# Maynooth University Opportunity

# **Biosensors**



# Unmet need:

Successful drug development for a variety of brain diseases requires knowledge of neurochemical processes. Such information allows for better understanding of brain function, and more rapid screening of potential drugs to address specific neurochemical imbalances.

#### **Our Solution:**

We have developed novel sensors to selectively monitor neurochemicals in the living brain on a timescale from milliseconds to days/months. These microelectrochemical devices are used to understand the complex functioning of the brain in terms of behaviour and disease. For example, one of the major hurdles to the discovery of new medicines to treat psychiatric and neurological disorders is the paucity of suitable animal models capable of predicting clinical benefit. This is particularly true of disorders associated with cognitive disturbance such as schizophrenia and Alzheimer's disease, where pre-clinical to clinical translation is poor. The sensor monitoring concept provides a solution to this deficit in pre-clinical drug discovery in that it enables the recording of continuous real-time signals, in freely-moving behaving animals, of the haemodynamic and metabolic consequences of neuronal activation that form the basis of functional brain magnetic resonance imaging in humans. These devices also have significant potential clinical applications.

#### **Development Stage:**

Stage 5: Commercialisation.

#### What is sought:

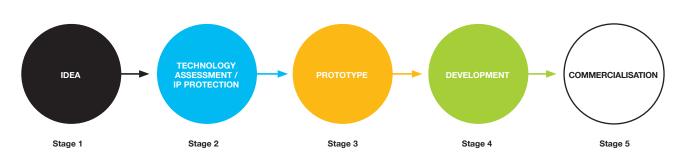
We are looking to attract commercial clients that would benefit from visualisation and mapping of data to help make information decisions for the future.

#### **Intellectual Property:**

Software and know-how.

# **Contact:**

Paul.Tyndall@mu.ie +353 1 708 6872



### **Development Stages of Opportunities**



# MaynoothWorks Knowledge Transfer Enterprise Partnership Entrepreneurship Innovation