TRINITY COLLEGE
Institute of Neuroscience
TCIN *from molecules to mind*

TRINITY COLLEGE INSTITUTE OF NEUROSCIENCE

ANNUAL REPORT 2008

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DIRECTOR'S REPORT

The past year has seen further expansion in TCIN with the appointment and arrival of several new Principal Investigators (PIs). Professor John O'Doherty who was appointed to the Thomas Mitchell Chair in Cognitive Neuroscience in 2007, took up his appointment in June 2008 and was recently awarded an SFI Investigator award. His expertise in image analysis has strengthened the research activity in this area and this is further strengthened by the appointments of Professor Thomas Frodl and Dr Arun Bodke whose expertise also lies in this area. Professor Thomas Frodl was appointed to the Chair of Neuroimaging and Dr Arun Bodke has been appointed as a Stokes Lecturer, both in the School of Medicine. Professor Richard Reilly was appointed as Professor in Neural Engineering and, as a PI in the TRIL programme, his appointment was particularly welcome strengthening the TCD and TCIN component of this large-scale programme. Dr Paul Dockree was appointed as a Stokes lecturer in the School of Psychology and continues his involvement in TCIN. The most recent appointee is Professor Kumlesh Dev who is an Associate Professor position in Physiology; he will take up this position in December 2008. His expertise, which is broadly in the area of neuroinflammation, will add to the development of this research area in TCIN.

Several PIs received promotions or awards in the past 12 months; Professor Michael Rowan was promoted to a personal chair in Neuropharmacology, and Professor Fiona Newell was promoted to Associate Professor and Professors Harald Hampal and Declan McLoughlin were elected to Fellowship.

TCIN recognizes the importance of contributing to the government-led initiative to build a knowledge-based economy and consequently there has been a steady increase in the numbers of PhD students. In the academic year 2007-2008, 9 PhD students graduated, while 12 students submitted their PhD theses in September/October 2008 and are awaiting their viva voce examinations. Student numbers in the MSc course in Neuroscience increased from 12 in the academic year 2007-2008, to 16 registrants in 2008.

TCIN has a commitment to enhancing the profile of Neuroscience to the wider community and in an effort to achieve this aim, Gillian Roddie has been appointed as Academic and Outreach Officer. Her remit includes coordination of activities in TCIN to coincide with International Brain Week in March 2009 and organization of a number of national and international meetings. A particularly important Outreach event is the current (4-31 October 2008) Science Gallery exhibition 'The lab in the Gallery: Pay attention' which was driven by Professors Ian Robertson and Richard Reilly and which involves several TCIN PIs. Its primary aim is to bring a working Neuroscience laboratory to the public who are invited to become participants in some of the several experiments. In April 2008, the 2007 intake of PhD students on the 4 year training programme founded the University of Dublin Neuroscience Society. One of its objectives is to hold public events to highlight recent developments in areas of Neuroscience of public interest such as Alzheimer's Disease, Autism and Multiple Sclerosis and will therefore help TCIN to achieve one of its goals which is reflected in its Mission Statement.

Fundamental to the development of TCIN is the continued efforts of its PIs to achieve their individual goals in their research activities. The past year has seen an increase in

research activity as assessed by the numbers of papers published and numbers of citations. As the Institute continues to expand, new challenges are being presented and plans are in place to provide additional space to enable research activity to grow. These challenges are presented in tandem with opportunities, in particular opportunities to further develop interdisciplinary research and translational research which is one of the primary objectives of TCIN.

Marina Lynch
Oct 2008

Mission Statement

To achieve international status in research of the highest possible rank in Trinity College Institute of Neuroscience by providing the infrastructure and support for individual and group endeavours and by ensuring that its research is promoted within and outside the University.

TCIN STAFF

Prof. Marina Lynch	Director	lynchma@tcd.ie
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TCIN MANAGEMENT TEAM

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Prof. Shane O'Mara	Director of Development	somara@tcd.ie
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* On leave (Oct 2008)

AIMS OF TCIN

Overall aim
TCIN aims to be among the most interdisciplinary neuroscience research centres in the world by 2010 defined by top-ranked publications with joint authorship spanning the molecular, cellular, systems, cognitive and clinical domains.

The specific objectives of TCIN are:
(a) to develop an institute which has world ranking in identified areas of Neuroscience:

- by fostering and supporting the research efforts of individuals;
- by providing the leading edge facilities to enable this research;
- by striving to become a centre of excellence in specified areas of Neuroscience;
- by attracting world-class researchers to TCIN; by encouraging and accommodating visiting workers;
- by establishing links nationally and internationally in an effort to enhance our research endeavours;
- by consolidating the position of TCIN as Ireland's premier Neuroscience centre.

(b) to encourage interdisciplinary research with a focus on translation so that the aspiration 'molecules to mind' can be achieved:

- by continuing and expanding focused meetings in TCIN;
- by participating in the development of cross-disciplinary discussion fora;
- by expanding and publicizing a modified seminar programme in TCIN;
- by increasing interaction with PIs in cognate disciplines.

(c) to sustain and develop a high quality education and outreach programme, and

- by supporting, continuing and expanding current teaching and seminar programmes at 3rd and 4th levels;
- by rewarding excellence at 3rd and 4th levels by initiating undergraduate and postgraduate awards;
- by introducing and supporting a summer internship programme for Neuroscience undergraduates.

(d) to contribute to the government-led drive to build a knowledge-based economy:

- by fostering industrial links in appropriate areas of research;
- by increasing awareness among academics of the importance of data protection;
- by assisting PIs in patent development when appropriate.

(e) to enhance the profile of science, particularly neuroscience, to the wider community:

- by planning a series of annual or bi-annual meetings open to the public;
- by actively contributing to events in the Science Gallery;
- by encouraging PIs to interact with the press when appropriate.

NEW APPOINTMENTS AND ARRIVALS

Professor Declan McLoughlin was appointed to the Chair of Psychiatry in St. Patrick's Hospital and started in July 2007. There are now 4 researchers in his research group.

Professor John O'Doherty has been appointed to the Thomas N. Mitchell Chair of Cognitive Neuroscience and took up his appointment in May 2008. He has been awarded an SFI Principal Investigator award and hired 2 researchers for his team.

Professor Thomas Frodl has been appointed as Chair of Integrative Neuroimaging in the School of Medicine-Department of Psychiatry and the Adelaide and Meath Hospital (AMiNCH) and St. James´s Hospital and took up his appointment in September 2008. He is also a PI at TCIN.

Professor Richard Reilly was appointed as Professor in Neural Engineering and Ageing in January 2008, he is affiliated to the School of Engineering (Mechanical Engineering). He is one of the senior PIs in the TRIL programme and is a PI in TCIN. The Neural Engineering group has recruited 3 Postdoctoral Researchers, 1 Research Fellow and 7 PhD students since January 2008.

Ms Gillian Roddie was appointed as Academic & Outreach Officer in May 2008.

Visiting Researchers
Prof James P Cleary completed a very successful visit to TCIN as an SFI Walton visiting fellow from August 2007-August 2008 where he collaborated with Professors Anwyl, Rowan and O'Mara. He was involved in a number of projects.

Prof Orlando Espino from the Uinversity of La laguna, Tenerife, is a visiting fellow from September 2008-December 2008; he is a collaborator of Professor Ruth Byrne.

