

[Cardiac & Vascular Physiology](#)

[Education & Teaching](#)

[Endocrinology](#)

[Epithelia & Membrane Transport](#)

[Human, Environmental & Exercise Physiology](#)

[Metabolic Physiology](#)

[Neuroscience](#)

## Cardiac & Vascular Physiology

### PCB001

#### Comparative Microarray Profiling of Exosomal miRNAs in the Serum of Acute Ischemic Stroke Patients and Healthy Controls

Muhammad Ammar Zahid<sup>1</sup>, Ghulam Jeelani Pir<sup>2</sup>, Aijaz Pararray<sup>2</sup>, Abdelali Agouni<sup>1</sup>

<sup>1</sup>Department of Pharmaceutical Sciences, College of Pharmacy, QU Health, Qatar University, Doha, Qatar, <sup>2</sup>The Neuroscience Institute, Academic Health System, Hamad Medical Corporation (HMC), Doha, Qatar

### PCB002

#### Electrophysiological effects of extracellular histones in isolated cardiomyocytes

Moza Al-Owais<sup>1</sup>, Z Yang<sup>1</sup>, H Kirton<sup>1</sup>, E White<sup>1</sup>, D Steele<sup>1</sup>

<sup>1</sup>School of Biomedical Sciences, University of Leeds, Leeds LS2 9JT, UK, Leeds, United Kingdom

### PCB003

#### In silico Investigation of Pro-arrhythmogenic Effects of KCNE2 Mutations in Human Atrial Fibrillation

Ghadah Alrabghi<sup>1,2</sup>, Henggui Zhang<sup>1</sup>

<sup>1</sup>Biological Physics Group, University of Manchester, Manchester, United Kingdom, <sup>2</sup>Department of Physics, Faculty of Science, University of Jeddah, Jeddah, Saudi Arabia

### PCB004

#### Machine-learning analysis of near-infrared spectroscopy to improve clinical decision making for hypoxic-ischemic encephalopathy in term infants

Mino Ashoori<sup>1,2</sup>, John M O'Toole<sup>1,3</sup>, Aisling A Garvey<sup>1,3,4</sup>, Vicki Livingstone<sup>1,3</sup>, Brian Walsh<sup>1,3,4</sup>, Andreea M Pavel<sup>1,3,4</sup>, Mary Anne Ryan<sup>1,3,4</sup>, Geraldine B Boylan<sup>1,3</sup>, Deirdre M Murray<sup>1,3</sup>, Michael Moore<sup>5</sup>, Lavinia Panaite<sup>1,3,4</sup>, Fiona B McDonald<sup>1,2</sup>, Eugene M Dempsey<sup>1,3,4</sup>

<sup>1</sup>INFANT Research Centre, University College Cork, Cork, Ireland, <sup>2</sup>Department of Physiology, University College Cork, Cork, Ireland, <sup>3</sup>Department of Paediatrics & Child Health, University College Cork, Cork, Ireland, <sup>4</sup>Department of Neonatology, Cork University Maternity Hospital, Cork, Ireland, <sup>5</sup>Department of Radiology, Cork University Hospital, Cork, Ireland

**PCB005**

**The role of Sodium fluoride on electrolytes and blood pressure in male Wistar rats**

Olusola Ayegboyin<sup>1</sup>, Abayomi Ige<sup>2</sup>, Elsie Adewoye<sup>3</sup>

<sup>1</sup>University of Ibadan, Ibadan, Nigeria, <sup>2</sup>University of Ibadan, Ibadan, Nigeria, <sup>3</sup>University of Ibadan, Ibadan, Nigeria

**PCB007**

**Screening for small molecules that rescue the defective trafficking of mutant KCNQ1 channels**

Hongwei Cheng<sup>1</sup>, Grace Salisbury<sup>2</sup>, David N Sheppard<sup>1</sup>, Stephen C Harmer<sup>1</sup>

<sup>1</sup>School of Physiology, Pharmacology and Neuroscience, University of Bristol, Bristol, United Kingdom, <sup>2</sup>William Harvey Heart Centre, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, United Kingdom

**PCB008**

**Embryonic origins of vascular dysfunction in developmental hypoxia: the role of miR-21-5p**

Anna Cochrane<sup>1</sup>, Aaliyah Razi<sup>1</sup>, Youguo Niu<sup>1</sup>, Sage Ford<sup>1</sup>, Rachael Crew<sup>1</sup>, German Arenas<sup>3</sup>, Bernardo Krause<sup>2</sup>, Dino Giussani<sup>1</sup>

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**PCB009**

**Effect of Vitamin D Supplementation on Doxorubicin-Induced Cardiotoxicity in Rats**

Faten Diab, Noha Abdel-Aziz Nassef, Manal Abd-El Hamid, Yasmin Khaled

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**PCB010**

**GPER1 increases expression of vascular alpha 2C-adrenoceptors and mediates cold-induced vasoconstriction**

Manal Fardoun<sup>1</sup>, Khodr Issa<sup>2</sup>, Ali Eid<sup>3</sup>

<sup>1</sup>American University of Beirut, Faculty of Medicine, Beirut, Lebanon, <sup>2</sup>University of Lille, Proteomics, Inflammatory Response, Mass Spectrometry, INSERM U-1192, Lille, France, Lille, France,  
<sup>3</sup>Department of Basic Medical Sciences, College of Medicine, QU Health, Qatar University, Doha, Qatar

