

# What's on today?

08.45 **Symposia**

All Lecture Theatres

Pages 87–92

12.30 **Michael de Burgh Daly Prize Lecture**

Lecture Theatre 1 – *University Museum of Natural History*

Page 14

14.30 **Oral Communications C73–C108**

All Lecture Theatres

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16.00 **Poster Communications PC247–PC361**

Marquee behind University Club

Pages 99–112

Thursday 14 July

Gordon Drummond, Senior Statistics Editor for *The Journal of Physiology*, is publishing a series of editorials on best practice in statistical reporting. Visit him at his poster near *The Journal of Physiology's* stand, in the Marquee, to find out more.

## Presenting and analysing data: reasons to be improved

G. B. Drummond

*Department of Anaesthesia and Pain Medicine, University of Edinburgh, UK*  
Senior Statistical Editor, *The Journal of Physiology*

The standard of data presentation and data analysis in most biological journals leaves a lot to be desired. I recently reviewed a systematic sample of articles from one volume of *The Journal of Physiology*. None of the articles surveyed was faultless in study design, data presentation, or statistical analysis. Frequent faults included absent power/sample size calculations, no justification of sample size, not considering pairing or repeated measures, no adjustments for multiple testing, no justification of statistical methods used, no verification that assumptions implicit in the data analysis were met, not using dot plots to display raw data when small samples were used, and not reporting the numbers of observations for analyses. These observations support those of others.(1)

The current guidance for authors submitting material to *The Journal of Physiology* is restricted to gentle advice. This will not generate improvement in statistical standards. Authors will continue doing what they, and others, have done before unless we provide more didactic statements, a checklist of requirements, and impose zero tolerance of poor practice. A major problem is that “Classical” statistical testing is based on a process that is logical but tortuous and often not well suited to the studies that are reported in *The Journal*. Many of the studies reported in *J Physiol* are so small that the individual data could easily be plotted, and assessed visually. Leniency of this sort reduces the worry that more stringent criteria will deter submissions from those who have not learned to love statistics. Many editors and indeed referees have no greater skill in statistics than the authors. A universal checklist will allow editors to write their reports more easily, and provide rapid and helpful suggestions to authors who are struggling with their data presentation. “Show the data” is the best first step.

*The Journal* intends to introduce new recommendations, with better guidance on data presentation and statistical analysis for *Journal* contributors. We shall publish a series of short, bite sized articles, presenting the material in palatable and easily assimilated mouthfuls. These will then form the basis of a new series of recommendations for authors. This poster describes the process so far.

Ensuring the application of these standards rests with the editors and referees; and these articles are as much required reading for them. It will be necessary to avoid sustaining old habits and reinforcing errors: repeated presentation of the standards expected and reminders of these elementary errors will be needed.

## Reference

1. Kilkenny C, Browne WJ, Cuthill IC, et al. Improving bioscience research reporting: the ARRIVE guidelines for reporting animal research. *PLoS Biol* 2010;8:e1000412.

# Intracellular calcium and cardiac arrhythmias

## Cardiac & Respiratory Physiology

Thursday 14 July 2011

*LT1 (University Museum of Natural History)*

Organised by David Eisner and Luigi Venetucci, *University of Manchester, UK*

- 
- 08.45** Welcome and introduction by the organisers
- 
- 09.00** **Critical factors controlling spontaneous SR Ca release in isolated ventricular cardiomyocytes**  
**SA70** Godfrey Smith, *University of Glasgow, UK*
- 
- 09.30** **Role of CaMKII in hypertrophy and heart failure**  
**SA71** Lars Maier, *Georg-August-Universitaet Göttingen, Germany*
- 
- 10.00** **Ca handling in persistent atrial fibrillation**  
Karin Sipido, *Katholieke Universiteit, Leuven, Belgium*
- 
- 10.30** Refreshments in the Marquee behind University Club
- 
- 11.15** **Cardiac electrical remodeling in arrhythmogenesis**  
David Rosenbaum, *Case Western Reserve University, Cleveland, USA*
- 
- 11.45** **Calcium handling abnormalities in inherited arrhythmias**  
**SA72** Silvia Priori, *Fondazione Salvatore Maugeri, Pavia, Italy*
-

# Smooth muscle remodeling: Perspectives and mechanisms

Vascular & Smooth Muscle Physiology



Sponsored by DMT

Thursday 14 July 2011

LT2 (Experimental Psychology A)

Organised by Iain Greenwood, *St George's University of London, UK*, and Rachel Tribe, *King's College London, UK*

