**In vitro ES cell differentiation**

(a) ES Cells

Hemangioblast

Bry⁺Flk1⁺

Hematogenic Endothelium

Tie2⁺cKit⁺CD41⁻

Smooth muscle cells

Hematopoietic cells

(primitive and definitive)

CD41⁺ and CD45⁺

**In vivo development**

(b) Hemangioblast

Bry⁺Flk1⁺

Primitive Streak

Yolk Sac

Smooth muscle cells

Endothelial cells

Hematopoietic cells

(c) Hematogenic Endothelium

Hematopoietic cluster

Dorsal aorta