**PCB011**

**Effect of home-based dynamic intermittent pneumatic compression therapy on vascular and functional health outcomes in chronic stroke: A randomized controlled trial**

James Faulkner<sup>1</sup>, Eloise Paine<sup>1</sup>, Nick Hudson<sup>1</sup>, Scott Hannah<sup>1</sup>, Amy Dennis-Jones<sup>2</sup>, Louis Martinelli<sup>2</sup>, Helen Hobbs<sup>2</sup>

<sup>1</sup>University of Winchester, Winchester, United Kingdom, <sup>2</sup>Hobbs Rehabilitation, Winchester, United Kingdom

**PCB013**

**The molecular basis of control of vascular tone by the therapeutic drug niclosamide**

Rachel Kaye<sup>1</sup>, Rumaitha Al Hosni<sup>1</sup>, Paolo Tammaro<sup>1</sup>

<sup>1</sup>University of Oxford, Oxford, United Kingdom

**PCB014**

**NATRIURESIS INDUCED BY ACUTE INTRAVENOUS SALINE INFUSION IN MICE IS MEDIATED BY TUMOR NECROSIS FACTOR-ALPHA (TNF $\alpha$ ) - EVIDENCE FOR PHYSIOLOGICAL ROLE OF THIS CYTOKINE IN KIDNEY.**

Dewan Majid<sup>2</sup>, Alexander Castillo<sup>1</sup>

<sup>1</sup>Department of Physiology, Tulane University School of Medicine, New Orleans,, New Orleans,, United States, <sup>2</sup>Department of Physiology, Tulane University School of Medicine., New Orleans, United States

**PCB015**

**Back to the future – mathematical models to capture ion channel kinetics using short high-information voltage clamp protocols**

Gary Mirams<sup>1</sup>

<sup>1</sup>Centre for Mathematical Medicine & Biology, School of Mathematical Sciences, University of Nottingham, Nottingham, United Kingdom

**PCB016**

**Glutaredoxin1-overexpression attenuates chronic angiotensin-II induced hypertension and changes cardiac dynamics**

Yashika Relan<sup>1</sup>, Jennifer Kerr<sup>1</sup>, Agathe Lermant<sup>1</sup>, Alison McNeilly<sup>1</sup>, Colin Murdoch<sup>1</sup>

<sup>1</sup>*University of Dundee, Dundee, United Kingdom*

**PCB017**

**CARDIOPROTECTIVE EFFECT OF CO-ENZYME Q10 ON DOXORUBICIN INDUCED CARDIOTOXICITY IN ADULT MALE ALBINO WISTAR RAT**

Enivwenaye Nabofa<sup>1</sup>, EKEMINIMFON-ABASI EMMANUEL Okon<sup>1</sup>

<sup>1</sup>*Babcock University, Ilishan-Remo, Nigeria*

**PCB018**

**Analysis of seasonal changes in cardiac conduction system**

Il-young Oh<sup>1</sup>, Youngjin Cho<sup>1</sup>, Ji Hyun Lee<sup>1</sup>

<sup>1</sup>*Seoul National University Bundang Hospital, Seonganm, Korea, Republic of*

**PCB019**

**Cardiac Energy Metabolism in Crotonaldehyde (Beta-methyl Acrolein) Exposed Male Wistar Rats**

Olufemi Oluranti<sup>1,2</sup>, Abayomi Ige<sup>2</sup>, Bernard Adele<sup>2</sup>, Elsie Adewoye<sup>2</sup>

<sup>1</sup>*Bowen University, Iwo, Iwo, Nigeria*, <sup>2</sup>*University of Ibadan, Ibadan, Nigeria*

**PCB020**

**Losartan treatment improves the cardiovascular profile in rats with right-sided insular experimental stroke**

Liliane Santos Machado<sup>1</sup>, Itamar Jesus<sup>1</sup>, Marcos Eliezeck<sup>1</sup>, Ana Caroline Ventris-Godoy<sup>1</sup>, Maria José Campagnole-Santos<sup>1</sup>, Silvia Guatimosim<sup>1</sup>, Marco A Peliky Fontes<sup>1</sup>

<sup>1</sup>*Federal University of Minas Gerais, Belo Horizonte, MG, Brazil*

**PCB021**

**Baroreflex dependent cardiovascular autonomic reactivity is deranged in COVID-19 survivors**

Ayan Roy<sup>1</sup>, Dinu Chandran<sup>1</sup>, Ashok Jaryal<sup>1</sup>, Manish Soneja<sup>1</sup>, Ambuj Roy<sup>1</sup>, KK Deepak<sup>1</sup>

<sup>1</sup>*All India Institute of Medical Sciences, New Delhi, India*

**PCB022**

**Chronic hypoxia increases noradrenaline transporter activity in the rat left atrium**

James Saleeb-Mousa<sup>1</sup>, Andrew M Coney<sup>1</sup>, Manish Kalla<sup>3</sup>, Keith L Brain<sup>1</sup>, Andrew P Holmes<sup>1</sup>

<sup>1</sup>*School of Biomedical Sciences, Institute of Clinical Sciences, University of Birmingham, United Kingdom, Birmingham, United Kingdom,* <sup>2</sup>*School of Biomedical Sciences, Institute of Clinical Sciences, University of Birmingham, United Kingdom, Birmingham, United Kingdom,* <sup>3</sup>*University Hospitals Birmingham NHS Foundation Trust, Birmingham, United Kingdom*

