



June 28, 2022

Neuro2022 Supplemental Info

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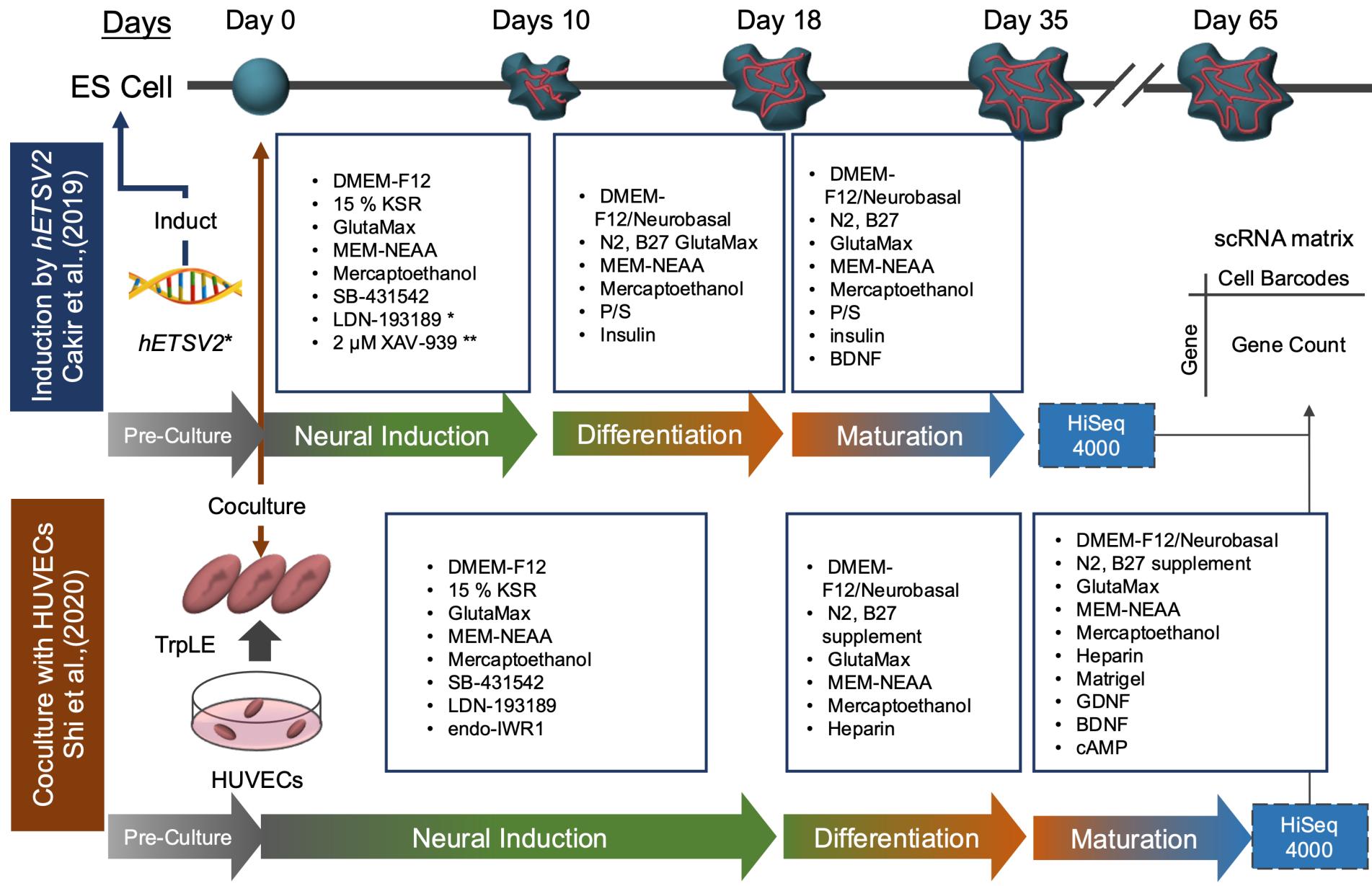
Yuya Sato¹, Toru Asahi^{1,2}, Kosuke Kataoka²