- 
- 08.45** Welcome and introduction by the organisers
- 
- 09.00** **Integrins and vascular remodeling – Insights using atomic force microscopy**  
SA73  
Gerald A Meininger, *University of Missouri, Columbia, USA*
- 
- 09.30** **Apoptosis and spiral artery remodelling**  
SA74  
Guy Whitley, *St George's, University of London, UK*
- 
- 10.00** **Cytoskeletal mechanisms in airway smooth muscle remodeling**  
SA75  
Susan Gunst, *Indiana University School of Medicine, USA*
- 
- 10.30** Refreshments in the Marquee behind University Club
- 
- 11.15** **Role of ion channels in smooth muscle remodeling**  
SA76  
M Theresa Perez-Garcia, *Universidad de Valladolid, Spain*
- 
- 11.45** **Role of stretch in vascular smooth muscle remodelling**  
SA77  
Per Hellstrand, *Lund University, Sweden*
- 

Symposium

VS

Today's **Vascular & Smooth Muscle Physiology** Oral Communications will be held in this lecture theatre from 14.30, see page 94

# Cellular and integrative functions of purines

## Cellular & Integrative Neuroscience

Thursday 14 July 2011

*LT3 (Large lecture theatre Sherrington Building)*

Organised by Bruno Frenguelli and Mark Wall, *University of Warwick, UK*

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**08.45** Welcome and introduction by the organisers

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**09.00** **A role for purinergic signalling in adult neurogenesis**

**SA78** Herbert Zimmermann, *Goethe-Universität, Frankfurt, Germany*

---

**09.30** **Modulation of hippocampal synaptic plasticity by adenosine A2A receptors**

**SA79**

Ana Maria Sebastião, *University of Lisbon, Portugal*

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**10.00** **Painful P2X3 receptors**

**SA80** Peter Illes, *Universität Leipzig, Germany*

---

**10.30** Refreshments in the Marquee behind University Club

---

**11.15** **Role for ATP receptors in glia-neuron communication**

**SA81** Yuriy Pankratov, *University of Warwick, UK*

---

**11.45** **Using optogenetics to study astrocytic purinergic signalling in the brainstem**

**SA82**

Sergey Kasparov, *University of Bristol, UK*

---

Today's Cellular & Integrative Neuroscience Oral Communications will be held in this lecture theatre from 14.30, see page 95

For details of the Lecture Theatres, see page 8

# Epithelial transport during infection and inflammation

Epithelia & Membrane Transport



Thursday 14 July 2011

Sponsored by Cystic Fibrosis Foundation (USA) and Cystic Fibrosis Canada

**LT4 (Pharmacology lecture theatre)**

Organised by John Hanrahan, *University, Montreal, Canada*, and Deborah Baines, *St George's University of London, UK*

- 
- 08.45** Welcome and introduction by the organisers
- 
- 09.00** **Regulation of sodium transport and pro-inflammatory cytokine secretion by the stress-activated metabolic sensor AMP-activated protein kinase in human bronchial epithelial cells**  
SA83  
Ken Hallows, *University of Pittsburgh, USA*
- 
- 09.30** **Role of cytokines in controlling gene expression and sodium transport in airway and alveolar epithelial cells; implications for cystic fibrosis and pulmonary edema**  
SA84  
Yves Berthiaume, *Universite de Montréal, Canada*
- 
- 10.00** **Inflammation, infection and airway glucose homeostasis**  
SA85  
Emma Baker, *St George's University of London, UK*
- 
- 10.30** Refreshments in the Marquee behind University Club
- 
- 11.15** **Molecular mechanisms of intestinal epithelial tight junction regulation**  
SA86  
Jerrold Turner, *University of Chicago, USA*
- 
- 11.45** **Role of wtCFTR in airway epithelial inflammatory responses to bacterial exoproducts**  
SA87  
Terry Machen, *University of California, Berkeley, USA*
-

# Neuro-endocrine-immune interactions in reproduction

## Metabolism & Endocrinology

Thursday 14 July 2011

**LT5** (*Lecture theatre Le Gros Clark*)

Organised by Alison Douglas, *University of Edinburgh, UK*, and Petra C Arck, *McMaster University, Hamilton, Canada*

- 
- 08.45** Welcome and introduction by the organisers
- 
- 09.00** **Prenatal determinants of children's health**  
**SA88** Petra C Arck, *McMaster University, Hamilton, Canada*
- 
- 09.30** **CRH, urocortins and inflammation in human placenta**  
**SA89** Chiara Voltolini, *University of Sienna, Italy*
- 
- 10.00** **Maternal neuroendocrine-immune responses to stress in early pregnancy**  
**SA90** Alison J Douglas, *University of Edinburgh, UK*
- 
- 10.30** Refreshments in the Marquee behind University Club
- 
- 11.15** **Stress, CRH and cytokines in childhood/adolescence and concurrent or later disorders**  
**SA91** George Chrousos, *Athens University Medical School, Greece*
- 
- 11.45** **Early life stress and reproductive dysfunction**  
**SA92** Kevin O'Byrne, *Kings College London, UK*
-

