



**ROYAL ACADEMY OF  
MEDICINE IN IRELAND**

**SECTION OF BIOMEDICAL SCIENCES**

**Annual Meeting 2014**

**Including Donegan Medal and  
Barcroft Medal Competitions**

**&**

**Conway Review Lecture**

**19th June 2014**

***O'Brien Centre for Science,  
University College Dublin***

***PROGRAMME***

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# ROYAL ACADEMY OF MEDICINE IN IRELAND

Section of Biomedical Sciences Annual Meeting  
19th June 2014  
O'Brien Centre for Science, UCD

Section President: Professor Aidan Bradford, RCSI  
Section Secretary: Professor Ken D. O'Halloran, UCC  
Local Organiser: Prof. James F.X. Jones

<b>ON-SITE REGISTRATION:</b>	<b>08.15-</b>
Welcome	08.55-09:00
Donegan Communications: D1-D10 Chair: Prof. Ken O'Halloran, UCC	09.00-11.00
Poster Session <i>Coffee/Tea will be served.</i>	11.00-11.45
Donegan Communications: D11-D15 Chair: Prof. Ken O'Halloran, UCC	11.45-12.45
<b>LUNCH</b> <i>(Council Meeting RAMI Section of Biomedical Science; poster viewing)</i>	<b>12.45-14.00</b>
Oral Communications: C1-C8 Chair: Prof. Aine Kelly, TCD	14.00-16.00
Poster Session <i>Coffee/Tea will be served.</i>	16.00-16.30
Barcroft Communications: B1-B3 Chair: Prof. James Jones, UCD	16.30-17.30
<b>Conway Review Lecture</b> Dr. Mark Hollywood, Smooth Muscle Research Centre Dundalk Institute of Technology <i>Six, drugs and RCK and bowl</i>	17.30
Conference Dinner Old Physics Theatre, Newman House, St. Stephen's Green	19.30

<b>REGISTRATION</b>	<b>08.15</b>
<b>OPENING ADDRESS</b>	<b>08.55</b>

<b>Donegan Medal</b>	<b>09.00-11.00</b>
<b>Communications D1-D10</b>	

**D1 09.00**

PERIPHERAL NERVE STRIATION FREQUENCY IS HIGHER AND AXONAL G-RATIO IS LOWER IN *Trembler-J* MICE

L.M. Alvey, J.F.X. Jones & M. Pickering

School of Medicine and Medical Sciences, University College Dublin, Dublin, Ireland.

**D2 09.12**

RESPIRATORY CONTROL AND DIAPHRAGM MUSCLE FUNCTION IN THE MDX MOUSE MODEL OF DUCHENNE MUSCULAR DYSTROPHY

D. Burns, K.D. O'Halloran

Department of Physiology, School of Medicine, University College Cork, Cork, Ireland.

**D3 09.24**

HOW DO ELEVATED LEVELS OF TESTOSTERONE AFFECT FERTILITY AND INTEGRITY OF THE FEMALE GENITAL TRACT?

K. Dulohey<sup>1</sup>, M. Trottman<sup>2</sup>, B. Liedl<sup>3</sup>, I. Alba-Alejandre<sup>4</sup>, S. Reese<sup>5</sup>, Kölle, S<sup>1</sup>.

<sup>1</sup>UCD School of Medicine & Medical Science, University College Dublin, Dublin, Ireland; <sup>2</sup>Department of Urology, Klinikum Grosshadern, University of Munich, Germany; <sup>3</sup>Department of Urogenital Surgery, Clinics for Surgery Munich-Bogenhausen, Munich, Germany; <sup>4</sup>Department of Gynecology, Klinikum Grosshadern, University of Munich, Germany; <sup>5</sup>Institute of Veterinary Anatomy, Histology and Embryology, University of Munich, Munich, Germany.

**D4 09.36**

PREDICTING PROSTATE CANCER: A COMPARISON OF THE PROSTATE CANCER PREVENTION TRIAL RISK CALCULATOR AND THE EUROPEAN RANDOMIZED STUDY OF SCREENING FOR PROSTATE CANCER RISK CALCULATOR IN A CONTEMPORARY IRISH COHORT

R.W. Foley<sup>1</sup>, D.J. Landon<sup>1,3</sup>, S. Boyce<sup>1</sup>, F. O'Brien<sup>4</sup>, D. Galvin<sup>2,3</sup>, J.M. Fitzpatrick<sup>1</sup>, R.W. Watson<sup>1</sup>

<sup>1</sup>School of Medicine and Medical Science, Conway Institute of Biomedical and Biomolecular Research, University College Dublin, Dublin, Ireland;

<sup>2</sup>Department of Urology, Mater Misericordiae University Hospital, Dublin, Ireland; <sup>3</sup>Department of Urology, St. Vincent's University Hospital, Dublin, Ireland; <sup>4</sup>Department of Urology, Cork University Hospital, Cork, Ireland.