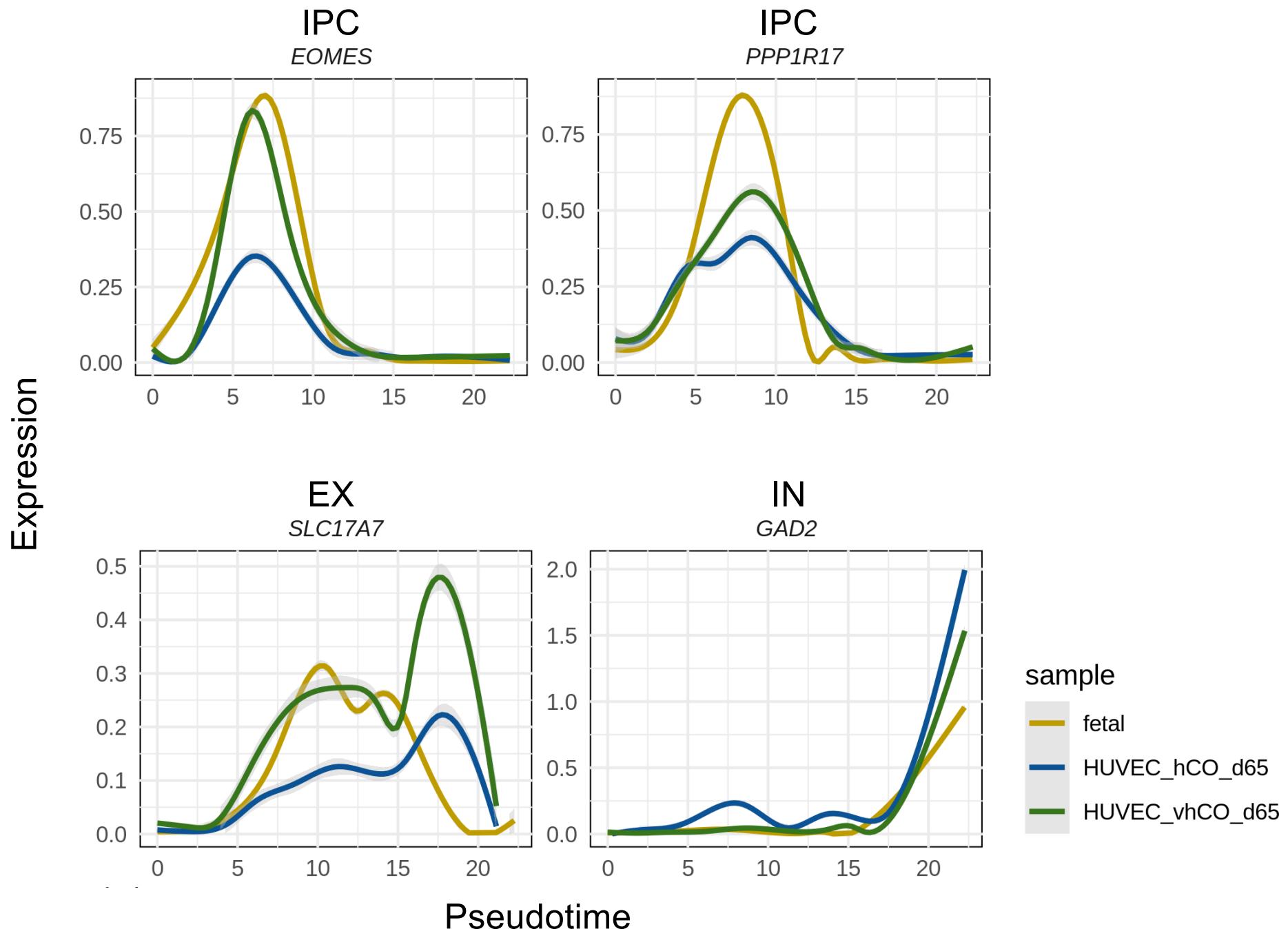
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Applied Biology, Developmental & Genomic Science

