ANKARA ÜNİVERSİTESİ
BİYOTEKNOLOJİ
ENSTİTÜSÜ

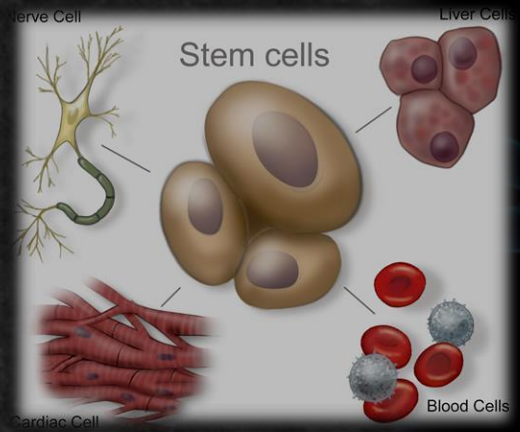
ANKARA ÜNİVERSİTESİ 1946

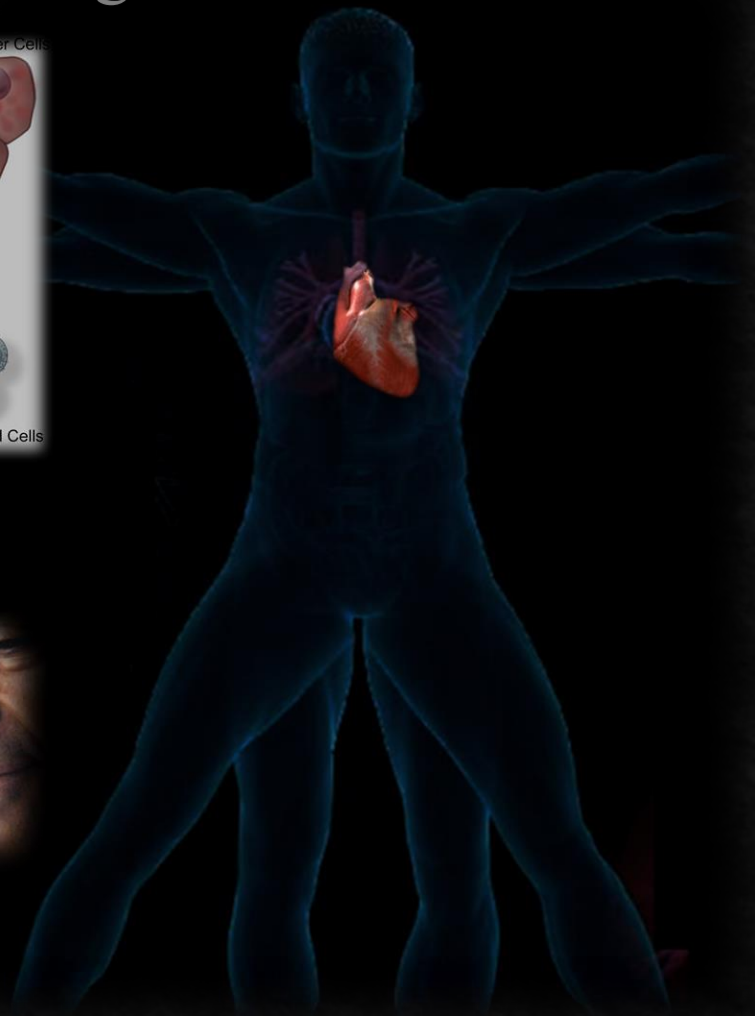
ANKARA UNİVERSİTY
BİOTECHNOLOGY INSTİTUTE

