



Cambridge Academy
of Therapeutic Sciences



Accelerating Translation

Wellcome Translational Partnership Award 2018-2024

Foreword



The University of Cambridge has shaped the lives of millions worldwide. As a crucible of transformative ideas, innovative technologies and pioneering insights, it consistently redefines the way we live, learn and grow. With a firm commitment to excellence in research and scholarship, Cambridge ensures its discoveries contribute meaningfully to societal progress and wellbeing.

Home to the largest bioscience cluster outside the US and the third largest globally, Cambridge's unparalleled multidisciplinary research strengths position it as a global leader in advancing translational biomedical research and driving breakthrough innovations in health and medicine.

Through the Wellcome Translational Partnership Award (TPA), Cambridge has significantly enhanced its ability to translate research into real-world impact. The TPA has sparked early-stage partnerships between academia, industry, engineering and clinical medicine, enabling important advancements in therapeutics, diagnostics and medical technologies. A key achievement has been the introduction of a proof-of-concept funding scheme and access to expert resources, empowering researchers to pursue interdisciplinary projects that deliver tangible benefits for society.

The TPA aligns seamlessly with the University's broader innovation strategy and vision, serving as a vital mechanism to ensure pioneering discoveries are translated into solutions with both local and global impact. The TPA's legacy is evident in its substantial influence on Cambridge's research ecosystem. By developing a culture of innovation, it has enabled researchers to turn discoveries into practical solutions, addressing pressing challenges in healthcare. Beyond this, the TPA has established a sustainable framework for interdisciplinary collaboration, laying the foundation for future generations of researchers to thrive.

In my role as TPA grant holder and Pro-Vice-Chancellor of Innovation, I have had the privilege to witness this transformation firsthand. I extend my heartfelt gratitude to my predecessor Professor Andy Neely, and to Professor Anne Willis, Professor Itzhaki and the Cambridge Academy of Therapeutic Sciences team for their exceptional leadership and dedication in strengthening the translational pipeline and delivering the TPA's vision.

Looking ahead, I am confident that the TPA's impact will resonate for many years to come. It is inspiring to envision the progress of the projects it has nurtured and the opportunities to build upon its legacy, amplifying its contribution to innovation, translational research and societal impact.

A handwritten signature in black ink that reads "Dr. Diarmuid O'Brien". The signature is fluid and cursive, with a slightly larger "D" and "O" at the beginning.

Dr Diarmuid O'Brien
Pro-Vice-Chancellor for Innovation



The Wellcome Translational Partnership Award (TPA) at the University of Cambridge has been a remarkable catalyst for innovation, creating a culture where pioneering ideas are translated into practical solutions for today's challenges. The TPA has been transformative, leaving an enduring legacy for the University and our research community.



One of the greatest successes of the TPA has been the empowerment of early-career researchers. By providing access to expert guidance, resources and strategic support, the TPA has enabled these researchers to design and execute impactful translational strategies, ensuring their cutting-edge discoveries have a pathway to real-world applications. This focus on nurturing early talent has created a ripple effect, enriching the researchers' careers and also strengthening the broader ecosystem of innovation at Cambridge.

The success of the TPA is exemplified by the fact that over 90 projects – the majority of them interdisciplinary – have been supported, demonstrating the power of collaboration across disciplines to address complex challenges. Remarkably, these projects have delivered an impressive nine-fold return, progressing to advanced translational grants that have further fuelled their development. This exceptional output in such a short time, underscores the role of the TPA as a cornerstone of Cambridge's translational research strategy.

As we reflect on the remarkable achievements of the TPA, it is important to celebrate the collective efforts of the researchers, experts and leaders who have contributed to its success. We extend our congratulations and gratitude to all those involved with the TPA and who have made it a success and the Cambridge Academy of Therapeutic Sciences team for their unwavering dedication to delivering the vision of the TPA.

Prof Anne Willis
Director, MRC Toxicology Unit

Prof Laura Itzhaki
Head of Department of Pharmacology

Co-applicants Wellcome Translational Partnership Award (2021-2024)
Co-Directors Cambridge Academy of Therapeutic Sciences

About CATS



The Cambridge Academy of Therapeutic Sciences (CATS) serves as a pivotal hub dedicated to fostering the development of new therapeutics and nurturing the next generation of leading researchers.

Established by the University of Cambridge as an Interdisciplinary Research Centre (IRC), CATS break down conventional barriers between disciplines, unites academia and industry, driving collaborative efforts to catalyse the translation of therapeutic research into tangible treatments.

CATS has played a central role in engaging with the Wellcome Trust and successfully lead the Wellcome Translational Partnership Award (TPA) for the University of Cambridge. CATS acts as a gateway to early stage therapeutics and medical technology projects. This report highlights the breadth and diversity of research supported by the TPA, showcasing the significant accomplishments achieved under its framework.

These achievements would not have been possible without the contributions of the CATS TPA team, who have worked tirelessly to promote the translation of early-stage therapeutic and medical technology projects across the university, ensuring they progress in their translational journey and that they are well-supported within the wider innovation ecosystem.

Let's talk

Building on the legacy of the TPA, we offer support programs to empower researchers embarking on their journey into translation. Whether you need guidance on a translational research grant, want advice from an Industry Expert in Residence, are looking for a Translation Champion in your department, or need assistance navigating funding opportunities – get in touch with us today!



Meghana Patel
CATS Executive Manager



Juraj Rievaj
Senior Research Facilitator



Caroline Reynolds
Senior Research Facilitator



Keyuri Mehta
Administrator

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Powering Translational Research at the University of Cambridge

In 2018, the University of Cambridge was awarded the prestigious **Wellcome Translational Partnership Award (TPA)**, marking a significant step in advancing translational research. This award is designed to support the application of scientific discoveries to the prevention and treatment of human diseases.

Translational research is the process of applying ideas, insights and discoveries generated through basic scientific inquiry to the treatment or prevention of human disease. The concept of bench to bedside underpins translational medicine, i.e. from basic research to patient care.

The TPA aims to stimulate a pipeline of translatable ideas across a wide range of research disciplines within the university. By building early-stage collaborative partnerships between academia, industry and clinical medicine, the award seeks to bridge the gap between discovery science and the translational phase of research, ensuring that pioneering scientific discoveries can be developed into tangible medical applications.

Initially, the award focussed on chemical biology and supported researchers funded by the Wellcome Trust. However, in 2021, the scope of the award expanded, enabling a broader range of researchers beyond Wellcome Trust-funded individuals to benefit from its support.

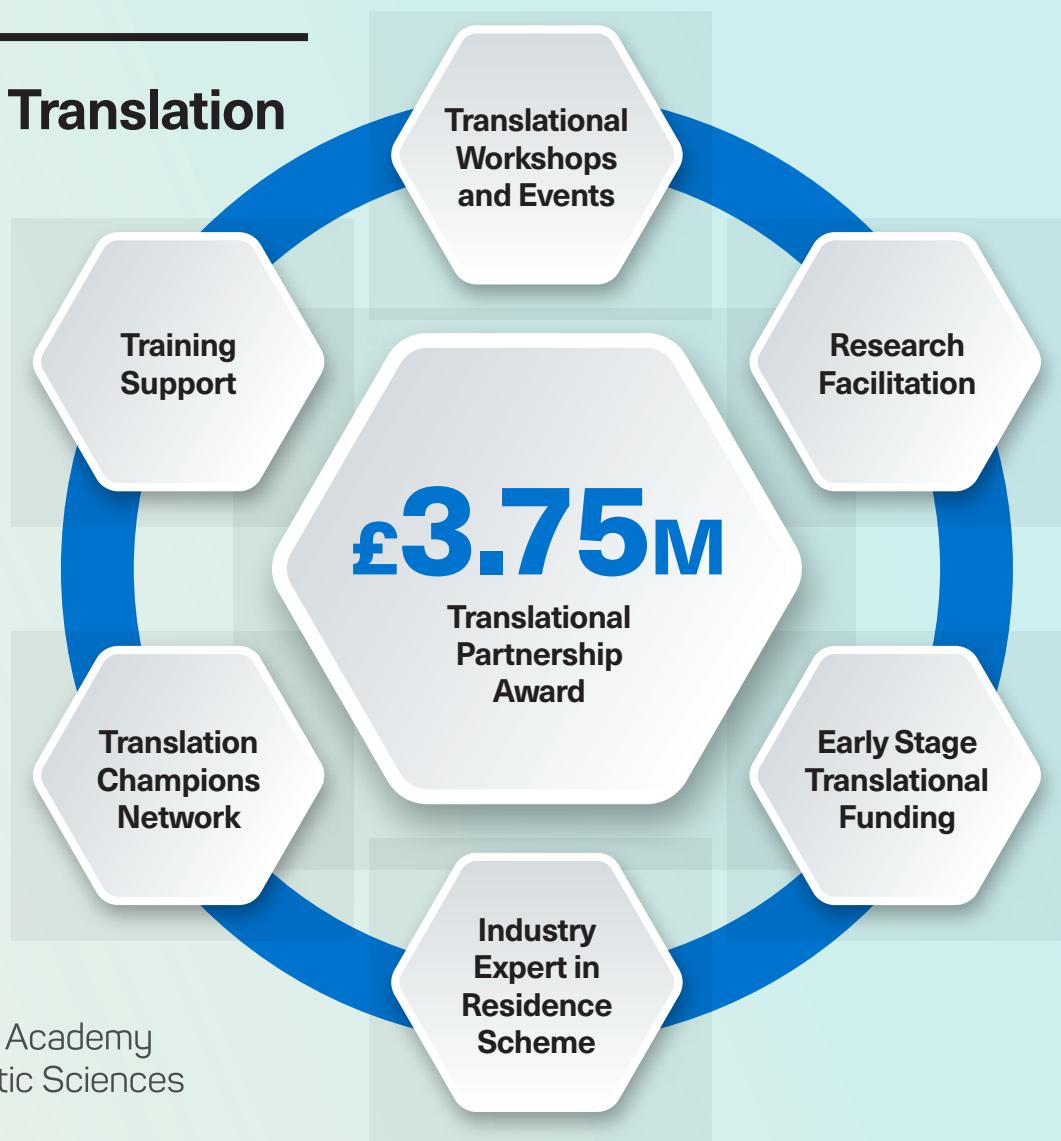
Renewed funding for an additional three years allowed researchers to explore and realise the translational potential of their work, encouraging the integration of basic scientific research with clinical and industry applications.

