

Welcome to the 10th issue of the NIHR Exeter Clinical Research Facility (CRF) newsletter

The aim of this newsletter is to highlight the achievements of our facility, provide an overview of our current projects, and show how you can become involved, or continue to be involved, in improving healthcare through research.

Exeter 10,000 Update

This time last year we were just beginning to hear about COVID-19 – none of us could have guessed its impact! For the CRF, this meant halting recruitment to the Exeter 10,000/ Peninsula Research Bank (EXTEND/PRB) and the NIHR BioResource. While we have not been able to recruit new participants, the PRB has continued to support researchers with studies needing access to our stored samples and data, and participants for remote/online data collection.

Recruitment will resume when we are sure it is safe to do so, as will our planned invitation to existing Exeter 10,000 participants for a follow-up visit. Please let us know if your circumstances have changed so that we can update your records. For more information about our research, please visit: <https://exetercrfnihr.org/about/exeter-10000/>

NIHR Exeter CRF helps in the fight against COVID-19

We are proud that the NIHR Exeter CRF has played an important role in supporting ongoing national and local COVID-19 urgent public health research studies.

- CRF staff supported the recruitment of 545 local participants for the **Novavax Phase 3 COVID-19 vaccine study** to test the safety and effectiveness of this new vaccine (developed by US biotechnology company Novavax). Preliminary results from this large UK trial indicate it to be 89.3% effective.

- **CCP-UK (ISARIC)** is a UK-wide study collecting routinely recorded hospital data and samples from COVID-19 positive patients to better understand the spread and behaviour of the disease. CRF staff and colleagues in the South West Peninsula Clinical Research Network (CRN: SWP) have successfully recruited over 1100 patients in Exeter since the start of the pandemic.

- COVID-19 primarily affects the respiratory system but, in moderate to severe infections, heart muscle injury may develop in 7-20% of patients. **COVID-HEART** is a national study aiming to better understand the occurrence and range of heart muscle involvement from COVID-19 and will also assess patient quality of life and functional capacity.

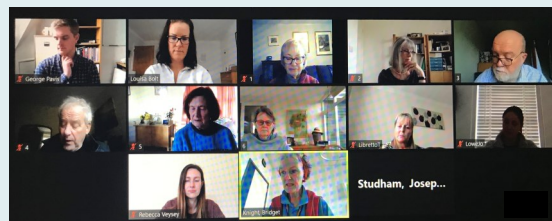
- **CLARITY IBD** study is screening blood samples from UK patients with Inflammatory Bowel Disease (IBD) for antibodies to the COVID-19 virus to help understand how current IBD treatments and physical distancing strategies are impacting on COVID-19 infection in this high risk group. The Exeter CRF has assisted in processing 35,000 serology samples.


**CLARITY
IBD**


- **Exeter COVID-19 Sequencing (ExCoSe)** is an RD&E Tissue Bank project collecting “leftover” screening samples (normally destroyed after testing is complete) and healthcare information from COVID-19 positive individuals. Working with colleagues from the National COVID-19 Genomics UK Consortium, the samples and participant information are helping identify the virus’s genetic make-up, and how this may be changing as it spreads. Locally, this information is used to identify virus hotspots and to improve hospital infection control measures.

NIHR Exeter CRF Research Lay Day 2020 goes virtual!

The annual CRF Research Lay Day for our Patient and Public Involvement (PPI) groups was held virtually for the first time in November 2020. Highlights of this interactive meeting included an overview of CRF activities over the past challenging year. Lay members were especially interested to hear an update on some of the COVID-19 related research that the CRF is supporting. Prof John Campbell, Professor of General Practice and Primary Care and the Associate Dean for Research at the University of Exeter, spoke about the BRACE study (“BCG vaccination to Reduce the impact of COVID-19 in healthcare workers following Coronavirus Exposure”), and Dr Jane Masoli, NIHR Doctoral Fellow and Specialist Registrar in Geriatric Medicine, presented her ExCoSe study. It was lovely to see and catch up with everyone on Zoom, but we are really looking forward to seeing everyone in person again, hopefully in the not too distant future.