# Developments in chronic obstructive pulmonary disease, and challenges for future research

## Human & Exercise Physiology

Thursday 14 July 2011

### LT6 (Experimental Psychology B)

Organised by Mary Morrell, *Imperial College London, UK*, and Ken O'Halloran, *University College Dublin, Rol*

- 
- 08.45** Welcome and introduction by the organisers
- 
- 09.00** **The effects of chronic sustained and intermittent hypoxia on muscle physiology**  
SA93  
Ken O'Halloran, *University College Dublin, Rol*
- 
- 09.30** **Chronic obstructive pulmonary disease as a systemic disease: a skeletal muscle perspective**  
SA94  
Paul Greenhaff, *University of Nottingham, UK*
- 
- 10.00** **Respiratory muscle function and training in patients with COPD**  
SA95  
Alison McConnell, *Brunel University, Uxbridge, UK*
- 
- 10.30** Refreshments in the Marquee behind University Club
- 
- 11.15** **Effects of iron on the pulmonary circulation: a therapeutic role in COPD?**  
SA96  
Annabel Nickol, *University of Oxford, UK*
- 
- 11.45** **When obesity and COPD collide: Physiological and clinical consequences**  
SA97  
Denis O'Donnell, *Queen's University, Kingston, Canada*
-

# Oral Communications

## Cardiac & Respiratory Physiology

Thursday 14 July 2011

**LT1** (*University Museum of Natural History*)

The names below are the presenting authors, for a full list of authors see the abstract

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C73 **Alveolar epithelial CNGA1 channels mediate cGMP-stimulated, amiloride-insensitive lung liquid absorption**  
14.30 William Wilkinson

---

C74 **The effect of ageing on the control of breathing: a role for the development of obstructive sleep apnoea**  
14.45 Keith Pugh

---

C75 **Interrelationship between conduction velocity, intracellular Ca<sup>2+</sup> and gap junction resistance in ventricular myocardium**  
15.00 Rita Jabr

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C76 **Mapping of cardiac activation with electrode arrays of monophasic action potential *in vivo* and *in vitro***  
15.15 Zhigang Shui

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C77 **Integrated assessment of cardiac contractility and calcium/calmodulin protein kinase II delta expression and activity following acute and chronic isoprenaline administration**  
15.30 Laura Mooney

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C78 **Acute elevations in extracellular glucose confer a mild cardioprotective effect to isolated ventricular myocytes**  
15.45 Richard Rainbow

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Today's [Cardiac & Respiratory Physiology](#) Poster Communications will be held in the Marquee behind University Club from 16.00, see page 99

For details of the Lecture Theatres, see page 8

# Oral Communications

## Vascular & Smooth Muscle Physiology

Thursday 14 July 2011

LT2 (Experimental Psychology A)

The names below are the presenting authors, for a full list of authors see the abstract

- 
- C79    **Arterial stent intimal hyperplasia: role of hypoxia and blood-wall oxygen transport**  
14.30    Colin Caro
- 
- C80    **Mechanism of hydrogen sulphide mediated contraction in rat small pulmonary arteries**  
14.45    Philip Aaronson
- 
- C81    **Protein kinase C delta isoform shRNA plasmid construct restores vascular disorders in spontaneously hypertensive rats**  
15.00    Tatiana Novokhatska
- 
- C82    **Inhibition of HDAC8 and acetylation of Hsp20 regulates contractile activity of human myometrial smooth muscle**  
15.15    Magdalena Karolczak-Bayatti
- 
- C83    **The role of smooth muscle K<sup>+</sup> channels in conducted hyperpolarization**  
15.30    Timea Beleznai
- 
- C84    **Isolated perfused pig bladder: a novel experimental approach for the study of whole organ physiology in large animals**  
15.45    Bahareh Vahabi
-

# Oral Communications

## Cellular & Integrative Neuroscience

Thursday 14 July 2011

*LT3 (Large lecture theatre Sherrington Building)*

The names below are the presenting authors, for a full list of authors see the abstract

- 
- C85  
14.30 **Evidence of a role for astrocyte purinergic signalling in regulation of extracellular potassium and action potential propagation in central nervous system white matter**  
Virginia Bay
- 
- C86  
14.45 **Human embryonic stem cell derived functional astrocytes are neuroprotective through glutathione dependent and independent mechanisms**  
Kunal Gupta
- 
- C87  
15.00 **Are astroglial G<sub>q</sub>-protein coupled receptors functionally relevant?**  
Samantha Lane
- 
- C88  
15.15 **Differential control of striatal inhibition by histamine**  
Tommas Ellender
- 
- C89  
15.30 **Investigating glycine-activated currents in rat substantia nigra neurones**  
James Hallett
- 
- C90  
15.45 **Electrophysiological deficits at GABAergic synapses on Purkinje cells of the dystrophin-deficient mdx mouse: possible implications for Duchenne Muscular Dystrophy**  
Stewart Head
- 