New student intake for the HRB-funded PhD training programme
Anna Gossen – Dipl. Biol. University of Bonn, Germany
Brendan Behan – BA (Mod) in Natural Sciences (Neuroscience), TCD
Deborah Keane – MA Psychology, UCD
Riffat Tanveer – MSc. Neuroscience, TCD
Raasay Jones – BA (Mod) in Natural Sciences (Neuroscience), TCD

RESEARCH ACTIVITY IN TCIN

The recent recruitment of PIs in the Schools of Medicine and Psychology whose research activity is housed in TCIN, and the growth and development of research teams in TCIN, has led to the reorganization of research groupings into 5 research themes. Each comprises PIs in basic and clinical sciences, which is consistent with the objective of supporting Translational Research, and some are underpinned by collaborative projects with industrial partners. The 5 research themes are:

- **Neurodegeneration, neuroprotection and neurorepair**
- **Brain aging**
- **Learning, memory and cognition**
- **Psychiatric diseases and drug abuse**
- **Neural development and plasticity**

Table 1: Research themes and PIs

Neurodegeneration, neuroprotection and neurorepair	Brain aging	Learning, memory and cognition	Psychiatric diseases and drug abuse	Neural development and plasticity
Prof. Marina Lynch	Prof. Marina Lynch	Prof. Shane O'Mara	Dr. Andrew Harkin	Dr. Kevin Mitchell
Prof. Kingston Mills	Dr. Aine Kelly	Prof. Ruth Byrne	Prof. Shane O'Mara	Prof. Mani Ramaswami
Dr. Gavin Davey	Prof. Rose-Anne Kenny	Prof. Hugh Garavan	Dr. Thomas Connor	Prof. Roger Anwyl
Prof. Michael Rowan	Prof. Brian Lawlor	Dr. Fiona Newell	Prof. Veronica Campbell	Prof. Michael Rowan
Prof. Roger Anwyl	Prof. Michael Rowan	Prof. Ian Robertson	Prof. Brian Lawlor	Prof. Shane O'Mara
Dr. Thomas Connor	Prof. Desmond O'Neill	Prof. Michael Rowan	Prof. Michael Gill	Dr. Daniel Ulrich
Dr. Colm Cunningham	Prof. Harald Hampel	Prof. Brain Lawlor	Prof. Ian Robertson	Dr. J. Pablo Labrador
Prof. Shane O'Mara	Prof. Ian Robertson	Dr. Paul Dockree	Prof. Hugh Garavan	Prof. Khurshid Ahmad
Prof. Veronica Campbell	Prof. Declan McLoughlin	Prof. Desmond O'Neill	Prof. Harald Hampell	
Prof. Pete Humphries	Dr. Aileen Lynch	Prof. John O'Doherty	Prof. Declan McLoughlin	
Dr. Jane Farrar	Prof. Shane O'Mara	Prof. Mani Ramaswami	Prof. Thomas Frodl	
Dr. Julie Kelly	Dr. Christian Kerskens	Dr. James Gibney*	Prof. Pat McKeon*	
Prof. Orla Hardiman	Dr. Arun Bokde	Dr. Richard Roche*	Dr. Jogin Thakore*	
Prof. Harald Hampel	Dr. Gary Donohue	Prof. John Foxe*	Dr Gary Donohue	
Dr. Arun Bokde		Dr. Niall Pender*		
Dr. Aileen Lynch				
Dr. Aine Kelly				
Dr Gary Donohue				
Dr. Colin Doherty*				

*Affiliates

NOTE: Details of team members for all PIs are given in Appendix 1

RESEARCH HIGHLIGHTS

Dr Connor and his team have established that activation of β-adrenoceptors induces expression of anti-inflammatory components of the interleukin-1 system (IL-1ra and IL-1RII); this anti-inflammatory action may underlie the neuroprotective effects of β-adrenergic agonists. Dr Harkin has continued his work on identifying novel neuroprotective properties associated with the tricyclic antidepressant desipramine. His recent findings in this area and further analysis on his second area of interest, the monoaminergic mechanisms which mediate a potentially lethal interaction between caffeine and MDMA, have been reported at meetings in 2008.

Drs Connor and Harkin, in collaboration with Dr Julie Kelly and Dr Jane Farrar, are continuing to generate a portfolio of pre-clinical data funded by an Enterprise Ireland Commercialization Technology Development Grant on a lead first-in-class thyrotropin-releasing hormone (TRH)-based compound developed by Dr Kelly. A US patent was granted on the compound in 2008.

Dr Cunningham reported (in Biological Psychiatry) that systemic inflammatory events early in chronic neurodegenerative disease can acutely exacerbate features of disease and accelerate its progression.

Professor Veronica Campbell's research group have identified the signaling pathway activated by Aß which evokes lysosomal destabilisation as an upstream event in the neurodegenerative process and the study was recently accepted for publication in Neurobiology of Ageing. Her research, as well as the research activity in several other laboratories (Connor, A Kelly, J Kelly, O'Mara, Lynch, Harkin) have identified and are continuing to investigate a number of potential neuroprotective strategies including endocannabinoids, TRH-like molecules, β-adrenergic agonists, the tricyclic antidepressant desipramine, PPARγ activators and statins as well as exercise and novel environments.

Professor Lynch's group have been involved in an interdisciplinary study involving Professor O'Mara's and Dr Christian Kersken's groups designed to couple markers identified by MRI with deterioration in cognitive and synaptic function and neuroinflammatory changes. The teams have identified neuroprotective effects of novel lipid mediators and have established that the anti-inflammatory effects of the PPARγ agonist rosiglitazone, may result from its ability to modulate astrocyte and microglial activation. Researchers in the Lynch team and in Professor Kingston Mills team have established that T cells have powerful modulatory effects on microglial activation and that the interactions between these cells impact on the development of symptoms in animal models of Alzheimer's Disease and Multiple Sclerosis.

Professor Shane O'Mara's group has identified neuroprotective effects of rosiglitazone after a single dose and have shown that one dose of rosiglitazone exerts profound effects on neuronal firing.

The research activity of Drs Juan Pablo Laborador and Kevin Mitchell focuses on using molecular genetic, cell biological and imaging techniques to understand how neurons achieve specific cell fates, and how these cell fates, once determined, are elaborated to yield precise neuronal wiring patterns. Recently Dr Labrador's work has

highlighted a functional link between the transcriptional control of dorsal motor axon targeting by *eve* and *grn* and the expression of the Unc-5 receptor. The group's studies have been able to demonstrate how these transcription factors regulate the expression of axon guidance receptors establishing one of the few examples of transcriptional regulation of axon guidance receptors known to date. Professor Ramaswami's research is continuing to probe genetic and cellular mechanisms of synaptic and behavioral plasticity in the relatively simple neural network that drives Drosophila olfactory behaviour.

Professor Pete Humphries has established that targeting a protein integral to the blood brain barrier mediates reversal opening of the blood brain barrier; this paper which employed a multidisciplinary team and includes findings from the MRI team led by Dr Kerskens, was recently published in *J Gene Med*.

Professor Brian Lawlor's group is continuing their study on determining whether neurocardiovascular instability contributes to the transition from Mild Cognitive Impairment (MCI) to dementia. Over 100 subjects have been recruited in this prospective study and the team have demonstrated that MCI subjects have greater postural blood pressure changes than age-matched controls. The group is also involved in 2 major industry-funded research collaborative programmes. The focus of the GSK programme is to accelerate Alzheimer's Disease treatments. The GSK-funded clinical trials of candidate cognitive enhancers in normal elderly control subjects and subjects with MCI are about to commence and will comprise EEG, behavioural and MRI analyses.

Professor Rose-Anne Kenny leads The Irish Longitudinal StuDy on Ageing (TILDA), a multi-disciplinary study which conceptualises ageing along three main dimensions: health, wealth and social connectivity. Its first pilot study, which provides baseline data that allows for the longitudinal assessment and evaluation of biomeasures in particular areas of disease that are prevalent with age, has been successfully completed. During the pilot, Trinity College Dublin opened a health assessment centre in September 2008. The next phase of the study will include several nested studies complementing and extending ongoing research activity in TCIN and St James's Hospital.

Professors Rose-Anne Kenny, Ian Robertson, Richard Reilly and Brian Lawlor are among the PIs involved in the Intel-funded Technology Research for Independent Living (TRIL). This large-scale programme aims to investigate three major factors which lead to loss of independence in older persons: falls, cognitive decline and social isolation. The emphasis is on prevention and early detection of disease to maximize independent living, and to study the role of technology to facilitate this early detection and intervention. The academic-industry partnership includes multidisciplinary teams from Trinity College Dublin, University College Dublin and National University of Ireland, Galway and Intel Digital Health, Leixlip; it is funded jointly by Intel Corporation and Industry Development Agency (IDA). Professor Richard Reilly's specific research projects include electrophysiological investigations into multisensory integration (EEG and ERPs), computational modeling of electrophysiological signals, algorithmic improvements to tractography for brain imaging and speech analysis as a potential marker of cognitive function.

Professor Harald Hampel has demonstrated the multicentre reliability of a biological marker (increased p-tau 231 in cerebrospinal fluid (CSF)) for identifying Alzheimer's Disease at a very early predementia stage; this work was published in Neurology. This marker has been shown to be a reliable and significant predictor of cognitive decline and

conversion from MCI to Alzheimer's Disease in a relatively short and clinically relevant period of 1.5 years. The Hampel team, with research partners in the US, has also developed a test for the measurement of a surrogate marker of β-amyloid production, BACE 1, in CSF; this has been published in Archives of General Psychiatry.

