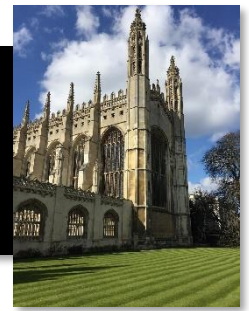




Cambridge Innovation Technologies Consulting Limited



Innovation for a better life

ABOUT US

CITC Ltd, situated in the heart of the prosperous Cambridge biomed/biotech landscape, provides innovation in high-tech fields that require multi-disciplinary approaches, from bio-electronics to advanced medical solutions. We develop partnership programs, help our customers optimize their product supply chain, and manage a broad and unique portfolio of technologies for licensing and R&D activities.

Our vision is to innovate within both the healthcare and medical fields by repositioning state of the art technologies in order to improve people's quality-of-life and cost-of-care.

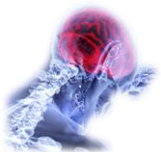
We work with an experienced team of designers and expert engineers, medical advisors, biologists, material scientists and project managers, allocated as technical staff to each project. The company has strong ties to the University of Cambridge and the broader Cambridge innovation environment, providing a vast pool of expertise and resources from which to draw. This allows for an effective and sustainable way to achieve the project goals in a timely manner and with the right focus.

OUR TECHNOLOGY PLATFORMS



Personalised Diagnostics and Therapy, Smart bioSensors and Wireless Wearable Devices (SW²)

We develop bio-sensors, point-of-care diagnostics, and medical device technologies to help bring personalised medicine out of the lab to patients and the NHS (e.g. the Patch4Life™ project).



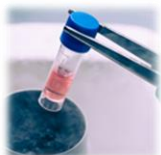
Smart Implants for Spinal Cord and Brain Injuries

From experience and know-how acquired in research on animal models, we develop and mature technologies for biocompatible and biodegradable smart implants for monitoring and treatment of traumatic diseases affecting the central nervous system (e.g. the BENDA project).



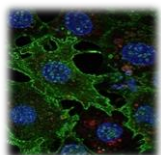
Molecular Medicine

We develop know-how and help secure translational pathways towards developing novel molecular drug delivery systems with high potential for the treatment of both rare diseases and those affecting large populations, including cancer and cardiovascular disease (e.g. the NanoNase project).



Stem Cells and Gene Therapy

Stem cells are considered the 'next big thing' in regenerative medicine. We are keen to exploit our unique know-how, matured in the field, to help develop new programs for the use of safe and efficient autologous stem cells that can be harvested from somatic sources and used to treat neurological disorders (e.g. the iStem4Life™ project).



Cell Culture and Growth

We have know-how in cell cultures and growth, developed in collaboration with our scientific partners and collaborators, and are keen to support feasibility studies and test applications in drug screening and experimental therapeutics.



In Vitro Diagnostics and Microfluidic Biomarker Discovery

We are happy to work with third parties on new assay design and development, through our consultancy business model, and we have the knowhow and capability to design and develop microfluidic networks and bespoke devices for in vitro diagnostic applications.

THE TEAM



Luigi Occhipinti, PhD CEO, Founder, and Director of Engineering

Luigi is a University of Cambridge Engineering Department PI and Outreach & Business Development Manager of the EPSRC Centre for Innovative Manufacturing in Large-Area Electronics. A former Senior Group Manager and R&D Programs Director at STMicroelectronics, PI on more than 12 EC-funded programs, and with a track-record in AI-based methods, Luigi has 20 years of industrial research and innovation experience in bioelectronics. Luigi has co-authored over 90 peer-reviewed scientific papers, 2 international standards and 37 patent families. Having managed multiple collaborative projects and joint development partnerships with key industrial partners, including some Top 100 companies, Luigi's pioneering efforts in post-silicon technology has generated over €130m in value in the last 7 years.



Stefano Pluchino, MD, PhD CSO, Co-Founder, and Director of Healthcare

An academic and clinician, Stefano is a University Reader in Regenerative Neuroimmunology and Honorary Consultant in Neurology at the University of Cambridge, Department of Clinical Neurosciences. Stefano's research interests pertaining to the immune-modulatory function of neural stem cells and vesicles derived therefrom, and their therapeutic potential in CNS diseases such as MS have given rise to an impressive publication history (H-index: 38, i10-index: 62, >7540 citations). This research also extends into next-generation technologies including induced neural and pluripotent stem cells, and nanotherapeutics.



Joshua Bernstock, MD, PhD COO

A physician-scientist and NIH Oxford-Cambridge Scholar, Joshua has a diverse medical background with expertise in hypoxia/ischemia, translational oncology, post-translational protein modification, drug repositioning, and the development of novel therapeutics.