**D5 09.48**

INVESTIGATING THE ROLE OF CYCLIC ADP RIBOSE IN GROUP I METABOTROPIC GLUTAMATE RECEPTOR-MEDIATED CALCIUM SIGNALLING IN RAT HIPPOCAMPAL NEURONES

A. Kaar, K. O'Donoghue, M.G. Rae

Department of Physiology, University College Cork, Cork, Ireland.

**D6 10.00**

PROTECTIVE AND ANTI-INFLAMMATORY EFFECTS OF URSODEOXYCHOLIC ACID IN COLONIC EPITHELIA

N.K. Lajczak<sup>1</sup>, V. Saint-Criq<sup>1</sup>, M.S. Mroz<sup>1</sup>, S.J. Keely<sup>1</sup>

<sup>1</sup>Department of Molecular Medicine, Royal College of Surgeons in Ireland, Education and Research Centre, Beaumont Hospital, Dublin, Ireland.

**D7 10.12**

HYPERESTROGENISM IN MEN – NEW INSIGHTS

M. Leavy<sup>1</sup>, M. Trottmann<sup>2</sup>, B. Liedl<sup>3</sup>, S. Reese<sup>4</sup>, C. Stief<sup>2</sup>, S. Koelle<sup>1</sup>

<sup>1</sup>School of Medicine and Medical Science, University College Dublin (UCD), Dublin, Ireland; <sup>2</sup> Department of Urology, Klinikum Grosshadern, University of Munich, Munich, Germany; <sup>3</sup>Department of Urogenital Surgery, Clinics for Surgery Munich-Bogenhausen, Munich, Germany; <sup>4</sup>Institute of Veterinary Anatomy, Histology and Embryology, University of Munich, Munich, Germany.

**D8 10.24**

AN ASSESSMENT OF INFLAMMATORY ACTIVITY IN HUMAN POST-MORTEM CORTICAL LESIONS AND NORMAL APPEARING WHITE MATTER IN MULTIPLE SCLEROSIS

R. Magee, Y.M. Nolan, E.J. Downer

Department of Anatomy and Neuroscience, University College Cork, Cork, Ireland.

**D9 10.36**

THE ROLE OF PRELIMBIC CORTEX CB<sub>1</sub> RECEPTORS IN MEDIATING FEAR-CONDITIONED ANALGESIA IN LISTER-HOODED RATS

F. McGowan<sup>1,3</sup>, K. Rea<sup>1,3</sup>, S. Khalid<sup>1</sup>, M. Roche<sup>2,3</sup>, D. P. Finn<sup>1,3</sup>

<sup>1</sup>Pharmacology and Therapeutics, <sup>2</sup>Physiology, School of Medicine, <sup>3</sup>NCBES Galway Neuroscience Centre and Centre for Pain Research, National University of Ireland, Galway, Galway, Ireland.

**D10 10.48**

EFFECTS OF FATIGUE ON MOTOR UNIT ACTION POTENTIAL PROPERTIES IN HUMAN FIRST DORSAL INTEROSSEOUS (FDI) MUSCLE

L. McManus<sup>1</sup>, X. Hu<sup>2</sup>, W. Rymer<sup>2,3</sup>, M.M. Lowery<sup>1</sup>, N.L. Suresh<sup>2</sup>

<sup>1</sup>Department of Electrical, Electronic and Communications Engineering, University College Dublin, Dublin, Ireland; <sup>2</sup>Rehabilitation Institute of Chicago, Illinois, USA, <sup>3</sup>Northwestern University, Chicago, Illinois, USA.

**Poster Viewing****11.00-11.45****Authors to attend. Tea/Coffee will be served. Please visit the exhibitors.****Donegan Medal****11.45-12.45****Communications D11-D15****D11 11.45**

CT VERSUS ULTRASOUND IN THE DETECTION OF RETROBULBAR HAEMORRHAGE

C.H. Ng, D. Broderick, L.F.A. Stassen

National Maxillofacial Unit, St James's Hospital, Dublin, Ireland.

