

2-3-14

Review test to make a better online test.

2-5-14

## STEM CELLS

- 3 hundred trillion cells
- all functional as factories
- all alive

↳ started as one cell

- how do organs form?

### Differentiation

how does it decide what to be?

how about repair?

we do not know.

### Undifferentiated

this type is a stem cell

doesn't know what it wants to be.

↳ Different kinds of stem cells

in developing embryos

- gobs of cells

### ↳ Totipotent

- can become any type of cell

- long lived

- easy to grow

In adults

- finding: a many organs and structures

### • Pleuriotent

- can't become everything

- hard to multiply

- short lived

Take a mature cell and trick it into becoming undifferentiated

★ There is so much potential for stem cells.

address any disease in tissue, organ, or cellular processes. (in theory)

- Paralysis, cancer, Parkinson's, blindness, deafness, amputation, Diabetes, heart disease, Alzheimers, Dementia, COPD,