**PCB023**

**VEGF receptor roles in human cardiac progenitor cell contributions to new vascular formation**

Andrew Smith<sup>2</sup>, Hanqing Zhao<sup>2</sup>, Sreenivasan Ponnambalam<sup>1</sup>

<sup>1</sup>*School of Molecular and Cellular Biology, University of Leeds, Leeds, United Kingdom,* <sup>2</sup>*School of Biomedical Sciences, University of Leeds, Leeds, United Kingdom,* <sup>3</sup>*School of Biomedical Sciences, University of Leeds, Leeds, United Kingdom*

**PCB024**

**Investigation of human tissue-specific proteome enrichment.**

Huei Teng Ng<sup>1</sup>, Florence Burte<sup>1</sup>, Julie Taggart<sup>1</sup>, Paul Ayuk<sup>2</sup>, Stephen Robson<sup>3</sup>, Michael Taggart<sup>1</sup>

<sup>1</sup>*Biosciences Institute, Newcastle University, Newcastle Upon Tyne, United Kingdom,* <sup>2</sup>*Department of Obstetrics, Royal Victoria Infirmary, Newcastle Upon Tyne, United Kingdom,* <sup>3</sup>*Population and Health Sciences Institute, Newcastle University, Newcastle Upon Tyne, United Kingdom*

**PCB025**

**BIOMARKERS OF HEART FAILURE WITH A PRESERVED EJECTION FRACTION IN BLACK SOUTH AFRICAN PATIENTS**

Marilet van Hoogland-van Heerden<sup>1</sup>, Pindile Mntla<sup>2</sup>, Harold Majane<sup>1</sup>

<sup>1</sup>*Sefako Makgatho Health Sciences University, Pretoria, South Africa,* <sup>2</sup>*Dr George Mukhari Academic Hospital, Pretoria, South Africa*

**\*M van Hoogland-van Heerden<sup>1</sup>, P Mntla<sup>2</sup>, OHI Majane<sup>1</sup>**

Department of Physiology, Sefako Makgatho Health Sciences University, South Africa<sup>1</sup>

Department of Cardiology, Dr George Mukhari Academic Hospital, South Africa<sup>2</sup>

## Education & Teaching

### PCB026

**Technical skills for basic scientists- Hands on skills in basic science courses is appreciated and promotes employability/life skills which otherwise are difficult to demonstrate to employers**

Liam Bagley<sup>2,3</sup>, Natasha Hadgraft<sup>3</sup>

*<sup>1</sup>Manchester Metropolitan University, Manchester, United Kingdom, <sup>2</sup>Department of Anaesthesia , Manchester NHS Foundation Trust, Manchester, Manchester, United Kingdom, <sup>3</sup>Department of Life Science, Manchester Metropolitan University, Manchester, United Kingdom*

### PCB028

**Teaching and learning about physiology of death and dying**

Laura Ginesi, Derek Scott

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### PCB029

**Encouraging students' development towards employability using a digital micro-activity**

Joseph Bass<sup>1</sup>, Aimee Whitton<sup>1</sup>, Gwen Hughes<sup>1</sup>

*<sup>1</sup>University of Nottingham, Nottingham, United Kingdom*

### PCB030

**The Use of Digital Storytelling to Compensate for Flexible Physiology Learning**

Noha Lasheen<sup>3</sup>, Maram Fawzy<sup>1</sup>, Mostafa Ibrahim<sup>1,2</sup>

*<sup>1</sup>Undergraduate Medical Student, Faculty of Medicine, Galala University, Suez, Egypt, <sup>2</sup>Faculty of Medicine, Galala University, Suez, Egypt, <sup>3</sup>Associate Professor of Physiology, Faculty of Medicine, Galala University, Suez, Egypt*

## Endocrinology

PCB031

### ANTI-OXIDANT AND ANTI-INFLAMMATORY EFFECTS OF MELATONIN ON OBESE WISTAR RATS

Tahir Abdussalam<sup>1</sup>, Luqman Olayaki<sup>1</sup>

<sup>1</sup>*Department of Physiology, University of Ilorin, Ilorin, Nigeria*

PCB032

### Effect of pulp extract of *Azanza garckeana* fruits on hematological and hormonal indices

E. Sylvia Okungbowa<sup>1</sup>, Idris. B. Momodu<sup>1</sup>, Fred O. Agoreyo<sup>2</sup>, Blessing O. Agoreyo<sup>3</sup>

<sup>1</sup>*Department of Biochemistry, Faculty of Life Sciences, University of Benin, P.M.B. 1154,, Benin City, Edo State, Nigeria,* <sup>2</sup>*Department of Physiology, School of Basic Medical Sciences, College of Medical Sciences, University of Benin, P.M.B. 1154,, Benin City, Edo State., Nigeria,* <sup>3</sup>*Department of Biochemistry, Faculty of Life Sciences, University of Benin, P.M.B. 1154,, Benin City, Edo State., Nigeria*

PCB033

### Thyroid function is related to body mass index in post-menopausal women.

MAUREEN EBOMOYI<sup>1</sup>, Clement Ekhator<sup>1</sup>

<sup>1</sup>*Department of Physiology, University of Benin, P.M.B. 1154, Benin City, Edo State, Nigeria*

PCB034

### Hypoglycemic and antioxidant potential of *Phyllanthus amarus* leaf extract in Type 2 diabetic *Drosophila melanogaster* flies.

