

# The gateway to innovation – institute and industry collaboration

## Case Study: IT TALLAGHT - MICRA BIODIAGNOSTICS & INCEREB

### Developing rapid and innovative neonatal monitoring sensors

With the MiCRA (Microsensors for Clinical Research and Analysis) Technology Gateway at Institute of Technology, Tallaght as co-developers, Incereb have developed neonatal and Fetal physiological monitoring sensors which are quick and easy to use without the need for specialist neurophysiology training



Incereb, based in Dublin, is an Enterprise Ireland High Potential start-up that graduated through the New Frontiers Programme to incubate in the Synergy Centre in Institute of Technology Tallaght in 2012.

The executive team is highly experienced, with in excess of 25 years' experience in the Clinical Neurophysiology and Medical Equipment sales business, complimented by a team of engineers with extensive

experience in Medical Device design, regulatory procedures, product development and manufacturing. Incereb has developed a rapid deployment multi-sensor EEG (electrophysiological monitoring method to record electrical activity of the brain) device. The device is for use in the Neonatal Intensive Care Unit on infants at risk of seizures following oxygen deprivation, infection or neurological abnormality.

This device, named 'neon' (Neonatal EEG

Optimised for NICU), reduces the time taken to set up the brain monitoring investigation from one hour to less than two minutes without the need for trained specialists. This enables clinicians to monitor brain activity quickly and efficiently for seizures in the first 24/36 hours of life. The reduction in application time is less stressful for the infant, and is more accurate than current techniques.

The Incereb neon device has been clinically validated via controlled clinical trial. It has CE and FDA (Food and Drug Administration) certifications, and is now being used by clinicians in Europe and the US since the product launch in October 2015.

Incereb collaborated with IT Tallaght-based Technology Gateway - MiCRA - through a series of Enterprise Ireland Innovation Vouchers and 100pc funded projects from the company to co-develop the electrode which was incorporated into the neon EEG sensor array.

Based in IT Tallaght, the MiCRA Gateway focuses on the advancement of biosensor technologies, using materials such as enzymes and advanced polymers. MiCRA delivers solutions to companies in many sectors including in vitro diagnostics, environmental, food and pharmaceuticals.

"MiCRA produced prototypes for Incereb, with full functionality, and were very close to the final design iteration," says Jim Roche, CEO Incereb. "The MiCRA staff were fully engaged with this project, the documentation and final report on the project was top class, and slotted immediately into our technical and design history file. We have absolutely no hesitation in recommending MiCRA to any interested party."

For more information on the MiCRA Technology Gateway, visit [www.technologygateway.ie/network/micra-gateway/](http://www.technologygateway.ie/network/micra-gateway/)