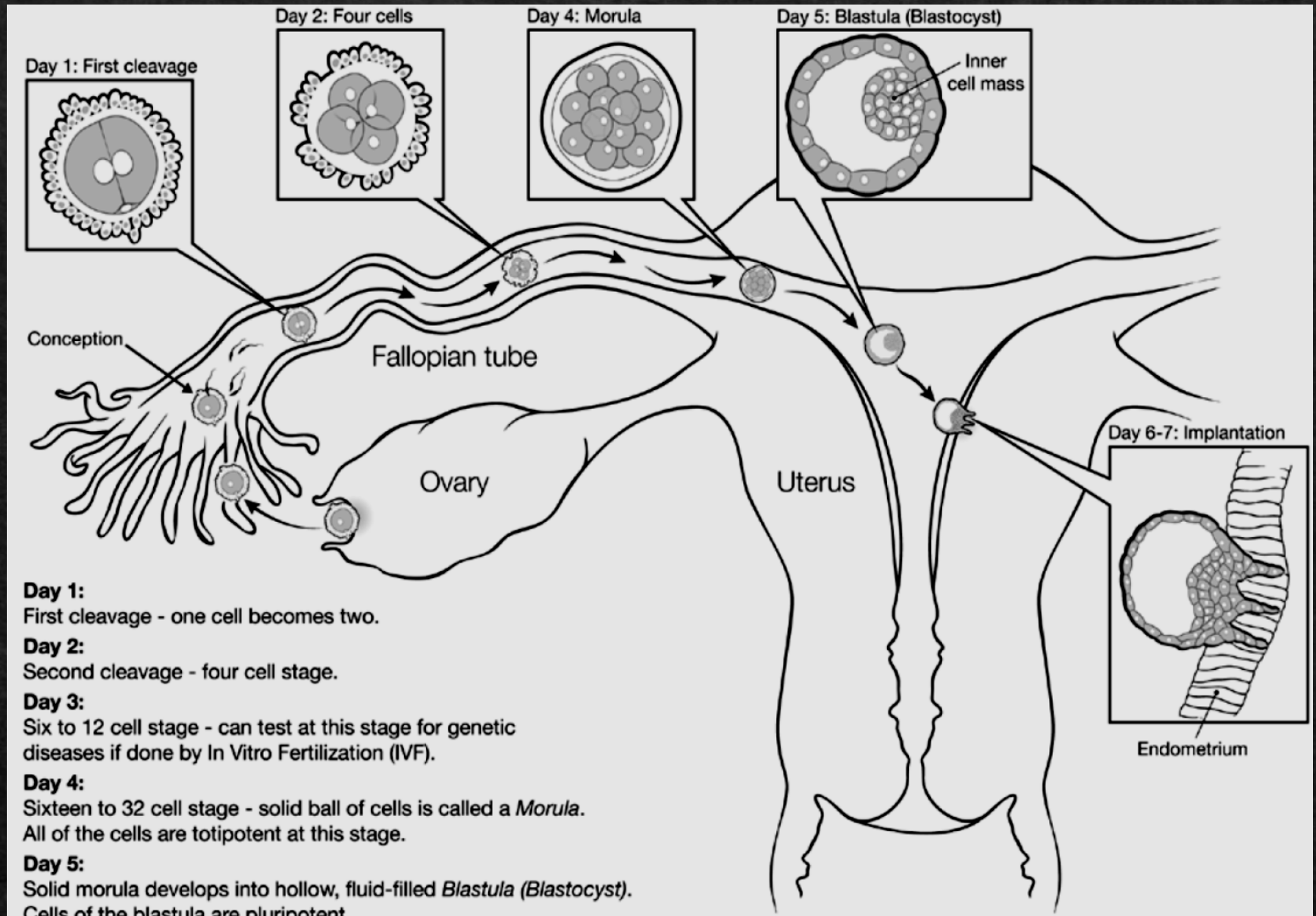
Regenerative Medicine

Onarımsal Tıp

(Rejeneratif Tıp)







Day 1:
First cleavage - one cell becomes two.

Day 2:
Second cleavage - four cell stage.