If you are interested in joining any of our PPI groups, please contact Louisa on L.Bolt@exeter.ac.uk



Novavax research staff at NHS Nightingale Hospital Exeter

Mireille Gillings Neuroimaging Centre opens



The new £10 million Mireille Gillings Neuroimaging Centre, funded by the Dennis and Mireille Gillings Foundation, is based at the Royal Devon & Exeter Hospital and allows researchers to analyse how the brain responds on a molecular level. World leading Neuroimaging expert, Prof Marios Politis, has been appointed Professor of Neurology and Director of the Mireille Gillings Neuroimaging Centre at the University of Exeter Medical School. His research involves using cutting edge PET and MRI scanners to understand how the brain works and to gain insight into how best to prevent and treat diseases, including dementia and Parkinson's disease.

Research Highlights

Periods of physical inactivity, such as a period of arm or leg immobilization (or a pandemic!), are often required for the recovery from injury but lead to loss of muscle mass. The **WTF-1 study** investigates if this muscle atrophy is due to an impaired ability of our muscles to extract important nutrients from the blood.



Fibreglass cast

Forearm muscles are made inactive via a forearm fibreglass cast which, for most participants, makes a nice blank canvas for doodling over the two days of immobilization. Recruitment to this intensive study resumed in September 2020. Of the 36 healthy young participants, about half have now completed their involvement.

The Respiratory Medicine Group (clinicians and scientists from the RD&E and University of Exeter, and supported by the CRF) goes from strength to strength, investigating a variety of lung diseases from basic lab research through to clinical studies and trials, a bench-to-bedside approach. A key interest is a condition called Idiopathic Pulmonary Fibrosis (IPF) – a little known but devastating disease causing 1% of all deaths in the UK. A recent award from the Medical Research Council (MRC) will allow the team to explore new therapies for IPF. This follows on from their recent CRF-based clinical study examining how useful well supervised cardiopulmonary exercise testing (CPET) might be in the clinical management of IPF patients. One of the first findings was how keen patients were to try it: *"I've not been on a bike for years – this is great!"*.



CRF Exercise room (pre-COVID)

The CRF was delighted to support the opening of the RD&E sponsored **EXPLODES study** in Autumn 2020,



especially considering the challenges of opening any new research during a pandemic.

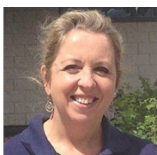
This is an NIHR-adopted study, funded by Bowel Research UK, looking at the small changes in how our genes work (epigenetics) to help explain why some patients with diverticulitis (inflammation of the large bowel) get mild disease, while others develop life threatening sepsis. Following a successful pilot study, the EXPLODES team is now recruiting participants in Exeter, with the support of the CRF, and will soon be joined by several other national sites.

Mr Frank McDermott, the Consultant Surgeon leading the research team (seen here after a fun run to raise funds for Bowel Research UK), highlighted that this new study *"is a testament to a successful, ongoing collaboration between the acute trust and the CRF, enabling us to perform clinically relevant research, particularly in traditionally under-represented disease groups."*



Awards for our Researchers

The InBev-Baillet Latour Fund has awarded the Health Prize 2020 to Professor Andrew Hattersley (our CRF Clinical Director), Professor of Molecular Medicine at the University of Exeter and Consultant in Diabetology at the RD&E NHS Foundation Trust. This is Belgium's most important scientific prize, awarded for outstanding achievements in biomedical research and was awarded to Professor Hattersley for his discoveries about diabetes that have changed the understanding, diagnosis and treatment of the genetic forms of this disease.



Professor Maggie Shepherd was chosen as one of the Women in Global Health's 100+ Outstanding Women Nurses and Midwives. Professor Shepherd, Lead Nurse for Research at the RD&E NHS Foundation Trust and Honorary Clinical Professor at the University of Exeter, was singled out for her work which combines research, clinical care and education in monogenic diabetes to improve patients' lives.

Maggie said: *"I'm absolutely delighted to have my work recognised in this way and to be part of a campaign to promote women in leadership positions. There are so many brilliant and talented nurses and midwives included and I am honoured to be one of them. I hope this campaign will inspire other nurses and midwives to become future health leaders."*

Please contact us if you have recently moved house, changed your telephone number, or have received this by post but would be happy to provide us with an email address to save us ongoing costs: **01392 408181** or **crf@exeter.ac.uk**



The **DARE Study** continues as planned to follow up participants already taking part. Fair processing information which clarifies what we do with your data can be found at <https://www.diabetesgenes.org/current-research/dare/>

The NIHR Exeter Clinical Research Facility is a partnership between the University of Exeter Medical School College of Medicine and Health, and Royal Devon and Exeter NHS Foundation Trust.