

Brain Organoid Research (Neuromethods, 189)

The brain is one of the largest and most complex organs in the human body.

It is made up of more than 100 billion nerves that communicate in trillions of connections called synapses.

The brain is made up of many specialized areas that work together:

• The cortex is the outermost layer of brain cells. Thinking and voluntary movements begin in the cortex.

• The brain stem is between the spinal cord and the rest of the brain. Basic functions like breathing and sleep are controlled here.

• The basal ganglia are a cluster of structures in the center of the brain. The basal ganglia coordinate messages between multiple other brain areas.

• The cerebellum is at the base and the back of the brain. The cerebellum is responsible for coordination and balance.

The brain is also divided into several lobes:

• The frontal lobes are responsible for problem solving and judgment and motor function.

• The parietal lobes manage sensation, handwriting, and body position.

• The temporal lobes are involved with memory and hearing.

• The occipital lobes contain the brain's visual processing system.

The brain is surrounded by a layer of tissue called the meninges. The skull (cranium) helps protect the brain from injury.

Reference

[The Merck Veterinary Manual](#)

[Munro's Statistical Methods for Health Care Research](#)