Today's Cellular & Integrative Neuroscience Poster Communications will be held in the Marquee behind University Club from 16.00, see page 103

For details of the Lecture Theatres, see page 8

# Oral Communications

## Epithelia & Membrane Transport

Thursday 14 July 2011

### LT4 (Pharmacology lecture theatre)

The names below are the presenting authors, for a full list of authors see the abstract

- 
- C91  
14.30 **TRPM7 cation channel is overexpressed in human pancreatic ductal adenocarcinoma and is required for cancer cell migration**  
Pierre Rybarczyk
- 
- C92  
14.45 **The effect of inflammation on human airway epithelial glucose transport and GLUT transporter expression**  
James Garnett
- 
- C93  
15.00 **Non-genomic estrogen regulation of airway surface liquid height in normal and cystic fibrosis bronchial epithelia**  
Vinciane Saint-Criq
- 
- C94  
15.15 **Genetic inactivation of the KCNN4 K<sup>+</sup> channel protects from lethality in a cystic fibrosis mouse model**  
Carlos Flores
- 
- C95  
15.30 **Loss of DRA expression results in severely decreased murine colonic HCO<sub>3</sub><sup>-</sup> secretion, low surface pH, disturbed mucus barrier, signs of colonic mucosal inflammation, and increased susceptibility to DSS-induced injury**  
Ursula Seidler
- 
- C96  
15.45 **Renal cyst fluid from human polycystic kidney disease patients stimulates Cl<sup>-</sup> secretion: Characterization of the active factor and target channels**  
Bonnie Blazer-Yost
-

# Oral Communications

## Metabolism & Endocrinology

Thursday 14 July 2011

*LT5 (Lecture theatre Le Gros Clark)*

The names below are the presenting authors, for a full list of authors see the abstract

---

C97  
14.30 **Placental sirtuin 1 (SIRT-1) and mammalian target of rapamycin (mTOR) in the Preobe Study: a protective response for the fetus against the adverse outcomes of maternal obesity?**  
Jole Martino

---

C98  
14.45 **Glycaemic response and insulin sensitivity during the menstrual cycle in women**  
Sarah Hillier

---

C99  
15.00 **The role of Annexin A1 in the manifestation of sexual dimorphisms in murine cerebral and systemic inflammatory responses to endotoxin**  
Ellen Hughes

---

C100  
15.15 **Glucocorticoid-induced changes in liver metabolism during mouse pregnancy**  
Juanita Jellyman

---

C101  
15.30 **Hypothalamic mechanisms mediating inhibition of prolactin secretion following stress in early pregnant mice**  
Victoria Parker

---

C102  
15.45 **Acetylsalicylic acid impairs early renal development in cultured embryonic metanephros through a COX-independent mechanism**  
Angela Carvalho

---

Today's **Metabolism & Endocrinology** Poster Communications will be held in the Marquee behind University Club from 16.00, see page 109

# Oral Communications

## Human & Exercise Physiology

Thursday 14 July 2011

### LT6 (Experimental Psychology B)

The names below are the presenting authors, for a full list of authors see the abstract

---

C103 **Skeletal muscle deoxygenation during respiratory fatigue in heart failure**  
14.30 Antonio Nobrega

---

C104 **Dietary nitrate supplementation reduces muscle metabolic perturbation and improves exercise tolerance in hypoxia**  
14.45 Anni Vanhatalo

---

C105 **The effects of prolonged hypobaric hypoxia on voluntary control of muscle in humans**  
15.00 Emma Ross

---

C106 **Chronic Epo deficit induces exercise performance decrease and massive muscle proteolysis in running mouse**  
15.15 Laurence Mille-Hamard

---

C107 **The effect of short duration high intensity interval exercise on postprandial lipaemia and soluble adhesion molecules**  
15.30 Brendan Gabriel

---

C108 **Human *in vivo* tendon adaptations to resistance training & detraining at different muscle lengths**  
15.45 Gerard McMahon

---

# Poster Communications

## Cardiac & Respiratory Physiology

Thursday 14 July 2011

### *Marquee behind University Club*

The names below are the presenting authors, for a full list of authors see the abstract

---

PC247 **Calcium stimulated adenylyl cyclase modulates ion channel currents in the guinea-pig atrioventricular node**  
Kathryn Yuill