Professor Hugh Garavan is a PI on several recently-funded grants one of which is entitled 'Neurocognitive risk and protective factors for addiction'. His international status in this area has been confirmed by a number of recent publications and his appointment, as the sole foreign member, to the Medical Research Council (UK) Addiction Project Group. He is a named investigator on 2 recently-awarded 'Initiatives in Medicine in Ireland' grants.

Professor Declan McLoughlin's groups in St Patrick's Hospital and TCD have started a 5-year research programme called the EFFECT-Dep Study. This programme is supported by a HRB Translational Research Award and its purpose is to improve electroconvulsive therapy (ECT) practice and use it to interrogate the molecular neurobiology of depression. The group will carry out a definitive randomised controlled trial comparing bilateral and high-dose unilateral ECT, recruiting 140 patients with severe depression. The study will use an animal model of ECT treatment to characterize changes in global protein expression in brain and plasma and will carry out parallel studies using plasma from depressed patients recruited into the clinical trial. The research aims to identify candidate peripheral biomarkers for depression, treatment response and depression relapse.

GRANT FUNDING IN TCIN

Among the major grants held in TCIN are:

1. Industrial Partnership with GlaxoSmithKline (GSK)
This research, led by Professor Shane O'Mara, is ongoing since August 2007. Its objective is to expedite the discovery and development of new medicines for the treatment of Alzheimer's Disease. The funding covers pre-clinical and clinical components and the first clinical trials will commence in November 2008 in a purpose-built clinical assessment suite in St James's Hospital.

2. The TRIL programme
This program is one of the biggest industry-academic partnerships ever funded in Ireland. This €30 million programme - a partnership between TCD/TCIN, UCD, NUIG and Intel - is designed to discover and deliver technology solutions which support independent living in the ageing population. TCIN PI's lead three of the five strands of this large and internationally-prominent programme, namely Prof Brian Lawlor (social connection), Prof Rose-Anne Kenny (falls) and Profs Ian Robertson and Richard Reilly (Cognition).

3. Health Research Board
TCIN investigators, led by Professor Marina Lynch, who is the Director of this programme, were awarded funding to introduce a 4-year integrated PhD programme in Neuroscience in October 2004. The fourth cohort of 5 students (chosen from 139

applicants) registered in October 2008 and the first cohort are currently in the process of submitting their theses.

4. Science Foundation Ireland

Several TCIN investigators have been awarded a prestigious Principal Investigator award and these are listed in the table below. The latest recipient of one of these awards is Prof. John O'Doherty.

Funding to individual PI's

Funding to individuals from a variety of sources is summarized in the table below:

Principal Investigator	Granting Body	Amount	Period of Grant	Area of Research Funded
Prof. Roger Anywl	Science Foundation Ireland	1,000,000	2007 – 20011	Plasticity of Brain, Alzheimers research
Dr. Mary Cannon	Health Research Board	1,500,000	2005 – 2010	Adolescent brain development and risk for schizophrenia: a study of structural and functional disconnectivity
Dr. Veronica Campbell	Health Research Board	150,000	2005 – 2008	Regulation of adult stem cell differentiation by hypoxia
Dr. Veronica Campbell	Science Foundation Ireland	180,000	2007 – 2009	Cannabinoids and the control of stem cell differentiation.
Dr. Thomas Connor/Prof. Kingston Mills	Science Foundation Ireland AOIP	120,000	2005 – 2008	Neuroimmunology
Dr. Thomas Connor	Health Research Board	298,436	2008 – 2011	Enhancement of central noradrenergic tone as a novel strategy to combat neuroinflammation and neurodegeneration: A role for b2-adrenoceptors
Dr. Thomas Connor, Dr Andrew Harkin	EU FP7, MOODINFLAME	373,200	2008 – 2011	Early diagnosis, treatment and prevention of mood disorders targeting the activated inflammatory response system
Dr Colm Cunningham	Welcome Trust	773,261	2006 – 2010	Neuroimmunology / Neuropsychology of ageing
Dr. Gavin Davey	EU Marie Curie	1,200,000	2006 – 2010	Neuroscience
Dr. Gavin Davey	NIBRT/IDA	1,300,000	2006 – 2010	Biotechnology
Dr. Gavin Davey	IRCSET	70,000	2006 – 2009	Neuroscience
Dr. Gavin Davey/Prof. Michael Coey	Science Foundation Ireland AOIP	160,000	2005 – 2009	Neuroscience/Nanoscience

Dr Gary Donohoe / Prof Harold Hampel	NARSAD	41,892	2008 – 2010	A diffuse tensor imaging investigation of white matter abnormalities associated with OLIG2 and CNP in schizophrenia
Dr Gary Donohoe /Dr. A Corvin & Prof. M. Gill	Science Foundation Ireland	162,000	2007 – 2010	Does genetic variation at dysbindin and other candidate schizophrenia genes within the glutamate system contribute to abnormal perceptual processing measured using visual and auditory evoked potentials?
Dr. Andrew Fagan	Science Foundation Ireland	162,000	2006 – 2009	MRI Physics in Neuroscience
Dr. Jane Farrar	Health Research Board	210,000	2006 – 2009	Treatment of retinal degenerations in mouse models of retinitis pigmentosa by transplantation of genetically modified retinal stem cells.
Dr. Jane Farrar	Health Research Board	210,000	2006 – 2009	Regulatory role of miRNAs in retinitis pigmentosa models.
Dr. Jane Farrar	Health Research Board	300,000	2006 – 2009	Exploration of exogenous microRNAs as a suppression tool and endogenous microRNAs in the context of retinal degenerations
Dr. Hugh Garavan (Ireland component)	EU 6th Framework Programme	800,000	2006 – 2011	Reinforcement-related behaviour in normal brain function and psychopathology
Dr. Hugh Garavan	EU Marie Curie Transfer of Knowledge	640,000	2006 – 2009	Using Cognitive Neuroscience to understand how consumers make and maintain healthy food choices
Dr. Hugh Garavan	Health Research Board	300,000	2008 – 2011	Neurocognitive risk and protective factors for addiction
Dr Kieran Murphy PI, Dr Hugh Garavan	Health Research Board	300,000	2008 – 2011	Neuroscience
Prof. Michael Gill	NIMH	1,500,000	2003 – 2008	ADHD genetics research collaboration
Prof. Michael Gill	Science Foundation Ireland	143,891	2006 – 2008	Schizophrenia genetics

Prof. Harald Hampel, M Ewers	Biotech Company, Germany	200,000	2007 – 2008	Early and differential diagnosis of Alzheimer's disease utilizing structural and functional changes in the brain, and genomic, neuropsychological and neurochemical markers
Prof. Harald Hampel, K Burger	Biotech Company, Germany	170,000	2007 – 2009	Validity examination of innovative inflammatory markers of Alzheimer's disease in blood plasma
Prof. Harald Hampel	Federal Office of Educaton and Research (BMBF)	119,600	2007 – 2009	Kynurenine metabolites as diagnostic markers for major depression and Alzheimer's disease
Prof. Harald Hampel	European Commission (EU), National Institutes of Health (NIH), Alzheimer's Association	201,829	2007 – 2010	The European Alzheimer's Disease Neuroimaging Initiative (E-ADNI): a study of the European Alzheimer's Disease Consortium for establishing of a large scale European network on Alzheimer's disease
Prof. Harald Hampel, Bürger K	European Commission (EU), FP6	19,740	2008 – 2010	Beta amyloid oligomers in the early diagnosis of AD and as a marker for treatment response
Prof. Harald Hampel, Bürger K et al	German Brain Foundation (Hirnliga e.V.)	25,000	2007 – 2008	Development and evaluation of a modular every day relevant cognitive intervention for patients with mild cognitive impairment (MCI) and mild Alzheimer's dementia (AD) using neuropsychologic and functional imaging techniques
Prof. Harald Hampel, Shen Y, Sabbagh M, Hampel H	Alzheimer's Association Zenith Award	175,345	2007 – 2009	Elevated BACE1 as a risk factor for progression from MCI to AD
Prof. Harald Hampel, Teipel SJ, Ewers M	Federal Office of Education and Research (BMBF), Competency Network on Dementia	104,784	2007 – 2008	Cooperative project Competency Network on Dementia
Prof. Harald Hampel, Sydykova D et al	Support program-science & teaching, medical faculty, LudwigMaximilian University of Munich	50,900	2007 – 2008	Novel image processing techniques to better understand functional and fiber connectivity