Jayden Smith, PhD SRA and Project Manager

Jayden has a diverse background based in computer science, chemistry and biology, most recently researching the development and in vitro characterisation of RNA nanotherapeutics for CNS disorders as a postdoc at the University of Cambridge. He currently manages CITC Ltd's involvement in the CUPIDO and B2B projects.

THE TEAM (continued)



Luca Peruzzotti-Jametti, MD, PhD

Project Consultant

Luca is a Clinical Research Associate and Wellcome Trust Fellow at the Department of Clinical Neurosciences, University of Cambridge. After receiving his MD, Luca began a residency in Neurology, participating in several clinical trials on ischemic stroke and acquiring a research interest in stem cell therapies. Upon receiving his CCT in Neurology, Luca joined Stefano Pluchino's laboratory and the Clinical Trials Unit at the University of Cambridge, where he completed his PhD. Luca's current research focus is the application of next-generation stem cells, such as induced Neural Stem Cells (iNSCs), as a potential treatment for neuroinflammatory conditions including multiple sclerosis. In this role he consults on matters relating to CITC's iStem4Life project.

Pelumi Oluwasanya, MSc
Project Consultant



Pelumi holds Masters degrees in Signal Processing and Communications (University of Edinburgh) and Sensor Technologies and Applications (University of Cambridge), and has a strong background in electrical/electronic engineering. He is a member of the Institution of Engineering and Technology (IET) and the Institute of Electrical and Electronic Engineers (IEEE). He has extensive experience in a range of programming languages as well as in designing and supporting software for financial institutions and several other projects involving microcontrollers such as the Arduino. He is currently involved in the CITC Ltd and Zinergy collaboration project known as RE-PATCH.



Nicole Harrington, BSc
Communication and Social Media Consultant

Nicole received her BSc in Human Physiology, Genetics and Psychology from the University of Pretoria. She is actively engaged in the maintenance of the CITC Ltd's communications activities, including web and social media presence, providing information on new ventures, current events and the progression of ongoing R&D projects.

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OUR PROJECTS

iStem4Life™

Harvesting, reprogramming and storage of autologous stem cells for treatment of neurological disorders. CITC has licensed technology ("Induced neural stem cells", EP2828381 and US-2015-0087594) for the generation of patient-specific, safe, expandable neural stem cells for clinical applications. A patent application pertaining to the development of the platform has been filed ("Banking of Stem Cells and Business Methods related to the same", PCT/EP2017/050557).

NanoNase

Bringing together artificial intelligence-directed enzyme evolution and a biomimetic delivery vehicle to generate next-generation nanotherapeutics. Findings from joint research between CITC and the University of Cambridge (Nat. Chem. Biol., 2017:13, 991-995) have identified a naturally-occurring carrier for a human-compatible chemotherapeutic ("Human asparaginase lacking glutaminase activity"; PCT/EP2017/073635). NanoNase aims to synthetically emulate this system.

Patch4Life™

The world's lightest and smartest "Wear-and-Forget" companion device for ambient assisted living. This wearable medical patch, capable of monitoring a variety of physical and environmental parameters through wireless communication, has been enhanced to include ultra-thin battery and superconductor technology through an Innovate UK project ("RE-PATCH") collaboration with Zinergy.



Cardio Ultraefficient nanoParticles for Inhalation of Drug prOducts. EU Horizon 2020 project consortium of 12 members (2017-2021; €6,094,781.25 budget).

B2B

Modeling spontaneous Breast cancer metastasis TO the Bone with a first-of-its-kind 3D device that recapitulates physiological tissue-level complexity. EU Horizon 2020 project consortium of 8 members (2018-2022; €3,799,371.25 budget).

BUSINESS MODEL

CITC Ltd 's preferred business model is to: (i) invent or license innovative IP, (ii) position it in the landscape of incumbent technologies, (iii) mature and de-risk the technology, (iv) upscale and validate the technology in the relevant field, and (v) exploit via either licensing deals or through spin-off/joint venture formation to commercialise the final product.

Through current and future projects CITC Ltd will seek to build upon its diverse IP portfolio with new ideas and products. Our aim it to capitalize on the significant flexibility offered through licensing to strategic industry partners with interests in pharmaceuticals, ATMPs, biotechnology, and assay design.

KEY ACHIEVEMENTS

CITC has entered R&D collaborations with a number of research bodies and biotech companies, and is an integral member of several international research consortia. CITC's collaborative research efforts have already generated several pieces of IP ripe for further development and commercialisation, and the company is engaged in consultations with regulatory bodies regarding future clinical applications.