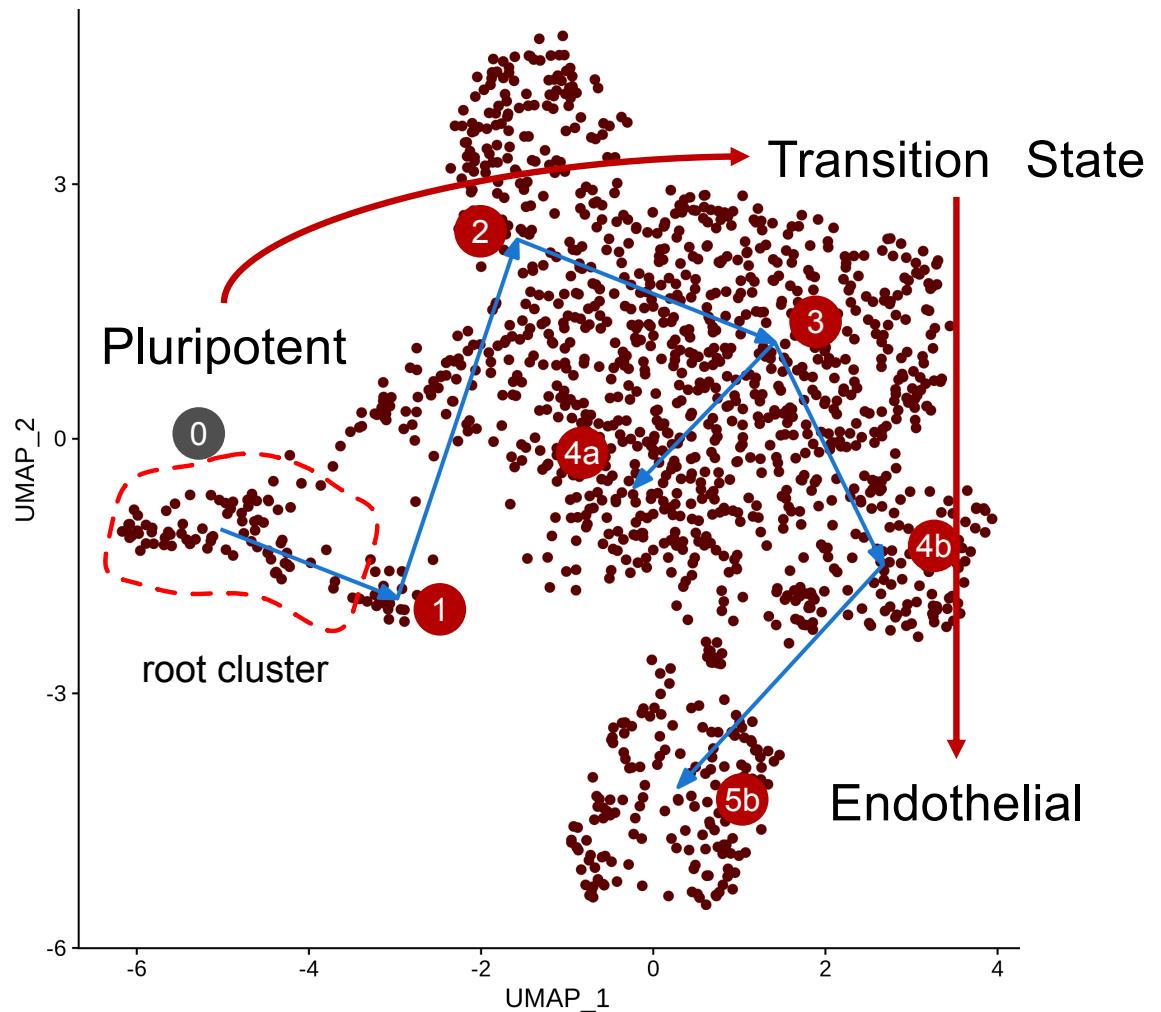
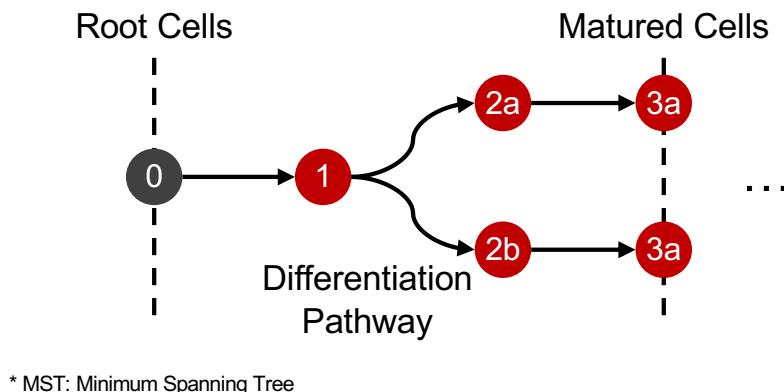
Protocol	Cakir et al., (2019)	Shi et al., (2020)
Treatment	induction by hETSV2	coculturing with HUVEC
Accession Number	PRJNA553561	PRJNA542649
Total Maturation Day	18 days	35 days
Equipment	HiSeq4000	HiSeq4000
Target Cell Type	ES cell	ES cell
Samples	hCO / vhCO	hCO / vhCO
Organism	Homo sapiens	Homo sapiens





