

### **Symposium 3: Novel targets for pain, depression and their co-morbidity**

**Sponsored by Neuroscience Ireland**

**Theme: Novel treatments & translational neuroscience**

**Monday 10<sup>th</sup> April, 13:00 – 14:40**

Pain is the most common reason people seek medical help and a major focus of neuroscience research. At least 20% of Europeans suffer from chronic pain and the cost of pain to health, well-being, society and the economy is immense. Reciprocal interactions between pain and negative affect are now widely recognised. Moreover, depression and chronic pain have been estimated to co-occur in over 50% of patients, and such co-morbidity is more disabling and costlier to both patients and society than either disorder alone. Thus, there is an urgent need to understand the mechanisms underlying depression-pain interactions in order to facilitate the development of novel treatment regimens.

This symposium will focus on novel, emerging research examining some key neural substrates that may underlie the association between negative affect and pain.

Prof. David Finn (National University of Ireland Galway) uses a whole-systems *in vivo* approach to examine the role of the endocannabinoid system in the interaction between negative affect and pain.

Dr. Siobhain O'Mahony, an early-stage researcher who collaborates with Prof John Cryan's team (University College Cork) will discuss work providing an important link between the microbiome and brain-gut communication and the implications this has for visceral pain.

Dr. Sandrine Geranton (University College London) will present new work showing an important role for the stress regulator FKBP51 in full development and maintenance of long-term pain states.

Prof. Oliver Dolly (Dublin City University) will present his latest research demonstrating how botulinum toxin alleviates chronic pain and the relationship with depression.

Chairs: Professor David Finn (National University of Ireland Galway) and Professor Oliver Dolly (Dublin City University)

Speaker 1: Professor David Finn (National University of Ireland, Galway)

'Reciprocal interactions between pain and negative affect: Role of the endocannabinoid system'

Speaker 2: Dr Siobhain O'Mahony (University College Cork)

'The microbiome-gut-brain axis as a key regulator of visceral pain'

Speaker 3: Dr Sandrine Geranton (University College London)

'Treating chronic pain by inhibiting the stress regulator FKBP51'

Speaker 4: Professor Oliver Dolly (Dublin City University)

'Alleviation of chronic pain by botulinum toxins and its relation to depression'