Churchill Inneh<sup>1</sup>, James Osakue<sup>1</sup>

<sup>1</sup>*University of Benin, Benin City, Nigeria*

PCB035

### Effect of ethyl acetate extract of *Amaranthus hybridus* on blood glucose, insulin, oxidative stress, and lipid profile in streptozotocin (STZ)-induced diabetic rats.

Grace Umoren<sup>1</sup>, Gabriel Ajayi<sup>2</sup>, Saka Bamiro<sup>1</sup>, Fehintoluwa Femi-Olabisi<sup>2</sup>, Odunayo Olumide<sup>1</sup>, Samson Aina<sup>1</sup>, Adebisola Shakunle<sup>1</sup>, Isaac Ikuejamoye<sup>1</sup>

<sup>1</sup>*Lagos State University College of Medicine, Lagos, Nigeria,* <sup>2</sup>*Mountain Top University, Ogun, Nigeria*

## Epithelia & Membrane Transport

### PCB036

**The role of electrogenic and electroneutral monocarboxylate transport in airway clearance.**

Anita Guequen<sup>1,2</sup>, Bárbara Tapia<sup>1,2</sup>, Sandra Villanueva<sup>1,3</sup>, Carlos Flores<sup>1,3</sup>

<sup>1</sup>*Centro de Estudios Científicos, Valdivia, Chile,* <sup>2</sup>*Universidad Austral de Chile, Valdivia, Chile,*

<sup>3</sup>*Universidad San Sebastián, Valdivia, Chile*

### PCB037

**Characterisation of the respiratory epithelium within Primary Ciliary Dyskinesia patients compared to healthy controls.**

Elizabeth Haughey<sup>1</sup>, Fengxia Ding<sup>1</sup>, Chris O'Callaghan<sup>1</sup>

<sup>1</sup>*University College London, London, United Kingdom*

### PCB038

**Insight into the mechanism of D-glucose accelerated exchange in GLUT1 from molecular dynamics simulations**

Richard Naftalin<sup>3</sup>, Saul Gonzalez-Resines<sup>2</sup>, Carmen Domene<sup>1</sup>

<sup>1</sup>*Department of Chemistry, University of Bath, Claverton Down, Bath, BA2 7AY, UK2, Bath, United Kingdom,* <sup>2</sup>*Department of Chemistry, University of Bath, Claverton Down, Bath, BA2 7AY, UK2, Bath, United Kingdom,* <sup>3</sup>*BHF Centre of Research Excellence, School of Medicine and Life Sciences, King's College London, London, United Kingdom*

### PCB039

**Developing a neutrophil trans-epithelial endothelial migration model of the human air-blood barrier to identify biomarkers for respiratory virus infection.**

Machaela Palor<sup>1</sup>, Thomas Benoist<sup>1</sup>, Robert Hynds<sup>1</sup>, Claire M Smith<sup>1</sup>

<sup>1</sup>*UCL GOS ICH, London, United Kingdom*

### PCB040

**Dietary regulation of ruminal UT-B2 urea transporters in adult male fallow deer bucks: effects of season and wildlife feeding activity.**

Gavin Stewart<sup>1</sup>, Deirdre McLaughlin<sup>1</sup>, Laura Griffin<sup>1</sup>, Chongliang Zhong<sup>1</sup>, Simone Ciuti<sup>1</sup>

<sup>1</sup>*University College Dublin, Dublin, Ireland*

## Human, Environmental & Exercise Physiology

### PCB041

#### **Regular exercise ameliorates anxiety and memory dysfunction due to combined oral contraceptive treatment in female rats: role of allopregnanolone and the vagus nerve**

Tulin Altinoluk<sup>1</sup>, Zarife Nigar Ozdemir Kumral<sup>1</sup>, Ece Bakiryol<sup>1</sup>, Elif Pamukbasanoglu<sup>1</sup>, İpek Ayata<sup>1</sup>, Bersun Turan<sup>1</sup>, Damla Anil Celebi<sup>2</sup>, Dilek Akakin<sup>2</sup>, Berrak Yegen<sup>1</sup>, Alper Yildirim<sup>1</sup>

<sup>1</sup>Marmara University School of Medicine, Department of Physiology, Istanbul, Turkey, <sup>2</sup>Marmara University School of Medicine, Department of Histology and Embryology, Istanbul, Turkey

The combined oral contraceptives (COCs) are a mixture of synthetic oestrogen and

### PCB042

#### **The reproducibility of dendritic cell and T cell counts to a 30-minute high-intensity cycling protocol as a tool to highlight overtraining**

Carla Baker<sup>1</sup>, John Hough<sup>1</sup>, Jessica Piasecki<sup>1</sup>, John Hunt<sup>1</sup>

<sup>1</sup>Nottingham Trent University, Nottingham, United Kingdom

### PCB043

#### **The Role of Oestrogen in Female Skeletal Muscle Ageing: A Systematic Review**

Annabel Critchlow<sup>1</sup>, Danielle Hiam<sup>1</sup>, Ross Williams<sup>1</sup>, David Scott<sup>1</sup>, Séverine Lamon<sup>1</sup>