**D12 11.57**

ENHANCING LOWER LIMB VENOUS HAEMODYNAMICS USING NEUROMUSCULAR ELECTRICAL STIMULATION (NMES)

S. O'Connell<sup>1</sup>, A. Coney<sup>1</sup>, R. Gallagher<sup>1</sup>, F. Quondamatteo<sup>2</sup>, B.J. Broderick<sup>3,4</sup>, L.R. Quinlan<sup>1</sup>, G. Ó Laighin<sup>3,4</sup>

<sup>1</sup>Discipline of Physiology, School of Medicine; <sup>2</sup> Skin and ECM Research Group, Anatomy; <sup>3</sup>Electrical & Electronic Engineering, School of Engineering & Informatics; <sup>4</sup>National Centre for Biomedical Engineering Science, National University of Ireland, Galway, Galway, Ireland.

**D13 12.09**

POTENTIAL miRNA BIOMARKERS FOR METABOLIC SYNDROME

S. O'Neill<sup>1</sup>, M. Bohl Larsen<sup>2</sup>, K. Hokamp<sup>3</sup>, S. Gregersen<sup>2</sup>, K. Hermansen<sup>2</sup>, L. O'Driscoll<sup>1</sup>

<sup>1</sup>School of Pharmacy and Pharmaceutical Sciences and Trinity Biomedical Sciences Institute, Trinity College Dublin, Dublin, Ireland; <sup>2</sup>Department of Clinical Medicine, Aarhus University, Aarhus, Denmark; <sup>3</sup>Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Ireland.

**D14 12.21**

PROTEIN KINASE D2, A NOVEL REGULATOR OF ALDOSTERONE AND SODIUM REABSORPTION IN THE RENAL SYSTEM

S. Quinn<sup>1</sup>, R. Dooley<sup>1</sup>, Y.R. Yusef<sup>1</sup>, W. Thomas<sup>1</sup>, B.J. Harvey<sup>1</sup>

<sup>1</sup>Department of Molecular Medicine, Royal College of Surgeons in Ireland, Education and Research Centre, Beaumont Hospital, Dublin, Ireland.

**D15 12.33**

THE EFFECTS OF ELECTRODEPOSITION CURRENT DENSITY ON THE MORPHOLOGY, ELECTROCHEMICAL AND BIOLOGICAL CHARACTERISTICS OF POLY(3,4ETHYLENEDIOXYTHIOPHENE): POLY(STYRENESULFONATE) (PEDOT-PSS) NEURAL INTERFACES

C. Vallejo-Giraldo, A. Pandit, M.J.P. Biggs

Network of Excellence for Functional Biomaterials (NFB), National University of Ireland, Galway, Galway, Ireland.

**LUNCH 12.45-14.00**

**Poster Viewing**

**COUNCIL MEETING 13.30-14.00**

***Biomedical Sciences Council Members only***

**Oral Communications 14.00-16.00**

**Communications C1-C8**

**C1 14.00**

ALGORITHMS FOR AUTOMATIC PROGRAMMING OF DEEP BRAIN STIMULATION FOR PARKINSON'S DISEASE: A COMPUTATIONAL STUDY

E.M. Dunn<sup>1</sup>, M.M. Lowery<sup>1</sup>

<sup>1</sup>School of Electrical, Electronic and Communications Engineering, University College Dublin, Dublin, Ireland.

**C2 14.15**

AN INVESTIGATION OF PANX 1 MEMBRANE CHANNELS IN CANNABINOID MEDIATED NEUROPROTECTION

S.G. Fagan, V.A. Campbell

Department of Physiology, Trinity College Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland.

**C3 14.30**

THE DEVELOPMENT OF A CANNABINOID-CONTAINING COLLAGEN-GAG SCAFFOLD FOR USE IN ORTHOPAEDIC TISSUE ENGINEERING STRATEGIES

M.M. McDonald<sup>1</sup>, A. Matsiko<sup>2</sup>, A. López Noriega<sup>2</sup>, H.D. Kieran<sup>1</sup>, A. Gowran<sup>1</sup>, K.J. Mulhall<sup>3</sup>, F.J. O'Brien<sup>2,3</sup>, V.A. Campbell<sup>1,3</sup>

<sup>1</sup>Department of Physiology, Trinity College Dublin, Dublin, Ireland; <sup>2</sup>Department of Anatomy, Royal College of Surgeons in Ireland, Dublin, Ireland; <sup>3</sup>Sports Surgery Clinic, Dublin, Ireland; <sup>4</sup>Trinity Centre for Bioengineering, Trinity College Dublin, Dublin, Ireland.

