

Questions based on readings by Brodal, Mesulam, and on Schneider lectures and reading:

1. Memorize Mesulam's figure 6 (p.8). Define isocortex (iso=same) vs. allocortex (allo=other). What is idiotypic cortex (p.11)--one type of isocortex? (See also Nauta & Feirtag, p. 292-293).
2. What are the different types of association areas, according to Mesulam? (p 9)
3. What are the two "heteromodal fields" in the primate brain? Which is larger? (p 9-11)
4. What thalamic nuclei connect with the two neocortical fields in question 6? (Mesulam p 73-75) See also, Brodal fig. 20.7.
5. Describe the neocortical territories (areas projected to) of the basic thalamic cell groups:
 - Geniculate bodies ("external geniculates") (LGBd, MGB)
 - Ventral thalamus: ventral posterior nuclei (ventrobasal) (VPL, VPM)
 - a. ventral anterior and ventral lateral (VA-VL)
 - Lateral thalamus, including the pulvinar nucleus (LD, L, LP, Pulvinar, Po)
 - Medio-dorsal thalamic nucleus (MD)
 - Anterior nuclei (AD, AV, AM)
 - Intralaminar and midline nuclei
6. Try to extract as much as you can from the readings. Basic points will be reviewed in class. See Brodal fig 20.7 (better than the Mesulam diagram of thalamus). In class we will contrast rodent and primate, looking at frontal sections of thalamus as well as surface views of the hemisphere.
7. One of the major meanings of the term "association cortex" is that these are the areas with long transcortical interconnections. What basic patterns of connections can you see in the Brodal figures? Relate these to Nauta's figure 115, showing association fiber groups which are so large in the human brain that they can easily be seen in dissections.

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9.14 Brain Structure and Its Origins

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