The Wellcome TPA has played an important role in enabling the University of Cambridge to develop a culture of translation to accelerate the journey from laboratory discoveries to life-saving treatments. This includes establishment of 19 Translation Champions across the university and support for Early Career Researchers (ECRs).

A Gateway to Translation



Cambridge Academy
of Therapeutic Sciences



Developing Concept Fund (DCF)

Flagship funding of up to £50,000 for nine-month projects aimed at progressing basic research along the translational pipeline. ECRs who have not previously held independent funding are invited to apply with a Principal Investigator (PI) and manage the DCF as a training exercise, taking responsibility for day-to-day project management.

Future of Therapeutics (FoT)

Funding allocated to support knowledge exchange activities and non-wet lab work that aligns with the Wellcome's key priorities.

Departmental Translational Award (DTA)

Funding of up to £20,000 for departments or institutes to develop a translational strategy or to support events that encourage a translational culture and industry engagement.

Access to Expertise (AtE)

Funding of up to £20,000 to access expertise beyond the university to support translational projects and remove barriers to translation. Examples include regulatory support, business plan development or market analysis.

Revolutionising Hip Replacement Surgery



“The Wellcome Trust AtE funding helped in accessing external expertise for market analysis and regulatory advice which was really useful in shaping the overall commercialisation strategy and for strengthening our ability to attract funding to take the concept forward. It has been very rewarding working with a dedicated team to develop our novel force sensing technology and to be part of the journey from lab to clinic.”

– Professor Sohini Kar-Narayan

A new tool developed by **Professor Sohini Kar-Narayan** along with a team of experts could revolutionise hip replacement surgery. Working with **Mr Vikas Khanduja**, a consultant orthopaedic surgeon at Addenbrooke's Hospital, this innovation has the potential to transform the way surgeons approach total hip replacements – one of the most common procedures in healthcare.

The novel surgical aid driving this breakthrough – the “smart” joint “trial liner” – is equipped with sensors that measure the forces passing through the hip joint. These sensors provide real-time data, allowing surgeons to assess and balance the soft tissues during the operation, leading to more accurate positioning of the hip implant. The potential impact of this device is huge, promising greater precision during surgery and improved outcomes for patients.

A Growing Need for Innovation

Globally, over two million total hip replacements are performed each year, with this number steadily increasing as people live longer, more active lives. And it is not only the ageing population driving this surge – more young people are now requiring hip replacements, presenting new challenges. These younger patients need implants that can endure higher levels of stress for longer, reducing the likelihood of wear and the need for repeat surgeries later in life. Innovation in this space is not just desirable – it is crucial.

Professor Kar-Narayan's team has already made significant progress. They have developed a prototype of the device, which has been successfully validated in the laboratory, with academic papers (and a patent application) published describing the sensor technology and its integration in the smart liner. The prototype is now undergoing further improvements, following which the next step is translating this innovation from the lab to clinical settings, where it can start making a difference to patients in the real world.

From Prototype to Practice

The journey from prototype to practice is not without its challenges, but thanks to the support of the **Access to Expertise** funding programme, the team is well on its way. This vital funding has enabled the team to secure external expertise, preparing the groundwork to guide the prototype through the complex regulatory processes required for medical devices.

Specifically, the funding has supported the development of a comprehensive regulatory strategy and the planning of necessary quality management systems. These are essential steps, not only to prepare the device for clinical testing but also to ensure its long-term success. This regulatory-focussed work has been critical in securing further funding including £1.4 million for an NIHR Invention 4 Innovation (i4i) Product Development Award to progress to the pre-verification testing stage of product development. This builds on support of over £500,000 from UKRI and ERC. The team has incorporated ArtioSense Ltd as the potential commercialisation vehicle for this technology, which is being driven by the technology's co-inventor, biophysicist and entrepreneur **Dr Jehangir Cama**, and which also includes translational expert **Dr Alex Samoshkin**.

A New Standard in Precision and Patient Care

The potential of this device goes beyond technical advancement – it represents a shift towards more tailored, data-driven care for patients undergoing hip replacements. By providing surgeons with real-time feedback on the forces acting on the hip joint, this technology could reduce complications, shorten recovery times and help ensure that patients – young and old – receive a more durable and long-lasting implant.

For the millions of people undergoing hip replacement surgery each year, the future may hold less pain, quicker recovery and fewer repeat procedures, all thanks to a device born in the labs of Cambridge and now set to transform lives around the world.

*Kar-Narayan Lab: www.kar-narayan.msm.cam.ac.uk
Artiosense: artiosense.co.uk*

Image: Dr Alex Samoshkin, Prof Sohini Kar-Narayan , Mr Vikas Khanduja, and Dr Jehangir Cama

Turning Scientific Discovery into Life-Changing Solutions

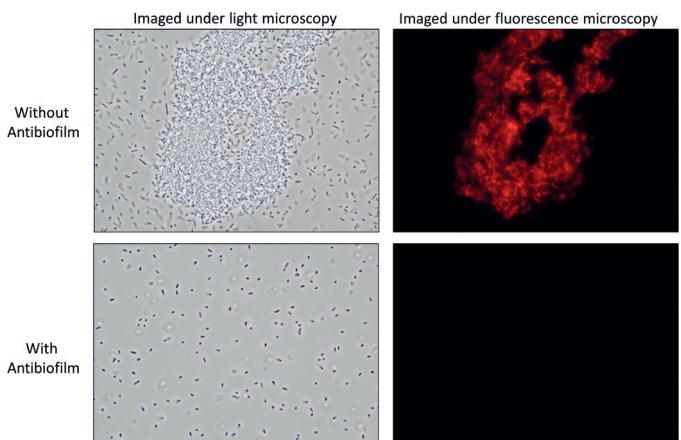
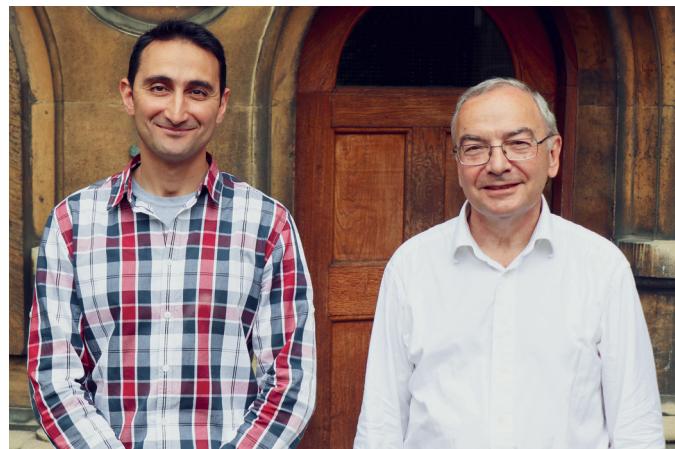
Steady Progress Towards Disrupting Bacterial Biofilms

With bacterial resistance to antibiotics on the rise, the medical community faces an urgent challenge. Among the culprits are bacterial biofilms, which shield bacteria from antibiotic penetration, and a sub-population of “persisters” – bacteria that survive by entering a semi-dormant state. However, researchers from the Department of Genetics are taking significant steps towards disrupting these defences.

Dr David Summers and **Dr Ashraf Zarkan’s** initial breakthrough came in 2017 when they identified an enzyme that controls this form of bacterial defence. An MRC Proximity to Discover Award then enabled their discovery of a set of specific inhibitors of this enzyme, facilitating the acquisition of a £500,000 grant in 2019 from Innovate UK to perform extensive screening and identify multiple classes of inhibitors. Further support from the **Wellcome Developing Concept Fund (DCF)** in 2020 helped them refine potential drug candidates. Additional funding, including a £30,000 Isaac Newton Trust Award and an £50,000 MRC Confidence in Concept Award, and a £30,000 Confidence in Concept follow-on award allowed for crucial toxicity and expansion studies.

Building on this momentum, Dr Zarkan joined Innovate UK’s ICURe programme along with the Founders at the University of Cambridge Programme, and **BioTryp Therapeutics** was born. This promising spin-out received £300,000 in pre-seed funding this year, advancing a potentially transformational antimicrobial technology poised to make an impact on global health.

biotryp.com



Images (top): Dr Ashraf Zarkan and Dr David Summers; (bottom): Biofilm inhibition using one of the antibiofilm drugs developed by Drs Summers and Zarkan. Visualisation of uropathogenic *E. coli* bacterial cells carrying a fluorescent biofilm reporter after 24 hours growth, without (top panel) and with (bottom panel) an antibiofilm drug, imaged by light (left panel) and fluorescence (right panel) microscopy.

