**FutureNeuro, the SFI Research Centre for Chronic and Rare Neurological Diseases**

The FutureNeuro Vision is to enable people with neurological diseases to live independently. We aim to realise this vision by providing Faster Diagnosis, Personalised Treatments and Patient-Centred Care.

**Facilities**
- Genomics, bioinformatics and computational biology
  - Next-generation sequencing platforms
  - Proteomics core
  - Bioinformatics and systems biology core
- Preclinical disease phenotyping
  - iPSC lines, in vitro modelling and gene editing
  - Molecular, cellular and brain imaging
  - Electrophysiology
  - Pre-clinical in vivo phenotyping
- Sensor Development
  - Companion diagnostics
  - High-speed electrochemistry
  - Super resolution fluorescence microscopy
- eHealth enabled patient support
  - National electronic patient records system and patient portal infrastructure
  - Integration of genomic and phenotypic information
  - Integration of wearables
- Clinical research
  - Clinical infrastructure for trials
  - Biobanking and biosample collection
  - Large patient datasets of structural MRI

**Industry and Commercialisation**

FutureNeuro connects national and multinational industry with key academics and clinicians based in our leading hospitals to provide diagnostic, therapeutic and E-Health solutions.

FutureNeuro’s target projects with industry partners will bring diagnostic supports to market, a pipeline of new drugs, and connected health solutions that enable patients to monitor and report their health better than ever before.
**Prof. David Henshall**  
*Director*  
dhenshall@rcsi.ie

Prof David Henshall is Professor of Molecular Physiology & Neuroscience and has been working at the RCSI University of Medicine and Health Sciences since 2004. His main interests lie in the causes and treatment of the neurological disorder epilepsy. Some of his major research projects are looking at the patho-mechanisms underlying epilepsy development following brain injury, neonatal seizures, developing new medications for epilepsy and exploring the role of epigenetics and non-coding RNA in this disease.

He is the co-ordinator of EPI-Cluster, a pan-european research and advocacy network, which was recently funded by European Brain Research Area (EBRA) He is also the chair of the International League Against Epilepsy (ILAE) Genetics/Epigenetics Taskforce. Prof Henshall has authored over 180 papers and 9 book chapters.

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**Public Patient Involvement:**

FutureNeuro places particular emphasis on quality Public Patient Involvement ensuring research is informed by and for our public. FutureNeuro defines Public Patient Involvement as the development of active partnerships between researchers, patients, and stakeholders to progress research in the field of health sciences and digital health technologies which is relevant and useful to patient and public needs.