Prof. Harald Hampel, Sydykova D et al	German Brain Foundation (Hirnliga e.V.)	25,000	2006 – 2008	Structural and functional integrity of intracortical projections in patients with Alzheimer's disease a combination study with diffusion tensor imaging, MRI and EEG (DTI-integrity)
Prof. Michael Gill	Science Foundation Ireland	1,707,867	2004 – 2009	Resource for Psychoses genomics Ireland
Prof. Orla Hardiman	Health Research Board	1,700,000	2007 – 2012	A population-based study of cognitive decline in ALS.
Prof. Orla Hardiman	Health Research Board	350,000	2007 – 2010	Replication & Development of Whole Genome Association Study in an Irish ALS population.
Prof. Orla Hardiman	Muscular Dystrophy USA	342,000	2007 – 2009	A Whole Genome Association Study of ALS in a population isolate
Prof. Orla Hardiman	ALSA Initiation Grant:	137,129	2007 – 2009	Population-based Epidemiology of Cognitive decline in ALS
Prof. Orla Hardiman	IMNDA	100,000	2007 - 2009	IMNDA Irish Register of ALS
Prof. Orla Hardiman	IICN/Serono Neurology Fellowship	50,000	2008-2009	
Dr. Andrew Harkin	Health Research Board	213,124	2006 – 2009	Caffeine and MDMA is a lethal combination; a role for dopamine
Dr. Andrew Harkin	IRCSET	72,009	2006 – 2009	Do antidepressant have neuroprotective properties?
Prof. Peter Humphries	Science Foundation Ireland.	970,297	2003 – 2008	Exploration of molecular pathology and molecular therapeutics for inherited retinal degenerations.
Prof. Peter Humphries	Science Foundation Ireland.	970,297	2003 – 2008	Exploration of molecular pathology and molecular therapeutics for inherited retinal degenerations.
Dr. Julie Kelly	Health Research Board	238,703	2005 – 2008	Furthering the development of TRH-DE inhibitors – toward a novel therapeutic strategy for CNS disorders
Dr. Julie Kelly/Dr. Jane Farrar	Science Foundation Ireland	165,000	2005 – 2008	Exploration of methods to provide sustained expression of TRH peptide in a target tissue and investigation of neuroprotective properties of TRH

Dr. Julie Kelly	Enterprise Ireland CFTD/2006/122:	392,415	2007 – 2009	Development of a Novel Compound for treating Neurological Disorders.
Juan Pablo Labrador	SFI (07/IN.1/B913)	913,860	2007 – 2011	"Transcriptional Programming of Motor Axon Guidance
Juan Pablo Labrador	TCD Start-up Grant	12,615	2007 – 2008	
Juan Pablo Labrador	SFI RFP 2008 (08/RFP/NSC1617)	206,515	2008 – 2011	Progamming Motorneuron Guidance
Juan Pablo Labrador	SFI Research Frontiers Programm 2008: (08/RFP/NSC1617): €206,515. Principal Investigator.		2008	Progamming Motoneuron Guidance
Juan Pablo Labrador	DFG	70,000	2008	Postdoctoral fellowship
Juan Pablo Labrador	IRCSET	93,300	2007 – 2009	Postdoctoral fellowship
Prof. Brian Lawlor/ Prof. Rose-Anne Kenny/Prof. Michael Rowan	Health Research Board	1,500,000	2006 – 2011	Neurocardiovascular influences on cognitive functioning: basic and clinical mechanisms
Prof. Rose-Anne Kenny/Prof. Brian Lawlor	Roskamp Institute, Florida	850,000	2006 – 2008	An open label evaluation of the safety and efficancy of nivaldipine in mild to moderate Alzheimers disease
Prof. Rose-Anne Kenny/Prof. Brian Lawlor	Intel/IDA TRIL: Social Connection	1,756,000	2006 – 2009	Using technology to enhance social connection and health of older people
Prof RA Kenny/Dr. Terry Dishongh/Prof Fiona Newell	Intel/IDA TRIL: Social Connection	2,395,000	2007 – 2010	Using technology to enhance social connection and health of older people TRIL: Falls
Prof. Brian Lawlor/Prof. Ian Robertson and Prof. Roseanne Kenny	GSK Collaborative Research in Alzheimer's disease	6,390,000	2007 – 2011	Novel clinical pharmacodynamic endpoints
Prof R Kalaria/ProfRose Anne Kenny	NIH Grant	208,000	2006 – 2008	Longitudinal Neuropathological series of a stroke cohort
Prof. Rose-Anne Kenny	Atlantic Philanthropies & Dept. of Health & Children	5,000,000	2006 – 2016	TILDA (The Irish LongituDinal Study on Ageing)
Prof. Marina Lynch	Science Foundation Ireland	951,027	2004 – 2008	Analysis of the mechanism underlying age-related impairments in synaptic function.

Prof. Marina Lynch/TCIN colleagues	Health Research Board	999,460	2004 – 2008	From basic neuroscience to clinical applications: an integrated PhD programme
Prof. Marina Lynch/TCIN colleagues	Health Research Board	1,000,000	2004 – 2008	From basic neuroscience to clinical applications: an integrated PhD programme. Renewal grant.
Prof. Marina Lynch	Vasogen Ireland	204,680	2005 – 2006	Investigation of the anti-inflammatory effects of VP025 (renewal).
Prof. Marina Lynch	Amarin UK	184,000	2005 – 2008	Comparative studies of the anti-inflammatory effects of EPA and EPA derivatives
Prof. Marina Lynch	EU	183,100	2005 – 2009	From cell-cell recognition to memory formation. New strategies for the treatment of dysfunctional plasticity, learning and memory
Prof. Marina Lynch/Prof. Kingston Mills	Science Foundation Ireland Annual Overhead Investment Plan	160,000	2005 – 2008	A study of the mechanisms underlying the inhibitory effects of interleukin-1 on synaptic transmission in rat hippocampus
Prof. Marina Lynch	Health Research Board	186,658	2006 – 2009	Do atorvastatin and/or the immunemodulatory molecule, FHA, act as neuroprotective agents in the aged rat brain?
Prof. Marina Lynch	Science Foundation Ireland	1,250,000	2008 – 2012	Role of inflammation in age-related neurodegeneration
Dr. Jim Meaney	Health Research Board	4,000,000	2005 – 2010	Proposal for a National Centre for Advanced Medical Imaging
Prof. Declan McLoughlin	Health Research Board	1,481,484	2007 – 2012	*The EFFECT-Dep Study*: enhancing the effectiveness of electroconvulsive therapy in severe depression and understanding its molecular mechanism of action
Prof. Declan McLoughlin	Alzheimer's Research Trust Project Grant	215,662	2007 – 2010	Fe65:Fe65L2 double knockout mice and APP processing
Prof. Declan McLoughlin	Wellcome Trust Programme Grant	833,643	2006 – 2011	The X11 adaptor proteins and Alzheimer's disease
Prof. Declan McLoughlin	Alzheimer's Society Project Grant	198,000	2006 – 2009	*In vivo* analysis of the Fe65L2 protein in health and Alzheimer's disease

Prof. Kingston Mills	EU 6th Framework Programme	350,000	2003 – 2008	Mucosal Vaccines for Poverty Related Diseases (MUVAPRED). FP6-2002-LIFESCIHEALTH-2.3., Proposal No 503240
Prof. Kingston Mills	Health Research Board	209,491	2005 – 2008	'Regulation of T cell responses in immunity to Bordetella pertussis'.
Prof. Kingston Mills	TCD AOIP Collaborative PhD studentship	120,000	2005 – 2009	'Role of T cells in the pathogenesis and prevention of the inflammatory and neurodegenerative changes associated with Alzheimer's disease'. Collaboration with Prof. Marina Lynch. Student stipend and consumable costs for 3 years
Prof. Kingston Mills	TCD AOIP Collaborative PhD studentship	120,000	2005 – 2008	'A role for the anti-inflammatory cytokine IL-10 as a mediator of stress-induced immunosuppression'. Collaboration with Dr. Thomas Connor, Physiology and TCIN. Student stipend and consumable costs for 3 years
Prof. Kingston Mills	Science Foundation Ireland	149,264	2006 – 2009	'Regulation of pathogenic T cells in multiple sclerosis'.
Prof. Kingston Mills	EU-FP7-HEALTH-2007-A	488,016	2008 – 2011	'CP collaborative project. Nasal Pandemic Influenza Vaccine (NASPANVAC)'
Dr. Kevin Mitchell	Wellcome Trust	334,516	2005 – 2008	"A comparative functional genomic screen for novel axon guidance molecules in fly and mouse".
Dr. Kevin Mitchell	EMBO YIP	45,000	2005 – 2008	Genetics of brain wiring
Dr. Fiona Newell	EU-IST	360,000	2006 – 2009	Measuring the perception of naturalness
Dr. Fiona Newell	Marie Curie, ToK	200,000	2006 – 2010	Cognitive neuroscience
Dr. Fiona Newell	TCD Psychology studentship	60,000	2006 – 2009	The role of motion in object recognition
Prof. John O'Doherty	SFI	983,520	2008 – 2012	Fractionality of reward based decision making