<sup>1</sup>School of Exercise and Nutrition Sciences, Institute for Physical Activity and Nutrition (IPAN), Deakin University, Geelong, Australia

Ageing is associated with a loss of skeletal muscle mass and function that negatively impacts

### PCB044

#### **Prevalence and translation of assessment and putative treatments for Long Covid-19 into clinical practice**

Avijit Datta<sup>1</sup>

<sup>1</sup>York and Scarborough Teaching Hospitals NHS Foundation Trust, York, United Kingdom

### PCB045

#### **Orai Ca<sup>2+</sup> channels but not Ano1 or L-type Ca<sup>2+</sup> channels contribute to adrenergic contractions of male mouse urethral smooth muscle**

Neha Gupta<sup>1</sup>, Caoimhin Griffin<sup>2</sup>, Mark Hollywood<sup>3</sup>, Keith Thornbury<sup>4</sup>, Gerard Sergeant<sup>5</sup>, Bernard Drumm<sup>6</sup>

<sup>1</sup>*Smooth Muscle Research Centre, Dundalk Institute of Technology, Dundalk, Co. Louth, Ireland,*

<sup>2</sup>*Smooth Muscle Research Centre, Dundalk Institute of Technology, Dundalk, Co. Louth, Ireland,*

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<sup>5</sup>*Smooth Muscle Research Centre, Dundalk Institute of Technology, Dundalk, Co. Louth, Ireland,*

<sup>6</sup>*Smooth Muscle Research Centre, Dundalk Institute of Technology, Dundalk, Co. Louth, Ireland*

#### **PCB046**

##### **The impact of indoor carbon dioxide on human cognition and the physiological response**

Stefan Flagner<sup>1,2,5</sup>, Steffen Kuenn<sup>2</sup>, Thomas Meissner<sup>3</sup>, Guy Plasqui<sup>1</sup>

<sup>1</sup>*Department of Nutrition and Movement Sciences, Faculty of Health Medicine and Life Sciences, Maastricht University, Maastricht, Netherlands,* <sup>2</sup>*Department for Macro, International & Labour Economics, School of Business and Economics, Maastricht University, Maastricht, Netherlands,*

<sup>3</sup>*Department of Microeconomics and Public Economics, School of Business and Economics, Maastricht University, Maastricht, Netherlands,* <sup>4</sup>*Department of Nutrition and Movement Sciences, Faculty of Health Medicine and Life Sciences,, Maastricht, Netherlands,* <sup>5</sup>*Department of Finance, School of Business and Economics, Maastricht, Netherlands*

#### **PCB047**

##### **The effects of $\beta$ -GPA on resistance training adaptations in rat skeletal muscle**

Naoki Fukao<sup>1</sup>, Junya Takegaki<sup>2</sup>, Ryo Takagi<sup>3</sup>, Koki Okumura<sup>4</sup>, Satoshi Fujita<sup>5</sup>

<sup>1</sup>*Graduate School of Sport and Science, Ritsumeikan University, Kusatsu, Japan,* <sup>2</sup>*Research Organization of Science and Technology, Ritsumeikan University, Kusatsu, Japan,* <sup>3</sup>*Research Organization of Science and Technology, Ritsumeikan University, Kusatsu, Japan,* <sup>4</sup>*Graduate School of Sport and Science, Ritsumeikan University, Kusatsu, Japan,* <sup>5</sup>*Faculty of Sport and Health Science, Ritsumeikan University, Kusatsu, Japan*

#### **PCB048**

##### **The effect of electrical pulse stimulation, an in vitro model of exercise, on metabolic characteristics of differentiated primary human muscle cells: comparison of two different protocols**

Klára Gabrišová<sup>1</sup>, Tímea Kurdiová<sup>1</sup>, Natália Pálešová<sup>2</sup>, Jozef Ukropec<sup>1</sup>, Barbara Ukropcová<sup>1,3</sup>

<sup>1</sup>*Institute of Experimental Endocrinology, Biomedical Research Center, Slovak Academy of Sciences, Bratislava, Slovakia,* <sup>2</sup>*Institute of Experimental Endocrinology, Biomedical Research Center, Slovak Academy of Sciences, Bratislava, Slovakia,* <sup>3</sup>*Department of Pathological Physiology, Faculty of Medicine, Comenius University, Bratislava, Slovakia*

#### **PCB049**

**Whole-body cardiopulmonary fitness and local skeletal muscle function in people living with Long COVID compared with healthy controls**

Alexandra Jamieson<sup>1</sup>, Ronan Astin<sup>2</sup>, Lamia Al Saikhan<sup>7</sup>, Robert Bell<sup>3</sup>, Mark Hamer<sup>4</sup>, Lee Hamill Howes<sup>1</sup>, Toby Hillman<sup>5</sup>, Michele Orini<sup>1</sup>, Helen Purcell<sup>5</sup>, Marie Scully<sup>6</sup>, Melissa Heightman<sup>5</sup>, Thomas Treibel<sup>1</sup>, Hugh Montgomery<sup>2</sup>, Nishi Chaturvedi<sup>1</sup>, Alun Hughes<sup>1</sup>, Siana Jones<sup>1</sup>

