日時：2026年3月19日（木）
　　　17：00〜18：30
場所：共同会議室（研究棟B・2階）

https://us02web.zoom.us/j/82829777148?pwd=kwe8ZqzOKlpYr9I0AWPyNMsyUPSFBO.1
ミーティング ID: 828 2977 7148　パスコード: 979577

Using pluripotent stem cells to model human enteric nervous system development and for cell therapy.
Dr Lincon Stamp

Department of Anatomy and Physiology, University of Melbourne

The current President of the Australasian Society for Stem Cell Research (ASSCR). A/Prof Stamp's PhD research with Prof Martin Pera at Monash University focused on the derivation of hepatopancreatic progenitors from human embryonic stem cells.

Understanding the development, function, and communication of the enteric nervous system (ENS) in humans is essential for developing new therapies for enteric neuropathies. In vitro modelling of this complex neural network using human pluripotent stem cells (hPSCs) has enabled the study of enteric neuronal and glial development and function. Using functional calcium imaging, we characterised the maturation of hPSC-derived enteric neurons and glia. Network analysis demonstrated critical roles for specific neurons in network communication and dispersed organisation of strongly connected modules. Furthermore, we aimed to assess the efficacy of stem cell therapy to regenerate the ENS in a novel rat model of Hirschsprung disease. Enteric neural precursors derived from hPSCs were transplanted, with or without functionalised biomimetic hydrogels, into the distal colon of Ednrb-/- rats. Human enteric neural precursors survived and gave rise to mature neurons of various neurochemical phenotypes, with axon-like projections, providing a potential treatment for Hirschsprung disease.

【コーディネーター】神経分化・再生分野　教授　榎本秀樹
【主　　催】メディカルトランスフォーメーション研究センター（CMX）
【連絡先】研究支援課研究企画係　天羽（内5189）　E mail:k9shien@med.kobe u.ac.jp
どなたでも多くの方々のご聴講を歓迎いたします