Trajectory Analysis

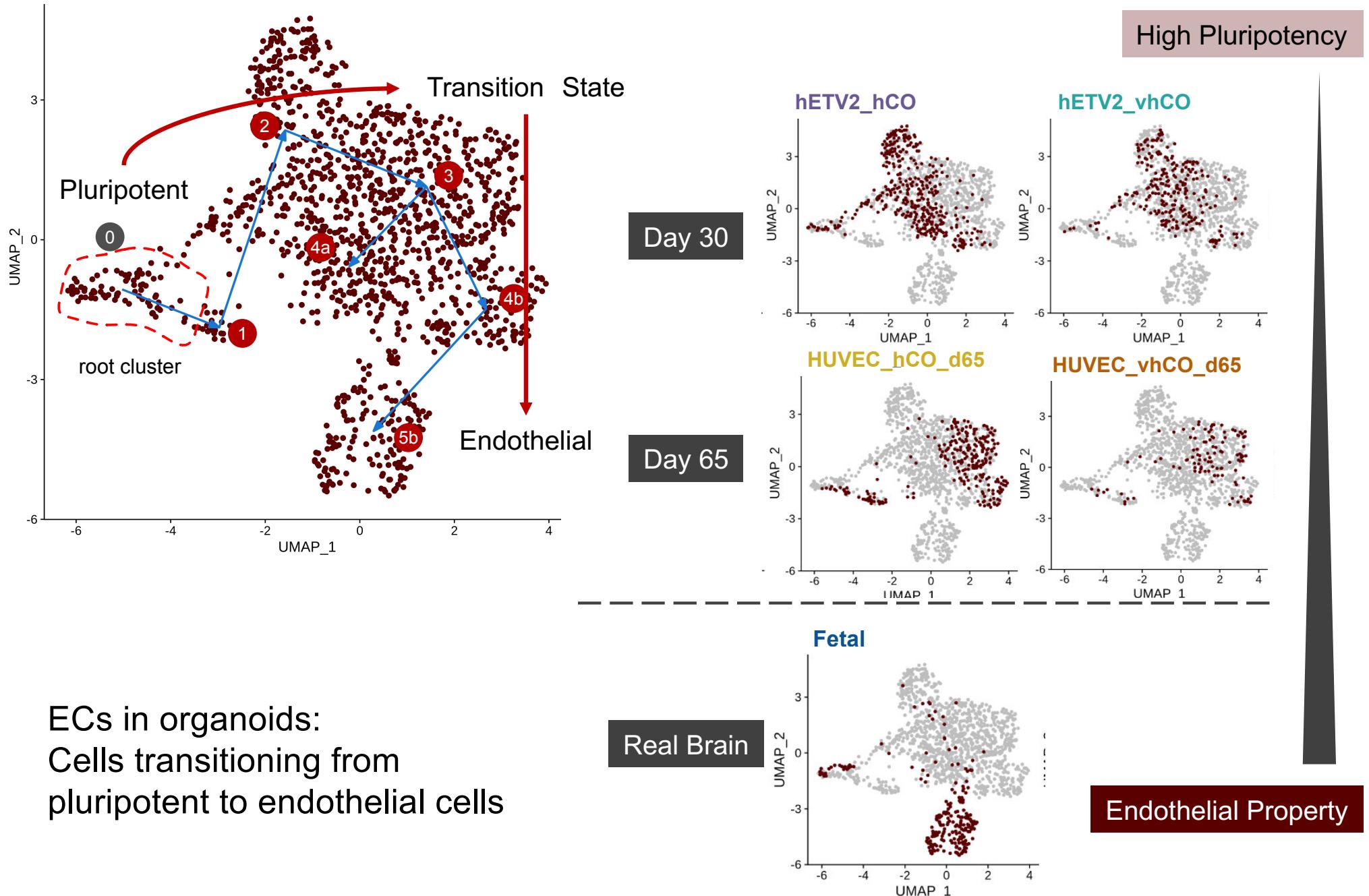
Predict cell differentiation order
with MST* algorithm



