

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Combined hESC DE PGC Legendscreen Analysis

File Name: Supplementary Data 2

Description: Gene Modules Changing by pseudotime trajectory to PGC vs non PGC

File Name: Supplementary Data 3

Description: Expression of FGCs Soma PGCLCs

File Name: Supplementary Data 4

Description: Genes differentially expressed between d4 PGCLCs in cluster 1

File Name: Supplementary Data 5

Description: DEG Bulk RNASeq

File Name: Supplementary Data 6

Description: Reagents and Primers

File Name: Supplementary Movie 1

Description: Time Lapse of PGCLCs differentiation and NANOG-YFP expression in incipiently forming PGCLCs