

Showcase stands: Research

Robotics to mitigate against drug shortages

These projects have had EPSRC IAA funding

Vimal Dhokia, Uriel Martinez Hernandez, Lorenzo Giunta, Ulises Tronco Jurado and Christos Vasilakis

This work is being carried out in partnership with Royal United Hospitals Bath.

The objectives of the research are to develop automated compounding systems to synthesise oncology drugs on demand with reduced cost and waste, and to reduce reliance on fragile, long-distance supply chains by creating a robust, localised and automated compounding model for these types of drugs. The researchers will be showcasing the robotic systems they are developing to carry out the automated compounding along with network distribution models. The project uses advanced robotics, AI and modelling to improve the safety, speed, and efficiency of preparing intravenous medication.

Contact: <https://researchportal.bath.ac.uk/en/persons/vimal-dhokia/>

EnsiliTech

This project is EPSRC IAA funded.

Asel Saertbaeva, Aswin Doekhie

It is estimated that more than 25% of vaccines worldwide are wasted, largely due to failures in vaccine cold chain transport and storage. EnsiliTech is a University of Bath spinout biotechnology company that has developed Ensilication®, a patented, novel, and scalable technology that stabilises vaccines, antibodies, and other biological products within a silica shell to eliminate the need for cold-chain logistics, with the aim of reducing waste and ensuring vaccines reach communities that need them.

Find out more: <https://www.ensilitech.com/>

Contact: hello@ensilitech.com

Probiotic modified fabric for prevention of skin infections

This project is EPSRC IAA funded.

Toby Jenkins (not attending) and Naing Thet

Incontinence Associated Dermatitis (IAD) is skin damage caused by bacteria, yeasts and enzymes in contact with skin. In incontinent adults it can be very serious as IAD can lead to large scale skin and tissue breakdown in the peri-anal area, exacerbating other conditions such as pressure ulcers, and reduced mobility. This project team has developed a product technology called 'Probiosooth' – a low-cost, probiotic-coated, non-woven textile that is placed on the skin of incontinent people who use pads to prevent IAD.

Addressing food security

This project is ESRC funded.
Leda Blackwood.

The Food Access Toolkit is an interactive toolkit for policy and action on food insecurity. The toolkit highlights the complexities of food insecurity in different communities to prompt conversation, reflection and action by policy makers, community leaders and individuals. It is informed by partnership research by the University of Bath and Bath and North East Somerset Council, and was funded by an ESRC IAA grant.

One Health Water Epidemiology

Neil Byrnes, Tolulope Lawrence and Dalia Elabbadi
Barbara Kasprzyk-Hordern with local partners including Banes, Wessex Water

Water contains a complex mix of biomarkers, including toxic chemicals and pathogens. This provides a diagnostic medium for community health status assessment, giving detailed real-time, anonymous and low-cost information on population health and disease. This project works with regional and national stakeholders to provide a practical roadmap for a UK early-warning system platform. This platform will allow the testing of public health and environmental interventions focused on increasing community resilience to disease, pollution, and climate change impacts.

Stories Online For Autism

This project is EPSRC funded.
Mark Brosnan

Stories Online For Autism (SOFA) is an app that's been co-developed with the autistic and broader autism communities to support writing stories to support autistic children. This award-winning project has been recognised for its evidenced-based practice, and the app is available to users for free. There is an adult mode which supports parents and carers to write stories and assign these to a child. There are also pre-written stories that adults can use or adapt. The child mode allows an autistic child to access and read the stories that have been assigned to them. Story telling is shown to support autistic children in setting expectations before transitions or events, in achieving their daily objectives and in developing situational understanding so reducing anxiety. An adult version is now in development to enable autistic adults to support themselves through the process of storytelling.

Find out more: <https://www.bath.ac.uk/guides/download-and-get-started-with-the-stories-online-for-autism-sofa-app/>

Contact: <https://www.bath.ac.uk/profiles/head-of-department-of-psychology-mark-brosnan/>

Physical activity for older people in hospital

The minimum dose of strength exercise for older people in hospital
Oly Perkin and Max Davis
Current Medlock Fellow

This research aims to develop and understand the physiological mechanisms of practical, cost-effective, and implementable interventions to maintain and improve physical function in older adult patients during hospital stays and on return to the community. There is mounting evidence that even minimal 'doses' of simple, safe exercise 'snacks' can have enormous benefits for muscle strength and function, particularly in patients at risk of frailty associated with hospital admissions and longer length of hospital stay.

