

## **Short Course Schedule:** ***New Approaches to Understanding Depression***

**Fri 24<sup>th</sup> October 2014**

**Venue: TCIN, Lloyd Institute, Trinity College Dublin**

| <b>Morning Session:</b>   |  |
|---------------------------|--|
| 9.30 – 11.30              | <p><b><u>Lecture 1:</u> <i>Depression from Clinical Classification to Preclinical Models</i></b><br/>Prof. Shane O'Mara</p> <p><b><u>Lecture 2:</u> <i>Depression in older people</i></b><br/>Prof. Brian Lawlor</p>   |
| 11.30 – 12.00             | Coffee/Tea Break   |
| 12.00 – 1.00              | <p><b><u>Lecture 3:</u> <i>Therapeutic brain stimulation for depression</i></b><br/>Prof. Declan McLoughlin</p>  |
| 1.00 – 2.00               | Break for lunch  |
| <b>Afternoon Session:</b> |  |
| 2.00- 5:00                | <p><b><u>Lecture 4:</u> <i>Antidepressants; addressing unmet needs for the treatment of depression</i></b><br/>Dr. Andrew Harkin</p> <p><b><u>Lecture 5:</u> <i>The hypothalamic-pituitary-adrenal (HPA) axis: modification by early life stress and function in depression</i></b><br/>Prof. Veronica O'Keane</p> <p><b><u>Lecture 6:</u> <i>Chemobrain: Investigating and ameliorating the neurological and neuropsychiatric sequelae of chemotherapy</i></b><br/>Dr. Charlotte Kathleen Callaghan</p> |
|                           | Questions & Wrap-up  |

**Registration and payment:**

<http://www.eventbrite.ie/e/new-approaches-to-understanding-depression-tickets-13158594711>



## Shortcourse Programme

### CPD Short Course: New Approaches to Understanding Alzheimer's Disease

**Accredited for CPD by the Royal College of Physicians of Ireland**

**RCPI approval reference number: 4841**

**CPD credits allowed: 6**

**This CPD Recognition is accepted by all Irish Postgraduate Training Bodies**

The World Health Organization, defines depression as: 'a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness and poor concentration.' 38% of the EU population each year suffers from a mental disorder, with three of the most disabling conditions being depression, dementias, and stroke. Major depression alone affects 12% of men and 20% of women in their lifetime, costs Europe 1% of its total economy and, according to the WHO, will be the world's second most debilitating illness by 2020 after HIV/AIDS. This one day course will focus on the latest approaches to understanding the symptoms, the causes, and the treatments of Depression. An appreciation of the changes occurring in the scientific and clinical environments may lead to better diagnostic and therapeutic approaches to this illness.

**Lecture 1.** The course starts with a lecture on depression from Clinical Classification to Preclinical Models. In this lecture, we will explore several topics. Firstly, we will examine the frequency of mood disorders in the general population using new 'big data' tools. Next, we will examine the ICD and DSM classification of mood and affective disorders. We then examine the aetiology of major depressive disorder, and the predominant biopsychosocial mode of depression. We then examine approaches to depression treatment from a variety of perspectives. Finally, we examine some of the major preclinical animal models of depression. Objectives: after attending, attendees should be conversant with the major classification schemes for depression; understand the differing perspectives on depression, and be able to discuss differing treatment options and their possible appropriateness for use in differing clients, understand the utility and limitations of preclinical models of depression (Shane O'Mara)

**Lecture 2.** The second lecture will look into antidepressants and the unmet needs for the treatment of depression. Current drug treatments for depression will be reviewed. A number of unmet clinical needs remain including slow onset of action, treatment resistance and adverse effects. Research to address these needs will be highlighted with reference to monoamine and non monoamine mechanisms of antidepressant action and elucidation of neuroimmune interactions in the pathophysiology of depression. Future perspectives on drug development for depression will be discussed (Andrew Harkin)

