

1. Cell type

2. Events involved

Naïve cell

Determined cell

Differentiated cell

3. What is the nervous system?

4. Progressive determination:

ectoderm

- neurectoderm versus epidermis
- position
- neurons versus glia
- steps
  - i. pluripotent cell
  - ii. proliferating precursor/progenitor/stem cell
  - iii. non-dividing differentiating cell
- positional refinement (11.22.06)
- neural tube (brain, spinal cord) morphogenesis (11.1.06)

5. What region forms the nervous system? How do you know?

6. Early signaling: role of BMPs

7. early regulatory genes

Sox

Zic

geminin

8. proneural genes

Neurogenin

NeuroD

Achaete/Scute

9. role of Notch

lateral inhibition

Delta

Proneural genes

10. role of repressors

REST complex

11. role of asymmetric cell division

ventricular zone/ ependymal layer