Targeting Common Weak Points Across Cancer Types, One Step at a Time

Some proteins, overexpressed in various cancers but absent in healthy tissue, offer promising targets for developing safer, more effective anticancer drugs. Recognising this potential, **Professor Marko Hyvönen** from the Department of Biochemistry, along with collaborators **Professor David Spring** from the Yusuf Hamied Department of Chemistry and **Dr Ross Chapman** from the University of Oxford, identified a critical binding site on one such protein. This discovery marked the start of their journey to develop targeted inhibitors.

The team's work was catalysed by a **DCF** award in 2021, with additional funding support from a £50,000 Rosetrees Trust award, £10,000 from internal resources, and £20,000 **DCF Follow-on funding**. These grants enabled them to produce the target protein and conduct fragment-based screening, yielding several promising leads. Apollo Therapeutics has invested £750,000 across the University to support chemistry and screening on this project with plans to spend a further £2 million in 2025. This collaborative effort moves the team closer to breakthrough treatments targeting cancer at its common molecular roots.

hyvonen.bioc.cam.ac.uk

Bringing Potassium Monitoring to Patients' Fingertips

For patients with kidney failure, maintaining normal blood potassium levels is critical for heart and organ health. However, monitoring potassium levels independently has been impossible – until now.

Professor Fiona Karet from the Cambridge Institute for Medical Research set out to develop a personal monitor that could accurately measure electrolyte levels from a single drop of blood.

Supported by a £114,000 grant from Kidney Research and £30,000 from a **DCF** award in 2018, Professor Karet's team focused on minimising the blood volume required for reliable potassium readings. This breakthrough enabled a patent application and led to the founding of **Kalium Health Ltd**, a spin-out committed to making potassium monitoring accessible to patients.

Kalium Health has since attracted over £1 million in seed funding and is steadily advancing towards creating practical, patient-friendly potassium sensors. This innovative approach promises to empower patients with potassium problems to monitor their potassium levels anytime, anywhere – transforming daily management and potentially saving lives.



kaliumhealth.com

Turning Scientific Discovery into Life-Changing Solutions

Where Games Meet Diagnostics



Image: Screenshot from FarmApp

Dr Kate Baker and her team at the MRC Cognition and Brain Sciences Unit have developed **FarmApp**, an innovative game-based tablet app tailored to assess cognitive abilities in children with ADHD and Intellectual Disabilities (ID). Traditional assessments often fall short for these children, who struggle with complex, fast-paced tasks. FarmApp is different – it adapts to each child's responses in a fun, engaging format, allowing accurate assessments in a home setting. With **Access to Expertise** funding, the team optimised their prototype for GDPR compliance and clinical use, and it's now undergoing testing to help personalise ADHD care for children with ID.

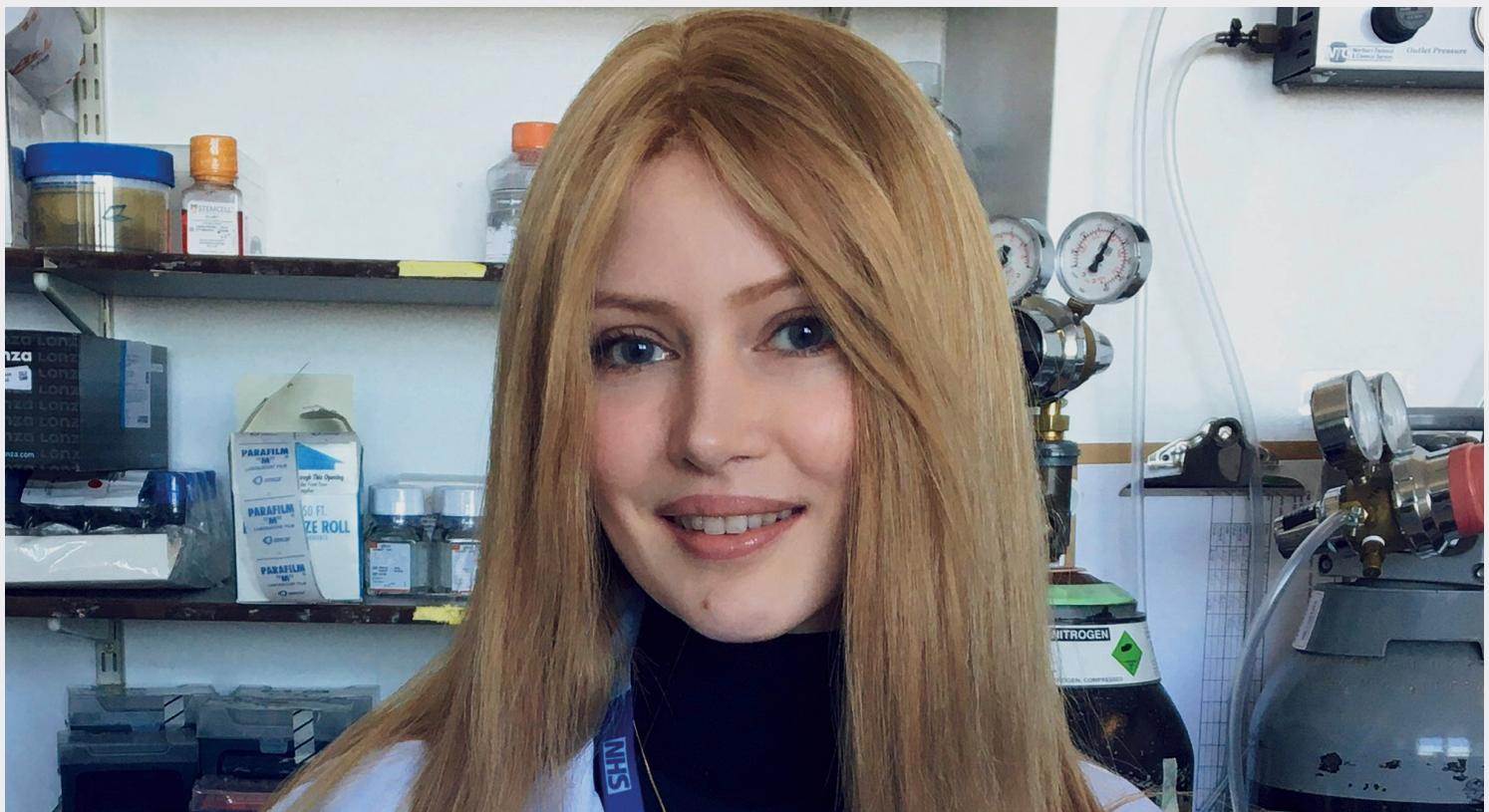
www.mrc-cbu.cam.ac.uk/people/kate.baker

Improving Colorectal Cancer Treatment with Antibody-Drug Conjugates

Antibody-drug conjugates (ADCs) offer promising treatments for various cancers, though colorectal cancer (CRC) remains a challenge. **Dr Marc de la Roche**, from the Department of Biochemistry, developed a novel antibody targeting CRC with minimal impact on healthy tissue. Working with **Professor David Spring**, who contributed innovative linker technology, and **Dr Maike de la Roche** of the CRUK Cambridge Institute, they synthesised novel ADCs which proved to be effective against CRC *in vitro* and *in vivo*. Supported by the 2023 **DCF** and guidance from the **Experts in Residence** programme (including Dr Jeremy Griggs, Dr Nicola Wallis and Dr Tom Oakley), the team is preparing for further studies to develop a robust preclinical data package.

www.bioc.cam.ac.uk/research/delaroche

Pioneering Progress in Neurological Therapeutics



“While there is still much more we can do to de-risk proposals to the stage that would be of interest to larger funds, the translational funding we have received so far has been crucial in allowing us to validate the astrocytic network as a viable therapeutic target. It encourages researchers to explore the ‘boring’ parts of translational science such as brain penetrance of a drug. That early-career researchers like myself can lead these grant applications is of great help both administratively and conceptually as recognition of our intellectual input.” – Dr Nataly Hastings

Pioneering Progress in Neurological Therapeutics

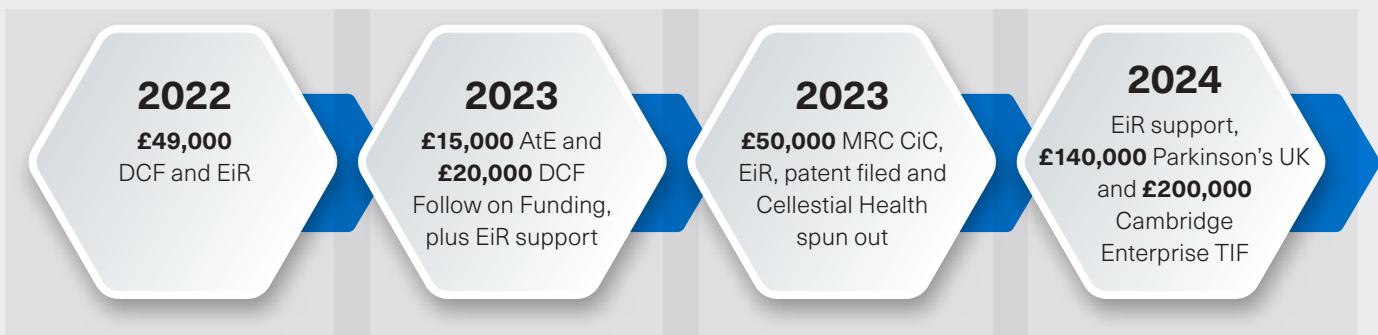
Dr Nataly Hastings, a postdoctoral researcher and founder of a spin-out company, **Celestial Health**, is leading transformational neurological work focussing on translating academic discoveries into tangible healthcare solutions.

