consultant in Medical Oncology, University of Cambridge

Jean is exploring how high risk and/or hereditary breast cancer patients can benefit from newer drugs, with specific, targeted actions and fewer side-effects, earlier in their treatment pathway. She and her group use molecular stratification and precision cancer medicine research to understand differences in genetic changes between these breast cancers and how this affects their response to new drugs. She leads multiple local, national and international studies investigating these questions.

Jean previously held a Cancer Research UK National Clinical Training Fellowship and has a PhD in pharmacogenetics from the University of Cambridge.



#### Oriane Chausiaux, CSO and Co-founder, Heartfelt Technologies

Oriane co-founded Heartfelt Technologies to help heart failure patients who have difficulty taking medicine and monitoring their symptoms. She co-developed the algorithms for a device that uses artificial intelligence and machine learning to measure and report ankle volume (a key symptom of worsening heart failure), without requiring patient action. The data is transmitted to doctors so treatment can be given before hospitalization. She leads the regulatory and clinical trials programmes: a reliability test is complete and trials with home patients are underway.

Oriane has a PhD from the University of Cambridge in molecular genetics and earlier co-founded DuoFertility, IVF Diary and Cambridge Digital Health.



Liberty Foreman, CEO and **Co-founder, BeamLine Diagnostics** Liberty is leading the development of a laptop-sized device to identify, at a patient's bedside, healthy, benign and potentially cancerous tissue from biopsies. The system uses unique software combined with an infrared spectrometer to detect subtle changes in the absorption of infrared light by DNA, RNA and glycoproteins in healthy and diseased tissue. Liberty and her co-founder, Katherine Willetts, founded BeamLine in 2015, during the final stages of their PhDs in the clinical application of infrared spectroscopy, and have raised over £1 million.

Liberty is a Fellow of the Software Sustainability Institute, which promotes collaboration between clinicians and statisticians.



#### Alexandra Grigore, Director of Innovation and Co-founder, Simprints

Alexandra led the design and development of the first fingerprint scanner for accessing health records in low-resource settings. She did this together with community health workers in the developing world, using various human centred and co-design tools. There are currently 1.1 billion people worldwide who have no birth certificates or any official ID. Simprints has created a lowcost, secure, and reliable identification tool, enabling health workers to diagnose, treat, and monitor their most remote beneficiaries.

With an engineering background and a PhD in nanotechnology from the University of Cambridge, Alexandra's passion lies in using technology to make a social impact.



#### Elin Haf Davies, CEO and Founder, aparito digital health

Elin founded aparito to accelerate access to drugs by patients, using wearable technology and smart phone apps, delivering real-time remote monitoring for doctors, regulators and reimbursement agencies. The technology uses machinebased learning and artificial intelligence to capture medication adherence and physiological performance to create individual patient profiles and also help reduce hospital visits. With the initial focus on rare diseases and paediatrics, aparito's technology is in use in several UK hospitals.

Outside work Elin is known for her love of the sea, having rowed across both the Atlantic and the Indian Ocean. Elin has over 20 years' clinical, academic and regulatory experience.



Karen Livingstone, National Director, **SBRI Healthcare and Regional** Director, Partnerships, Eastern Academic Health Science Network Karen led the establishment and growth of SBRI Healthcare to encourage the NHS to act as an intelligent lead customer to companies – something the public sector struggles with. This £74 million investment vehicle uses public funds to contract early stage technology development, co-creating innovations the NHS needs to address demographic and clinical challenges. She forges new partnerships with industry at the Eastern Academic Health Science Network

Karen is a Fellow at the Cambridge Judge Business School. She has served on the boards of six public and private sector bodies.



#### Dame Julie Moore, CEO, University Hospitals Birmingham NHS Foundation and Interim Chief Executive Officer, Heart of England NHS Foundation Trust

Dame Julie leads a Trust that has developed one of the most sophisticated health informatics capabilities in the world, the only secondary care informatics system created and controlled by the NHS. Coupled with its research capabilities, clinical expertise and academic collaboration, this gives UHB the capacity to deliver bespoke and innovative healthcare that is changing lives, saving lives and informing treatments globally.

Dame Julie is a graduate nurse who spent 10 years in clinical practice before moving into nursing management. She is included in the Health Service Journal lists of the most influential clinical leaders.



#### Lara Mott, CEO and Co-founder, ImproveWell

Lara founded ImproveWell in 2016 to offer better ways for healthcare professionals to communicate quality improvement ideas to management. ImproveWell's platform aggregates data, completes feedback loops and facilitates shared knowledge. The technology is being used at Guy's and St Thomas' NHS Foundation Trust, Sussex Partnership NHS Foundation Trust and Mersey Care NHS Foundation Trust.

Lara spent 11 years in senior roles across healthcare specialist investment, biopharmaceutical, life sciences consulting and financial services businesses. She supported the £200 million Circassia IPO and helped raise a €660 million healthcare private equity fund for GHO Capital.