**C4 14.45**

CANONICAL BMP-SMAD SIGNALLING PROMOTES NEURITE GROWTH IN EMBRYONIC RAT MIDBRAIN DOPAMINERGIC NEURONS

S.V. Hegarty<sup>1</sup>, L.M. Collins<sup>1</sup>, A.M. Gavin<sup>1</sup>, S.L. Roche<sup>1</sup>, S.L. Wyatt<sup>2</sup>, A.M. Sullivan<sup>1\*</sup>, G.W. O'Keeffe<sup>1,3\*</sup>.

<sup>1</sup>Department of Anatomy and Neuroscience, Biosciences Institute, University College Cork, Cork, Ireland; <sup>2</sup>Molecular Biosciences Research Division, School of Biosciences, Cardiff, UK; <sup>3</sup>The Irish Centre for Fetal and Neonatal Translational Research (INFANT), Cork University Maternity Hospital, Cork, Ireland.

**C5 15.00**

A BEHAVIOURAL ANIMAL MODEL OF FAECAL CONTINENCE

L. Devane<sup>1</sup>, E. Lucking<sup>1</sup>, P.R. O'Connell<sup>2</sup>, J.F.X. Jones<sup>1</sup>

<sup>1</sup>School of Medicine and Medical Science, University College Dublin, Dublin, Ireland; <sup>2</sup>Centre for Colorectal Disease, St. Vincent's University Hospital, Dublin, Ireland.

**C6 15.15**

SUPPRESSION OF PATHOLOGICAL OSCILLATORY NEURAL ACTIVITY IN A MODEL OF DEEP BRAIN STIMULATION IN PARKINSON'S DISEASE: COMPARISON OF THEORETICAL AND EXPERIMENTAL DATA

J.C. Davidson<sup>1</sup>, H. Cagnan<sup>2</sup>, A. de Paor<sup>1</sup>, M.M. Lowery<sup>1</sup>

<sup>1</sup>School of Electrical, Electronic and Communications Engineering, University College Dublin, Dublin, Ireland; <sup>2</sup>University of Oxford, Oxford, UK.

**C7 15.30**

DEGRADATION IN THE JAR: OPTIMISING THE IN VITRO ENZYMATIC DEGRADATION OF COLLAGEN-BASED DEVICES

J.A.L. Helling<sup>1</sup>, E. Tsekoura<sup>1</sup>, G. Wall<sup>1,2</sup>, Y. Bayon<sup>3</sup>, A. Pandit<sup>1</sup>, D. Zeugolis<sup>1</sup>

<sup>1</sup>Network of Excellence for Functional Biomaterials (NFB) and <sup>2</sup>Department of Microbiology, National University of Ireland, Galway, Galway, Ireland; <sup>3</sup>Sofradim Production, Covidien, Trevoux Cedex, France.

**C8 15.45**

THE ROLE OF HIF IN DETERMINATION OF MACROPHAGE PHENOTYPE

E. Masterson, D. Higgins, C. Godson

Conway Institute, University College Dublin, Dublin, Ireland.

**Poster Viewing**

**16.00-16.30**

**Authors to attend. Tea/Coffee will be served.**

**Barcroft Medal Competition 16.30-17.30**  
**Communications B1-B3**

**B1 16.30**

TOWARDS PERSONALISED TREATMENT IN ADVANCED PROSTATE CANCER  
D.J. Landon<sup>1,2</sup>, M. Prencipe<sup>1,2</sup>, A. O'Neill<sup>1,2</sup>, S. Madden<sup>2,3</sup>, S. Ahearne<sup>2,3</sup>, P.  
Doolan<sup>2,3</sup>, J.M. Fitzpatrick<sup>1,2</sup>, R.W.G. Watson<sup>1,2</sup>

<sup>1</sup>School of Medicine and Medical Science, University College Dublin, Dublin, Ireland; <sup>2</sup>Molecular Therapeutics for Cancer Ireland; <sup>3</sup>National Institute for Cellular Biotechnology, Dublin City University, Dublin, Ireland.