---

PC248 **Elevated extracellular glucose markedly attenuates ischaemic preconditioning in cardiac ventricular myocytes**  
Mark Sims

---

PC249 **Effects of physiological parameter variation in a computational rabbit ventricular cell model**  
Philip Gemmell

---

PC250 **The energetics of cardiac trabeculae undergoing quasi-realistic work-loops**  
Denis Loiselle

---

PC251 **Computer simulation of human atrial fibrillation due to S140G and V141M mutations of the  $K_v7.1$  gene**  
Sanjay Kharche

---

PC252 **Mechanical and electrical effects of superoxide donor menadione in rat myocardium are associated with increased diastolic intracellular  $Ca^{2+}$**   
Ed White

---

PC253 **Effects of anandamide on electrical activity and contraction in guinea pig cardiac ventricular myocytes**  
Emma Bolton

---

Continued on the next page

- 
- PC254 **The effect of inorganic phosphate on mitochondrial  $\text{Ca}^{2+}$  dynamics in single permeabilized ventricular myocytes of rat**  
Chae Hun Leem
- 
- PC255 **Is SERCA overexpression anti- or pro-arrhythmic?**  
Thomas Collins
- 
- PC256 **STED microscopy reveals secondary RyR cluster morphology**  
Niall MacQuaide
- 
- PC257 **Can stimulation frequency modulate  $\text{Ca}^{2+}$  handling of sheep atrial myocytes?**  
Daniel Wrigley
- 
- PC258 **Impact of in-utero and postnatal exposure to a high fat nutritional environment on clock and clock-controlled genes in murine hearts**  
Aaron Stokes
- 
- PC259 **Telethonin regulates transverse (t)-tubule structure and  $\text{Ca}^{2+}$  induced  $\text{Ca}^{2+}$  release (CICR) in mouse ventricular myocytes**  
Michael Ibrahim
- 
- PC260 **Human aging and heart rate variability, psychomotor speed and neurodynamic characteristics in rowers**  
Oleg Dranitsin
- 
- PC261 **Relationship between seismocardiography and echocardiography for measuring cardiac cycle timing events**  
J. Patrick Neary
- 
- PC262 **Location of the tetraalkyl ammonium (TAA) blocking site in the mouse cardiac ryanodine receptor (mRyR2)**  
Sammy Mason
- 
- PC263 **Mice expressing a human  $\text{K}_{\text{ATP}}$  channel mutation have altered channel ATP sensitivity, but no cardiac abnormalities**  
Roope Mannikko
- 
- PC264 **Identification of gating mutations in the TREK-1 K2P potassium channel by functional complementation in  $\text{K}^+$  uptake deficient yeast**  
Chetan Sharma
-

- 
- PC265 **Simulation analysis of Ca<sup>2+</sup>-dependent inhibition dynamics of L-type Ca<sup>2+</sup> current of pulmonary vein cardiomyocytes of rabbit**  
Hyeon Sung Baek
- 
- PC266 **Preventive effect of mitochondrial substrates and calmodulin on L-type Ca<sup>2+</sup> current in atrial cardiac myocytes of rabbit**  
Hyun-A Kim
- 
- PC267 **Characterization of a TRPM7-like cation current in human atrial cardiomyocytes**  
Irma Martisiene
- 
- PC268 **The solution structure of the EAG domain of hERG channels provides insight into the molecular basis for slow deactivation gating**  
John Mitcheson
- 
- PC269 **Coupling of the Voltage Sensing Domain to the Pore Domain in the hERG K<sup>+</sup> Potassium Channel**  
Steven Thomson
- 
- PC270 **Description of the gating behaviour of purified human cardiac ryanodine receptor (hRyR2) by kinetic modelling and burst analysis under minimal conditions**  
Saptarshi Mukherjee
- 
- PC271 **Studies on IKr channel blockade in human cardiomyocytes as a cause of arrhythmias**  
Hussein Rubaiy
- 
- PC272 **IP<sub>3</sub> sensitive, Ca<sup>2+</sup>-dependent oscillating currents in cardiac myocytes of pulmonary vein of rabbit**  
Jeong Hoon Kwon
- 
- PC273 **L-type calcium modulates the pro-arrhythmic response to dofetilide in human: a simulation study**  
Nejib Zemzemi
- 
- PC274 **The sGC activator BAY58-2667 protects against sterile inflammatory shock in mice**  
Benjamin Vandendriessche
- 

Continued on the next page

Find out about the next [Cardiac & Respiratory Physiology](#) meeting on page 132