Identified differentiation order with Trajectory Analysis (Slingshot)

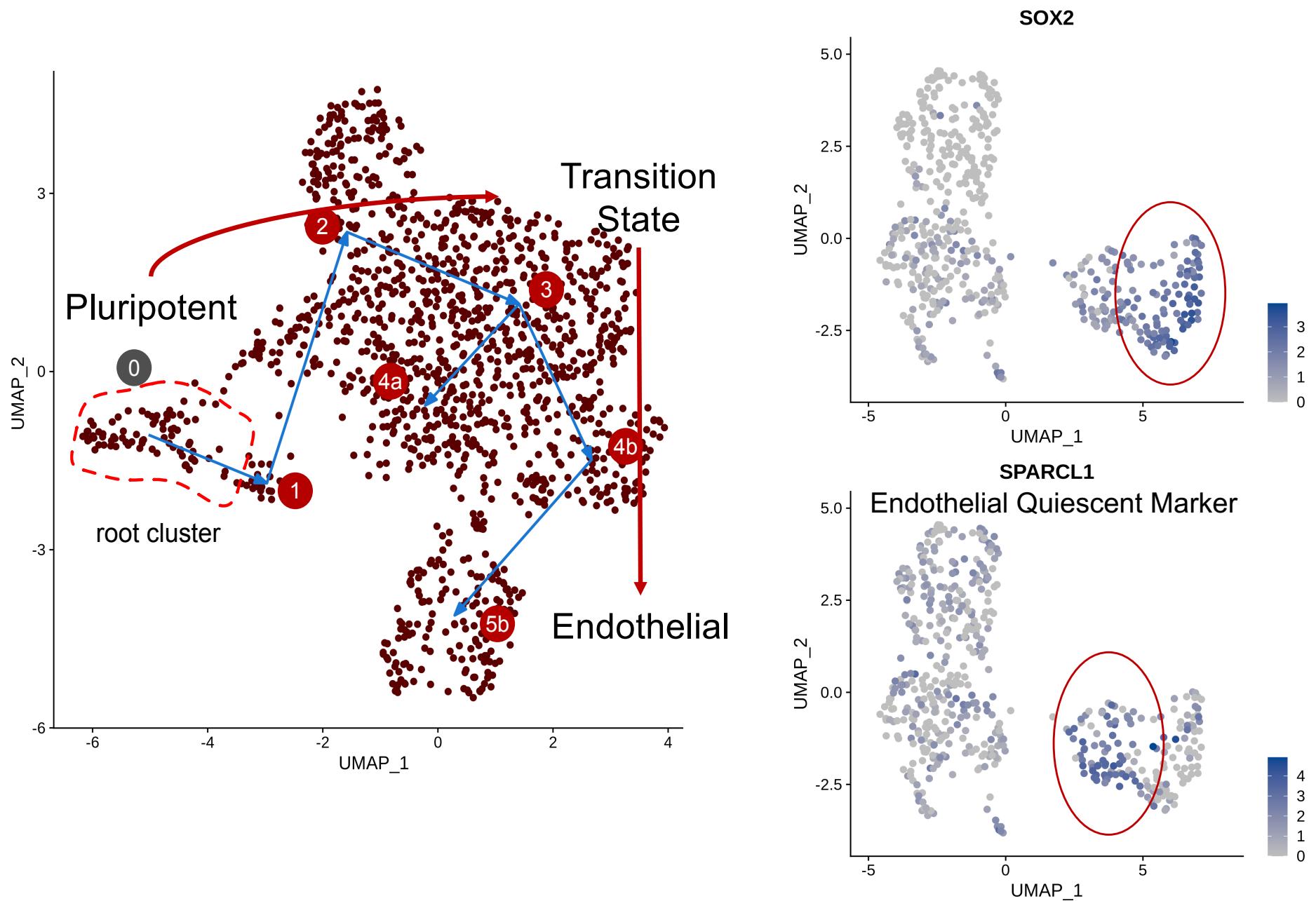
Organoid ECs are potentially progenitor cells

