

PATIENT INSPIRED INNOVATION

Newsletter Issue 11: December 2020

Welcome to issue 11 of the NIHR Brain Injury MedTech Co-operative newsletter.

Current Topics

In this edition, find out about the launch of our Seedcorn competition 2020 and more about our Theme Lead and current research projects.

About us

The MIC is one of eleven national Medtech and In vitro diagnostic Co-operatives (MICs) funded by the National Institute for Health Research (NIHR).

The MIC works with patients, carers, academics, clinicians and industry to develop new medical devices, healthcare technologies and technology-dependent interventions to improve treatment and quality of life for patients with brain injuries.

Be part of Research

To find out about opportunities to participate or get involved in brain injury research sign up to Register for Healthcare Involvement and Technology Evaluation (RHITE). The register is designed to match researchers with patients and carers who would like to help with our understanding of brain injury and development of new treatments and technologies. Visit our website for more information

www.brainmic.nihr.ac.uk/rhite

Important:

To unsubscribe from RHITE and this newsletter please send an email to: involve@brainmic.org

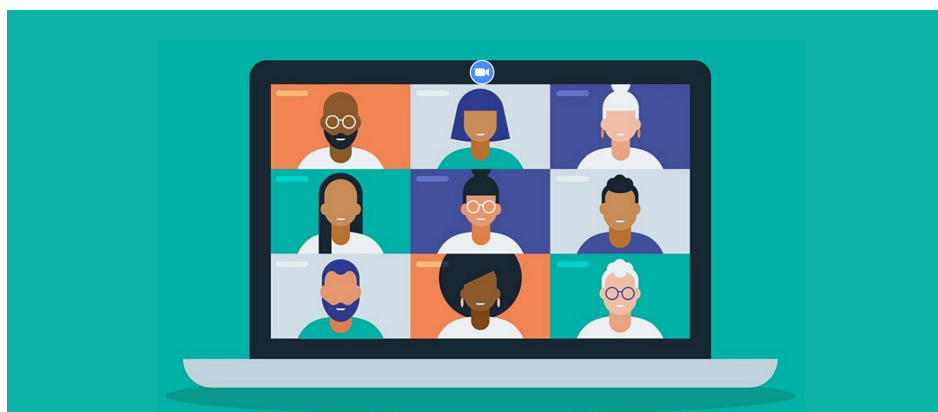
Wishing everyone the best possible Christmas, and a better 2021

Tooling you up to Get Involved in Research Virtual Drop In Session 1: 13 January 2021

We know that to increase diversity in and improve access to brain injury research studies there are many steps to take. Key to this is the relationship between the public and researchers, which the MIC is here to support. We are working with researchers to establish ways of engaging both with the public and the MIC. In parallel, we are launching our outreach programme in 2021, which aims to provide support to the public who are interested in taking part in research but do not know what it would entail. The programme is led by Mr James Piercy, who is himself a brain injury survivor with plenty of experience both being involved with and participating on brain injury research studies and panels.

Due to the current climate we will be running these sessions virtually until further notice, with the first session being held on 13 January 2021. If you are interested in attending please email involve@brainmic.org and we will send you the briefing pack, including our online joining details.

If you know of others that you think might benefit from these sessions, please feel free to share details widely amongst relevant networks/people.



What a year this has been!

Coronavirus (COVID-19)

Post COVID-19

The National Institute of Health Research (NIHR) Brain Injury MedTech Co-operative (MIC) responded to the Covid-19 pandemic and launched its own COVID-19 challenge. We received 15 completed expressions of interest forms, each of which was reviewed and received formal feedback. Although we contributed funds to some of these projects, including the Panoramic facemask and the HappyShield, we also provided expertise on technology development and partnered on a UKRI grant application.

Further information about NIHR COVID-19 research can be found here:

