${ m S4}$ Table. Cluster Annotations Deng et al blastocyst level single cell data using 46 genes with top driving gene summaries.

Cluster	Top 5 Driving	Top significant GO terms (function)[q-value]
	Genes	
Green	Nanog, Pdgfa,	GO:0048568 (embryonic organ development)[9e-08], GO:0048468 (cell
	Eomes, Fgfr2,	development)[4e-07], GO:0001890 (placenta development)[1e-06], GO:0051094 (posi-
	Grhl2	tive regulation of developmental process)[1e-06], GO:0030097 (hemopoiesis)[1e-05]
Purple	Creb3l2, Klf4,	GO:0048864 (stem cell development)[4e-12], GO:0048863 (stem cell
	Fn1, Bmp4,	differentiation)[2e-11], GO:0009893 (positive regulation of metabolic process)[7e-10],
	Lcp1	GO:0009653 (anatomical structure morphogenesis)[4e-08]
Orange	Tcfap2a, Klf5,	GO:0061061 (muscle structure development)[2e-13], GO:0060537 (muscle tissue
	Dppa1, Dab2,	development)[2e-12], GO:0048514 (blood vessel morphogenesis)[8e-12], GO:0007275
	Gata4	(multocellular orgasnimal development)