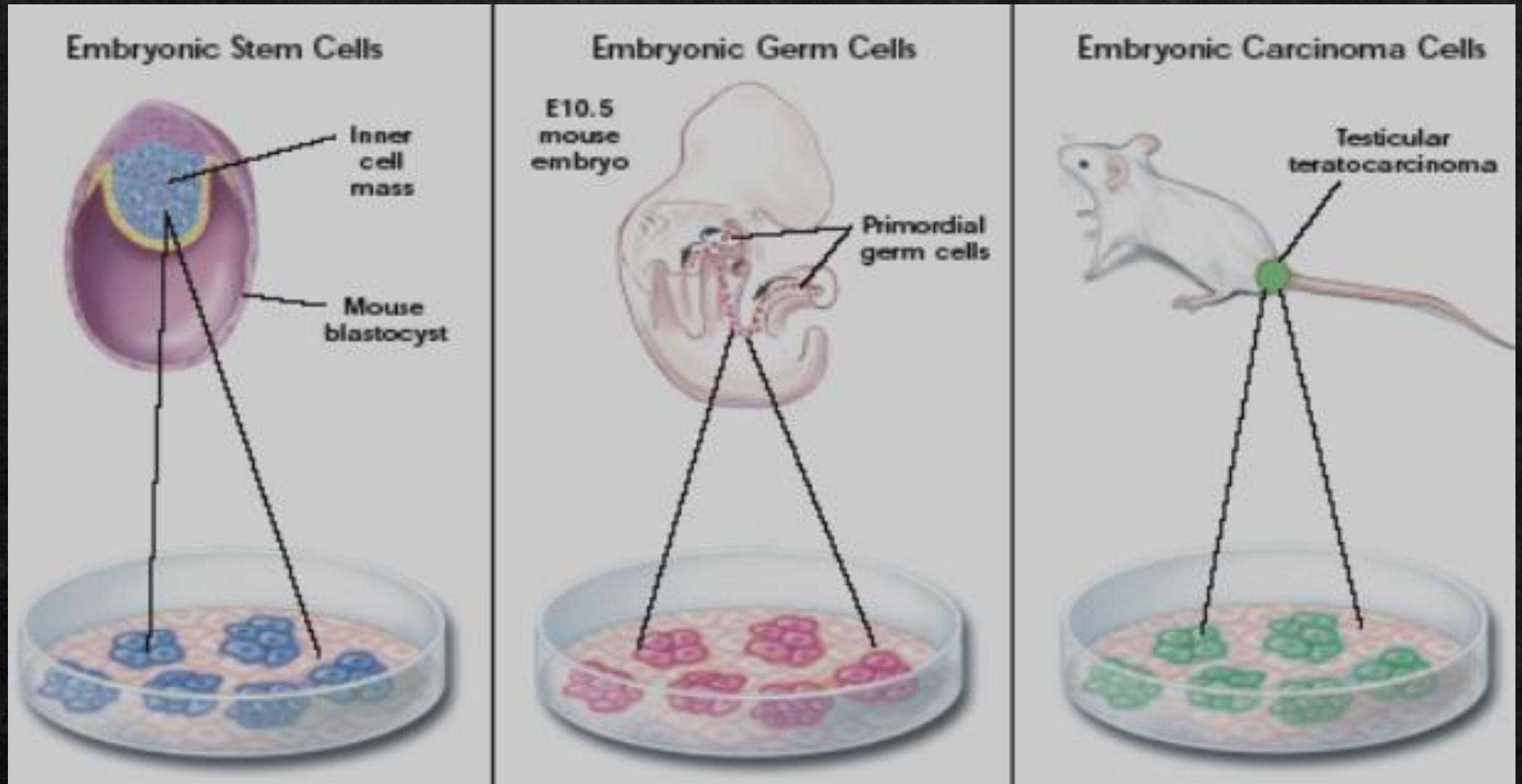
Day 3:
Six to 12 cell stage - can test at this stage for genetic diseases if done by In Vitro Fertilization (IVF).

Day 4:
Sixteen to 32 cell stage - solid ball of cells is called a *Morula*.
All of the cells are totipotent at this stage.

Day 5:
Solid morula develops into hollow, fluid-filled *Blastula (Blastocyst)*.
Cells of the blastula are pluripotent.
The embryo will develop from the inner cell mass, or embryonic disc.

Day 6-7:
Blastula attaches to the endometrium and burrows in - implantation.
The blastula starts to secrete hCG (human chorionic gonadotropin), which stimulates estrogen and progesterone production to prevent menstrual flow.