#### **Sara Murray OBE, CEO, Buddi** Sara's focus with Buddi is on combining digital assets with unique wearable technology, addressing a range of conditions from diabetes to substance abuse. Buddi is tackling areas of health and care that drastically need attention, not only supporting existing patients, but also focussed on prevention. For example, Buddi's new Nujjer solution nudges people at high risk of type 2 diabetes

to achievable lifestyle changes, with

improved health outcomes.

Sara is a serial technology entrepreneur, who started optimising sales forces in the pharmaceutical industry and founded the UK's leading insurance marketplace. She was awarded an OBE for services to entrepreneurship and innovation.



#### Helen Shaw, Director and Co-founder, Proveca

Helen co-founded Proveca to deliver licensed, child-friendly medicines to the European market. Reformulating existing adult medicines and conducting the necessary clinical work means children can be provided with many much-needed licensed medicines. Balancing challenging regulatory and clinical hurdles whilst maintaining a viable value proposition brought the first licence for Sialanar for Chronic Pathological Drooling, in 2016.

A medical doctor with over 25 years' experience in the pharmaceutical industry Helen was Medical Director of Boots Healthcare International and has held several non-executive directorships of start-up pharmaceutical and medical device companies.

### Top Trends

#### Liberty Foreman, CEO and Co-founder, BeamLine Diagnostics

Diagnostic approaches can learn more from health technology companies than we first thought. Whilst digital health is often seen as a 'soft science' compared to more established clinical approaches, it is disrupting the health sector and creating opportunities.

#### Elin Haf Davies, CEO and Founder, aparito digital health

The value of patient generated data collected in real-time is becoming increasingly important throughout the drug development cycle and in routine clinical care. Utilising emerging technologies such as wearable devices and smart phone apps means that this data can be captured passively at home but still available for doctors to review in the hospital. This enables patient-centric care to become a reality.

#### Karen Livingstone, National Director, SBRI Healthcare and Regional Director, Partnerships, Eastern Academic Health Science Network

Changing patients lives is never one-dimensional. For innovation to thrive, the convergence between the science, clinical and management activity is vital. Co-creation of solutions for patient benefit requires clinical excellence, great engineering, user knowledge and intelligence, underpinned by accessible data and adaptive technology.

#### Lara Mott, CEO and Co-founder, ImproveWell

There is a growing body of evidence linking better patient outcomes with organisations that enable and support frontline healthcare professionals in quality improvement. The value of encouraging a culture of intrapreneurship gives those who are closest to the patients a voice, helping small changes make a significant impact.

## Infrastructure Innovation



### Sarra Achouri, Director of Marketing and Co-founder, CamBioScience

Sarra is building a global community of scientists around an e-learning platform tailored to the needs of life science and health care. Initial customers are pharmaceutical companies, biotechs and research organisations. The platform offers personalised learning, using machine-learning technology to assess and match content to a learner's needs. CamBioScience equips scientists with the skills they need to develop a bettertrained scientific community for improved translation of new technology into healthcare and society.

While studying in Paris before her PhD in physics at the University of Cambridge, Sarra also carried out interior decoration and dressmaking jobs.



#### Janet Allen, Director of Research, Cystic Fibrosis Trust

Janet is positioning research at the Trust to focus on translational science, through working with the biotechnology sector. She has established a multidisciplinary approach involving new fields such as computer science, mathematics, bioinformatics, chemistry and digital. With the Trust based in the UK, it now works with teams of scientists across Europe, USA, Canada and Australia. Janet has recently been guiding new approaches for clinical trials, the adoption of digital technologies and formalising the Trust's interactions with the corporate sector.

Janet joined the Cystic Fibrosis Trust in 2012 to develop its research strategy, drawing on her experience in academic and industry biomedical sciences.



#### Kay Boycott, CEO, Asthma UK

Kay is changing how pharmaceutical companies and health tech innovators research and develop new products so as to ensure they address unmet needs and end-user requirements. Partnership working is essential to achieving Asthma UK's mission to stop asthma attacks and cure asthma. The organisation led the European Asthma Research & Innovation Partnership, bringing together global experts to define the top asthma research priorities and created the Asthma Lab for collaborative working.

Kay began her career in consumer marketing, followed by 10 years in strategy consultancy. She joined the not-for-profit sector in 2009 and became Chief Executive of Asthma UK in 2013.



#### Sue Charles, Managing Partner and Life Sciences Practice Founder, Instinctif Partners

Sue is a passionate ambassador of boldness about success in the life sciences sector, in her own right and on behalf of her clients. Only if UK innovation and achievements in life sciences are recognised will the sector thrive and deliver on its impacts for patients, investors, employees and other stakeholders, which is especially important through times of change and uncertainty. And this is critically important now with Brexit when powerful communications strategies are essential.

With an academic career in biochemistry, an MBA and a 30 year track record, she has helped set the standard and drive innovation in life sciences communications.