Initially envisioning a career as a patient-facing physician, Dr Hastings was disheartened by the limited, non-disease modifying options available to patients suffering from conditions like Parkinson's disease. This frustration led her to ask, why can't we do more? Driven by this question, she began to explore underappreciated mechanisms and cell types in the brain.

Today, Dr Hastings is at the forefront of research into the role of brain cells called astrocytes in brain disease, investigating the hypothesis that astrocytic network dysfunction plays a critical role in Parkinson's disease and could serve as a target for treatments. Her work is powered by pre-seed translational funding from organisations like Addenbrooke's Charitable Trust, Parkinson's UK, Cambridge Enterprise and Wellcome Trust. Programmes such as **Wellcome Developing Concept Fund (DCF)** and MRC Impact Acceleration Award Confidence in Concept (CiC) made her research possible by supporting exploratory studies of translational aspects including formulation and biodistribution – areas often overlooked by traditional research grants.

"These grants are vital for enabling high-impact translational research, but they could go even further," Dr Hastings explains. "We often have to juggle numerous applications to secure enough funding and gaps mean that early career researchers get discouraged, distracted with other responsibilities, or the project may lose relevance due to competition. Funding could be tranches to align with de-risking steps, but it's important for academic institutions and funders to understand the need for us to move quickly. Speed is not about convenience, but is existential in our field."

The funding and support secured by Dr Hastings enabled the development of small-molecule drugs targeting astrocytic networks. Unlike research projects that stall due to a lack of application, Celestial Health aims to create treatments that are both accessible and scalable within standard healthcare systems. This patient-centred focus ensures that Dr Hastings' research doesn't stay confined to the lab but instead advances toward therapies.



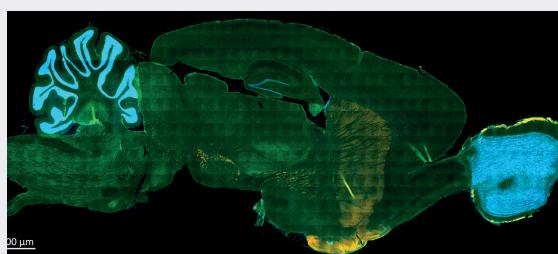
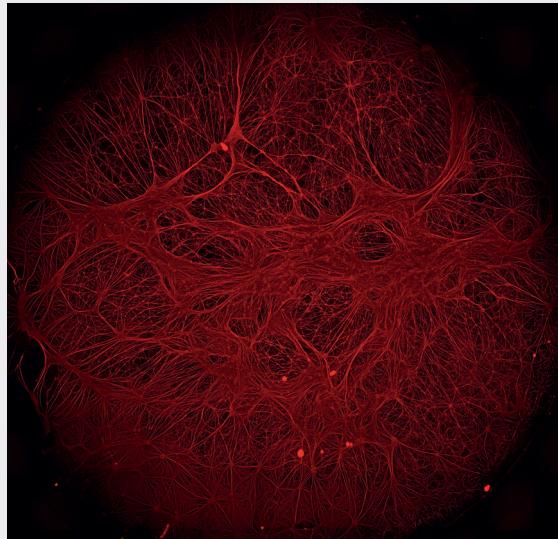
A summary of the support provided through the Wellcome TPA and beyond

Proof-of-concept data obtained by Celstial ensures continuity from models to patients, which is attractive to investors and larger pharmaceutical companies. With preliminary support from DCF and CIC funding Dr Hastings has refined her approach, producing promising data on the viability of astrocytic-targeted therapies. Such evidence is crucial for gaining interest of venture capitalists (VCs) and other funding bodies to support subsequent advanced efficacy and preclinical safety studies. "Translational funding enables us to move from a hypothesis to a validation of whether it can be tested in real life," she adds.

Perhaps the biggest achievement in Dr Hastings' project, supported by CATS with advice from **Experts in Residence** including Professor Thompson (formulation) and Dr Perrior (medchem and pharmacology), was the successful demonstration that the selected drug crosses the blood-brain barrier and engages the target mechanism at appropriate dosages. This finding, while not a discovery of new treatment effects or disease mechanisms, represents a critical milestone. The confirmation that the drug reaches the brain and engages astrocytes as expected provides a data-driven foundation for the next stages of research. With this result, Dr Hastings' team could proceed to more costly preclinical trials with confidence, knowing that any future efficacy results will not be compromised by dosing inaccuracies.

Celstial Health is now uniquely positioned to expand these foundational studies, aiming to bring new treatments to clinical trials within five years. Dr Hastings sees her therapies being offered at the point of diagnosis with Parkinson's to stop the disease from getting worse and preserve quality of life as well as avoid the need for harsher symptom-facing treatments for longer. Her research doesn't just push scientific boundaries – it also directly addresses clinical challenges, bringing hope to millions of patients with limited treatment options. This is the power of translational science.

celstialhealth.com



Images (Top to bottom): An overview of a coverslip with a network of brain cells which are used to model behaviours relevant to the cell behaviour in the brain.

Dopaminergic system in the rat brain. Orange staining shows regions rich in dopamine-producing cells, which become damaged in Parkinson's.

Boosting Collaboration in Stem Cell Technology and Innovation



“I am delighted that CATS was keen to support our vision to enhance engagement between stem cell researchers across the Cambridge ecosystem, spanning academia, pharma and biotech. More than two years in, SCI-TIF is already proving to be valuable in several ways, including joint projects, students and grant applications.”

– Professor Bertie Gottgens, Director of the Cambridge Stem Cell Institute

Dr Alice Sorrell, Knowledge Exchange Manager at Cambridge Stem Cell Institute addressing the attendees of the Technology & Innovation Forum

The **Cambridge Stem Cell Institute (CSCI)** is a world-renowned centre for stem cell research, driven by its mission to transform human health. However, it was recognised that limited interaction with industry partners represented an untapped opportunity for collaboration and advancement. To address this gap, the Institute sought to create new avenues for partnership between academia and industry, particularly for those working at the cutting edge of stem cell research and technology.

With the support of **Departmental Translational Award Funding (DTA)**, the Institute undertook an ambitious project to strengthen these vital connections. The funding kick-started the development of a bespoke programme aimed at creating partnership and translational opportunities for scientists interested in the application of stem cell research in technological innovation. The result was the launch of the Stem Cell Institute Technology and Innovation Forum (SCI-TIF) in November 2022.

The inaugural event brought together academic researchers and industry representatives, marking the beginning of what has since become an invaluable platform for collaboration. Since its inception, **11 companies** have subscribed to the SCI-TIF.

Building Bridges Between Academia and Industry

The SCI-TIF is much more than a membership programme. It offers a rare yet essential opportunity for scientists from both industry and academia to come together, share their expertise and explore the potential of stem cells in technological applications. Through a carefully structured framework, it promotes interactions that can lead to groundbreaking collaborative projects.

What makes SCI-TIF unique is its multifaceted approach to building these connections. It provides opportunity for idea exchange and potential collaboration.

