

# **Innovate UK, NIHR and SBRI Healthcare Investment Readiness Programme Investor showcase**

30th March 2022, online

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# Innovate UK, NIHR & SBRI Healthcare Investment Readiness Programme Investor Showcase, 30th March 2022

| Times         | Session Themes                                                                                             | Speaker                                                                            |
|---------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 09.30 - 09.35 | Welcome                                                                                                    | Geoff Davison, Bionow                                                              |
| 09.35 - 09.45 | Some words from the programme sponsors:<br>-NIHR<br>- Innovate UK                                          | Raffaella Roncone, NIHR<br>Chris Rowe, Innovate UK                                 |
| 09.45 -11.05  | Company 8 minute pitches:<br>Miicare<br>Nanoverv<br>KOKU Health<br>Spotlight Pathology<br>Aelius Biotech   | Ophir Levy<br>Jurek Kozyra<br>Emma Stanmore<br>Martin Fergie<br>Matt Wilcox        |
| 11.05 - 11.10 | Break                                                                                                      |                                                                                    |
| 11.10 - 12.30 | Company 8 minute pitches:<br>Tutti Toot<br>Recourse AI<br>QV Bioelectronics<br>MetalloBio<br>GlycoScore DX | Gayle Storey<br>Scott Martin<br>Qasim Akhtar<br>Kirsty Smitten<br>Sarah Greenhalgh |
| 12.30         | Close                                                                                                      | Geoff Davison, Bionow                                                              |

# Introduction

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Bionow in collaboration with Innovate UK, the National Institute for Health and Research (NIHR) Invention for Innovation (i4i) and the NHS England and NHS Improvement Small Business Research Initiative (SBRI) Healthcare programmes are delighted to welcome you to the Investment Showcase.

The Investment Showcase features presentations from MedTech, Diagnostic and Digital Health companies based in the UK raising seed or series A investment between £100k - £2m. This is a fantastic opportunity to hear ideas from innovative companies about their ideas to transform the Health Sector.

Over the last few weeks we have been working closely with these companies through a series of pitch exercises designed to mirror the challenges when seeking private investment and to better their chances of attracting interest.

Despite not being able to deliver these events face-to-face, we still want to provide the companies we have worked with the opportunity to network and connect with the investment community.

Thank you for joining us to hear from some of the companies on our programmes.

## NIHR i4i

The National Institute for Health and Research (NIHR) Invention for Innovation (i4i) Programme invests in disruptive early-stage medtech technologies to accelerate the translation of innovation into the NHS and the wider market for increased patient benefit. It supports collaborative projects that involve SMEs, universities and the NHS, with strong management teams and a clear commercial pathway towards adoption. The aim is to de-risk technologies to make them attractive to follow-on funders and private investors.

NIHR i4i supports innovators across the translational innovation pathway, covering from early stage development to real world testing through three funding streams:

- **i4i Product Development Awards (PDA)** to support any stage of the translational research and development pathway, including the clinical development of laboratory validated technologies or interventions.

- **i4i Challenge Awards** to support the first real world implementation studies of market ready technologies, in order to move innovations a step closer to adoption in the NHS.
- **i4i Connect** aimed at SMEs in need of a funding boost to reach the next stage in the development pathway.

The team manages an investment of £199m+ into a portfolio of 279 projects, growing on average by £15m and 25 projects per annum. The portfolio has had two IPOs in the last 2 years, raising a combined value in excess of £190m, and our companies have secured close to £700m of private investment.

More information on the i4i programmes can be found on our website.

## **SBRI HEALTHCARE**

The Small Business Research Initiative (SBRI) Healthcare is an NHS England & NHS Improvement initiative, supported by the Academic Health Science Network (AHSN). The aim is to promote UK economic growth whilst addressing unmet health needs and enhancing the take up of known best practice. The initiative supports a programme of competitions inviting companies to come forward with their ideas on novel medtech and digital innovations that can address specific NHS challenges, driving the adoption and increasing the chances of successful implementation. This includes technologies that can improve patients' health, as well as healthcare service delivery.

Early stage projects are de-risked through a phase gated mechanism, which enables organisations to test feasibility (Phase 1, over 6 months and up to £100K), and if successful to progress forward with product development/clinical testing (Phase 2, over 12 months, up to £1m).

The Programme has recently launched a Phase 3 stage to accelerate innovations in an advanced stage of development into relevant health or social settings, and to facilitate the collection of evidence in real-world settings required by commissioners and regulators to make purchasing or other recommendations/decisions.

The team manages an investment of £100m+ into a portfolio of 229 projects, which have been able to secure additional £300m+ through grant funding and venture capital investment. The programme has also a strong commercial focus, with 75+ products already available to buy, 60 of which are available in the NHS and 23 of which are exported.