Prof. Shane O'Mara	GlaxoSmithKline/ TCIN Research Consortium on Neurodegeneration	14,615,230	2007 – 2011	The focus of the new TCIN/GSK research consortium (2007-2012) is on diseases associated with brain ageing (especially Alzheimer's Disease).
Prof. Mani Ramaswami	US National Institute of Health	1,380,000	2003 – 2008	Cellular function and regulation of Fos and Jun
Prof. Mani Ramaswami	Science Foundation Ireland	3,005,626	2005 – 2009	Role of synaptic signalling in brain function
Prof. Mani Ramaswami	Wellcome Trust	300,000	2006 – 2008	Synapse assembly and function
Prof. Mani Ramaswami	Science Foundation Ireland	3,139,802	2007 – 2012	Genetic analysis of synaptic signalling components in Drosophila and their roles in circuit and behavioural plasticity
Prof. Mani Ramaswami, Dr. Kristina Foltenyi	IRCSET Post Doctoral	100,000	2008 – 2010	Postdoc fellowship
Prof. Mani Ramaswami, Mr John Lee	Ureka Studentship	5,600	2008	UREKA Studentship for Mr John Lee
Prof. Mani Ramaswami, Prof Veronica Rodrigues	Department of Biotechnology Grant of the Government of India.	130,000	2008 – 2011	Circuit mechanisms of short and long-term olfactory plasticity.
Prof. Richard Reilly (Co PI), Prof. Ian Robertson (PI)	IDA/Intel, www.trilcentre.org	160,000	2006 – 2009	Effects of Ageing on Cognitive Function
Prof. Richard Reilly (PI), Professor Richard Costello (Co PI)	Enterprise Ireland	265,000	2005 – 2008	Signal Processing Algorithms for use in eHealthcare Applications
Prof. Richard Reilly, Dr Jogin Thakore (PI), Royal College of Surgeons in Ireland as PI.	Enterprise Ireland	25,000	2008 – 2009	Alcohol Intake: An acoustic-based detection system Telephone-based Alcohol Detection System
Prof. Richard Reilly, Professor Brian O'Connell (PI)	Enterprise Ireland	10,000	2008 – 2009	SMART SPLINT – Superior Monitoring & Longitudinal Analysis on Nocturnal Tooth-grinding
Prof. Richard Reilly (PI), Dr Dermot Power Mater Hospital	Mater Hospital	10,000	2008 – 2009	Seed funding for research into quantitative analysis of clinical practice.

Prof. Richard Reilly (PI), Prof Richard Costello, RCSI/Beaumont Hospital	Beaumont Hospital	10,000	2008 – 2009	Signal processing and engineering development for asthma compliance
Prof. Richard Reilly (Co PI), Dr Robert Whelan, Professor Michael Hutchinson, St Vincent's University Hospital	Enterprise Ireland	98,678	2008 – 2009	Movement disorder Objective Verification by EEG (MOVE): A tool for movement disorder diagnosis, classification and monitoring
Prof. Ian Robertson	Science Foundation Ireland	980,000	2004 – 2008	Cognitive neuroscience and cognitive genomics of ADHD
Prof. Ian Robertson/Dr. Katherine Johnson	Health Research Board	73,000	2006 – 2009	ADHD and movement control
Prof. Ian Robertson	IRCSET	72,000	2007 – 2010	Postgraduate Award, Sabina Brennan
Prof. Ian Robertson	Intel/IDA programme grant TRIL	1,440,000	2007 – 2010	
Prof. Ian Robertson	IRCHSS/ESF Eurocore grant	240,000	2007 – 2011	
Prof. Michael Rowan	IRCSET	75,000	2006 – 2008	Human cortical plasticity
Dr. Jogin Thakore/Dr. Sherlyn Yeap	Health Research Board	171,358	2006 – 2009	"The search for an endophentypic marker in schizophrenia"

PROMOTIONS AND AWARDS

PROMOTIONS

1. Personal Chairs
Michael Rowan (October 2007; Professor of Neuropharmacology)
Richard Reilly

2. Associate Professor
Fiona Newell

3. Fellowship
Professor Harald Hampal
Professor D. McLoughlin

4. Stokes Lecturer
Dr Arun Bokde
Dr Paul Dockree

AWARDS

Ranya Bechara was awarded the Donegan Bronze Medal Medal at the 2008 Meeting of the Biomedical Sciences Section of the Royal Academy of Medicine in Ireland, which was held in Dundalk Institute of Technology (Jume 2008). The competition is open to students presenting research for the first time at a meeting or conference and this year there were 24 entrants. **Amy Birch** won third prize.

Aisling Buckley was the recipient of the Lundbeck Neuroscience Prize 2008:

Keith McQuillan won the Science Speak competition in TCD and represented the College in the National event in the RDS in May 2008.

Dana Kilroy received a travel award from FENS to attend, the NEUROTRAIN: Autumn School which focused on "Pathophysiology and plasticity of neuroglial interaction"; the meeting was held in Dubrovnik, Croatia (October 2007).

Karen Ryan received a travel award from the European College of Neuropsychopharmacology to attend a Workshop on Neuropsychopharmacology for young scientists held in Nice, France (March 2008). She presented her findings at the meeting.

Niamh Curtin, Eoin McNamee and **Karen Ryan**, received travel awards from the Psychoneuroimmunology Research Society to attend at their annual meeting held in Madison, USA (May 2008) where they presented posters.

Melanie Watson and **Laura Kelly** received travel awards from the British Neuroscience Association to attend the 6th Forum of European Neuroscience (FENS) in Geneva, Switzerland (July 2008), where they presented posters.

Dr Jason Chan received an award for the best poster at the Eurohaptics Meeting in Madrid in June 2008. The presentation was entitled '*Investigating visuo-tactile recognition of unfamiliar moving objects: A combined behavioural and fMRI study'*; his co- authors were T Whitaker, Dr Cristina Simões-Franklin and Professor Fiona Newell.

INVITED PRESENTATIONS

PROF RUTH BYRNE

Keynote Talk, Cognitive Science Society of Germany Annual Conference, Dresden, Germany	Sept-08
Invited Symposium Convener and Chair, Symposium on Counterfactual Thinking, International Conference on Thinking, Venice, Italy	Aug-08

PROF VERONICA CAMPBELL

British Neuroscience Association; Symposium on Cannabinoids	Apr-07
School of Biomedical Sciences, University of Nottingham	Apr-07
3rd European Cannabinoid Workshop	Apr-07

DR TOM CONNOR

School of Biotechnology, Dublin City University	Oct-07
St. Ita's Hospital Portrane	Feb-07
Anti-inflammatory actions of antidepressants: A new indication for an old class of drugs?	May-08
B-cells 2008: Complexity, integration and translation, Barcelona	
25th CINP Congress, Munich,	Jul-08

DR COLM CUNNINGHAM

Annual meeting of the Psychoneuroimmunology Research Society, Arcachon, France	May-07
The annual meeting of the European Delirium Association, Limerick	Nov-07
Invited speaker at the Cajal Institute, Madrid	Mar-08
Selected speaker at the International Society of Neuroimmunology, Neuroimmunology Symposium, UCD, Dublin	Mar-08
Invited speaker at the Queens Medical Research Institute, University of Edinburgh	Apr-08
Invited speaker at the University of Southampton	July-08
Invited speaker at the Annual Meeting of the European Delirium Association, Helsinki	Oct-08

DR GAVIN DAVEY

REMEDI, National University of Galway	2007
University of Siena, Italy	2007
University of Perugia, Italy	2007
European Society of Neurochemistry conference lecture, Salamanca	2007

DR GARY DONOHUE

Neuroscience and Mental Health RRG Scientific Meeting, Queen's University Belfast	May-07
International society of Biological psychiatry, San Diego	May-07

DR ANDREW FAGAN

25th Anniversary Scientific Meeting, Association of Physical Scientists in Medicine, TCD.