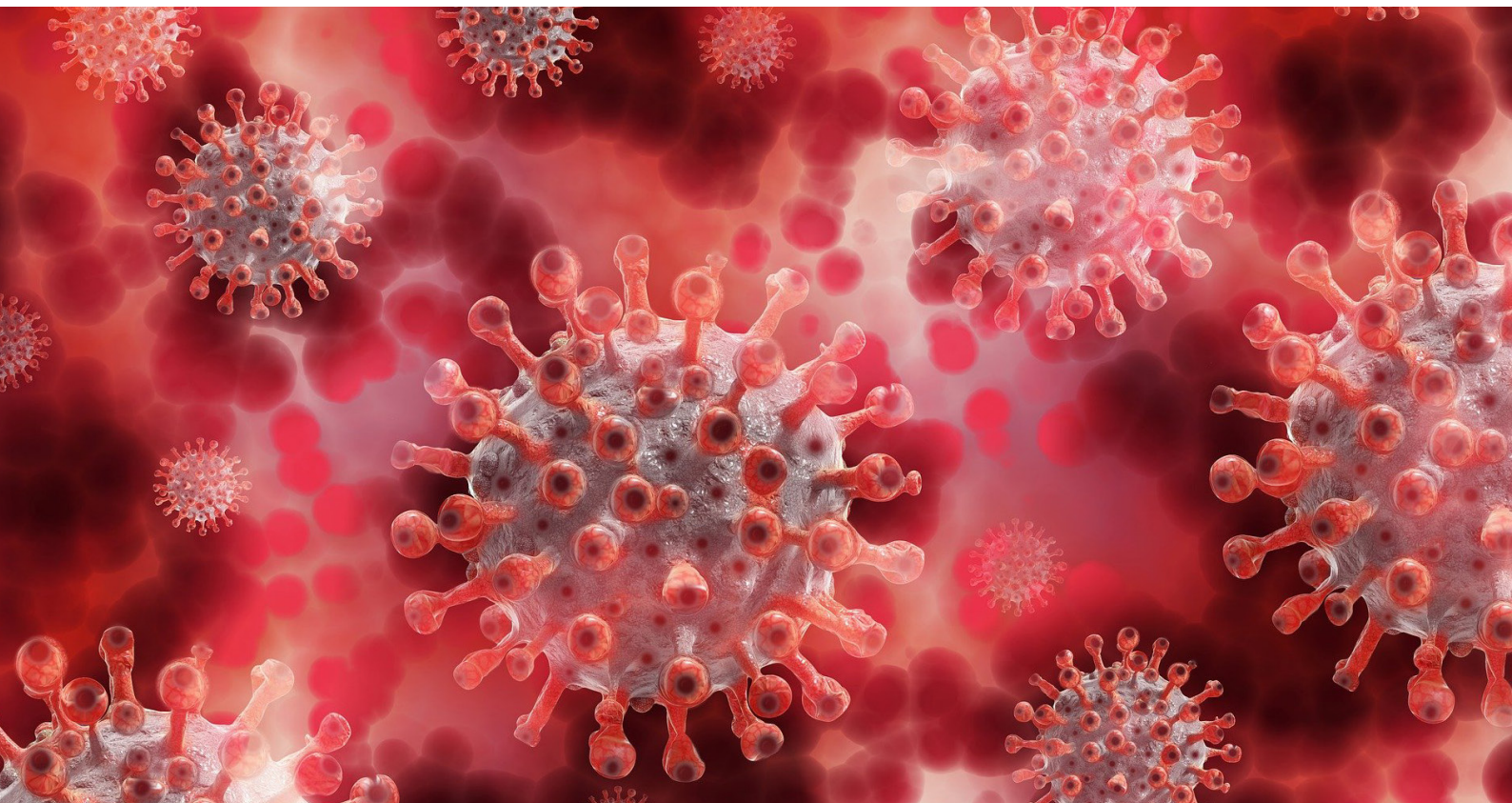
www.nihr.ac.uk/covid-19

Seedcorn Competition Launch 2020

Applications are invited for funding of up to £10,000 to support the early development of novel technology-based solutions applicable to the brain injury pathway from prevention through to long term rehabilitation that includes Patient and Public Involvement and Engagement (PPIE). Awarded projects will kick off on 31 March 2021.

Further information can be found on our website:

www.brainmic.nihr.ac.uk



Professor Mark Wilson OBE

Professor Mark Wilson OBE is dual qualified in neurosurgery and pre-hospital care working both at Imperial College Healthcare NHS Trust and for Kent, Surrey & Sussex Air Ambulance Trust. He is clinical lead for neurotrauma at the Trust and co-director of the Imperial Neurotrauma Centre. His area of clinical interest is acute and traumatic brain injury (TBI), especially the first few minutes and hours after injury. Professor Wilson is chair of the trauma committee for the Society of British Neurological Surgeons (SBNS) and lectures regularly both nationally and internationally on TBI. He holds the position of professor of practice of brain injury at Imperial College and is honorary professor (the Gibson Chair) of pre-hospital care at the Royal College of Surgeons, Edinburgh. He is co-founder of GoodSAM.org, a revolutionary platform that alerts doctors, nurses, paramedics and those trained in basic life support to emergencies around them, recognition given in the extraordinary Covid Honours List 2020.