<sup>1</sup>MRC Unit for Lifelong Health and Ageing, UCL, London, United Kingdom, <sup>2</sup>Centre for Human Health and Ageing, UCL, London, United Kingdom, <sup>3</sup>Hatter Cardiovascular Institute, UCL, London, United Kingdom, <sup>4</sup>Division of Surgery and Interventional Science, UCL, London, United Kingdom, <sup>5</sup>Department of Respiratory Medicine, UCLH, London, United Kingdom, <sup>6</sup>Department of Haematology, London, United Kingdom, <sup>7</sup>Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

**PCB050**

**Sex differences in the effect of physical activity throughout adolescence on VO<sub>2</sub>max in early adulthood**

Siana Jones<sup>1</sup>, Michele Orini<sup>1</sup>, Chloe Park<sup>1</sup>, Nishi Chaturvedi<sup>1</sup>, Alun Hughes<sup>1</sup>

<sup>1</sup>MRC unit for Lifelong Health and Ageing, University College London, London, United Kingdom

**PCB051**

**Evaluation of the Vapor Phase Toxicity of the Thyme Essential Oil and Thymol in Fibroblasts and Lung Tumor Cells.**

Jacqueline Gonçalves Santos<sup>1</sup>, Marilene Biavatti<sup>2</sup>, Carla Cristine Kanunfre<sup>2</sup>

<sup>1</sup>Federal University of Paraná (UFPR), Curitiba/PR, Brazil, <sup>2</sup>State University of Ponta Grossa (UEPG), Ponta Grossa/PR, Brazil

**PCB052**

**The impact of a mixed exercise countermeasure on muscle proteomic dynamics and muscle atrophy in active healthy older adults undergoing a 14-day head-down tilt bedrest**

Jean-Christophe Lagacé<sup>1</sup>, Philippe St-Martin<sup>1</sup>, Mathil Ruel<sup>1</sup>, Jamie S. McPhee<sup>2</sup>, Karen Lambert<sup>3</sup>, Eléonor Riesco<sup>1</sup>, Isabelle J. Dionne<sup>1</sup>

<sup>1</sup>Faculty of Physical Activity Sciences & Research Centre on Aging, Université de Sherbrooke, Sherbrooke, Canada, <sup>2</sup>Department of Sport and Exercise Sciences & Institute of Sport, Manchester Metropolitan University, Manchester, United Kingdom, <sup>3</sup>PhyMedExp, Université de Montpellier, INSERM, CNRS, Montpellier, France

**PCB053**

**Influence of anxiety, breathing vigilance and respiratory muscle strength on respiratory load perception**

William Scott<sup>1</sup>, Christos Aristidou<sup>1</sup>, Michael I Polkey<sup>2</sup>, Timothy O Jenkins<sup>1,2</sup>, Vicky MacBean<sup>1</sup>

<sup>1</sup>Brunel University London, London, United Kingdom, <sup>2</sup>Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom

**PCB054**

**Lower Limbs Motor Index (LLIMI-DXA): a standardisation parameter of muscle mass in professional football players**

Antonio Molina López<sup>1</sup>, Heliodoro Moya Amaya<sup>1</sup>, Antonio Jesús Berral Aguilar<sup>1</sup>, Daniel Rojano Ortega<sup>1</sup>, Pedro Estevan Navarro<sup>1</sup>, José Naranjo Orellana<sup>1</sup>, Francisco José Berral de la Rosa<sup>1</sup>

<sup>1</sup>Universidad Pablo de Olavide, Sevilla, Spain

**PCB056**

**The protective mechanisms of Osteoprotegerin on C2C12 myogenic differentiation.**

Aaron Owens<sup>1,2</sup>, Livia Dos Santos<sup>1</sup>, Mathew Piasecki<sup>2</sup>, John Hunt<sup>1</sup>, Jessica Piasecki<sup>1</sup>

<sup>1</sup>Nottingham Trent University, Nottingham, United Kingdom, <sup>2</sup>University of Nottingham, Nottingham, United Kingdom

**PCB057**

**End Stage Liver Disease is Associated with Increased Quadriceps Intermuscular Adipose Tissue Compared to Age and Sex Matched Controls**

Jonathan Quinlan<sup>1,2</sup>, Colette Bell<sup>1</sup>, Armitpal Dhaliwal<sup>1,2</sup>, Felicity Williams<sup>1,2</sup>, Sophie Allen<sup>1,2</sup>, Surabhi Choudhary<sup>3</sup>, Alex Rowlands<sup>4,5</sup>, Leigh Breen<sup>1,2,6</sup>, Gareth Lavery<sup>7</sup>, Janet Lord<sup>1,2,6</sup>, Ahmed Elsharkawy<sup>3</sup>, Matthew Armstrong<sup>3</sup>, Carolyn Greig<sup>1,2,6</sup>

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**PCB059**

**Modelling skeletal muscle ageing and repair in vitro**

Janelle Tarum<sup>1</sup>, Hans Degens<sup>2</sup>, Mark Turner<sup>3</sup>, Claire Stewart<sup>4</sup>, Craig Sale<sup>5</sup>, Livia Santos<sup>1</sup>

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**PCB060**

**Spectral decomposition of different pulse wave signals – a pilot study**

Henrique Silva<sup>1,2,3</sup>, Carlota Rezendes<sup>4</sup>

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**PCB061**

**Suprasystolic limb occlusion and its impact on contralateral limb perfusion - an insight into flowmotion**

Henrique Silva<sup>1,2,3</sup>, Nicole Lavrador<sup>4</sup>

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**PCB062**

**Exploring the fractal behaviour of photoplethysmography perfusion signals**

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**PCB063**

**Lifelong exposure to high-altitude hypoxia in humans is associated with improved redox homeostasis and structural-functional adaptations of the neurovascular unit**

