1. Discuss the importance of brain functional localization.

Brain functional localization preliminarily established the correspond relation of structure and function. For instance, the hippocampus is associated with memory, the amygdala is associated with emotion, and the cortex is associated with sensorimotor functions etc. Therefore, brain functional localization laid a foundation for subsequent investigation to further resolution of nuclei, cell type and circuit, which will help us understand relationship between brain structure and function on circuit level.

1. What’s the function of IT and MT?

IT: IT, the inferior temporal area, contributes to object recognition.

MT: MT, the middle temporal area, specifically contributes to the detection of moving objects.

1. Discuss the possible roles of parietal area.

(1) Patients with parietal lobe lesions usually contain contralateral neglect syndrome. And experiments on monkey shows that some neurons’ activities in parietal area are respond to monkeys’ attention to stimuli. Thus, we can speculate that parietal area involves attention.

(2) Decision signals in lateral intraparietal (LIP) area indicate that parietal area may be relative to decision making.

(3) Parietal area is involved in sensory history mediated bias.

(4) Recent research indicate that parietal area is required for stimulus categorization. (Zhong et al, Nature neuroscience)