**Lecture 3.** Lecture number 3 will discuss the bio-psychosocial risk factors, presentation and management of depression in older people. Getting older inevitably means a change in roles and lifestyle, such as children leaving home, retirement, the development of physical health problems, experiencing bereavements or moving to a nursing home. These stressful life events can trigger feelings of loneliness and isolation and can lead to depression. Mobility can become limited which results in a loss of independence, possibly resulting in a spouse or child becoming the carer. However depression is not an inevitable part of ageing and older people should not be embarrassed to discuss their mental health and emotional wellbeing (Brian Lawlor)



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**Lecture 4.** The objective of the second lecture is to explore therapeutic brain stimulation for depression. The main teaching objectives of this lecture will be: 1. to update students on recent developments in therapeutic brain stimulation for depression, including ECT, TMS, DBS, VNS and tDCS and 2. to critically appraise the role of such therapies. On completion of this workshop, students should be able to: 1. describe the range of physical brain stimulation therapies currently available or in development for treating depression, 2. understand the evidence-base for these therapies for depression, 3. evaluate the role of these modalities in treating depression (Declan McLoughlin)

**Lecture 5.** The presentation will provide a brief overview on the hypothalamic-pituitary-adrenal (HPA) axis: modification by early life stress and function in depression. Stress systems are essential for the maintenance of life but can become skewed if we are exposed to excessive stress in early life. We may also have innate problems with the function of our HPA axis and allied limbic system components. This talk will explore how the HPA axis is modified in depression and how stress in early life can predispose us to this, with a particular focus on the prenatal environment (Veronica O'Keane)

**Lecture 6.** The last lecture will introduce the Chemobrain concept: investigating and ameliorating the neurological and neuropsychiatric sequelae of chemotherapy. In recent years it has become apparent that chemotherapeutic treatment can cause cognitive deficits, including memory impairment and depression, with numerous studies reporting impairment in cognitive ability of patients termed "chemobrain" or "chemo-fog". This lecture will explore the underlying and pathophysiological mechanisms that may be involved (Charlotte Callaghan).

## LECTURERS



**Shane O'Mara, Professor of Experimental Brain Research, TCIN Director**

Shane O'Mara's research focuses on the relations between cognition, synaptic plasticity and behaviour, in the context of brain aging and depression.

[http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Shane\\_OMara2.php](http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Shane_OMara2.php)



**Declan McLoughlin, Research Professor of Psychiatry, TCIN**

Declan McLoughlin's research focus is developing molecular biomarkers to aid diagnosis and long term management of depression in parallel with randomised controlled trials to improve therapy.

[http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Declan\\_Mcloughlin2.php](http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Declan_Mcloughlin2.php)



**Veronica O'Keane, Senior Lecturer, Department of Psychiatry, Consultant Psychiatrist AMiNCH Hospital, TCIN**

Veronica O'Keane's current main research interests are in the area of stress systems and the HPA axis, particularly during fetal development and in adult depression.

[http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Veronica\\_OKeane2.php](http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Veronica_OKeane2.php)



**Brian Lawlor, Professor of Old Age Psychiatry, Consultant Psychiatrist at St James's Hospital, Director of the Memory Disorders Clinic at M.I.R.A., Clinical Director of Psychiatry, St James's Hospital, TCIN**

Brian Lawlor's research interests focus on the neurobiology and treatment of behavioural and psychological symptoms in dementia (especially Alzheimer's disease) including late-life depression and late-life dysthymia, social connection and loneliness in the community dwelling elderly.

[http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Brian\\_Lawlor2.php](http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Brian_Lawlor2.php)



**Andrew Harkin, Senior Lecturer in Pharmacology, TCIN**

Andrew Harkin's research, in the area of neuropharmacology, is focused on the neurobiology of depression, the development of novel antidepressants and the adverse effects of drugs of abuse.

[http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Andrew\\_Harkin.php](http://www.tcd.ie/Neuroscience/partners/PI%20Profiles/Andrew_Harkin.php)



**Charlotte Callaghan – Postdoctoral Fellow, TCIN**

Charlotte Callaghan's research focuses on cognitive function and dysfunction, including; molecular biology of memory formation and of stress and depression on cognitive function, and identification of biomarkers of memory impairment.

<http://ie.linkedin.com/pub/charlotte-callaghan/54/b50/728>