Benjamin Stacey<sup>1</sup>, Ryan Hoiland<sup>2,3</sup>, Hannah Caldwell<sup>4</sup>, Connor Howe<sup>4</sup>, Tyler Vermeulen<sup>4</sup>, Michael Tymko<sup>4,5,6</sup>, Gustavo Vizcardo-Galindo<sup>7</sup>, Daniella Bermudez<sup>7</sup>, Rómulo Figueroa-Mujíca<sup>7</sup>, Christopher

Gasho<sup>8</sup>, Edouard Tuailon<sup>9</sup>, Christophe Hirtz<sup>10</sup>, Sylvain Lehmann<sup>10</sup>, Nicola Marchi<sup>11</sup>, Hayato Tsukamoto<sup>12</sup>, Francisco Villafuerte<sup>7</sup>, Philip Ainslie<sup>4</sup>, Damian Bailey<sup>1</sup>

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**PCB064**

**The effect of hypoxia on physiological and behavioural outcomes during simulated driving in healthy subjects**

Jaspreet Kaur<sup>1</sup>, Michael Thynne<sup>2</sup>, Feisal Subhan<sup>1</sup>

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**PCB066**

**Identification of a miRNA Signature as a Diagnostic and Prognostic Marker in Clear Cell Renal Cell Carcinoma**

Muhammad Ammar Zahid<sup>1</sup>, Abdelali Agouni<sup>1</sup>

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**PCB067**

**Effect of obesity on cognitive functions in school children**

Nouralsalhin Alaagib<sup>1</sup>, Alshima Ahmed<sup>2</sup>

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<sup>2</sup>Lecturer, Faculty of Medicine, Omdurman Islamic University., Omdurman, Sudan

## Metabolic Physiology

PCB068

**Plasmodium berghei infection associated with adverse birth outcomes in pregnant Swiss albino mice**

David audu<sup>1</sup>, Olufunmilayo Ajoke Idowu<sup>1</sup>, Adewumi Babatunde Idowu<sup>1</sup>

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PCB069

**High-density lipoprotein protein composition differs between white Europeans and South Asians but is not related to its anti-inflammatory function**

Jack Beazer<sup>2</sup>, Stefan Ljunggren<sup>3</sup>, Helen Karlsson<sup>3</sup>, James McLaren<sup>1</sup>, Jason Gill<sup>1</sup>, Dilys Freeman<sup>1</sup>

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PCB070

**Activation of pancreatic stellate cells evokes signalling and metabolic changes promoting cellular resilience**

Agnieszka Kusiak<sup>1</sup>, Katarzyna Fryt<sup>1</sup>, Kinga Stopa<sup>2</sup>, Jacek Litewka<sup>1</sup>, Ole Petersen<sup>3</sup>, Monika Jakubowska<sup>2</sup>, Pawel Ferdek<sup>1</sup>

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PCB071

**Neurogenic activation of lipolysis in white adipose tissue ex vivo**

Kayleigh Goddard<sup>1</sup>, Samuel J. Fountain<sup>1</sup>

<sup>1</sup>*University of East Anglia, Norwich, United Kingdom*

PCB072

**Age-related differences in skeletal muscle fibre-specific mTOR-mediated signalling proteins via immunofluorescent microscopy**

Marie Korzepa<sup>1</sup>, Ryan Marshall<sup>2</sup>, Benoit Smeuninx<sup>3</sup>, Jonathan Quinlan<sup>1</sup>, Paul Morgan<sup>4</sup>, Leigh Breen<sup>1</sup>

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**PCB074**

**Higher stromal vascular fraction TGF $\beta$ 1 transcription and adipocyte overexpression of COL4A1 may explain reduced capacity for adipocyte expansion in pre-eclampsia**

Zoë J. Lees<sup>1</sup>, Róisín Ramsay<sup>1</sup>, Xiwen Chen<sup>1</sup>, Zuzanna Boguslawska<sup>1</sup>, Ian P. Salt<sup>2</sup>, Dilys J. Freeman<sup>1</sup>

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**PCB075**

**The effect of ex vivo human serum on insulin signalling mechanisms in C2C12 skeletal muscle cells: a randomised parallel trial of diets differing in carbohydrate and fat content.**

Deaglan McCullough<sup>2</sup>, Tanja Harrison<sup>4</sup>, Katie Lane<sup>3</sup>, Claire Stewart<sup>3</sup>, Ian Davies<sup>3</sup>

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**PCB076**

**Adipose depot dependency of chloride channels expression in murine white fat adipocytes**

Yan Meng<sup>1</sup>, Olena Fedorenko<sup>2</sup>, Nneoma Akaniro-Ejim<sup>3</sup>, Maria Toledo-Rodriguez<sup>1</sup>, Paul Smith<sup>1</sup>

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**PCB077**

**Effects of the administration of a combined oral contraceptive composed by ethinylestradiol and drospirenone on adiposity and liver histopathology in female mice in reproductive age**