For details of the Lecture Theatres, see page 8

- 
- PC275 **Chronic intermittent hypoxia-induced respiratory muscle fatigue is mediated by reactive oxygen species**  
Christine Shortt
- 
- PC276 **Maternal fructose and/or salt consumption programs cardiovascular hypersensitivity in the offspring**  
David Gardner
- 
- PC277 **The impact of NAD(P)H oxidase on the regulation of renal hemodynamics**  
Hayder Shabana
- 
- PC278 **Bradykinin mediated activation of sensory nerves in the kidney: impact on contra-lateral kidney function.**  
Elaine Barry
- 
- PC279 **The role of Angiotensin (1-7) in the regulation of renal haemodynamics**  
Julie O Neill
- 
- PC280 **Chronic intermittent hypoxia induces respiratory muscle weakness in neonatal rats which persists into early adult life.**  
Ruth O'Connell
- 
- PC281 **Protective effect of hypercapnia on warm ischemia induced free radical damage of lungs retrieved from non-heart-beating donors**  
Daniel Hodyc
- 
- PC283 **Overnight changes in neck circumference and pharyngeal calibre in heart failure patients with obstructive sleep apnoea**  
Tom Carlisle
- 
- PC284 **The asthma associated cytokines IL-13 and TGF $\beta$  synergistically increase expression of TRPC6 in human airway smooth muscle**  
Charmaine Ribeiro
- 
- PC285 **The long acting beta agonist formoterol and the cAMP raising agent forskolin both cause reduced expression of SERCA2 in human airway smooth muscle cells**  
Oluwaseun Ojo
-

# Poster Communications

## Cellular & Integrative Neuroscience

Thursday 14 July 2011

### *Marquee behind University Club*

The names below are the presenting authors, for a full list of authors see the abstract

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PC286 **Use of burst analysis and agonist concentration jumps to investigate the properties of di- and tri-heteromeric NMDA receptors in dopaminergic neurons of neonatal rat substantia nigra**  
Qian Zhao

---

PC287 **Functional characterisation of mutations in the TRESK K2P K<sup>+</sup> channel (KCNK18) associated with common migraine.**  
Isabelle Andres-Enguix

---

PC288 **Impact of ischemic preconditioning on excitatory postsynaptic current (EPSC) and AMPA / kainate-activated currents in primary cortical neurons**  
Samaneh Maysami

---

PC289 **Characterisation and pharmacological activation by bithionol of human SLO2.2A K<sup>+</sup> channels**  
David Wrighton

---

PC290 **Effects of hyperthermia on neurogenesis and neurobehavior in the young male rat**  
Bayram Yilmaz

---

PC291 **Effects of prenatal hypoxia-ischemic in the motor behavior and cardiovascular system**  
Ive Sab

---

PC292 **Measuring the dynamics of retino-collicular map formation in the mouse**  
Daniel Lyngholm

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Continued on the next page

Find out about the new Editor-in-Chief's plans for neuroscience in *The Journal of Physiology* on page 123

For details of the Lecture Theatres, see page 8

- 
- PC293 **Oxytocin alters spike activity in oxytocin neurons**  
Richard Dyball
- 
- PC294 **Nitric Oxide (NO) modulates the excitability of magnocellular neurons of the Supraoptic Nucleus (SON) during changes in plasma osmolality**  
Melina da Silva
- 
- PC295 **The timing of antisaccades**  
Imran Noorani
- 
- PC296 **The effect of coil type and navigation on the reliability of transcranial magnetic stimulation**  
Melanie Fleming
- 
- PC297 **Human tremor size reduces with ischaemia due to decreased EMG to muscle gain**  
Carlijn Vernooij
- 
- PC298 **Descending pathways influence sensitization of reflex responses in the rat**  
Katharine Dobson
- 
- PC299 **Saccadic latency and information foraging**  
Sara Hänni
- 
- PC300 **Effects of chelates of gadolinium on intracellular calcium concentrations in isolated rat dorsal root ganglia neurons**  
Haluk Kelestimur
- 
- PC301 **Possible nerve inflammation in patients with diffuse chronic pain syndromes**  
Andrew Dilley
- 
- PC302 **CCL2 excites a subgroup of inflamed C-fibre axons in the rat**  
Natalie Richards
- 
- PC303 **The gap junction opener trimethylamine enhances characteristics of network based activity within nociceptive dorsal horn**  
Chris Kay
- 
- PC304 **Selective decline in slowly adapting type I mechanoreceptors during development in rat sinus hair follicles *in vitro***  
Peter Cahusac
-

# Poster Communications

## Epithelia & Membrane Transport

Thursday 14 July 2011

### *Marquee behind University Club*

The names below are the presenting authors, for a full list of authors see the abstract

---

PC305 **L-Arginine-nitric oxide pathway and possible implications for cardiovascular disease in depressive patients**  
Tatiana Brunini