Üç Çeşit Embriyonic Kök Hücre Bulunmaktadır

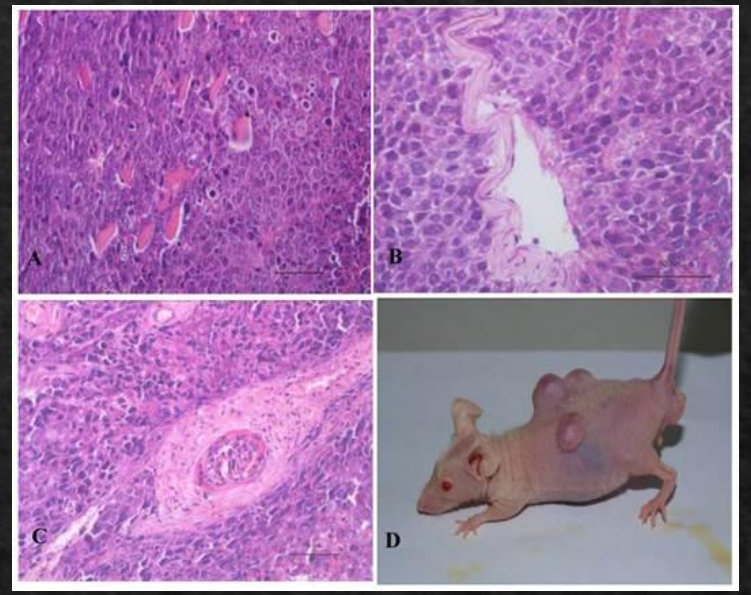


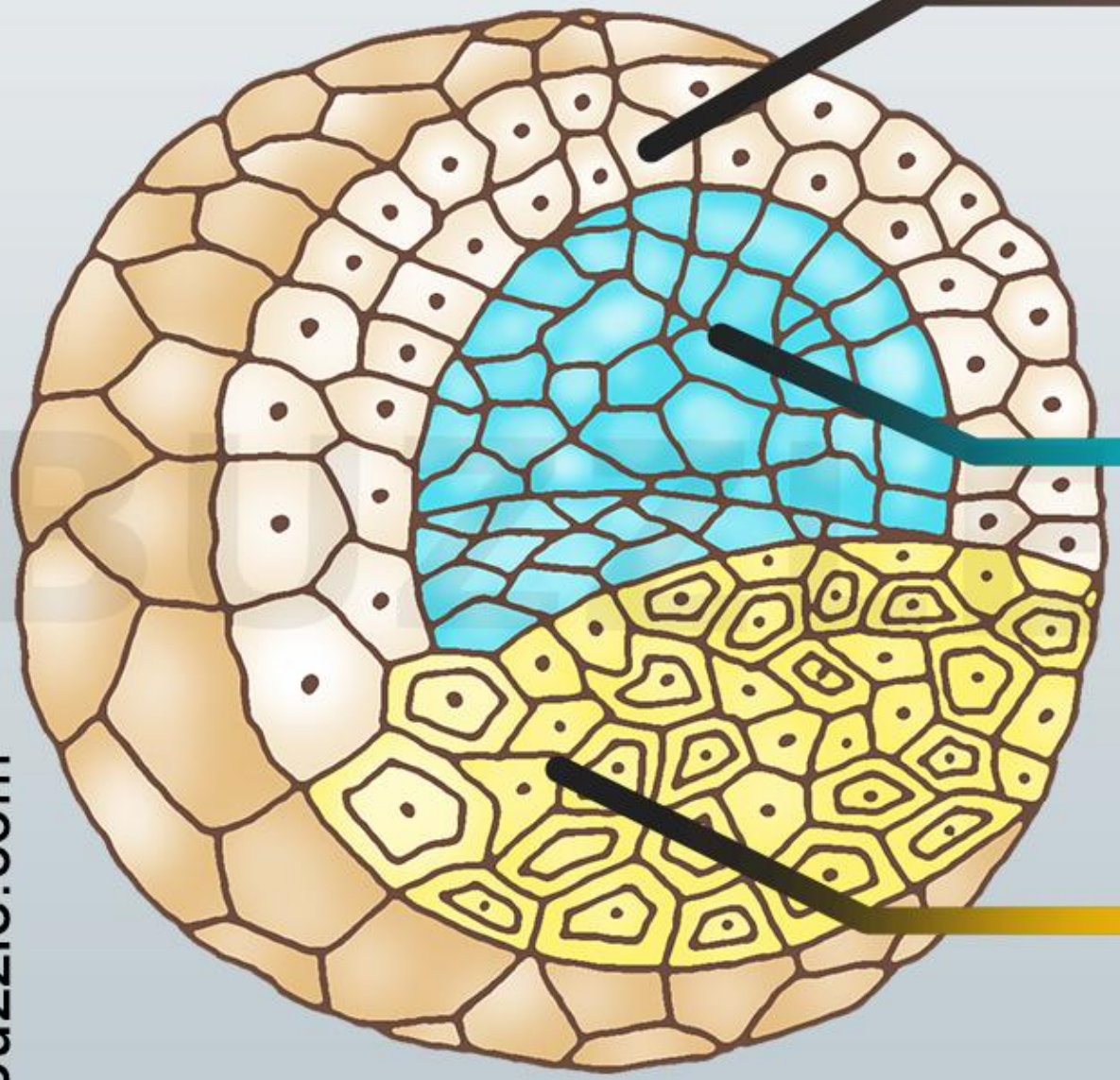
Embriyonik Embriyonik Kök Hücrelerin crelerin Tanımlanması

- Embriyonik kök hücre hatlarını oluşturma sürecinin çeşitli aşamalarında bilim adamları kültür edilmiş hücrelerin embriyonik kök hücre temel özelliklerini taşıyıp taşımadıklarını test ederler. Bu süreç **karakterizasyon** olarak bilinmektedir.