The **GoodSAM Platform** is powering the NHS Volunteer responder scheme across the UK. 750,000 volunteers are helping those self-isolating due to Covid-19. Once a referral for someone in need is made, they are automatically deployed with a 99.5% instant automated matching rate. Other organisations such as the British Red Cross are also using the platform.

As Prevention and Pre Hospital theme lead he opened the Brain Injury Technology Think tank in 2019 with the talk on What 'AR' the Needs for Brain Injury Patients? Mark is keen to focus on the GoodSAM platform, ensuring that the window of opportunity to intervene and prevent further death of brain cells is not missed. Using the GoodSAM app enables people trained in basic airway management, who are within a few hundred metres of such incidents, to be alerted. The early detection of an intracranial haematoma would allow for focussing of the trauma pathway to the needs of the individual patient. For all these reasons, access to better monitoring at the roadside is required.



Dr Naomi Deakin

The RESCUE-RACER study, is a two-year study of concussion in motorsport, funded by the FIA Foundation and delivered in partnership with world motorsport's governing body the Fédération Internationale de l'Automobile (FIA). RESCUE-RACER incorporates the most promising and technologically advanced concussion assessment tools currently available to explore its two main aims – rapid identification of concussion and provision of an evidence base for the return to race decision.

The study consists of two parts. The first investigates 50 predominantly UK-based racing drivers at baseline, recruiting mainly from the British Touring Car Championship and its associated series. Post-injury tests are open to international motorsport competitors, carried out during the 2019 and 2020 race seasons. The second part assesses a minimum of 20 drivers in the acute post-injury period (up to three weeks after injury) following involvement in a potentially concussive incident.

The RESCUE-RACER assessment involves measures such as eye tracking, balance, and reaction

time, with data collected using technology developed by Neurologix, with whom the researchers are collaborating. The team also collect data using the Cambridge Neuropsychological Test Automated Battery (CANTAB) as well as salivary biomarkers. They will use the latest, powerful 7T Magnetic Resonance Imaging (MRI) scanner, using sequences to explore brain structure and function by measuring changes in blood flow.

The Principal Investigator for RESCUE-RACER is Professor Peter Hutchinson from Cambridge's Department of Clinical Neurosciences, and a neurosurgeon at Cambridge University Hospitals NHS Foundation Trust.

"The project represents a significant step for motorsport medicine," says Professor Hutchinson. "RESCUE-RACER will follow drivers through a racing season and uses state-of-the-art assessment tools and imaging. This represents a tremendous opportunity to improve the management of drivers with concussion and traumatic brain injury in terms of assisting recovery and enabling return to safe driving."

Primary study support is provided by the FIA's 2018 Sid Watkins Scholar and RESCUE-RACER Study Coordinator Dr Naomi Deakin. Dr Deakin is a PhD student at Robinson College, where Professor Hutchinson is a fellow and Director of Studies for Clinical Medicine.

The goal of the study is to establish the symptoms and signs of concussion sustained in motorsport activity and to monitor their progression throughout recovery. The study uses a comprehensive battery of scientific tests and emerging technologies as objective assessments that can assist with concussion diagnosis and prognosis. Improved future care for head-injured racers could also translate into enhanced care for road-traffic collision victims from the general population.

"After an accident there is obvious concern for the individual, but a concussed driver also presents a potentially lethal risk to other competitors as well as spectators and crew," says Dr Deakin.

"We hope that our study will lead to evidenced-based, medical decision-making protocols for track-side evaluation after potentially concussive incidents, as well as enabling a plan for clinical management of motorsport concussion, including the important 'return-to-race' decision."

The RESCUE-RACER (Research Evaluating Sports ConcUSSION Events – Rapid Assessment of Concussion and Evidence for Return) programme is funded by the FIA Foundation and supported by the FIA and Neurologix. It is jointly sponsored by the University of Cambridge and Cambridge University Hospitals NHS Foundation Trust, which comprises Addenbrooke's Hospital and the Rosie Maternity Hospital.

More information about the study can be found on its website: bit.ly/RESCUE-RACER

Active listening & personalised feedback

The Brain injury researchers want to hear from you, you can help direct, produce and deliver to improve lives of brain injury survivors.

We are going to run our first virtual session on **Wednesday 13 January 2021** and you are invited to find out how you can get involved in relevant research studies. If you are interested in taking part please email: involve@brainmic.org