The Future of Collaboration

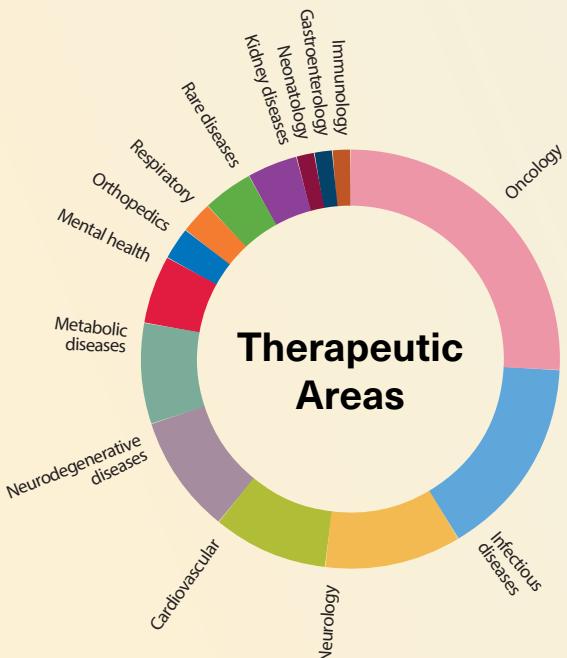
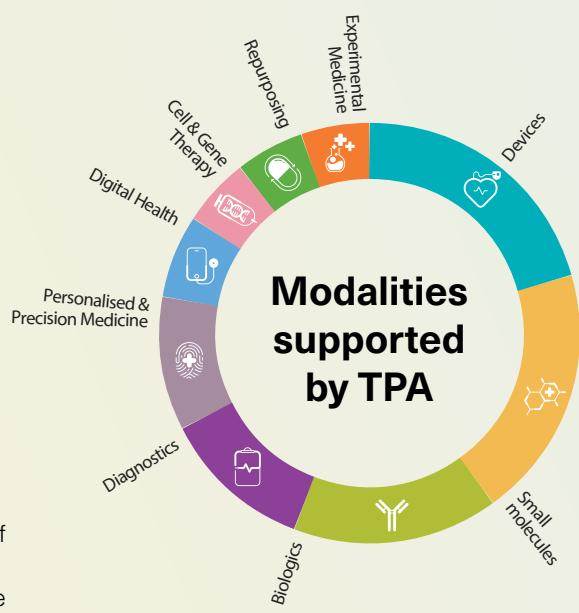
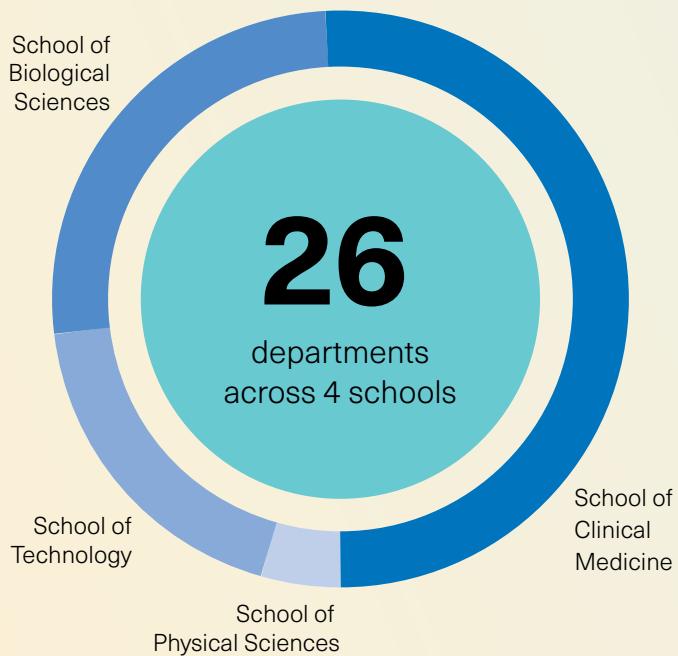
Through the creation of the SCI-TIF, CSCI has created a powerful and sustainable platform that encourages meaningful interaction between academia and industry. By providing a dedicated space for collaboration, the programme is not only helping to bridge the gap between research and real-world application but also paving the way for the next wave of innovation in stem cell technology.

As the forum continues to grow, it promises to open up further potential for transformative partnerships, benefitting both sectors and ultimately contributing to the advancement of human health. Through initiatives like SCI-TIF, the Cambridge Stem Cell Institute is reinforcing its position as a leader in the field while ensuring that the future of stem cell research is collaborative, innovative and focussed on real-world impact.

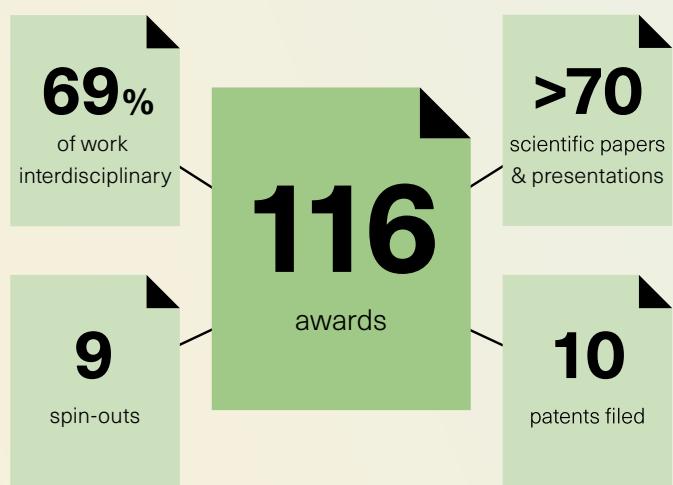
“The SCI-TIF, an initiative by the CSCI, has significantly enriched the stem cell scientific community in the Cambridge area. It has created a unique and vibrant forum for meaningful exchanges on cutting-edge stem cell science and innovation, fostering ambitious ideas and facilitating effective exploration of collaborative opportunities. Additionally, the SCI-TIF provides PhD students and early-stage researchers at the CSCI with regular opportunities to connect with industry stakeholders in an informal setting, broadening their career perspectives throughout their journey in stem cell science,” says Dr Thomas Moreau, Vice President of Precision Reprogramming Research, bit.bio, SCI-TIF member.

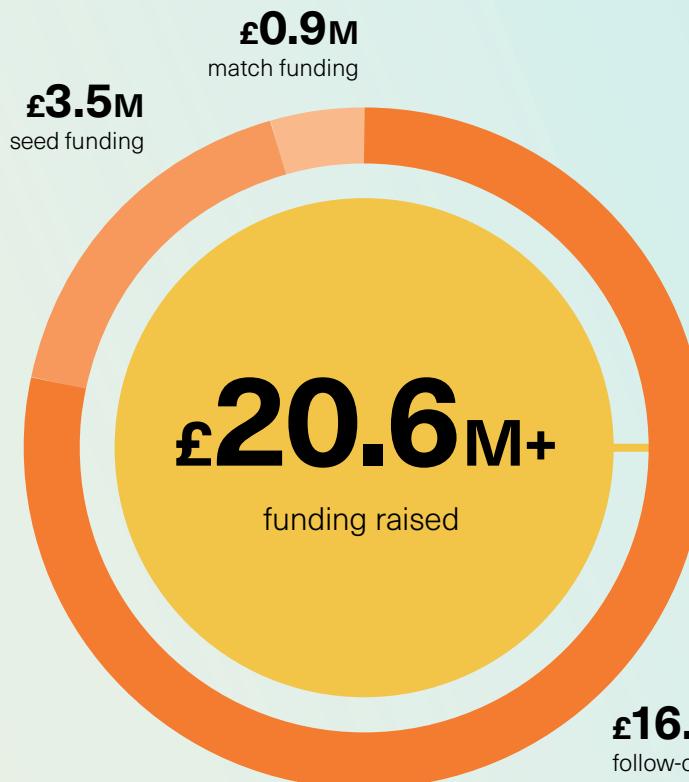
www.stemcells.cam.ac.uk/research/sci-tif-technology-innovation-forum

Translational Partnership Award 2018-2024



Expanding portfolio





For every £1 awarded, £9 was subsequently secured

1000+
researchers engaged with TPA

>250
researchers supported with training

>750
meetings with Research Facilitators

11
Industry collaboration projects

432
meetings with EiR

>40
ECR funded as co-applicants

>60
external consultancies engaged

>80
events

19
Translation Champions

8
Industry Experts in Residence

Dragons' Den Meets Pharmacology

In a creative push to bridge the sometimes stubborn academia-industry divide, **Professor Mark Howarth**, the newly appointed Translation Champion for the **Department of Pharmacology**, saw a unique opportunity. While the department already offered valuable studentship programmes, Professor Howarth recognised that a deeper, culture-building effort was needed to encourage collaboration and entrepreneurial mindsets among researchers and graduate students alike.

Thanks to a **Departmental Translation Award**, Professor Howarth spearheaded two pivotal events: a **Spin-out Development** event and an **Industry Engagement Day**. These initiatives aimed not only to enhance industry partnerships but also to instil an entrepreneurial spark among the department's emerging scientists.

The Spin-out Development event unfolded like a real-life 'Dragons' Den'. Professor Howarth introduced participants to the essentials of Intellectual Property (IP) and the art of crafting a compelling pitch deck – two crucial components for anyone considering spinning out a company. Working in teams, third-year PhD students and postdoctoral researchers developed hypothetical start-ups, formulating business proposals and pitching them to an audience that doubled as an investor panel. Representatives from CATS and Cambridge Enterprise were in the audience, evaluating the pitches with both encouragement and constructive feedback.

The teams presented innovative ideas, building their cases and fielding questions from "investors" who were simultaneously learning the nuances of venture pitching and the specific criteria that investors look for in early-stage ventures. By the end of the event, a winning proposal was crowned, and more importantly, a fresh enthusiasm for entrepreneurship was sparked across the department.

Following this success, the Industry Engagement Day in March 2023 attracted a diverse group of 16 industry leaders representing 11 companies with 20 academic researchers, all keen to explore potential collaboration. Through high-level presentations and roundtable discussions, the attendees – from academia and industry – exchanged ideas on the future of pharmacology, identifying areas where their work could intersect to drive meaningful progress. This dialogue has led to several exciting outcomes, including an iCASE studentship, an

industry-led seminar for group leaders to deepen collaboration, and new conversations with companies to explore further partnerships. Plans are already in place to replicate the event in 2026 – a testament to its success in sparking collaboration.

The impact of these initiatives has already been transformative. Since the events, the department has seen a marked increase in translational activities, including the formation of two promising spin-outs:

- **IntercepTx**, led by PhD student **Austin Reed** and **Professor Walid Khaled**, is dedicated to developing interventions against pre-cancer. Austin's participation in the prestigious Ignite programme at the Judge Business School was made possible by a scholarship from the TPA, further developing his entrepreneurial skills.
- **Gastrobody Therapeutics**, co-founded by **Dr Ana Rossi**, a senior postdoctoral scientist, and **Professor Howarth**, focusses on pioneering antibody-like scaffolds for gastrointestinal therapies, promising new treatment avenues for a range of conditions.

"Pitching a company idea is a fun way to gain skills, think about your science in a different way, and gain confidence that the dreams of bringing your ideas to reality are not so distant after all," says Professor Howarth.

