

IMEG Seminar Series

Onsite!!
& Zoom

The road to global science



Dr. Austin Smith

Director, Living Systems Institute, University of Exeter, UK

November 24th, 2023, 15:30-16:30

Naïve Pluripotent Stem Cells

This seminar series is open to all students and researchers in Kumamoto University.

The Zoom ID and passcode were sent via email. Check your inbox!

Mouse naïve embryonic stem (ES) cells were derived over 40 years ago. They show close correspondence, phenotypically and functionally, with emergent epiblast in the mammalian pre-implantation embryo. Human naïve pluripotent stem cells (PSCs) proved more elusive but can now be derived from embryos or readily generated by reprogramming. Human naïve PSCs share key transcription factors and chromatin features with mouse ES cells yet have distinct self-renewal requirements. These differences relate to the unique potency of human naïve PSCs to differentiate into trophoblast. This reverse differentiation potency can be harnessed to produce structures comprising trophoblast, hypoblast and epiblast that closely resemble the human blastocyst.