**B2 16.50**

CHANGES IN COLONIC MUCOSAL PROTEIN EXPRESSION UNDERLIES THE  
THERAPEUTIC BENEFITS OF ANTI-IL-6R AND ANTALARMIN ON IBS-LIKE  
SYMPTOMS IN THE WISTAR KYOTO RAT

M.M. Buckley, D. O'Malley

Department of Physiology, University College Cork, Cork, Ireland.

**Conway Review Lecture 17.15**

**Dr. Mark Hollywood**  
**Smooth Muscle Research Centre, Dundalk Institute of Technology**

**Six, drugs and RCK and bowl.**

**CONFERENCE DINNER 19.30**

**Posters**  
**P1-P17**

**P1**

PHARMACOLOGICAL ENHANCEMENT OF NORADRENALINE AS A TARGET  
TO LIMIT NEUROINFLAMMATION IN PARKINSON'S DISEASE

J. D. Yssel<sup>1</sup>, T. Connor<sup>1</sup>, A. Harkin<sup>2</sup>

<sup>1</sup>Neuroimmunology Research Group, Department of Physiology, School of Medicine, Trinity College Institute of Neuroscience, Dublin, Ireland; <sup>2</sup>Neuropsychopharmacology Research Group, School of Pharmacy and Pharmaceutical Sciences, Trinity College Dublin, Dublin, Ireland.

**P2**

ADENO-ASSOCIATED VIRAL DELIVERY OF SARCOPLASMIC RETICULUM  $Ca^{2+}$ -ATPASE (SERCA2A) PUMP INTO THE PRE-CLINICAL *MDX* MOUSE MODEL OF DUCHENNES MUSCULAR DYSTROPHY

O.A. Bahri, S.D. McCarthy, K.J.A. McCullagh

Department of Physiology, School of Medicine, and Regenerative Medicine Institute, National University of Ireland, Galway, Galway, Ireland.

**P3**

FABRICATION OF PIEZOELECTRIC PVDF TRFE NANOCOMPOSITE SCAFFOLDS FOR BONE-TISSUE ENGINEERING

C. Comte<sup>1</sup>, M. A. Fernandez-Yague<sup>1</sup>, L. Quinlan<sup>2</sup>, A. Pandit<sup>1</sup>, M.J.P. Biggs<sup>1</sup>

<sup>1</sup>Network of Excellence for Functional Biomaterials (NFB) and <sup>2</sup>Department of Physiology, National University of Ireland, Galway, Galway, Ireland.

**P4**

THE EFFECTS OF THALIDOMIDE ANALOGUES ON SYNAPTIC PLASTICITY AFTER ACUTE HYPOXIA IN THE RAT HIPPOCAMPUS ARE MODULATED BY P38MAP KINASE BUT NOT COX-2 INHIBITION

G. Mukandala, A. M. Wall, J.J. O'Connor

UCD School of Biomolecular & Biomedical Science, UCD Conway Institute for Biomolecular & Biomedical Research, Belfield, Dublin 4, Ireland.

**P5**

EFFECTS OF AGEING ON PROTEINS INVOLVED IN EXCITATION-CONTRACTION COUPLING IN THE MOUSE HEART

R. A. Carey<sup>1</sup>, B. McDonagh<sup>2</sup> and J.J. Mackrill<sup>1</sup>

<sup>1</sup>Department of Physiology, University College Cork, Ireland; <sup>2</sup>Department of Musculoskeletal Biology, Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, UK.

**P6**

EFFECTS OF POSTURAL AND EXERCISE CHALLENGES ON HEART RATE VARIABILITY IN TRAINED AND UNTRAINED HEALTHY MALE AND FEMALE VOLUNTEERS

J. Higgins, C. Gallagher, K.D. O'Halloran

<sup>1</sup>Department of Physiology, School of Medicine, University College Cork, Cork, Ireland.

**P7**

CHRONIC INTERMITTENT HYPOXIA BLUNTS THE EXPRESSION OF VENTILATORY LONG TERM FACILITATION IN SLEEPING RATS

D. Edge<sup>1,2</sup>, K.D. O'Halloran<sup>2</sup>

<sup>1</sup>UCD School of Medicine and Medical Science, University College Dublin, Dublin, Ireland; <sup>2</sup>Department of Physiology, School of Medicine, University College Cork, Cork, Ireland.

**P8**

EFFECTS OF CHRONIC INTERMITTENT HYPOXIA ON RAT RESPIRATORY MUSCLE METABOLIC AND ANTIOXIDANT ENZYME ACTIVITIES

P. Lemaire<sup>1,2</sup>, P. Lewis<sup>2</sup>, K.D. O'Halloran<sup>2</sup>

<sup>1</sup>Universite Paul Sabatier, Toulouse III, France; <sup>2</sup>Department of Physiology, School of Medicine, University College Cork, Ireland.