By encouraging an entrepreneurial spirit and creating robust industry connections, Professor Howarth's efforts are steering the Department of Pharmacology toward a future where translational impact is at the heart of its mission. This journey from lab bench to industry – from ideas to impactful innovations – has only just begun.



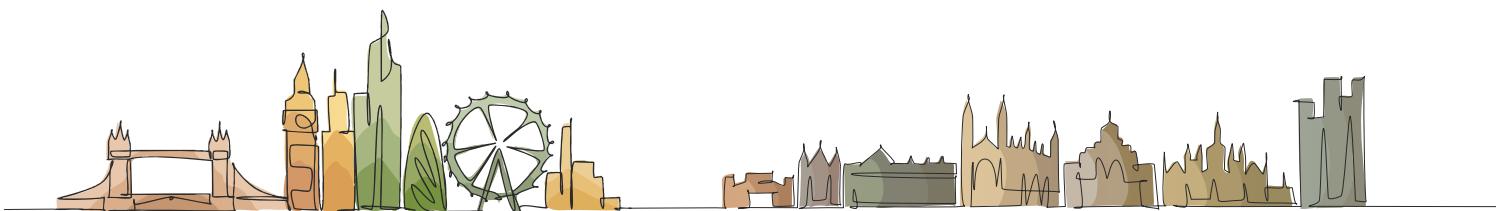
“Pitching a company idea is a fun way to gain skills, think about your science in a different way, and gain confidence that the dreams of bringing your ideas to reality are not so distant after all.” – Professor Mark Howarth



Professor Mark Howarth, Translation Champion for Pharmacology presenting to participants in the Dragons Den

Creating an Innovation Diamond

In July 2023, the **Wellcome Translational Partnership Network** convened in Birmingham, gathering representatives from the teams responsible for managing the Translational Partnership Award (TPA) funding from 21 leading UK universities, including Leeds, Liverpool, Birmingham, Oxford, Glasgow, UCL, Manchester and Cambridge. At the heart of these discussions was a shared goal: to drive research impact beyond academia and into practical, real-world applications.



The **CATS** and **Translation Manchester** teams seized this opportunity to explore new ways of expanding access to translational research insights. Their collaboration soon took shape, with Cambridge's monthly webinar series, **Gateway to Translation (G2T)**, becoming a jointly hosted initiative with Manchester to widen outreach. Since the partnership began in March 2024, the series has delivered seven webinars to date, attracting hundreds of academics and industry professionals to hear about the latest advancements across the pharmaceutical, medtech and biotech sectors.

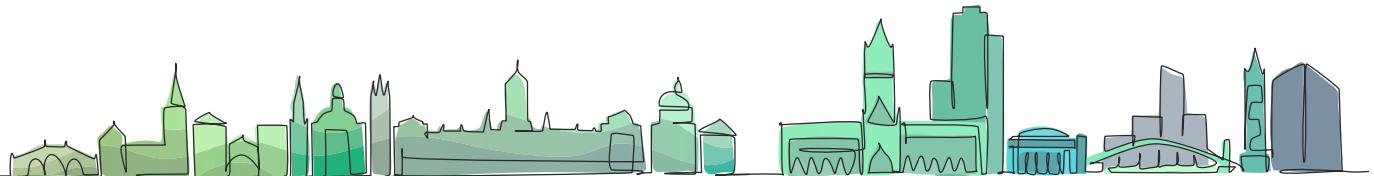
G2T webinars have covered a range of topics – from RNA-targeting drug development and microbiome therapies to cutting-edge organ-on-chip technologies and the integration of digital health tools into the NHS – offering valuable insights into the latest developments in the world of translation. Researchers gain both knowledge and the opportunity to make industry connections, empowering them to further their work towards impactful solutions.

Beyond knowledge-sharing, this collaboration also opened up practical applications. CATS and Translation Manchester joined forces to support Manchester's **Innovation Lab** scheme, which connects companies with specific research challenges to relevant academic expertise. The scheme proved particularly beneficial for Celestial Health, a promising Cambridge spin-out led by **Dr Nataley Hastings**. Dr Hastings, an early career researcher and previous recipient of **Developing Concept Fund (DCF)** support, joined the Innovation Lab to tackle the complex task of analysing biomarkers in cerebrospinal fluid.

With £20,000 in **Innovation Lab** funding, a combined team of academic and industry experts launched the collaborative project, leveraging expertise from both Cambridge and Manchester. The initiative is now progressing, with sample analysis currently underway at Cambridge, marking a pivotal step towards potential large-scale investigations if the pilot is successful.

“Through the Wellcome Translational Partnership Award, we have strengthened our collaboration with the Cambridge Academy of Therapeutic Sciences (CATS). Together, we deliver educational webinars on industry translational research, building a base for future partnerships. Through this collaboration, we also attracted a local Cambridge company, Celestial Health, to join a new collaborative project with University of Manchester academics, funded by our competitive Innovation Labs scheme. Overall, this partnership has paved the way for future opportunities to advance innovation and enhance healthcare impact.”

– Dr Alessandro Faroni, Wellcome Translational Research Manager, University of Manchester



This partnership connects academic innovation with real-world industry needs, improving access to the latest research developments. By co-hosting G2T and supporting initiatives like the Innovation Lab, the Cambridge and Manchester partnership provides an opportunity to work together to create real impact in critical areas of healthcare, bridging the gap between discovery and societal benefit. This also feeds into developing Innovate Cambridge strategy.

Innovate Cambridge was launched in September 2022 to define the future of the Greater Cambridge life sciences and technology ecosystem to ensure it continues to transform the UK and the world for the better.

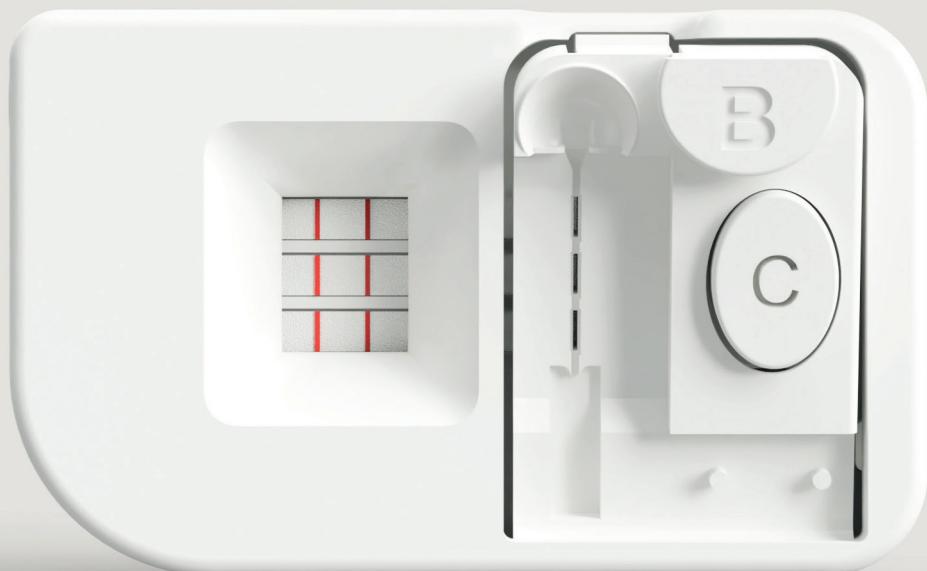
The resulting strategy is a 10-year programme with an ambitious vision to place Cambridge as the most impactful and important innovation ecosystem in the world. A key part of this vision is to formalise partnerships with other areas of innovation excellence and economic opportunity, such as Manchester, to demonstrate the benefits of a transparent, accessible, supportive and easily navigable ecosystem.

*Translation Manchester: www.translation.manchester.ac.uk
Innovate Cambridge: www.innovatecambridge.com*

Transforming Diagnostics for Nutritional Deficiencies



Dr Alex Patto is transforming nutritional diagnostics through his pioneering company, **William Oak Diagnostics**. After earning his PhD in Genetics in 2016, Dr Patto co-founded WaterScope, a not-for-profit spin-out company, which provides a simple and affordable water testing technology to communities all around the world. Dr Patto's entrepreneurial journey took an unexpected but impactful turn. In 2020, a personal tragedy motivated him to tackle nutritional deficiencies – starting with vitamin K in newborn children – in the hope of preventing health issues that are easily avoidable with timely interventions.





“Preventable deficiencies are often overlooked, yet they lead to life-altering health issues. By developing accessible, cost-effective testing, we’re not only empowering individuals to monitor their health but also reducing the pressure on healthcare systems. Our goal is to make comprehensive, at-home diagnostics a norm, ensuring that people receive timely insights into their nutritional wellbeing.”

– Dr Alex Patto

Vitamin K is a vital nutrient that plays a critical role in blood clotting. Vitamin K deficiency is particularly dangerous in newborn babies, where it can lead to an often-fatal syndrome. In countries with advanced healthcare systems, routine Vitamin K treatment offers only a partial solution to this problem while child morbidity and mortality is much more pronounced across developing world.

Dr Patto's venture began with a £50,000 **Wellcome Trust Developing Concept Fund** award, in collaboration with **Professor Jeremy Baumberg**, which provided seed funding for development of a first proof-of-concept Vitamin K deficiency assay. Other funding secured facilitated the further development of the assay and Dr Patto was able to move this technology towards a viable lateral flow-based test and led to a spin out company **William Oak Diagnostics**.

£20,000 **DCF follow-on funding** in 2024 focussed on enhancing the diagnostic prototype by incorporating image processing and machine learning tools, moving it towards a deployable point-of-care solution.