Embriyonik Embriyonik Kök **karakterizasyonu**

- **Teratoma oluşumu**
- **Kolonilerin oluşumu**
- **Embriyoid Cisimcikleri oluşumu**
- **Hücre Yüzey Markerleri**



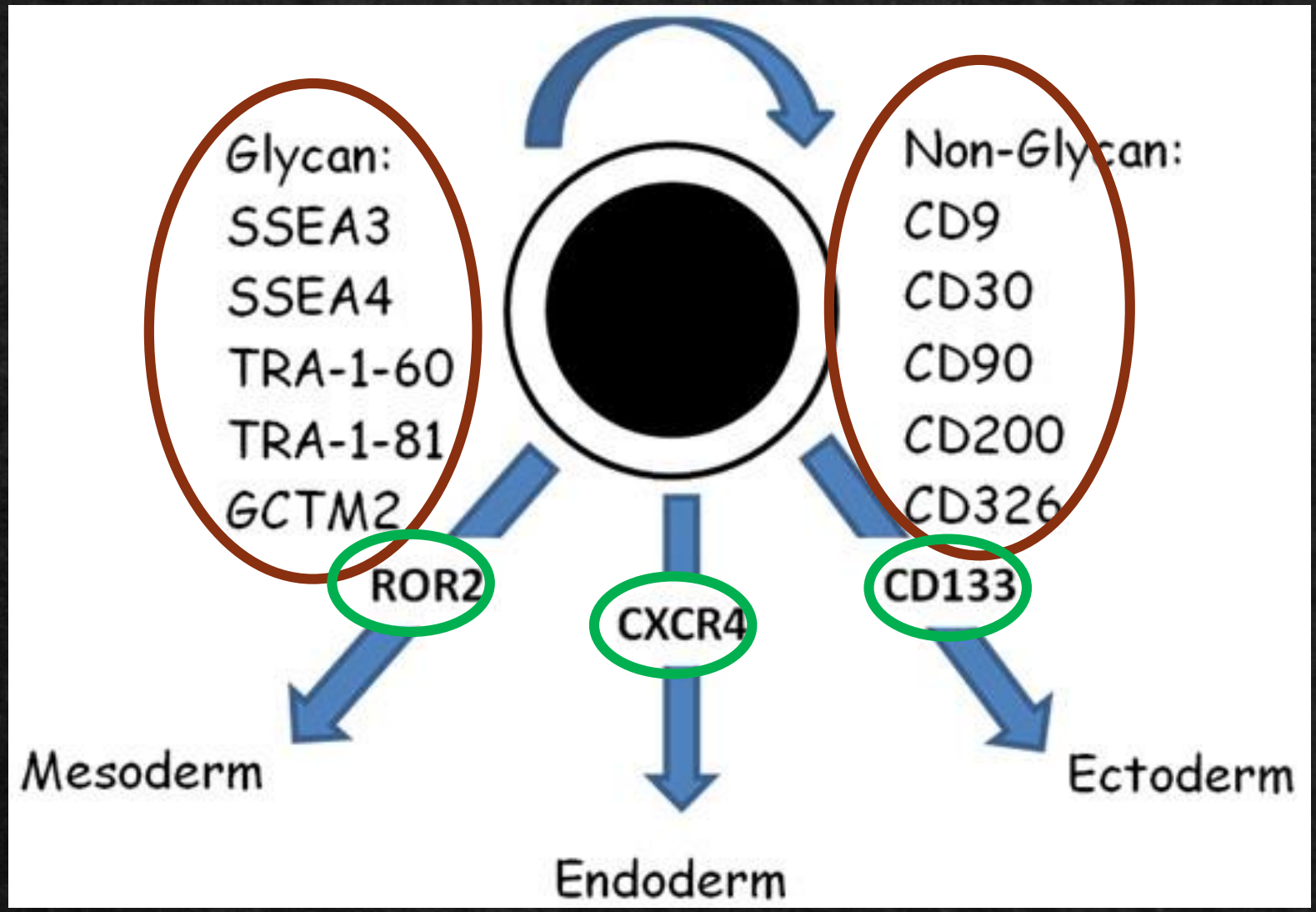


Ectoderm
(forms the exoskeleton)