---

PC306 **X-ray crystal structure of a prokaryotic inwardly-rectifying (KirBac) potassium channel reveals the mechanism of channel opening at the bundle-crossing gate.**  
Stephen Tucker

---

PC307 **Functional regulation of transient receptor potential vanilloid type (TRPV) 6 channel by extracellular pH**  
Byung Yeh

---

PC308 **Protein Kinase A (PKA) is central for the forward transport of two-pore domain K<sup>+</sup> channels K<sub>2p</sub>3.1 and K<sub>2p</sub>9.1**  
Alexandra Mant

---

PC309 **Correction of the cystic fibrosis transmembrane conductance regulator in cystic fibrosis epithelial cells using zinc finger nuclease homology-directed repair**  
Jennifer Hollywood

---

PC310 **Oscillatory changes of intracellular chloride concentration during cell cycle progression in SiHa cells**  
Wei-Chun Wei

---

PC311 **P2X subunits expression in mouse Leydig cells at different ages**  
Ligia Antonio

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Continued on the next page

Find out about the next [Epithelia & Membrane Transport](#) meeting on page 128

For details of the Lecture Theatres, see page 8

EM

Poster Communications

- 
- PC312 **Epidermal growth factor-driven expression of a TTX-sensitive voltage-gated sodium channel potentiates human non-small cell lung cancer invasion via elevation of intracellular sodium concentration**  
Tom Campbell
- 
- PC313 **Modulation of TRPM3 cation channel by intracellular Ca<sup>2+</sup>**  
Victoria Seymour
- 
- PC314 **Characterisation of a chloride conductance in canine chondrocytes**  
Rebecca Lewis
- 
- PC315 **Prenatal exposure of pregnant rats to cigarette smoke and nicotine: effect on nitric oxide and fasting glycemia in treated and untreated neonates with vitamin C**  
Ibukun Oyeyipo
- 
- PC316 **Cytokine regulation of natural antimicrobial peptide expression in cultured human vaginal epithelial and endocervical cells**  
Rachel Tribe
- 
- PC317 **Mirror-like SeSAME/EAST renal phenotype in mice lacking the Kir5.1 (Kcnj16) K<sup>+</sup> channel subunit**  
Stephen Tucker
- 
- PC318 **Regulation of the epithelial sodium channel (ENaC) by norepinephrine in cultured mouse renal collecting duct cells**  
Morag Mansley
-

# Poster Communications

## Human & Exercise Physiology

Thursday 14 July 2011

### *Marquee behind University Club*

The names below are the presenting authors, for a full list of authors see the abstract

---

PC319 **Quality of life in children with type 1 diabetes in Kuwait**  
Fatemah Alotaibi

---

PC320 **The effect of a health enhancing physical activity programme on transient ischaemic attack and non-disabling stroke: The methodological design of a randomised controlled pilot trial**  
James Faulkner

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PC321 **Improvement in neurocognitive function: disassociating habituation from treatment effects**  
Chris Marley

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PC322 **Comparison of haemodynamics and metaboreflex sensitivity between high intensity interval and constant aerobic exercise in prehypertensive individuals**  
Jae Seung Chang

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PC323 **Functional involvement of the calmodulin/inositol 1,4,5-trisphosphate receptor-binding region of TRPC6 in human platelets**  
José López

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PC324 **Thapsigargin and the diacylglycerol analogue 1-oleoyl-2-acetyl-sn-glycerol differentially regulate the association between Orai and STIM proteins in human platelets**  
Letizia Albarrán

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PC325 **Three nights of sleep restriction impairs forearm skin microvascular reactivity in young healthy males**  
Jonathan Moore

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Find out about the next [Human & Exercise Physiology](#) meeting on page 129

For details of the Lecture Theatres, see page 8

- 
- PC326 **Temperature effects on muscle force in pre- and post-menopausal women.**  
Julie Bieles
- 
- PC327 **Artificially aged skeletal myoblasts display reduced regeneration in bio-engineered skeletal muscle**  
Adam Sharples
- 
- PC328 **Intracellular calcium and phosphate in intact muscle stimulated to fatigue in the anaesthetised mouse**  
David Allen
- 
- PC330 **Kinetic control of oxygen consumption in single *Xenopus laevis* skeletal muscle fibres is not first-order**  
Rob Wüst
- 
- PC331 **TNF- $\alpha$  inhibits amino acid uptake and activation of the MAPK pathway in isolated intact mammalian skeletal muscle fibres through a COX-dependent pathway**  
Mohammed Rashid
- 
- PC332 **Dihydrotestosterone (DHT) stimulates amino acid uptake in mouse fast-twitch fibre bundles by increasing the expression and activity of the L-type amino acid transporter (LAT) 2**  
Gabriel Mutungi
- 
- PC333 **A putative model of endurance exercise using bio-engineered skeletal muscle**  
Darren Player
- 
- PC334 **Effect of hindlimb suspension on the expressions of neurotrophins in rat soleus muscle**  
Tatsuro Hirose
- 
- PC335 **Relationship between serum pH and seizure onset following birth asphyxia in the newborn.**  
Rachael Delahunty
-