William Oak Diagnostics now focusses on a range of deficiencies beyond vitamin K, including iron, vitamin D, B12 and folate. Recent studies show a stark rise in deficiencies within the UK, contributing to an estimated half a million hospital admissions annually for issues related to iron and B12 deficiencies alone. To address this growing public health concern, Dr Patto's team developed

a highly sensitive assay that uses just one drop of blood – a fraction of what traditional tests require. “With a single drop of blood, users can test for multiple deficiencies at once, right from home. Vitamin deficiencies are preventable, yet they cause immense health issues. By making these diagnostics accessible, we empower individuals to monitor their health proactively,” Dr Patto explains.

The testing technology combines sophisticated microfluidics with smartphone integration. Users apply a drop of blood to the test, and the device's fluidic chip autonomously directs the blood into various wells for individual assessments. The smartphone app then reads the results, providing accurate data that can be easily understood by both healthcare providers and individuals.

Dr Patto has built a robust team, including industry experts such as co-founder Tim Dwyer and Adrian Walker, who helped develop the first Clearblue pregnancy test. Together, they've raised over £500,000 in funding, driving ongoing research and development to perfect the testing technology. The company's approach to nutrition diagnostics includes partnerships with institutions such as Norwich Hospital and Synnovis, a leading UK pathology lab, to refine the assays and expand their applications.

The lateral flow platform has expanded to a multiplexed diagnostic tool, designed to test for multiple micronutrient deficiencies in maternal, infant and child populations. For pregnant women,

monitoring deficiencies can be crucial for foetal development, while in children, such tests could prevent issues related to obesity and nutrient deficits, often undetected due to socioeconomic barriers.

In parallel to the technology development, funding also supported provision of consultancy expertise for regulatory, market research, fundraising and strategic scoping essential to bringing the Vitamin K deficiency test closer to market. Additionally, Alex has benefited from the **CATS Industry Experts in Residence** programme, gaining 1:1 consultancy on translational research applications and a valuable sounding board for project ideas. The **Wellcome TPA** also sponsored a fellowship for Alex to participate in the Impulse programme at the Maxwell Centre in 2022, further strengthening his entrepreneurial skills. In 2021, he reached the final of the prestigious Chris Abell Postdoc Business Plan Competition, showcasing his innovation in diagnostics and vision for public health impact. Most recently, Dr Patto was funded through the **Founders@Cambridge** programme to develop a pitch for investors.

Dr Patto's innovation offers a minimally-invasive, accessible way to support health without placing strain on NHS resources – a model that could have a profoundly positive impact on public health as well as save lives in the UK and beyond.

www.williamoakdiagnostics.com

Celebrating the Translational Partnership Award's Legacy and the Road Ahead

By Meghana Patel, Anne Willis, Laura Itzhaki and George Malliaras



The therapeutic and medtech sectors are experiencing a transformative period. Artificial intelligence (AI) is revolutionising drug discovery, clinical data analysis, digital health and medical imaging. Big data and 'omics' technologies are advancing our understanding of human disease. New personalised medicines offer better patient outcomes by tailoring treatments to individual needs.

Images (top left to right): Dr Meghana Patel, Executive Manager, Cambridge Academy of Therapeutic Sciences; Prof Anne Willis, Director, MRC Toxicology Unit; Prof George Malliaras, Prince Philip Professor of Technology; Prof Laura Itzhaki, Head of Department of Pharmacology

At the University of Cambridge, innovation is similarly driving new discoveries in these areas. Researchers have made exciting progress in stem cell biology, furthering advancements in cell and gene therapies. Our discovery science in oncology, rare diseases, neuroscience and infectious diseases is improving patient outcomes and is well-supported by investments from Cancer Research UK, the establishment of the Victor Dahdaleh Heart and Lung Research Institute, University initiatives such as AI@Cam, and the expansion of the Biomedical Research Campus and West Cambridge. Strengthened connections with Cambridge University Health Partners, NHS trusts and industry leaders including AstraZeneca and GSK add to this thriving ecosystem. Digital health technologies targeting mental health and wellness are growing and Cambridge has become a leader in implantable medical technologies as a result of collaborations between engineers at West Cambridge and clinicians on the Biomedical Research Campus in the South.

Transformative Achievements and a Powerful Legacy

The Wellcome Translational Partnership Award (TPA) has been a cornerstone of this vibrant hub of innovation, enabling swift decision-making and providing an agile platform for early-stage projects. The support provided by the TPA has allowed projects to rapidly advance and gain additional translational funding or, equally importantly, led to the identification of early-stage failures, with a refocus of resources on the most promising ideas. One of most enduring legacies of the TPA is the role that it has played in the transformation of the University's culture, resulting in a far greater prioritisation of translational work at all career stages.

The impact of the TPA is evident from the number of individuals who have engaged with this scheme: more than 750 one-to-one research facilitation meetings; more than 430 expert advisory sessions; establishment of Translation Champion network; and targeted training for around 250 early-career researchers. TPA research facilitation has been instrumental in supporting early-career researchers by assisting them in crafting translational grant proposals, connecting with training providers and funders, and evaluating the feasibility of early-stage ideas. This comprehensive support system enables

researchers to navigate the complexities of translational research and has been key in building a healthy translational pipeline within the University. Overall, the TPA has both accelerated research and built a deep-seated commitment to translational science. The platform has yielded impressive returns, achieving an approximately nine-fold increase in attracting large grants.

Filling Gaps and Addressing Challenges

The TPA has been instrumental in addressing critical, longstanding gaps within the innovation ecosystem. With the rise of new modalities including cell and gene therapy, nucleic acid-based medicines, implantable devices and advanced drug delivery technologies, the demand for specialised expertise and facilities has grown significantly. Notable gaps, identified through the TPA funding awarded to the Engineering Department, include a lack of facilities capable of small batch production at the standard needed to support clinical trials, and an insufficient understanding of the steps required to bring a product to market, such as a detailed knowledge of the regulatory process. To address these challenges, it has been proposed that a BioInnovation Institute should be established.

The expansion of the TPA Experts-in-Residence (EiRs) scheme has provided crucial guidance on medicinal chemistry, regulatory and toxicological challenges, bridging essential knowledge gaps that might otherwise hinder innovation.

One of the biggest challenges looking ahead is to identify a new source of funding to replace the TPA, particularly for early-stage innovations. The TPA has acted as a gateway to translation, providing funding of up to £50,000 for both proof-of-concept studies and access to specialised expertise typically not available within the University, such as market research, toxicology packages and regulatory frameworks. In this way, the TPA has created a pipeline allowing projects to progress to larger translational awards including MRC Confidence in Concept, Cambridge Enterprise Technology Investment Funds, MRC DPFS, NIHR and other funding bodies. Without TPA funding, this pipeline will decrease substantially, severely limiting the number of promising applications progressing to further rounds.

Celebrating the Translational Partnership Award's Legacy and the Road Ahead

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Collaborative evaluations by various University departments as well as Cambridge Academy of Therapeutic Sciences, the Maxwell Centre and the Office for Translational Research have identified other persistent gaps, including fragmented approaches to translational funding, insufficient training and a lack of a centralised University contact for translational and wider industry support, which includes smaller biotechnology companies. While the TPA has addressed some of these challenges through training and networking, more structured, comprehensive solutions are needed to support academics – especially early-career researchers – in advancing their work from the laboratory to the market.

Future Challenges and the Path Forward

The sector continues to face several challenges. Without an additional funding source, the trajectory of early-stage projects with translational potential will be severely impacted due to limited access to operational resources within set timeframes. As a direct consequence there will be a reduction in the University's capacity to secure large external translational grants. Moreover, the substantial level of industry engagement and co-funding opportunities that have been developed by the TPA and which prior to the TPA were limited by operational obstacles, will require new strategies and resources to thrive.

To maintain momentum, Cambridge University must continue to innovate its approach to translational support and build on the legacy of the TPA. Investment in projects at early stages and specialised research facilitation in therapeutics and medtech through centralised support and operational structures is essential to allow the expansion of pioneering translational work. The impact of the TPA on Cambridge's therapeutic and medtech landscape has been profound, and while its absence poses significant challenges, its achievements offer a roadmap for future success. By leveraging on legacy of the TPA, the University can continue to lead in translating groundbreaking research into life-changing therapies and technologies.

TPA Researchers in the News



11 September 2024

Hopes for new hip replacement surgery tool from University of Cambridge – BBC News

Professor Sohini Kar-Narayan, Access to Expertise Award 2022 and 2023



31 January 2024

Kalium Health recruits first clinical study patients as it eyes \$100bn a year US kidney disease spend – Business Weekly

Prof Fiona Karet, Developing Concept Fund, 2018



#21toWatch

5 February 2024

Revealed: 2024 shortlist for #21toWatch, showcasing tech companies, people and innovations across East of England – Cambridge Independent

Dr Alexander Patto, Developing Concept Fund 2021, DCF Follow on Funding 2024, Access to Expertise 2022 and 2024



12 October 2024

Crohn's treatment by Cambridge researchers sets global standard – BBC News

Dr Nuru Noor, Future of Therapeutics Award 2023



23 November 2023

Brilliant impulse alumni continue to dazzle as application window for 2024 programme opens – Cambridge Network

Dr Andrew Kadis, Impulse Fellowship 2023 sponsored by Wellcome TPA

Five to Watch in 2025

Cambridge Alliance on Medicines Safety: National Expansion

The **Cambridge Alliance on Medicines Safety (CAMS)** is set to expand nationwide, building on its pioneering collaboration between academia and the pharmaceutical industry. Originally founded to connect University of Cambridge researchers and the MRC Toxicology Unit with major players like GSK, AstraZeneca and Novartis, CAMS is advancing toxicology and medicines safety through open research and collaborative innovation. With **Wellcome Department Translational Award** funding, **Professor Marion McFarlane** is leading CAMS' growth, bringing critical expertise and building a platform to address toxicity and safety of drugs in clinical trials. This expansion will position CAMS and the University of Cambridge at the forefront of UK toxicology and medicines safety breakthroughs.

www.ats.cam.ac.uk/cambridge-alliance-medicines-safety

Targeting Viruses Before Transplants

Organ transplant patients face unique risks from latent human cytomegalovirus (CMV). This usually barely noticeable virus can re-emerge post-transplant, causing serious complications. **Dr Emma Poole** from the Department of Pathology, along with Dr Michael Nevels of the University of St Andrews, could have found a solution.