Mesoderm
(develops into organs)

Endoderm
(forms the inner lining of organs)

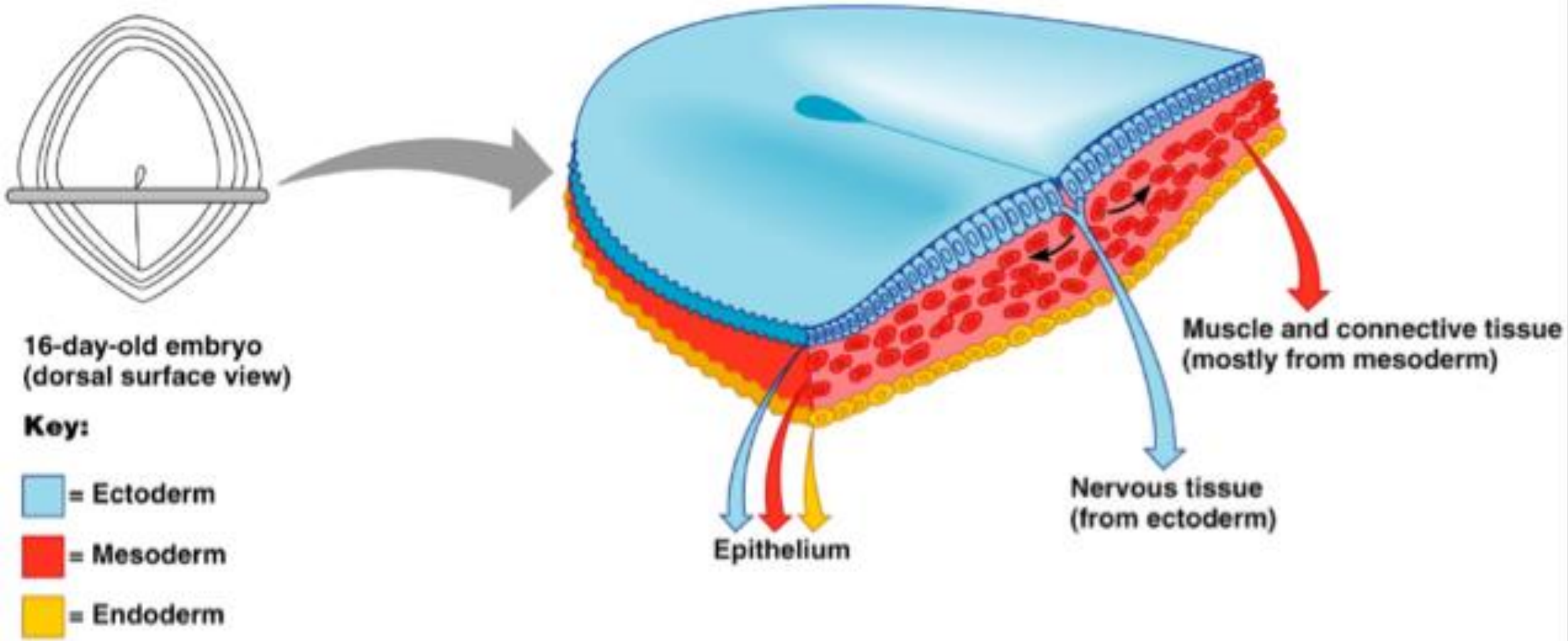
EKH Hücre Yüzey markerleri



EKH Hücre Yüzey markerleri

- SSEA3
- SSEA4
- TRA-1-60
- TRA-1-81
- GCTM2

- CD9
- CD30
- CD90
- CD200
- CD326


16-day-old embryo
(dorsal surface view)
Key:
= Ectoderm
= Mesoderm
= Endoderm
Epithelium
Nervous tissue
(from ectoderm)
Muscle and connective tissue
(mostly from mesoderm)

Embryonik Kök Hücre Özellikleri

- **Doubling time**
- **Hücre boyutu**
- **Ploriferasyon**
- **.....**