## About Innovate UK

Our mission is to help UK businesses grow through the development and commercialisation of new products, processes, and services, supported by an outstanding innovation ecosystem that is agile, inclusive, and easy to navigate. Innovate UK uses its knowledge of innovation barriers and business opportunities to support the very best ideas through competition and independent assessment. This includes the use of trusted and well-proven tools, such as feasibility studies, collaborative research and development, SBRI, intellectual property policies, standards, Global Business Innovation Programme, Knowledge Transfer Partnerships, mission-based programmes, Analysis for Innovators, and Smart grants.

We also have wider capabilities that help businesses to access facilities, expertise and capital with Innovate UK Edge, our Knowledge Transfer Network and Catapults. We connect businesses to the partners, customers and investors, and our tools are known to bring in private money. For example, analysis of the Biomedical Catalyst found that £250 million of public money to 300 projects brought in more than £1.3 billion of new private investment through additional funding, licensing deals, or acquisition.

The Investment Readiness Programme and Showcase has supported UK companies focusing on health innovation to get investor ready and pitch their ideas to the private investment community. This provides an opportunity to secure the private investment needed to accelerate commercialisation delivering both economic and health benefits.

Innovate UK is part of UK Research and Innovation.

For more information:

**Telephone:** 01793 361000

**Email:** [support@innovateuk.ukri.org](mailto:support@innovateuk.ukri.org)

# Pitching Company Overviews

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## MiiCare

MiiCare is an AI-powered digital remote health monitoring and digital therapeutics platform, developed to bring longevity, quality of life and companionship to vulnerable older adults living alone at home.

We are a team of software developers, product engineers, data scientists and clinicians and we developed an AI-powered IoT home gateway, MiiCube, which integrates with an ecosystem of wireless sensors and telehealth devices to monitor the activity of daily living (ADL) and body vitals of an older adult. Similarly, our digital voice assistant, Monica, acts as a companion to address loneliness and provide social connectivity to their families and friends.

Our differential value proposition is characterised by our ability to monitor physical, physiological and psychosocial parameters which we use to create biomarkers and baselines for each user. We then use these biomarkers and baselines to personalise and recommend clinically validated cognitive behavioural therapies (CBT) via our in-home digital health coach and companion, "Monica".

Our solution is deployed across the NHS, local authorities and we raised £1.5m in funding already. We are now looking to raise an additional £2m in Q2 2022, as a bridge round. This will be used for marketing, inventory, boost sales and grow the business through international partnerships.

**Website:** <https://www.miicare.co.uk/>

**Presenter:** Ophir Levy, CTO

**Email:** ophir.levy@miicare.co.uk

# Nanoverv

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## Overview

Nanoverv is developing nanorobots to diagnose the world's deadliest diseases.

Starting with liver disease (but rolling out to other diseases and chronic conditions), we are building a technology that can detect trace amounts of DNA/RNA biomarkers circulating in a patient's bloodstream. Positioned in the rapidly growing Liquid Biopsy market, our product is accurate as PCR, but fast and simple as an antigen test.

## Technology

The nanorobot is a tiny molecular device made entirely of synthetic DNA. Our nanorobots are programmed to capture specific nucleic acid biomarkers and light up to signal a positive result. At scale, our nanorobots are 10x cheaper and 100x faster than current detection methods (qPCR/NGS) and can be used at the point-of-care. This is achieved through use of state-of-the-art DNA nanotechnology, whereby we create blood-based detection kits that work at room temperature, under robust enzyme-free conditions and with a simplified workflow. Nanoverv filed a patent application for the core technology (UK: P61343GB, international: P61343WO)

## Funding sought

We are seeking £5M to achieve next key milestones (regulatory approval, further IP protection, growing testing infrastructure, commercial and clinical goals).

**Website:** <https://www.nanoverv.co.uk>

**Presenter:** Jurek Kozyra, Founder CEO

**Email:** jurek@nanoverv.co.uk

# KOKU Health

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KOKU Health Ltd have an award winning, NHS approved, digital program which enables older adults to access tailored, evidence based, strength and balance exercises proven to reduce falls by a third. Our embedded behaviour change methods and user-friendly approach also helps older adults to be more aware of healthy ageing practices that maintain wellbeing and independence. We are seeking £1m investment to grow our team and to build on existing international opportunities.

