Introduction to Bioelectricity

Week 1: Introduction to the Nervous System
Lecture 1.1: Basic Organization of CNS & PNS

By Pedro P. Irazoqui
Associate Professor of Biomedical Engineering and Electrical and Computer Engineering
Purdue University
Week 1: Introduction to the nervous system

- Lecture 1: Basic organization of CNS & PNS
1.1: Basic organization of CNS & PNS

- Dendrites
1.1: Basic organization of CNS & PNS

• Soma
1.1: Basic organization of CNS & PNS

- Axon
1.1: Basic organization of CNS & PNS

• Synapses
1.1: Basic organization of CNS & PNS

- Neuronal diversity

(A) Neurons in mesencephalic nucleus of cranial nerve V

(B) Retinal bipolar cell

- Cell bodies
- Dendrites
- Cell body
- Axon
1.1: Basic organization of CNS & PNS

- More diversity
1.1: Basic organization of CNS & PNS

- And more diversity
1.1: Basic organization of CNS & PNS

- Glial cells
1.1: Basic organization of CNS & PNS

- Central and peripheral nervous systems
1.1: Basic organization of CNS & PNS

- **Flow of information**
1.1: Basic organization of CNS & PNS

- Breaking down the CNS
1.1: Basic organization of CNS & PNS

- The cortex
1.1: Basic organization of CNS & PNS

- A mid-sagittal view
1.1: Basic organization of CNS & PNS

- The lobes

1.1: Basic organization of CNS & PNS

- Anatomical organization
1.1: Basic organization of CNS & PNS

- Cortical slices
1.1: Basic organization of CNS & PNS

- Coronal slices
1.1: Basic organization of CNS & PNS

- Slice E

![Brain Diagram with labels](image-url)
1.1: Basic organization of CNS & PNS

- Slice F
1.1: Basic organization of CNS & PNS

• Sensation
1.1: Basic organization of CNS & PNS

• Spatial map