DR JANE FARRAR

preARVO Vision Research Conference	May-07
Irish Society for Gene and Cell Therapy	May-07
EURETINA 7th congress – Monte Carlo	May-07
University Eye Hospital – Tubingen Germany	Jun-07
Royal College of Surgeons in Ireland - Marie Curie Seminar	Oct-07

PROFESSOR HUGH GARAVAN

University of Wales, Bangor, UK.	Oct-07
European Society for Cognitive Psychology.	Sep-07
European Society for Biomedical Research on Alcoholism.	Sep-07
Pharmacology, Biochemistry & Behavior Conference, Morzine.	Jan-08
Alpine Cognition Conference, Champery.	Jan-08
Royal Society, London.	Feb-08
Dartmouth College, New Hampshire, USA.	May-08
American Psychological Association workshop, Washington D.C.	May-08
CUBRIC, Cardiff University, Wales.	Nov-08
Society for Neuroscience Annual Meeting Symposium, Washington.	Nov-08

PROFESSOR HARALD HAMPEL

IPA European Meeting in Association with Royal College of Psychiatrists, Dublin, Ireland	Apr-08
Hirnliga and GE (General Electric Healthcare) Expert Meeting, Berlin, Germany	Apr-08
Symposium on Alzheimer Research, French Embassy, Berlin, Germany	May-08
European School for Scientific and Regulatory Assessment of New Medicines and European Medicines Agency, Rome, Italy	May-08
Psychiatry Colloquium/ Psychiatry Postgraduate Programme, University of Bangor, Wales, UK	May-08
Psychopharmacology Course for Psychiatrists, RCPI, Dublin, Ireland	June-08
SERPA – South Eastern Regional Psychiatric Association, Kilkenny, Ireland	June-08
10th Anniversary of AMNCH, Tallaght, Dublin, Ireland	June-08
Neuroscience Seminar Series, Trinity College Institute of Neuroscience	June-08
XXVI. CINP Collegium Internationale Neuro-Psychopharmacologicum-50, Munich Germany -Perspectives of biological and imaging markers in AD	July-08
XXVI. CINP Collegium Internationale Neuro-Psychopharmacologicum-50, Munich Germany -Co-Chair of Symposimum on Neurochemical and Imaging biomarkers for early diagnosis and mapping of disease progression in AD	July-08
Alzheimer's Association's Intnl. Conference on Alzheimer's Disease (ICAD) Chicago, USA -Alteration of beta secretase (BACE1) functional candidate biomarkers…	July-08

PROFESSOR ORLA HARDIMAN

International Symposium on ALS/MND, Toronto; Clinical trials, Why the Drugs aren't Working	Nov-07
Institute of Biotechnology, Havana Cuba; ALS as a Paradigm of Neurodegeneration	Feb-07
University of Ulm, Germany; Epidemiology, Ethnicity and Population Genetics of ALS	Feb-07
2007 Womens Equality Forum, Killarney; "What Doctors are Doing for Health"	Feb-07
RCPI, London UK; Acute Management of Headaches in the A+E; The First Critical Hours	Apr-07
2007 Nurses Conference, Sligo; "Mythbusting in Irish Healthcare"	Apr-07
European Neurological Society, Rhodes; Recent Advances in ALS Diagnostics	Jun-07
Trinity College Policy Institute; Perspectives in the Public Health System	Jun-07
MacGill Summer School, Donegal; Priorities in Health for the New Government	Jul-07
Society of Immunology, Dublin; Immune Disorder in the Peripheral Nervous System	Oct-07

DR ANDREW HARKIN

SMi organised conference on Depression and Anxiety, London, UK	Jun-07
St. Ita's Psychiatric Hospital, Portrane, Dublin, Ireland. -A role for glutamate neuronal transmission in depression and antidepressant action	Feb-08
University of Kuopio, Finland -Testing drug action for depression and aggression …disease models	June-08
CINP World Congress, Munich. -Chair of Symposium The predisposing influence of recreational drug use to neuropsychiatric	July-08

disorders

Danish Society for Biological Psychiatry, University of Aarhus, Denmark.	July-08

PROFESSOR PETER HUMPHRIES

Fundacion Jiminez Diaz, Madrid. Progress in the development of genetically-based therapies for retinal degeneration.	Jun-07

DR AINE KELLY

Queen's University Belfast	Feb-07

DR JULIE KELLY

EHRLICH II, 2nd World Conference on Magic Bullets held in Nürnberg, Germany -Designing Drugs for Neurological Disorders: TRH-based Neurotherapeutics	Oct-08

DR CHRISTIAN KERSKENS

Conference on Bioengineering, Royal Academy of Medicine in Ireland, Sligo, Ireland	2008
European Society of Biomechanics, Lucerne Switzerland.	2008

PROFESSOR MARINA LYNCH

19th National Meeting of British Neuroscience Association	Apr-07
6th International Symposium - Neurovision, Bochum, Germany	Oct-07
International Neuroimmunology Symposium, University College Dublin	Mar-08
6th FENS FORUM Geneva, Switzerland -Molecular, cellular and circuit contributions to cognitive decline in normal aging	Jul-08
PNIRS Meeting, Madison, USA -Symposium on The Impact of Inflammation on the Vulnerable Brain	Aug-08
Irish Society of Immunology, RDS, Dublin, Ireland	Sept-08
British Pharmacolgical Society, London, UK	Sept-08
University of Michigan, Michigan, USA -NIA-funded Workshop "Cellular & Molecular Mechanisms of Cognitive Aging."	Oct-08

PROF DECLAN McLOUGHLIN

Oxford University; Dept of Psychiatry External Speaker Seminar Series	Feb-07
Institute of Molecular Medicine, St James's Hospital, Dublin; External Speaker Seminar Series	Feb-07
Royal Society of Medicine; Key Advance in the Management of Depression, London	Jul-07
Alzheimer's Society; Quality Research in Dementia Annual Meeting	Sep-07
Queen's University Belfast; Neuroscience Research Group Annual Meeting	Oct-07

PROF KINGSTON MILLS

8th John Humphrey Advanced Summer Programme in Immunology, Moscow, Russia.	Sep-07
Irish Society for Immunology Annual meeting, Dublin City University.	Sep-07
Meeting on Infectious Diseases, Royal College of Physicians of Ireland (RCPI), Dublin	Oct-07
John Humphries Lecture series, Imperial College, Hammersmith, London.	Nov-07.
MIVAC & MUVAPRED International meeting on Mucosal Immunology, Gotenburg Sweden	Jan-08
Vaccination Immunology: prevention and Beyond, NVVI Lunterern, The Netherlands	Apr-08
6th International Cancer Conference, Dublin Castle, Ireland	May-08
Emerging Issues in infectious diseases, IDSI Inaugural annual scientific meeting, Dublin	Jun-08

DR KEVIN MITCHELL

EMBL, Heidelberg; EMBO Young Investigator meeting	Jun-07
European Life Sciences Organisation; Symposium on Neural Circuit Assembly	Sep-07
EMBL, Heidelberg; EMBO PhD course	Sep-07
University Medical Center Utrecht; Institute of Neuroscience	Dec-07
Abbaye des vaux de Cernay; Semaphorin Function and Mechanisms of Action	May-08

DR FIONA NEWELL

British Neuroscience Association Meeting, Harrogate, UK	Apr-07
Lincoln University, UK: Invited seminar speaker	2007
XXIX International Congress of Psychology, Berlin, Germany -'The effect of non-informative visual information on haptic spatial scenes'.	July-08

PROFESSOR SHANE O'MARA

School of Neuroscience, University of Manchester UK	Feb-07
Institute of Biology, CNRS, Paris, France	May-07