6



Endothelial Quiescent

7



Organoid ECs are potentially progenitor cells

8

Pluripotency

Endothelial

Pluripotent Marker

Mesoderm marker

Endothelial marker

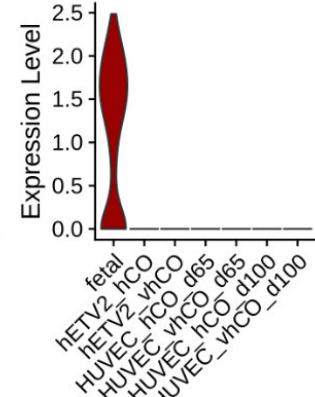
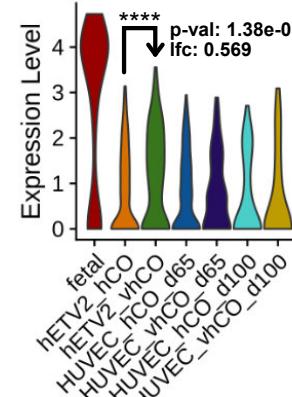
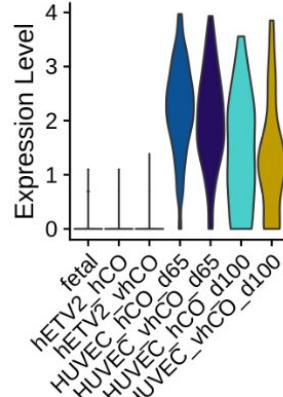
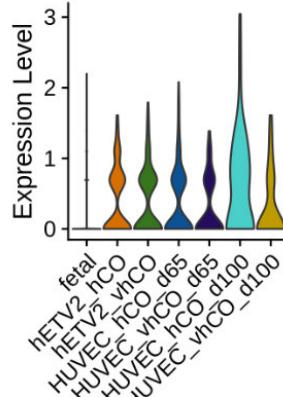
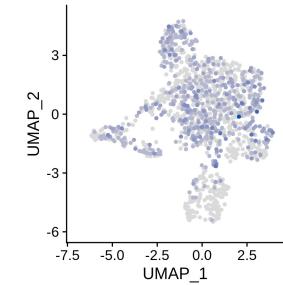
NR2F1

SOX2

MEST

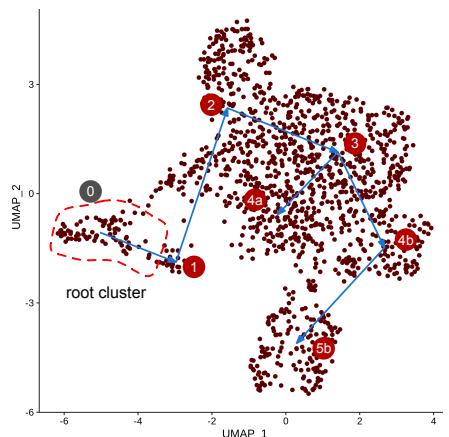
CLDN5

PECAM1



Samples

Conclusion



ECs in organoids are potentially progenitor cells of Endothelial cells

Cell Decision Tree

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