## Benefits for Commissioners

- Trusted: approved by NHS Digital and ORCHA as compliant with data and safety standards.
- Scalable at population level due to low costs.
- Proven ROI for NHS, Local Authorities and other health providers - reducing falls, ambulance call outs, A&E assessments, hospital admissions & hip fracture surgery.
- Measure impact via simple, clear analytics dashboards for adherence, progress, falls and related injuries.
- Benefits for Users
- Developed WITH older adults FOR older adults - easy to use, safe and accessible and tested with people even into their 90's.
- Tailored exercises scientifically proven in UK and UK trials to maintain physical function, prevent falls & improve quality of life.
- Tested with people who have pre-frailty, frailty, multi-morbidities, pre and post foot surgery, cognitive impairment.

**Website:** <https://kokuhealth.com>

**Presenter:** Emma Stanmore, CEO

**Email:** emma.stanmore@manchester.ac.uk

# Spotlight Pathology

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Spotlight Pathology are developing decision support tools to make the diagnosis of blood cancers faster and more objective. Our team consist of experts in blood cancer diagnosis, computer vision and artificial intelligence.

A fast and accurate cancer diagnosis has been identified as one of the key routes to improve cancer outcomes by health services. However, pathology services are under increasing pressure due to rising demand and an acute staffing crisis, with 25% of pathologists nearing retirement and a shortage of trainees in the pipeline to replace them.

The current process for diagnosing blood cancer is time consuming and subjective, with pathologists having to manually assess the cellular content of biopsies. Spotlight's technology uses automated image analysis algorithms to give a quantitative assessment of patient biopsies to support pathologists to make a diagnosis.

Unlike other offerings on the market, our products will perform specific assessments for blood cancer diagnosis for direct use in the clinic. These tools will allow pathology departments to increase their diagnostic capacity. This will benefit patients through a faster turn-around time to receive a diagnosis and start treatment.

We are looking to raise £2m to support early clinical evidence to for regulatory approval and early adoption.

**Website:** <https://www.spotlightpathology.com>

**Presenter:** Martin Fergie, CEO

**Email:** martin.fergie@spotlightpathology.com

# Aelius Biotech

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At Aelius Biotech our mission is to provide innovative people and organisations with robust, usable data and expertise to drive development of the next generation of orally delivered products.

Our scientists use world leading gastrointestinal models and human trial expertise to help our customers make data-driven decisions

With our unique patented model of the human gastrointestinal tract, you can model digestion, mucus permeation and absorption in a single system giving deeper insight as to how products would perform in the human body. This technology can transform simple 2D cell cultures into a 3D system.

We have a strong growing customer base with many repeat customers, our cash flow is stable for the next 24 months through a mix of income from customers, grant funding and cash in the bank.

To grow our revenues, we are seeking £850k investment to; automate and increase throughput of our contract research services; allow us to licence our technology to large CROs and Pharma; and to help us productise our model of the human large intestine into a kit and consumable format. To learn more about Aelius Biotech and our future plans contact matthew.wilcox@aeliusbiotech.co.uk

**Website:** <https://aeliusbiotech.co.uk>

**Presenter:** Matt Wilcox, COO

**Email:** matthew.wilcox@newcastle.ac.uk

# Recourse AI

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Medical error and misdiagnosis kill 200,000 and 80,000 people annually costing providers \$20bn, while 3.8 million new healthcare workers need to be trained to fill roles in the US by 2024.

Founded by Scott Martin, qualified medical doctor and Maksim Belousov, PhD in Artificial Intelligence, Recourse are transforming patient care by unleashing healthcare workforce potential. Their conversational AI-powered “Medical Metaverse” uses Digital Human simulations to provide experiential training and autonomous assessment of traditionally difficult to teach communication and clinical decision making skills anytime, anywhere (via SaaS platform). With data-driven insights produced with each interaction, Recourse are creating a new paradigm in workforce development, accelerating learning curves remotely and at lower cost, whilst filling vacancies faster and reducing malpractice claims.

Recourse have already proven that their platform increases clinical performance, and have supported high profile customers including the NHS, global pharma, and top US universities. The team are now scaling rapidly into the \$94bn global medical education market, and have recently won £1m funding to further support the NHS, and are open to conversations with the right partner to fuel the next phase of growth.

**Website:** <https://www.recoursemedical.com>

**Presenter:** Scott Martin, CEO

**Email:** scott@recourseai.com

# Tutti Toot

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Tutti Toot Ltd is a new SME supported by the Cystic Fibrosis Trust, University College London, Imperial College, Royal Manchester Children's Hospital.

In 2021, we received NIHR i4i Connect award to develop the 'Tutti Toot Trumpet', a novel medical, musical airway clearance device for adults and children with respiratory diseases. Typical airway clearance treatment is laborious, on average, 200 exhalations are recommended daily.

The Tutti Toot Trumpet makes therapy fun, works similarly to Sony Play Station's 'Guitar Hero' and gamifies the experience to music.

