The Early Hematopoietic Process
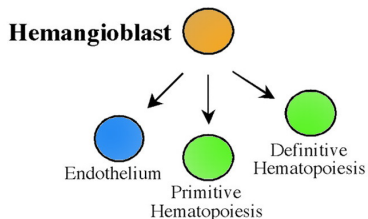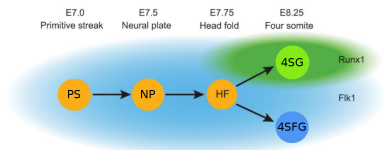

Hemangioblast → Endothelium, Primitive Hematopoiesis, Definitive Hematopoiesis

Pluripotent cells differentiate into :

- Endothelial Cells
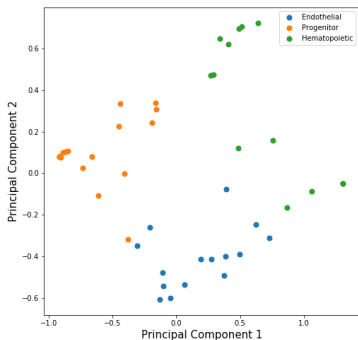- Hematopoietic Cells

The Experiment

The data acquired :

- 3934 single cells
- 46 genes
- Binarized expression

Cell type	Number of embryos	Cells sorted	Cells retained	Percentage retained
PS	12	725	624	86.1
NP	9	637	552	86.7
HF	8	1,184	1,005	84.9
4SG	3	1,085	983	90.6
4SFG-	4	858	770	89.7
Total	36	4,489	3,934	87.6

Categorizing genes

Steps :

- ▶ Each gene is a 5D vector.
- ▶ Principal Component Analysis to reduce dimensions.
- ▶ K-means as unsupervised clustering.

Genes grouped as expected.