

Evolution and functional biology of neuropeptide signalling: from genomes to behaviour

Monday 13 – Tuesday 14 March 2017

Theo Murphy International meeting organised by Professor Maurice Elphick, Dr Gáspár Jékely and Professor Lindy Holden-Dye

DAY 1			
SESSION 1: Evolution of neuropeptide signalling in metazoans Chair: Gáspár Jékely		SESSION 2: Neuropeptides as modulators of neural circuits in 'simple' systems Chair: Lindy Holden-Dye	
09.00	Welcome by Royal Society and Maurice Elphick		
09.05	Olivier Mirabeau Long-range co-evolution of neuropeptides and their receptors in animals	13.30	Eve Marder Robustness and degeneracy in peptide modulation of a central pattern generating circuit
09.30	Discussion	13.55	Discussion
09.40	Dirk Fasshauer Evolution of the neuronal secretion apparatus	14.05	Joris Koene Hermaphroditic reproduction and its neuroendocrine modulation
10.05	Discussion	14.30	Discussion
10.15	Cornelius Grimmelikhuijzen Evolution of the AKH/corazonin/GnRH receptor superfamily in protostomes	14.40	Tea
10.40	Discussion	15.10	Isabel Beets Neuropeptide signalling networks and circuit modulation in <i>C. elegans</i>
10.50	Coffee	15.35	Discussion
11.20	Maurice Elphick The evolution and comparative physiology of neuropeptide signalling: echinoderms as model systems	15.45	Gáspár Jékely Combining the connectomics and neuromodulation perspectives in the study of <i>Platynereis</i> larvae
11.45	Discussion	16.10	Discussion
11.55	Dan Larhammar Neuropeptides and receptors at the dawn of vertebrates: comparisons of cyclostomes and gnathostomes	16.20	Summary and general discussion of day 1 Chairs: Gáspár Jékely and Lindy Holden-Dye
12.20	Discussion	17.00	Poster session
12.30	LUNCH	18.00	CLOSE

DAY 2			
SESSION 3: Neuropeptide function in whole-animal physiology and behaviour Chair: Liliane Schoofs		SESSION 4: New perspectives, techniques and applications in neuropeptide research Chair: Maurice Elphick	
09.00	Simon Webster Can we unify the endocrinology of ecdysis in arthropods?	13.30	Lingjun Li Deciphering neuropeptide signalling via mass spectrometry-based peptidomic approaches: from discovery to function
09.25	Discussion	13.55	Discussion
09.35	David Prober Neuropeptidergic regulation of zebrafish sleep	14.05	Bernardo Sabatini Regulation of synaptic transmission by peptides in cortex and striatum
10.00	Discussion	14.30	Discussion
10.10	Shireen Davies Neuroendocrine control of environmental stress responses	14.40	Tea
10.35	Discussion	15.00	Sébastien Granier Structural biology of opioid receptors
10.45	Coffee	15.25	Discussion
11.15	Mario De Bono Interleukin 17 as a modulator of neural circuit output and behaviour	15.35	Stefan Gründer Alternative receptors for neuropeptides - ion channels!
11.40	Discussion	16.00	Discussion
11.50	Ilona Grunwald Kadow Neuropeptidergic modulation of chemosensory processing and decision making in Drosophila	16.10	Angela Mousley The development of Functional Genomics Platforms for nematode pathogens: informing the biology of neuropeptides and their receptors
12.15	Discussion	16.35	Discussion
12.30	LUNCH	16.45	Summary and general discussion of day 2 Chair: Maurice Elphick
		17.30	CLOSE