

Thursday

Session 1		Welcome and Lightning Talks	
9.00 - 10.45	Physiology Lecture Theatre		Session Chair: Maximilian Jakobs
9.00 - 9.10	Maximilian Jakobs	Welcome from the PDN Symposium organising committee	
9.10 - 9.15	Bill Colledge	The importance of kissing in fertility	
9.15 - 9.20	Rob White	Packaging the fly genome	
9.20 - 9.25	Kristian Franze	The mechanical regulation of CNS development and regeneration	
9.25 - 9.30	Kevin O'Holleran	Research projects in the Cambridge Advanced Imaging Centre	
9.30 - 9.35	Cristina Branco	Endothelial cell physiology, oxygen-sensitive metabolism and intercellular communication	
9.35 - 9.40	Randall Johnson	Oxygen and Hypoxia	
9.40 - 9.45	Simon Tunster	Isolating the mechanism of Phlda2-driven fetal growth restriction in the mouse	
9.45 - 9.50	Guy Blanchard	Tracking cell divisions to probe epithelial mechanics	
9.50 - 10.10	GE Healthcare	Edit-R - An introduction to our novel, algorithmically designed, synthetic RNA CRISPR-CAS9 system for Cell line generation and screening	
10.10 - 10.15	Michelle Ware	Loss of Proenkephalin-positive neurons in several areas of the brain of a mouse model of Huntington's disease	
10.15 - 10.20	Emily Camm	Cerebral development and mitochondrial function: role of thyroid hormones	
10.20 - 10.25	Hannah Yong	Impact of altered placental endocrine function on fetal growth and postnatal metabolic outcomes	
10.25 - 10.30	Tina Napso	The Remote Control of Maternal Metabolism by the Placenta	
10.30 - 10.35	Agnieszka Jedrusik	How do cells establish their identity in early mouse development?	
10.35 - 10.40	Neophytos Christodoulou	Tissue remodeling during early post-implantation development	

10.40 - 11.15

TEA & COFFEE BREAK (Experimental Physiology Classroom)

Session 2		Stem Cells, Neural Development and Autophagy		
11.15 - 13.00	Hodgkin-Huxley Seminar Room			Session Chair: Afnan Azizi
11.15 - 11.30	Benjamin Badger	1st Year PhD	Andrea Brand	Mitochondria and Stem Cell Reactivation
11.30 - 11.55	Anna Hakes	3rd Year PhD	Andrea Brand	The role of Tailless in brain development and tumourigenesis
11.55 - 12.20	Megan Eldred	3rd Year PhD	Bill Harris	Self-organising aggregates of zebrafish retinal cells for investigating mechanisms of neural lamination
12.20 - 12.45	Ruth Sims	3rd Year PhD	Kevin O'Holleran	Capturing light fields in a light sheet microscope
12.45 - 13.00	Lars Schlotawa	Postdoc	Angie Fleming	An inducible system for up- and down-regulation of autophagy in zebrafish

Session 2		Epigenetics, Embryo Development and HIF signalling		
11.15 - 13.05	Bryan Matthews Seminar Room			Session Chair: Jorge Lopez-Tello
11.15 - 11.30	Tess Garrud	1st Year PhD	Dino Giussani	Antenatal Glucocorticoids - Studies in the Chick Embryo
11.30 - 11.45	Joanna Rakoczy	Postdoc	Erica Watson	Abnormal folate metabolism in mice leads to defects in trophoblast differentiation over multiple generations
11.45 - 12.10	Maria Schacker	3rd Year PhD	Bill Colledge	Defining the genomic and epigenetic signature of mouse embryonic stem cells with compromised in vivo potential
12.10 - 12.35	Katie Davies	3rd Year PhD	Abby Fowden	Endocrine regulation of fetal skeletal muscle development during late gestation
12.35 - 12.50	Moritz Reiterer	1st Year PhD	Cristina Branco	Elucidating the HIF-VEGF-NO signaling network in endothelial cells
12.50 - 13.05	David Macias	Postdoc	Randall Johnson	HIF2-a is essential for carotid body development and impacts on key physiological adaptive responses

13.00 - 14.00

LUNCH & SPONSOR EXHIBITIONS (Experimental Physiology Classroom)

Session 3		Stem Cells and Tissue Morphogenesis		
14.00 - 15.35	Hodgkin-Huxley Seminar Room			Session Chair: Thorsten Boroviak
14.00 - 14.25	Mo Zhao	3rd Year PhD	Andrea Brand	Identifying genes required for Drosophila neuroblast quiescence and reactivation
14.25 - 14.40	Benjamin Klapholz	Postdoc	Nick Brown	Talin: the ultimate adapter protein to mediate integrin adhesion
14.40 - 15.05	Tara Finegan	3rd Year PhD	Benedicte Sanson	The role of the vertex - specific protein Sidekick in epithelial tissue morphogenesis in Drosophila
15.05 - 15.20	Andrea Dimitracopoulos	Postdoc	Kristian Franze	Optogenetic activation of mechanical forces to control neuronal polarisation
15.20 - 15.35	Hadi Boukhatmi	Postdoc	Sarah Bray	Molecular logic behind Satellite cells specification in Drosophila.

Session 3		Neurophysiology and Behavioural Neuroscience		
14.00 - 15.35	Bryan Matthews Seminar Room			Session Chair: Shel Yeo
14.00 - 14.15	Stephen Manchishi	1st Year PhD	Bill Colledge	Molecular characterization of <i>Kiss1</i> neuron receptors and their role on the reproductive axis
14.15 - 14.30	Jerry X. Zhao	1st Year PhD	Sue Jones	Calpain inhibition reduces NMDA receptors inactivation in substantia nigra neurons
14.30 - 14.45	Danyal Akarca	MPhil	Duncan Astle	Defining the neurophysiological signature for language impairment in individuals with ZDHC9 mutations.
14.45 - 15.10	Sufia Rahman	3rd Year PhD	Angela Roberts	Differential contributions of sub-regions of the dorsal anterior cingulate cortex (dACC) to negative emotion in the common marmoset
15.10 - 15.35	Alaa al-Mohammad	3rd Year PhD	Wolfram Schulz	Let the monkey do your bidding

15.35 - 16.00

TEA & COFFEE BREAK (Experimental Physiology Classroom)

Session 4		2B Scientific Talk - Plenary lecture		
16.00 - 17.00	Physiology Lecture Theatre			Session Chair: Afnan Azizi
	Dr Lukas Kaptein			Traffic control: sorting out polarized transport in neurons

from 17.00

CHAMPAGNE AND WINE RECEPTION (Experimental Physiology Classroom)

Friday

Session 5		Cell Biology		
9.00 - 10.35	Hodgkin-Huxley Seminar Room			Session Chair: Michael Elliot
9.00 - 9.15	Maximilian Jakobs	1st Year PhD	Kristian Franze	Non-symmetric microtubule stabilization and transport control microtubule orientation in neuronal axons
9.15 - 9.40	Benita Turner-Bridger	3rd Year PhD	Christine Holt	Targeted mRNA Trafficking in Growing Axons
9.40 - 9.55	Eva Pillai	2nd Year PhD	Kristian Franze	Mechanical control of chemical signalling in the developing brain
9.55 - 10.20	Roberta Cagnetta	3rd Year PhD	Christine Holt	Ultrasensitive pSILAC-SP3 reveals rapid cue-specific remodeling of the nascent axonal proteome
10.20 - 10.35	Elena Scarpa	Postdoc	Benedicte Sanson	Investigating how subcellular versus tissue-scale anisotropies in tissue tension control the orientation of cell division

Session 5		Placenta Development and Immunology		
9.00 - 10.35	Bryan Matthews Seminar Room			Session Chair: Tereza Cindrova-Davies
9.00 - 9.15	Beth Aykroyd	MPhil	Amanda Sferruzzi-Perri	Placental endocrine function and materno-fetal resource allocation during pregnancy
9.15 - 9.30	Nadeja Capatina	1st Year PhD	Graham Burton	Effect of Endoplasmic Reticulum Stress on Trophoblast Cell Lineage Differentiation
9.30 - 9.55	Romina Plitman	3rd Year PhD	Graham Burton, Michelle Oyen	Oxygen Transport in the Human Placenta: A Multi-physics Modelling Approach
9.55 - 10.20	Elisa Balmas	3rd Year PhD	Francesco Colucci	Group 2 innate lymphoid cells modulate the uterine immunological microenvironment in normal and complicated murine pregnancies
10.20 - 10.35	Alexis Crockett	MPhil	Milka Sarris	Implementation of Inducible and Tissue-Specific CRISPR/Cas9 Knockout

10.35 - 11.00 TEA & COFFEE BREAK (Experimental Physiology Classroom)

Session 6		Behavioural Neuroscience and Visual Processing		
11.00 - 12.30	Hodgkin-Huxley Seminar Room			Session Chair: Andrea Dimitracopoulos
11.00 - 11.15	Xizi Li	MPhil	Ole Paulsen, Guillaume Hennequin, Zuzanna Brzosko	Can Neuro-modulated Synaptic Plasticity Explain Reward-based Learning of Goal-directed Behaviour?
11.15 - 11.30	Andrew S. Champion	1st Year PhD	Albert Cardona	Accelerating neural circuit reconstruction to augment wiring diagrams with activity imaging
11.30 - 11.45	Sabrina Asteriti	Postdoc	Roger Hardie	Calcium signalling in Drosophila photoreceptors
11.45 - 12.00	Rachael Feord	1st Year PhD	Trevor Wardill	Spectral processing in early visual pathways of Drosophila
12.00 - 12.15	Jack Supple	1st Year PhD	Paloma Gonzales-Bellido	Descending Sensorimotor Control in Predatory Flying Insects
12.15 - 12.30	Kate Feller	Postdoc	Paloma Gonzales-Bellido	Pulling the trigger: neural control of mantis shrimp weapon deployment

Session 6		Cardiovascular Physiology		
11.00 - 12.30	Bryan Matthews Seminar Room			Session Chair: Emily Camm
11.00 - 11.25	Harvey Roweth	3rd Year PhD	Gavin Jarvis	Mechanisms of Platelet Inhibition by the Selective Serotonin Reuptake Inhibitor Citalopram
11.25 - 11.50	Haseeb Valli	3rd Year PhD	Christopher Huang	The mechanisms of atrial arrhythmogenesis associated with mitochondrial dysfunction
11.50 - 12.15	Shiraz Ahmad	3rd Year PhD	Christopher Huang	Ventricular arrhythmogenesis is associated with deletion of the metabolic transcriptional co-activator PGC-1 β
12.15 - 12.30	Kim Botting	Postdoc	Dino Giussani	The mitochondria-targeted antioxidant MitoQ prevents the programming of cardiovascular dysfunction by developmental hypoxia in sheep

12.30 - 13.30 LUNCH & SPONSOR EXHIBITIONS (Experimental Physiology Classroom)

Session 7		Early Embryonic Development		
13.30 - 14.50	Hodgkin-Huxley Seminar Room			Session Chair: Marta Shahbazi
13.30 - 13.55	Sarah Harrison	3rd Year PhD	Magda Zernicka-Goetz	Assembly of embryonic and extra-embryonic stem cells to mimic embryogenesis <i>in vitro</i>
13.55 - 14.20	Meng Zhu	3rd Year PhD	Magda Zernicka-Goetz	How does the mouse embryo establish the first cell polarity: actomyosin asymmetry and beyond
14.20 - 14.35	Ayaka Yanagida	Postdoc	Jenny Nichols	Cell specification in pre-implantation embryo
14.35 - 14.50	Thorsten Boroviak	Postdoc	Jenny Nichols	The blueprint of primate preimplantation development

Session 7		Neuropathology		
13.30 - 14.55	Bryan Matthews Seminar Room			Session Chair: Andrea Santangelo
13.30 - 13.45	Alice White	MPhil	Caroline Williams-Gray	Immune Markers in Parkinson's Disease
13.45 - 14.00	Hee-Yeon Jeon	Postdoc	Angie Fleming	Identifying new tau modifiers using a zebrafish model system
14.00 - 14.15	Prez Jarzebowski	MPhil	Ole Paulsen, Stephen Eglén	Network Development and its Dysfunction in Genetic Models of Autism
14.15 - 14.30	Pauline Janssen	MPhil	Sue Jones	Study of xCT expression and localisation in the healthy and injured rat spinal cord
14.30 - 14.55	Paul Morris	3rd Year PhD	Sue Jones	Activity-dependent downregulation of NMDA glutamate receptors in mouse substantia nigra pars compacta dopaminergic neurons

14.50 - 15.20 TEA & COFFEE BREAK (Experimental Physiology Classroom)

Session 8		Notch Signalling, Placode Development and Hox Transcription Factors		
15.20 - 16.45	Hodgkin-Huxley Seminar Room			Session Chair: Guy Blanchard
15.20 - 15.35	Julia Falo San Juan	1st Year PhD	Sarah Bray	Measuring transcription live in Drosophila embryos
15.35 - 15.50	Maria Gomez Lamarca	Postdoc	Sarah Bray	Live <i>in vivo</i> imaging of CSL DNA-binding dynamics reveals consequences of Notch activation
15.50 - 16.05	Pepe Urbano	Postdoc	Nick Brown	FlyBase Gene Snapshots: e-mailing computationally predicted experts to produce short gene summaries
16.05 - 16.30	Surangi Perera	3rd Year PhD	Clare Baker	The development of olfactory ensheathing cells from the neural crest
16.30 - 16.45	Damiano Porcelli	Postdoc	Rob White	More on the roles of cofactors and chromatin accessibility in Hox protein target specificity

Session 8		Behavioural Neuroscience		
15.20 - 16.45	Bryan Matthews Seminar Room			Session Chair: Fabian Grabenhorst
15.20 - 15.35	Alexandre Pastor-Bernier	Postdoc	Wolfram Schulz	Monkeys choose <i>as if</i> maximizing utility compatible with basic principles of revealed preference theory
15.35 - 15.50	Philippe Bujold	1st Year PhD	Wolfram Schulz	Framing and Adaptation of Probability Distortion in Non-Human Primates
15.50 - 16.15	Jack Curtis	3rd Year PhD	Steve Edgley	Classical conditioning of the eyeblink response: evidence for more complex forms of learning
16.15 - 16.30	Vaka Valsdottir	MPhil	Victoria Leong	Here's looking at you! Do babies learn language from a speaker who avoids eye contact?
16.30 - 16.45	Zuzanna Stawicka	1st Year PhD	Angela Roberts	Examining the role of the orbitofrontal cortex in regulating cognitive and memory biases in the context of anxiety

17.00 - 19.00 DRINKS RECEPTION AND PRIZES (Experimental Physiology Classroom)

19.00 - 22.30 GE HEALTHCARE SYMPOSIUM DINNER AT NEWNHAM COLLEGE