PROFESSOR MANI RAMASWAMI

Translation at the synapse, Janelia Farm, HHMI Campus, Maryland.	Oct-07
Satellite Symposium on Non-coding RNAs in the Brain, Soc Neuroscience Meeting, San Diego.	Oct-07
MRC Centre for Development Neurobiology, King's College, London.	Nov-07
Foster Talk, Dept of Physiology, Development & Neuroscience, University of Cambridge, UK.	Nov-07
Department of Biochemistry, Weill Medical College, Cornell University, New York.	2007
University of Iowa, Department of Biology, Iowa City, USA.	2007
RNA Granules Workshop. HHMI Headquarters, Chevy Chase, MD.	2008
From FMRP Biology to Clinical Trials, Banbury Centre, Cold Spring Harbor, USA.	2008
Abdus Salaam Centre, Trieste, Italy. Workshop on Genes and the Development of Behavior	2008
HHMI/Janelia Farm Conference on Translation at the synapse, Maryland, USA	2008

PROFESSOR IAN ROBERTSON

Instutute of Cognitive Neuroscience, University College London, UK.	Mar-07
Association of Medical Neurology, Duesseldorf, Germany.	May-07
Danish Association of Neuropsychology, Denmark.	Sep-07
American Society for Rehabilitation, Washington, USA.	Oct-07
Invited Lecture, MRC Cognition and Brain Sciences Unit, Cambridge, UK.	Mar-08
Invited Lecture, Dept of Psychology, University of Edinburgh, Scotland.	Feb-08
International Colloquium on Anosognosia, Barrow Neurological Institute, Arizona, USA.	Oct-08
Invited lecture, Finnish Neuropsychological Society, Helsinki, Finland.	Dec-08

PROFESSOR MICHAEL ROWAN

IPSEN meeting, Paris; Synaptic function and Alzheimer's Disease	Mar-07
Combined Life Sciences Meeting, Glasgow	Jul-07

DR DANIEL ULRICH

FENS Satellite Symposium, Geneva, Switzerland -Sleep-related discharge patterns and synaptic plasticity	July-08
Soc. Neurosci. Washington DC,USA -Differential impact of sleep-associated discharge patterns on synaptic plasticity	Nov-08

EDUCATION & OUTREACH AT TCIN

TCIN introduced the first 4-year integrated PhD programme in Ireland in October 2004. It was funded by the Health Research Board and funding was continued to allow 3 additional cohorts of students. The fourth cohort of 5 students registered in October 2008.

A taught 1-year MSc in Neuroscience was introduced in October 2006, with a full quota of 12 students. A second cohort of 16 students registered in October 2008. The course director is Dr. Tom Connor.

An undergraduate specialty (BA. Mod) in Neuroscience was introduced in Trinity College Dublin in 2002 with a quota of 10 students per annum. This quota increased to 20 students per annum in October 2006. Eighteen students graduated in June 2008; of these 2 were awarded first class honours. There are currently 20 Junior Sophister and 20 Senior Sophister students. The course directors are Dr. Gavin Davey and Dr Daniel Ulrich.

PhD graduations Summer 2008
Alex Pereda
Gary Bargary
Aoife Gowran
Charlotte Callaghan
Rachel O'Callaghan
Muireann Irish
Mandy Tivnan
Anne-Marie Miller
Alessia Piazza
Eoin McNamee
Emma Kearney

MSc graduations Summer 2008
Florry O'Connell
Belinda Grehan
Jennifer Rouine
Martha Noone
Craig Linke
George McMahon
Dearbhla Connor
GrehanBelinda
Allen Edward Walker Bulfin
Ross Cormac McKiernan
Susan McNamara
Ciara Ni Mhurchu
Emma Sheehan

MSc graduations October 2008
Ciaran PatrickWynne
Declan Donoghue
Emer Maria Fallon
Saud Alhusaini
Adam Stone
Alice Galvin
Cillian McCormack
David Doyle
John Paul Horgan
Omar Mothersill
Riffat Tanveer
Michelle Fung
Aine Abautret-Daly
Nicole Lopinto
Alex Aubrey Thompson

PhD submitted 2008
Eadaoin Griffin (Oct 08)
Manoj Kanaichi (Oct 08)
Niamh Curtin (Aug 08)
Carol Loscher (Oct 08)
Aine Murphy (Oct 08)
Melanie Watson (Oct 08)
Laura Kelly (Oct 08)
Gloria Roberts (Sept 08)
Sean Kilbride (Oct 08)
Jayne Telford (Oct 08)
Aoife Cullen (Oct 08)
Doereen Hoerold (Oct 08)

Ministerial Visits
On 17 April, 2008 the then Minister for Education, Ms Mary Hanifin visited TCD and TCIN at the invitation of the Provost John Hegarty and with colleagues from HEA. The party was given a guided tour by Professor Marina Lynch and a brief description of developments in TCIN since the PRTLI award. She was impressed by the rapid growth of TCIN and with the very large increase in numbers of PhD students.

On 17th July 2008 Minister Martin Devins, Minister of State at the Departments of Enterprise, Trade and Employment and Education and Science with special responsibility for Science, Technology and Innovation, visited TCD and TCIN at the invitation of the Provost John Hegarty. Minister Devins was given a guided tour by Professor Shane O'Mara and was particularly interested in the MR Imaging and EEG facilities, where he met with staff and students.

University of Dublin Neuroscience Society (Neurosoc)
The University of Dublin Neuroscience Society was set up in April 2008 and is Ireland's first university society for neuroscience. It was founded by a group of TCIN-based postgraduate students funded on the 4 year PhD programme. The aims of the society are to organise academic and social events for students and staff with an interest in neuroscience. Academic events includes hosting talks by prestigious national and international speakers, in association with TCIN, and holding public events on issues such as Alzheimer's Disease, Autism and Multiple Sclerosis. The society also caters for the social needs of its members; events include table quizzes, pub nights and fund-raising events. The society's Email address is: neuroscience@csc.tcd.ie. More information is available at Website: http://neurosoc.csc.tcdlife.ie/

Neuroscience Seminar Series
The Neuroscience seminar series, set up in January 2006, aims to provide a forum to facilitate transfer of knowledge and trigger discussion among researchers in different disciplines associated with TCIN. The purpose of the series is to foster the integrative approach to neuroscience research that TCIN was established to develop, as well as promote TCIN as an internationally competitive institute. The seminar topics cover all aspects of molecular, cellular, developmental and cognitive neuroscience as well as neuroscience-related topics in disease, psychiatry, and genetics. Participants include researchers at all levels within TCIN and internationally-regarded external speakers. This series is co-ordinated and organised by the HRB-funded PhD students in collaboration with Dr Colm Cunningham.

Neuroscience Course Committee (BA Mod Degree)
The Neuroscience moderatorship is an interfaculty degree programme comprised of modules from six Schools across three Faculties, consequently, a course committee is required in order to ensure effective running of this degree programme. The committee is comprised of the three academic members of staff that were employed specifically to teach on this degree programme (GD, DU, TC), the Director of Undergraduate Teaching and Learning in the School of Biochemistry and Immunology (as the Neuroscience degree is nominally affiliated to this School for administrative reasons), representatives from all other academic units that contribute to the degree programme, and the Academic and Outreach Officer in TCIN who has administrative oversight of the degree programme. The Academic and Outreach Officer will also act as student liaison and representative on the Committee.

Terms of reference: This committee will govern the effective running of the Neuroscience degree programme from both an academic and administrative perspective, and will report to the Course Director of TR071 (Science) via the TR071 course management committee. The membership of the Neuroscience degree course committee is to be included in the "Committees" section of the University Calendar.

Meetings: The committee will meet on the first and penultimate Thursday of each Semester.

Neuroscience degree course committee
Dr. Gavin Davey (GD), Senior Lecturer in Neuroscience, Senior Sophister co-ordinator and Director, Neuroscience degree programme (Chair)
Dr. Daniel Ulrich (DU), Lecturer in Neuroscience & Junior Sophister co-ordinator
Dr. Thomas Connor (TC), Senior Lecturer in Neuroscience
Dr. Daniela Zisterer – Director of Undergraduate Teaching and Learning, School of Biochemistry and Immunology
Mr. Paul Glacken – Anatomy
Dr. Aine Kelly – Physiology
Dr. Kevin Mitchell – Genetics
Dr. Andrew Harkin – Pharmacy
Dr. Paula Murphy – Zoology
Prof. Shane O'Mara – Psychology
Ms. Gillian Roddie – Academic and Outreach Officer, TCIN

MEETINGS

Meetings Held:

A **Neurogenetics Symposium** was held in TCIN in September, 2007. The meeting was well attended and a series of oral sessions, with brief talks from different groups were held. One of the highlights was the Keynote Lecture by Prof. John Foxe of the Nathan Kline Institute, New York and TCIN entitled "The search for electrophysiological endophenotypes in schizophrenia".