**P9**

TRANSCRIPTIONAL RESPONSES OF THE MOUSE DIAPHRAGM TO ACUTE SUSTAINED HYPOXIC STRESS

A. O'Leary, K.D. O'Halloran

<sup>1</sup>Department of Physiology, School of Medicine, University College Cork, Cork, Ireland.

**P10**

THE PERSISTENCE OF THE EFFECT OF VOLUNTARY EXERCISE ON LEARNING AND MEMORY

R. Hennessy, R. Kerley, J. Prenderville, Á.M. Kelly

Department of Physiology, School of Medicine & Trinity College Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland.

**P11**

THE CARDIOPROTECTIVE EFFECT OF MSC SECRETED PROTEIN IN AN *IN VITRO* MODEL OF MYOCARDIAL INFARCTION

N. Siti-Ismail, E. Farrell, M. Harte, M. Creane, M. Murphy, T. O'Brien<sup>1</sup>, F. Barry<sup>1</sup>  
Regenerative Medicine Institute (REMEDI), National University of Ireland, Galway (NUIG), Galway, Ireland.

**P12**

ENHANCING ENDOGENOUS ANANDAMIDE TONE ATTENUATES THE EXPRESSION OF TLR3-INDUCED INFLAMMATORY MEDIATORS IN THE RAT SPLEEN, EFFECTS PARTIALLY MEDIATED BY CB<sub>1</sub> RECEPTORS

L. Flannery<sup>1,3</sup>, R. Henry<sup>1,3</sup>, D. Kerr<sup>1,2,3</sup>, D.P. Finn<sup>2,3</sup>, M. Roche<sup>1,3</sup>

<sup>1</sup>Physiology and <sup>2</sup>Pharmacology and Therapeutics, School of Medicine; <sup>3</sup>NCBES Centre for Pain Research and Neuroscience Centre, National University of Ireland, Galway, Galway, Ireland.

**P13**

DOES 3Rs LAB BEDDING HAVE AN EFFECT ON MATERNAL AND NEONATAL PARAMETERS IN THE RAT?

S. Kleefeld, K. McDonnell Dowling, I. Castro, J.P. Kelly

Department of Pharmacology and Therapeutics, National University of Ireland, Galway, Galway, Ireland.

**P14**

INTRODUCTION OF AN ENVIRONMENTAL ENRICHMENT REGIME HAS MINIMAL CONSEQUENCES ON BEHAVIOUR IN THE RAT

I. Castro, K. Bannerton, S. Kleefeld, J.P. Kelly

Department of Pharmacology and Therapeutics, National University of Ireland, Galway, Galway, Ireland.

**P15**

DEVELOPMENT OF A PHYSIOLOGICAL PREPARATION FOR THE STUDY OF RAT ATRIAL VOLUME RECEPTORS

E.F. Lucking<sup>1</sup>, F. Shenton<sup>2</sup>, S. Pyner<sup>2</sup> & J.F.X. Jones<sup>1</sup>

<sup>1</sup>School of Medicine and Medical Science, University College Dublin, Dublin, Ireland; <sup>2</sup>School of Biological and Biomedical Sciences, University of Durham, Durham, United Kingdom.

**P16**

ASTROCYTIC ABLATION BY L-ALPHA AMINOADIPIC ACID (L-AAA) REDUCES MEASURES OF NEURONAL COMPLEXITY *IN VITRO*

E. O'Toole, M. Doucet, A. Harkin

Neuropsychopharmacology Research Group, School of Pharmacy and Pharmaceutical Sciences, Trinity College Dublin, Dublin, Ireland.

**P17**

AMITRIPTYLINE AND NORTRIPTYLINE HAVE NEUROTROPHIC EFFECTS ON NEURONAL COMPLEXITY MEDIATED VIA A TRK/MAPK/PI3K PATHWAY

E. O'Neill<sup>1</sup>, B. Kwok<sup>1</sup>, T. Connor<sup>1</sup>, A. Harkin<sup>2</sup>

<sup>1</sup>Department of Physiology, School of Medicine and Trinity College Institute of Neuroscience, Trinity College Dublin, Ireland; <sup>2</sup>School of Pharmacy and Pharmaceutical Sciences and Trinity College Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland.