

ASHBi SEMINAR

Differentiation of human amniotic and surface ectoderms

Lecturer: **Shota Nakanoh, Ph.D.**
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Date **Monday, 18 December 2023**

Time **16:30 – 17:30 [JST]**

Venue **Conference Room Onsite Only***
B1F, Faculty of Medicine Bldg. B



*Register via the right QR code

Abstract

Mechanisms specifying amniotic ectoderm and surface ectoderm are still unresolved in human due to their close similarities in expression patterns and signal requirements. Here, we developed an in vitro model to investigate the divergence between amniotic and surface ectoderms using human pluripotent stem cells. In this system, human pluripotent stem cells chose amnioblastic and surface ectodermal fates in a cell density-dependent manner. Single-cell RNA sequencing analyses detected an intermediate cell state with a surface ectoderm gene profile during amnioblast differentiation. Collectively, these results indicate that extraembryonic amniotic ectoderm and embryonic surface ectoderm separate along a common non-neural ectoderm trajectory based on cell density.

Organizer : Graduate School of Medicine
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