International Brain Awareness Week took place from 12th to 16th March 2008. TCIN and the Neurological Alliance of Ireland (NAI) held a series of public lectures in TCIN.

TILDA hosted an international conference on Health in Ageing in Trinity College Dublin on May 2008.

A **Neurogenetics Symposium** was organized by Dr Kevin Mitchell (TCIN) on Friday 19th September, 2008. Speakers included Prof. Lisa Goodrich Harvard; Dr Cahir O'Kane, Dept. of Genetics,Cambridge; Prof. Maurice Kernan SUNY at Stonybrook and Prof. Michael Gill from TCIN.

Planned Meetings:

15 December, 2008: TCIN will host a meeting in **Translational Neuroscience** designed to initiate further interactions between basic and clinical scientists; the organizer is Professor Orla Hardiman.

International Brain Awareness Week (March 2009): TCIN will run several events to coincide with this week including public lectures and Neuroscience Speak, in which postgraduate students will present their research to a lay audience.

April-2009: An international conference organized by Dr Kevin Mitchell (TCIN) entitled "**Wiring the Brain**: from Genetic to Neuronal Networks" will be held on April 21st-24th, 2009, Adare, Co. Limerick, Ireland http://www.wiringthebrain.com

August 2009: The annual meeting of **Neuroscience Ireland** will be hosted by TCIN.

May 2010: The 16th Annual meeting of the PsychoNeuroImmunology Research Society will be held in Dublin in May 2010 and the local committee is chaired by Dr Tom Connor.

INDUSTRIAL COLLABORATIONS

GSK: Professor Shane O'Mara has formed an industrial collaboration with GSK, this collaboration also includes: Professors Rose-Anne Kenny, Brian Lawlor, Marina Lynch, Ian Robertson and Michael Rowan

Dr. Veronica Campbell has formed an industrial collaboration with **GW Pharmaceuticals**.

Dr Christian Kerskens has a collaborations with **Philips and Bruker BioSpin MRI Ltd**.

Prof. Peter Humphries has industry collaborations with **Wyeth Pharmaceuticals**.

Professor Marina Lynch has industry collaborations with **Opsona, Vasogen Ireland and Amarin**:

Dr Fiona Newell and Professor Hugh Garavan are currently collaborating with **Unilever PLC**.

Professors Rose-Anne Kenny, Brian Lawlor, Ian Robertson and Richard Reilly, together with PIs in other 3rd level institutes in Ireland are currently collaborating with **Intel**.

PATENTS FILED

Professor Peter Humphries
1. Allele suppression: Patent Reference. No. PCT-GB97-00574
2. UTR suppression & replacement: Patent Reference. No. PCT-GB96-02357
3. Wobble strategy: Patent Reference. No. PCT-GB97-00929
4. Methods and Reagents for Treating Diseases. No. PCT/GB/2005/000626.

Dr Julie Kelly
1. Compounds that modulate TRH actions. (Irish Patent Application 2004/0669; PCT filed, October 3, 2005).
2. TRH-like peptide derivatives as inhibitors of the TRH-degrading ectoenzyme (Application number: PCT/IE01/00027; US 0030166944; Priority date, February 17, 2000)
3. Methods for modulating the levels and effects of TRH and TRH-related peptides (Irish Patent Application 2006/0253; Priority date: March 31, 2006.). With Dr GJ. Farrar.

Professor Marina Lynch
1. Compositions and methods relating to the modulation of an immune-mediated response. Preliminary Irish Patent Application. Filed 21/09/2005 (with KHG Mills and C Costelloe.)
2. Methods and compounds for the treatment of cognitive dysfunction. UK patent application. Filed 13/04/2005. (with KHG Mills, B Keogh, C Costelloe.)
3. Treatment of Age-Related Memory Impairment (Filed 25/09/2004 (PCT); PCT/CA/2004/001750; Filed 9/07/2004 (US)10/888,343; Filed 29/10/2004 (Taiwan) 093133213 (all filed by Vasogen Ltd with Drs A Mandel and AE Bolton)

4. Multiple Sclerosis Treatment; Filed 14/09/2005 (Gulf Co-operation Council)GCC/P/2005/5165; Filed 15/09/2005 (Malta) 2983; Filed 14/09/2005 (PCT) PCT/EP2005/009994; Filed 14/09/2005 (Peru) 001065.2005; Filed 15/09/2005 (Taiwan) 094131868; Filed 14/09/2005 (US) 11/227,984; Filed 15/09/2005 (Uruguay) 29.119; Filed 15/09/2005 (Venezuela) 01884-2005 (all filed with Vasogen Ireland Ltd with Drs YM Nolan, A Mandel and AE Bolton).

Professor Ian Robertson

A test method for ADHD response (Irish Patent Application S2004/0235; Filed April 2, 2004)

PUBLICATIONS

Professor Roger Anwyl

Ryan B. K., Anwyl R. and Rowan M. J. (2008) 5-HT2 receptor-mediated reversal of the inhibition of hippocampal long-term potentiation by acute inescapable stress. *Neuropharmacology* 55, 175-182.

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PERSONNEL IN TCIN (APPENDIX 1)

Current Principal Investigators, Postdoctoral Fellows, Postgraduate Students

Principal Investigator	Affiliation	Postdoctoral Fellows	Postgraduate Students
Prof. Roger Anwyl	School of Medicine (Physiology)	Phillip Welsby Sarah Harney Qin-Wen Fang Jianqun Wu	Lan Wang
Dr Arun Bokde	School of Medicine (Psychiatry)		Elizabeth Kehoe
Prof. Ruth Byrne	School of Psychology	Dr. David Beltran	Alex Pereda James Dixon
Prof. Veronica Campbell	School of Medicine (Physiology)	Aoife Gowran	Janice Noonan Baby Maloor Manoj Kanichai
Dr. Thomas Connor	School of Medicine (Physiology)		Karen Ryan Eoin McNamee Dana Kilroy Barbara Bates Noreen Boyle
Dr. Thomas Connor/ Prof. Kingston Mills	School of Medicine (Physiology)/ School of Biochemistry and Immunology		Niamh Curtin
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Dr. Gavin Davey/ Prof. Michael Coey	School of Biochemistry and Immunology		Darragh Crotty
Dr. Gavin Davey/ Prof. Keith Tipton	School of Biochemistry and Immunology		Laura Brady Aoife Cullen Wenhao Fu Aldo Oliveiri
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Prof. Harald Hampel	School of Medicine (Psychiatry)	Arun Bokde Michael Ewers Yemi Faluyi Joshua Maduwuba Catherine Delaney	
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Prof. Orla Hardiman	School of Medicine	Simon Cronin Julie Phukan Arif Shukralla	Paul Brennan Deirdre Fitzgerald Catherine Lynch RGN Bernie Corr RN (CNM2) Belinda Ennis (RA)
Prof. Peter Humphries	Genetics	Alison Reynolds	
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Dr. Julie Kelly/ Dr. Jane Farrar		Amanda Tivnan	
Dr. Christian Kerskens	School of Medicine		Jennifer Cooke Michael Kelly Joseph Gallagher
Prof. Marina Lynch/ Dr. Christian Kerskens	School of Medicine		Christoph Blau
Dr. C. Simms/ Dr. Christian Kerskens	School of Engineering		Kevin Moerman
Prof. RoseAnne Kenny	School of Medicine (Gerontology)	Dr Amilcar Moriera Dr Yumiko Kamiya Dr. Patricia Kearney Dr. Chie Wei (Mimi) Fan Dr. Joe Harbison Dr. Conal Cunningham	Dr. Orla Collins Dr. Hilary Cronin Dr. Sean Kennelly Claire O'Regan Dr. Clodagh O'Dwyer Dr. Lisa Coogan Dr. Roman R. Ortuno Ciaran Finucane Tim Foran Claire Sommerville Donal Skelly

Principal Investigator	Affiliation	Postdoctoral Fellows	Postgraduate Students
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Principal Investigator	Affiliation	Postdoctoral Fellows	Postgraduate Students
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Prof. William Torregiani **	School of Medicine		
Dr. Daniel Ulrich	School of Medicine (Physiology)		