Mental Health Research Group

Harriet Rose, Pamela Jacobsen, Atiyya Nisar, Rosie McGiure and Tom Jenkins

The NIHR funded, Bath Mental Health Research Group (MHRG) aims to improve mental health and wellbeing in young people aged 12–25 across Bath, North-East Somerset, Swindon and Wiltshire. We will be launching and sharing our overall research group website which is now open to the public and gives an overview of each of the work areas in the Bath Mental Health Research Group. <https://bathmhr.org/> . We will offer people the chance to sign up to our mailing list for updates, invites and opportunities to get involved with our work going forward.

From our work focused on digital interventions with young people, we will be demonstrating our Digital Single Session Intervention (SSI), you can find out more about the SSI trials here:
<https://unlockwellbeing.org.uk/>

The team will present an interactive hot-cross bun formulation activity (with real hot cross buns too!) showing and demonstrating the psychological concepts and theories that underpin the SSI intervention we are trialling for young people.

Showcase stands: teaching

Team Bath Heart

Aksharaa Gupta, Alabama Cawley

Team Bath Heart (TBH) is a multidisciplinary student-led medical engineering team from the University of Bath. Their mission is driven by innovation and determination to improve the lives of patients who are waiting for heart transplants, with total artificial heart design. Inspired by the former success of TBH at the International Heart Hackathon, TBH-26 is a team of curious and hardworking students passionate about contributing to the cause of bridging the gap in total artificial heart technologies. They are excited to come back stronger at this year's competition, with a bigger and more diverse team of talented individuals working collectively to leave a mark in the medical field.

Team Bath Prosthetics

Louis Lear-Belch, Arunima Sanjay

Team Bath Prosthetics is a student-led engineering team developing advanced, user-centred upper-limb myoelectric prosthetics. Focused on restoring the sense of touch via haptic feedback, they aim to compete in the 2028 Cybathlon. The team includes students from engineering, science, health, and management disciplines. They will be showcasing their prosthetic arm.

Pharmacy teaching

Philip Rogers

Our MPharm course provides a science-based, clinically focused education aligned with the General Pharmaceutical Council's current standards, combining early and extensive clinical placements, interprofessional education, specialist simulation facilities, and opportunities for research and international placement experience. The Bath MPharm is delivered from both the Claverton Down campus and, since 2024, our facilities at the University of Plymouth. Our postgraduate Clinical Pharmacy Practice programmes, offer flexible, part-time, practice-based study for UK -based pharmacists, allowing learners to build advanced clinical, therapeutic, and professional skills through modular units, CPD options, and pathways leading to PgCert, PgDip, MSc, or Advanced Clinical Practitioner accreditation. Most recently we have launched our MSc in Clinical Pharmacy and Pharmacotherapy for overseas-based pharmacists, which is designed to be completed alongside a full or part-time clinical pharmacy role.

Our partners

Bath Royal Literary and Scientific Institute

Ian Gadd (Chair) and James Hamilton (General Manager)

The Bath Royal Literary and Scientific Society celebrated its 200-year anniversary in 2024, and has enjoyed a close relationship with the University for decades. The University of Bath has presence on the BRLSI board and the two organisations work together through many avenues, including the BRLSI's calendar of talks, family events and its work in preserving the academic history and cultural heritage of Bath.

Find out more at: <https://www.brlsi.org/>

Bath Digital Festival

Lucy Paine (Director)

The University has had a partnership with Bath Digital Festival since its inception in 2011. The festival showcases University of Bath research, and has held University of Bath keynote lectures, roundtable events, workshops and debates. Lucy works for the Festival, for the University's SETSquared, and for TechSpark South West. This year the Festival will take place from 19 - 21 May and the University is a proud sponsor. Come along this May to immerse yourself in a diverse lineup of interactive workshops, thought-provoking discussions, and engaging panels. Get hands-on with cutting-edge technologies, meet the brilliant minds shaping the future, and experience the energy of a true festival.

Find out more: <https://techspark.co/bdf/>

Bath Festivals

Caroline Ferguson, Richard Hall

This year the University is sponsoring Bath Festivals for the third year in a row, supporting the Bath Music Festival, Bath Literature Festival, and Bath Children's Literature Festival. These celebrations feature renowned authors, musicians, and community-focused performances, transforming the city into a vibrant cultural hub.

Find out more at: <https://bathfestivals.org.uk/the-bath-festival/about/>

Bath Community Wellbeing Hub

Bath Community Wellbeing Hub is overseen by Bath Council. It is a unique setting bringing together health, careers, financial and third sector services under one roof, reducing referral times and ensuring local residents can quickly access the full suite of wellbeing services they need. The Hub has been recognised as groundbreaking in its approach and highlights just one way in which Bath the city, as well as Bath the university, are aligned in their goals to support wellbeing innovation.

Find out more at: <https://communitywellbeinghub.co.uk/>