#### Tara Donnelly, CEO, Health Innovation Network

Tara is an improvement enthusiast with a track record of bringing innovation into the NHS. As CEO of the Health Innovation Network, she runs the DigitalHealth. London Accelerator programme with partners, for scaling digital health ideas across the capital. The first 31 companies have achieved strong uptake in London. Previously she led work to redesign over a thousand outpatient clinics at University College London Hospital.

Earlier, she was CEO of West Middlesex hospital where she achieved dramatic improvements in patient safety and infection rates. She served for a decade on the Board of Macmillan Cancer Support as a Trustee.



#### Heather Fraser, Global Leader, Healthcare and Life Sciences, IBM Institute for Business Value

Heather is changing how traditional and non-traditional parties across healthcare think about using new technologies to provide optimum patient outcomes. Her research and thought leadership include stimulating collaboration amongst life sciences, providers, payers, regulators and beyond to nutrition, electronics and telecoms. She is working to improve patient outcomes through encouraging the use of emerging technologies, for example cognitive computing in pharmacovigilance, and blockchain for clinical trials.

Heather is a registered pharmacist, with a career in healthcare, life sciences, community pharmacy, consulting and technology.

### Top Trends



#### Hannah Kerr, Director, Communications and Government Affairs, GSK

Hannah is leading work at GSK to develop proposals to reform the evaluation, reimbursement and adoption of medicines. This includes engaging with government, NICE and the NHS to support accelerated access to cost-effective medicines. Hannah believes it is vital to bring people together to approach this challenge holistically and collaboratively. In doing so, we can ensure patients benefit from future innovations whilst securing a supportive business and research environment for industry.

A former civil servant, Hannah has a DPhil in molecular biology from the University of Oxford. She is also Deputy Chair of the Campaign for Science and Engineering.



#### Nicola Perrin, Head, Understanding Patient Data, The Wellcome Trust

Nicola is leading a new initiative to support better conversations about the importance of patients' data. Data can save lives – but only if patients have confidence that personal information is protected. Nicola is using innovative approaches to explain how and why data are used, what's allowed and what's not. By working with patients, charities and clinicians, Nicola is championing the responsible use of data to improve health, care and research for everyone.

Nicola's experience combines public engagement, bioethics and science policy, but she has learnt the most from transatlantic sailing: the importance of teamwork, clear direction, strong leadership – and humour.



**Jo Pisani, Partner, PwC Strategy&** As leader of the UK Pharma Consultina

team, Jo develops innovative commercial and collaboration models, based on adopting new technologies, for pharma, biotech and medical devices companies. She leads PwC's initiatives on anti-microbial resistance, accelerating innovation uptake in the NHS and also navigating the challenges and opportunities presented through Brexit. Throughout this work the focus is on delivering improved health outcomes.

Jo has been consulting on pharma strategy for 18 years with Booz&Co and PwC. Prior to this, Jo spent 13 years in industry with SmithKline Beecham, now GSK, and BP where she held positions in strategy, operations, engineering and IT.



#### Serena Scollen, Head, Human Genomics and Translational Data, ELIXIR, Wellcome Genome Campus

Serena is working with scientists across Europe to create a collaborative infrastructure for sharing and reusing genomics data. Doing so will open up possibilities for improving genomics and health. She is establishing standards to ensure data that can be shared, will be shared responsibly. Her vision is that it will soon be far easier to discover, access and analyse genomics data, linked to other data types and at a scale that has not previously been achieved.

Prior to joining ELIXIR, Serena was a Director within the Human Genetics group at Pfizer.

#### Kay Boycott, CEO, Asthma UK

Health charities are performing the role more and more of the 'honest broker ' to galvanise innovation. This can take different forms, for example, focusing partners on a shared goal, connecting innovators with experts, and managing culture clashes with the increasing digitising of healthcare.

#### Tara Donnelly, CEO, Health Innovation Network

The use of innovative digital technology is accelerating across the NHS in London with a range of benefits from saving staff time, to helping people with long term conditions manage them more effectively, to reducing costs associated with paper and postage.

#### Heather Fraser, Global Leader, Healthcare and Life Sciences, IBM Institute for Business Value

Digital reinvention in healthcare and life sciences organisations will continue to disrupt business models and place patients at the core of the ecosystem using technology. For example, using cognitive technologies to bring personalised care to each patient.

#### Jo Pisani, Partner, PwC Strategy&

A key trend will be around convergence of existing and new technologies. The combination of drug, device and digital technologies will provide immediate health benefits tailored to individual patient needs. Convergence of technologies will also provide the enablers needed for advanced data analytics and artificial intelligence to further our understanding of disease and treatment. This exciting new proposition will stimulate new business models, new partnerships and new behaviours.

### **BioBeat16 Moments**





























'There is no better time to be an entrepreneur, especially in healthcare'

Julie Walters (pictured above)











Discussing Top Trends and celebrating success









### BioBeat