Funded by the **Wellcome Developing Concept Fund**, they've identified antiviral compounds effective against CMV in lab models. These could be used to pre-treat donated organs to eliminate dormant CMV. Working with **Expert in Residence** Dr Trevor Perrior, the team is modifying these compounds and preparing to test on human kidneys – potentially improving transplant safety for patients nationwide.

www.path.cam.ac.uk/research/virology-division/poole-group

Innovative Device for Parkinson's Cell Therapy

Dr Harry Bulstrode from the Department of Clinical Neurosciences is tackling Parkinson's disease, a devastating condition with no long-term treatments, through innovative cell therapy. He is developing a pioneering device that delivers progenitor cells directly into the midbrain, requiring only a single skull access and minimising brain tissue damage.

With support from CATS **Industry Expert in Residence** Dr John Pritchard and **Access to Expertise Award** funding, he refined his concept, resulting in CAD-based prototype plans and a patent submitted in August 2024. Thanks to £108,000 in Technology Investment Fund support, the first prototype has already been built and tested on cadavers, with future experiments on large animals planned.

www.stemcells.cam.ac.uk/people/pi/bulstrode



Cambridge Pioneers BioInnovation Institute

Professor George Malliaras, Translation Champion at Department of Engineering, is leading an exciting initiative at the University of Cambridge to bridge gaps in bioengineering translation. With support from a **Departmental Translational Award**, he hosted workshops to define a translational ecosystem for Engineering. Further funding enabled a consultancy to evaluate both internal and external landscapes, leading to the proposal of a **BioInnovation Institute**. If it comes to life, this ambitious project will accelerate the translation of medical devices by enabling prototype manufacturing and providing training and support in bioinnovation, ultimately benefitting patients.

www.eng.cam.ac.uk/profiles/gm603

Targeting Solid Tumours from Within

Professor Goncalo Bernardes from the Yusuf Hamied Department of Chemistry is pioneering a project to tackle solid tumours by utilising tumour-associated macrophages, which make up to 50% of tumour mass. His innovative strategy involves creating 'artificial synapses' that enable macrophages to phagocytose cancer cells.

Supported by a **Developing Concept Fund Award** in 2023 and **Follow-on Funding** in 2024, the team developed several 'phagocytosis enhancers' and is currently testing them in cancer cell line-macrophage co-cultures, zebrafish models and mice. A patent has been filed and further optimisation is underway, marking promising progress in cancer treatment.

www.ch.cam.ac.uk/person/gb453

Supporting Parent-Baby Bonding with NeWTS Wireless Monitoring System

A project led by **Dr Kathryn Beardsall**, a consultant neonatologist, Department of Paediatrics, and **Dr Oliver Bonner**, Department of Engineering has pioneered a Neonatal Wireless Transmission System (NeWTS), which aims to transform neonatal and paediatric intensive care.

Traditionally, monitoring babies in neonatal intensive care units involves multiple wired sensors, which, while essential for medical care, can disrupt vital parent-child bonding. NeWTS replaces these with a wireless solution to monitor key health metrics such as ECG, respiratory rate, skin temperature and pulse oximetry, allowing for increased parent-baby contact.

Key funding from the **Wellcome Translational Partnership Award** has accelerated the development of NeWTS. **Access to Expertise (AtE)** support enabled a comprehensive regulatory strategy, which helped secure a £1.4 million i4i award from the National Institute for Health and Care Research (NIHR) to advance the technology. Additional AtE funding supported a market assessment in the USA, broadening the project's global potential. Further funding from the **Future of Therapeutics** funding, CE Technology Investment Fund and most recently a second award of £1.8 million for product development has facilitated progress towards commercialisation and prepared NeWTS for clinical application, including remote data transmission during critical inter-hospital transfers.

Through powerful interdisciplinary collaboration in healthcare innovation, the NeWTS system aims to support the essential bonding between parents and babies in neonatal intensive care and whilst transferring between units.



Industry Experts in Residence

The **Industry Experts in Residence (EiR)** scheme is a legacy initiative by CATS that connects academics with experienced industry professionals, offering crucial technical expertise to support the translation of research. Our eight EiRs, specialists in areas such as drug discovery, medicinal chemistry, diagnostics and regulatory affairs, play a vital role in refining translational strategies and guiding researchers in preparing for translational funding opportunities.

Since its launch in 2018, the scheme has facilitated over 400 meetings, helping researchers to refine their translational strategies and prepare translational funding applications. Supported by Translational Partnership Award-funded research facilitators, EiR sessions often include additional insights from case managers in Cambridge Enterprise, offering more invaluable insights.

Providing Hope for Rare Disease

Dr Jelle van den Ameele, an Early Career Researcher at the Department of Clinical Neurosciences, is leading an international effort to help patients with Mitochondrial NeuroGastroIntestinal Encephalomyopathy (MNGIE) – a rare genetic disorder with no known cure.

Building on gene therapy research from Spain's Dr Ramon Marti, Dr van den Ameele led the project through regulatory challenges with expertise provided by Dr Tom Oakley, an **Industry Expert in Residence** with specialised regulatory expertise.

Access to Expertise Award funding enabled the support of a consultancy by Asphalion S.L. The team, collaborating with the UKRI/LifeArc Gene Therapy Innovation and Manufacturing Centre in Sheffield, continues to refine its approach following feedback from a LifeArc grant application and is now planning an international natural history study of MNGIE led from Cambridge.

Learn more about CATS EiR scheme:
www.ats.cam.ac.uk/industry-experts-residence-eirs



Training the Entrepreneurs of the Future

The **Translational Partnership Award (TPA)** is about empowering Early Career Researchers (ECRs) and academics to turn innovative ideas into reality. Through targeted funding, the award supports a wide range of programmes, from drug development to specialised entrepreneurial training across the University. These initiatives provide ECRs with a foundation to advance their ideas through workshops, mentorship and a supportive network, as well as preparing them to secure translational funding.

Scholarship Initiatives Funded by the TPA

The TPA supports a variety of fellowships to enable attendance on a variety of training programmes including :

- **EnterpriseTECH** – Entrepreneurship Centre, Cambridge Judge Business School
- **Impulse Programme** – Maxwell Centre, early-stage ventures
- **Ignite Programme** – Innovation-focussed, Cambridge Judge Business School
- **Certificate in Translational Medicine** – Eureka Institute
- **Practical Application of Toxicology in Drug Development** – CATS, American College of Toxicology and the British Toxicology Society

TPA-Facilitated Training Programmes

The TPA team offers additional specialised workshops and webinars:

- **Molecules to Market** – Drug Development Workshop with Professor Claire Thompson
- **Bitesize Training** – Led by Dr Nessa Carey in collaboration with TPA network universities, covering:
 - Creating Impact from Research
 - Introduction to the development of Medical Devices
 - Working with Industry and Translational research
- **Gateway to Translation (G2T) Webinars** – Accessible training on topics like:
 - Discovering New Drugs by Dr Andy Merritt, LifeArc
 - The Challenges and Pitfalls of Developing a New Digital Health Technology in Collaboration with the NHS by Dr James Chapman, Decently

Ones to Watch

These TPA-backed ventures are shining examples of the University's commitment to nurturing impactful research and entrepreneurial talent:



Cambridge Vision Technology

Founded by **Dr Andrew Kadis (Impulse 2023)**, Cambridge Vision Technology provides early, accurate detection of Alzheimer's.

"Impulse has been transformational. It has transformed my small initial idea to a refined business proposition. The downstream impacts of Impulse have seen the business obtain significant funding to execute on the output and to productionise the technology in 2024," says Dr Kadis.



IntercepTx

Founded by PhD student in Pharmacology **Austin Reed (Ignite 2024)** with **Professor Walid Khaled**, IntercepTx focusses on pre-cancer intervention with promising preventative therapies.



William Oak Diagnostics

Founded by **Dr Alex Patto (Impulse 2022)**, William Oak Diagnostics is pioneering micronutrient deficiency detection devices.



Chum

Impulse graduate (2023) and Vice-Chancellor's Social Impact Award winner (2024), **Samantha Hodder** co-founded Chum, which initially focused on development of an app, but following pilot funding from Cambridge Cancer Centre, has published an educational book to support children with cancer. The spin-out will be developed as a social venture.

"The Impulse network is enormous and encompasses experts that span a wide variety of areas. Thus, whenever we are in need there is always someone we can turn to for advice," says Samantha.



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