The App collects lung performance data and compliance. Future plans will enable data sharing between clinicians and patients. LED traffic lights on the main body of the trumpet indicate optimum therapeutic breaths.

Children with cystic fibrosis tested the trumpet and said 'it's fun to use', 'clears mucus from their lungs', 'improved lung function tests'. Breath data analysed by Professor Eleanor Main, indicated it also reached effective pressures of Gold standard oscillating devices.

The Tutti Toot Trumpet has international patents and trademarks filed and registered.

Tutti Toot Ltd are looking to raise £5 million investment to support a feasibility study, 12 month clinical trial, to become a regulated UKCA and CE marked device, ready for market entry.

**Website:** <https://www.tuttitoot.com>

**Presenter:** Gayle Storey

**Email:** [gayle@tuttitoot.com](mailto:gayle@tuttitoot.com)

# QV Bioelectronics

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Brain tumours are a death sentence. Pharma and Biotech have failed to produce new treatment options for the most common primary brain tumour, glioblastoma, for over 20 years. This has left patients with just a 4% chance of surviving past 5 years.

However, one treatment, electric field therapy, has shown promise in treating glioblastoma. At specific frequencies, this therapy prevents cancer cell division without harming healthy brain tissue, extending patients' lives substantially. Unfortunately, the only existing treatment comes with a huge cost to patient quality of life.

At QV Bioelectronics, our first of its kind electric field therapy implant, GRACE, delivers therapy directly to the cancer resides using our cutting-edge gel electrode technology. Our multidisciplinary team, alongside some of the UK's leading neurosurgeons, have developed and integrated proprietary world leading technology into GRACE to maximise safety and efficacy.

Our vision is to become the world leader for this new type of cancer treatment, entering a global \$28Bn annual market.

We currently have an experimental prototype alongside proof-of-concept data. We aim to initiate 1st-in-human trials in 2024 and are raising £2M in a pre-series A round to complete device development and preclinical studies.

**Website:** <https://www.qvbio.co.uk>

**Presenter:** Qasim Akhtar, Head of Business Development

**Email:** qasim@qvbio.co.uk

# MetalloBio

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MetalloBio is a University of Sheffield spin-out company developing a novel antimicrobial platform technology. The platform technology has application potential as a systemic drug and an additive/coating in medical and non-medical materials.

The compounds that underpin the platform have a higher broad-spectrum activity than clinical antibiotics, a multi-modal mechanism of action, including a novel target, little-to-no-emergence of resistance and represent a new antimicrobial class. The novel chemistry exploits a radical new chemical space with a modular synthetic approach giving the capability to generate a library of these complexes. Additionally, the compounds can be incorporated into polymeric materials, and at loading levels as low as 1% exhibit complete antibiofilm activity against ESKAPE-relevant pathogens. This activity is fifteen times higher than market leading antimicrobial coating technologies.

MetalloBio has made excellent progress in the 12-months since incorporation. The team have just finalised an application-specific option to license agreement with a global top 10 materials company, offering option fee revenue and potential license fee revenue within 4-months.

The team are looking to raise £0.9-1.2m at pre-Series A to fund essential preclinical work packages both on the drug development (up to GLP-tox) and the development of the thin-film medical device coating (up to in vivo).

**Website:** <https://www.metallobio.com>

**Presenter:** Kirsty Smitten, CEO

**Email:** [kirsty.smitten@metallobio.com](mailto:kirsty.smitten@metallobio.com)

# Glycoscore DX

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One in eight men will be diagnosed with prostate cancer.

Founded in 2020, and spun out of Newcastle University in 2021, the mission of GlycoScoreDx is to translate over 10 years of academic research in prostate cancer (PCa).

The current route to PCa diagnosis relies on the PSA test which leads to both over- and under-diagnosis, and a high number of patients referred for prostate biopsies to rule out cancer. There is an urgent and unmet clinical need for a cost-effective diagnostic tool that can be applied at an early stage in the clinical pathway to enable doctors to identify clinically significant PCa without the need for invasive follow-up procedures.

The GlycoScore Prostate Cancer test is a simple, reliable blood test that detects a unique, patented combination of 3 biomarkers using an industry standard ELISA platform. Significant clinical sample testing has optimised our algorithm to deliver superior sensitivity and specificity over competitors: to support clinical decision making and reduce the number of men undergoing unnecessary biopsies.

Seed funding, and NIHR and Innovate Grants have supported product development. We are now seeking £2m to enable us to reach the key value-inflection point of submission for CE/CA marking by April 2023.

**Website:** <https://www.glycoscoredx.co.uk>

**Presenter:** Sarah Greenhalgh, Operations Director

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