Rosane Aparecida Ribeiro<sup>1</sup>, Janaina de Oliveira Chaves<sup>2</sup>, Gésily de Souza Aguiar<sup>2</sup>, Isabelle Vollero Manosso<sup>1</sup>, Helene Nara Henriques Blanc<sup>2</sup>

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**PCB078**

**Effects of a resistance training programme in people living with HIV in Zimbabwe**

Victor Mbayo<sup>1</sup>, Takshita Sookan Kassie<sup>2</sup>

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**PCB079**

**Altered cardiac mitochondrial respiratory complex activities in adult mice born to obese dams**

Benjamin Thackray<sup>1</sup>, Denise Fernandez-Twinn<sup>2</sup>, Kwun Kiu Wong<sup>2</sup>, Susan Ozanne<sup>2</sup>, Andrew Murray<sup>1</sup>

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## Neuroscience

### PCB080

#### **PUTATIVE GENETIC IMPACT ON DEPRESSION AND SUICIDAL IDEATION AMONGST A POPULATION OF YOUNG FEMALES WITH PREMENSTRUAL DYSPHORIC DISORDER**

FREDDY AGOREYO, Ese Onuyoh-Adaitire, Blessing Agoreyo, B Onuyoh-Adaitire

*undefined*

### PCB081

#### **Regulation of synaptic AMPA receptor function by TARP combinations**

Cecile Bats<sup>1</sup>, Thomas P. McGee<sup>2</sup>, Mark Farrant<sup>3</sup>, Stuart G. Cull-Candy<sup>4</sup>

<sup>1</sup>University College London, London, United Kingdom, <sup>2</sup>University College London, London, United Kingdom, <sup>3</sup>University College London, London, United Kingdom, <sup>4</sup>University College London, London, United Kingdom

### PCB082

#### **Cognition is selectively impaired in males with spinal pain: A retrospective analysis of data from the Longitudinal Study of Ageing Danish Twins**

David Byfield<sup>2</sup>, Benjamin Stacey<sup>1</sup>, Alister DuRose<sup>3</sup>, Damian Bailey<sup>1</sup>

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### PCB084

#### **Use of SH-SY5Y cell line to develop an in vitro model to study autism spectrum disorders**

Süeda Tunçak<sup>2,3</sup>, Vanessa Vulovic<sup>3</sup>, Nikhil Menezes<sup>3</sup>, Isadora Tassinari<sup>3,4</sup>, Amanda Thomaz<sup>3</sup>, Victorio Bambini-Junior<sup>3</sup>

<sup>1</sup>Bursa Uludag University, Bursa, Turkey, <sup>2</sup>Department of Physiology, Faculty of Medicine, Bursa Uludağ University, Bursa, Turkey, <sup>3</sup>Biomedical and Life Sciences, Faculty of Health and Medicine, Lancaster University, Lancaster, United Kingdom, <sup>4</sup>Graduation Program in Physiology, Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil

### PCB085

#### **Characterising Lipopolysaccharide induced Tumour Necrosis Factor Alpha release by BV-2 cells in Normoxia and Hypoxia (1% O<sub>2</sub>)**

John Bennett<sup>2</sup>, Stuart Jenkins<sup>3</sup>, Mark Dallas<sup>1</sup>, Ruoli Chen<sup>2</sup>

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**PCB086**

**The efficacy of induced pluripotent stem cells in animal models of stroke: a systematic review**

Isabel Birt<sup>1</sup>, Abigail Dos Santos<sup>1</sup>, Catriona Jane Cunningham<sup>1</sup>

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**PCB087**

**Blockade of hyperpolarization-activated channels with ivabradine attenuates mechanical, but not heat, hypersensitivity in two rat models of diabetic neuropathy**

Laiche Djouhri<sup>1</sup>

<sup>1</sup>*Qatar University, Doha, Qatar*

**PCB088**

**Minor effects of 12 week high-fat diet and/or prebiotic Xylo-oligosaccharides on cognition and brain metabolites in rats.**

Sanna Lensu<sup>1,2</sup>, Jukka Hintikka<sup>2</sup>, Elina Mäkinen<sup>2</sup>, Marko Lehtonen<sup>3</sup>, Satu Pekkala<sup>2</sup>

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**PCB089**

**Effect of GSG1L on the modulation of calcium-permeable AMPA receptor single-channel conductance by intracellular spermine**

Thomas McGee<sup>1</sup>, Cecile Bats<sup>1</sup>, Mark Farrant<sup>1</sup>, Stuart Cull-Candy<sup>1</sup>

<sup>1</sup>*University College London, London, United Kingdom*

Calcium-permeable AMPA-type glutamate receptors (CP-AMPA) play essential roles in

**PCB090**

**The role of BK in glioblastoma multiforme membrane potential**

Mathuscha Ratnasingham<sup>1</sup>, Michaela Griffin<sup>2</sup>, Stuart Smith<sup>2,3</sup>, Jonathan Rowlinson<sup>2</sup>, Paul Smith<sup>4</sup>

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*Kingdom, <sup>3</sup>Department of Neurosurgery, Queens Medical Centre, Nottingham, United Kingdom,*

*<sup>4</sup>School of Life Science, University of Nottingham, Nottingham, United Kingdom*

**PCB091**

**Intra-Arterial Injection of Bradykinin In Femoral Artery Elicits Cardiorespiratory Reflexes Involving Perivascular Afferents In Rat Models**

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