# Poster Communications

## Metabolism & Endocrinology

Thursday 14 July 2011

### *Marquee behind University Club*

The names below are the presenting authors, for a full list of authors see the abstract

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PC336 **Effects of ghrelin administration on regulation of food intake in arthritic rats.**

Maria Lopez-Menduiña

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PC337 **Fenofibrate administration ameliorates the inhibitory effect of adjuvant-arthritis on leptin and adiponectin.**

Ana Belen Gómez-SanMiguel

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PC338 **The role of clock genes and clock controlled metabolic genes in the developmental priming of fatty liver disease.**

Kiran Sihota

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PC339 **Effect of duration-of-stay at high altitude on plasma hormones and psychological variables**

Meenakshi Sachidhanandam

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PC340 **Galanin and different levels of energy requirements on gonadotropins levels in female goats**

Fatemeh Aboutalebi

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PC341 **Expression pattern and signalling pathway alterations in the brain concur with the hypermetabolic phenotype of mice lacking *Gnasx1/XLas***

Katie Burton

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PC342 **Impaired kidney function in rats six months after unilateral nephrectomy**

Vlasta Oršić

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# Poster Communications

## Vascular & Smooth Muscle Physiology

Thursday 14 July 2011

### *Marquee behind University Club*

The names below are the presenting authors, for a full list of authors see the abstract

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PC343 **Tissue-specific responses of human uteroplacental smooth muscles to  $\text{Ca}^{2+}$ /calmodulin-dependent kinase II inhibition**  
Michele Sweeney

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PC344 **Reactive oxygen species potentiate vasodilator effect of nitric oxide donor with gold nanoparticles in aortas from renal hypertensive rats**  
Bruno Silva

---

PC345 **Role of Kv1.3 channel in vascular smooth muscle cells proliferation in a porcine model of coronary restenosis**  
Pilar Ciudad

---

PC346 **Kv7.4 channels contribute to  $\beta$ -adrenoceptor regulation of rat renal artery**  
Friederike Zunke

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PC347 **The effects of gestation and agonists on the ability of magnesium to reduce uterine contractility**  
Alison McCullough

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PC348 **Caveolin-1 knockout reduces the expression of cavin-1, but not flotillins, in murine smooth muscle**  
Michael Taggart

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PC349 **The Novel Potassium Channel Kir7.1 is a Critical Component of Uterine Quiescence in Mice and Human.**  
Conor McCloskey

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- PC350 **Effect of high external potassium on spontaneous calcium oscillations in isolated ICC from the rabbit urethra.**  
Bernard Drumm
- 
- PC351 **Properties of a Na<sup>+</sup> current in freshly dispersed smooth muscle cells from the rabbit airway**  
Eamonn Bradley
- 
- PC352 **Caveolar disruption with methyl- $\beta$ -cyclodextrin (MCD) causes endothelium-dependent contraction of rat femoral arteries**  
Ashraf Al-Brakati
- 
- PC353 **Arterial acetylation of histones is increased by a broad class I/II lysine deacetylase (KDAC) inhibitor but not by a specific KDAC8 antagonist**  
Aiqing Chen
- 
- PC354 **Comparison of TMEM16A and Best 3 expression and function in murine thoracic aorta.**  
Alison Davis
- 
- PC355 **Responses of ICC populations in the bladder to electrical field stimulation suggests functional innervation**  
Susannah Gray
- 
- PC356 **siRNA-mediated knockdown of caveolin-1 protein also reduces expression of cavin-1, but not flotillin-1, in cultured human smooth muscle.**  
Michael Taggart
- 
- PC357 **Properties of interstitial cells in human uterus**  
Helena Parkington
- 
- PC358 **Evidence of phosphatidylcholine-specific phospholipase C involvement in hypoxic pulmonary vasoconstriction**  
Ievgen Strielkov
- 
- PC359 **Ca<sup>2+</sup>-activated K<sup>+</sup> channels in human fetoplacental arterial smooth muscle cells**  
Melissa Brereton
-

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PC360 **Effect of modulators of the nitric oxide/cGMP pathway on L-type  $\text{Ca}^{2+}$  current in rabbit corpus cavernosum smooth muscle cells.**  
Claire Doyle

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PC361 **Caveolae subpopulations in rat aortic smooth muscle**  
Caroline Dart

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