Laboratory Exercise 6: The Central Nervous System (CNS)

Introduction

The goals for this laboratory are to become familiar with the anatomy and functional organization of the brain and spinal cord. You will be able to identify key features and areas of the CNS and be able to outline functions for the major areas.

Required preparation

1. Read the following portions of Chapter 15 in your lab manual:

- Divisions of CNS, functional classes of neurons, histology of multipolar neuron, pp. 224 – 226.
    - You should already be familiar with this from lecture, so you don't need to complete any of the questions in the manual in this section. Do look at a slide of a motor neuron to get a feel for the cellular organization.
- Brain, pp.226 – 236
    - While you are working through this section refer to Chapter 15 in Martini and the summary list of structures I provided you with.
    - You are responsible for identification of these structures in brain models; you should also be familiar with **general** functions of these structures.
    - For sheep brain dissection follow the schematics shown in Radke, pp. 234 – 236. In addition a photographic atlas will be provided in class.

2. Use chapter 15 (Brain) and chapter 14 (spinal cord) in Martini as reference/atlas.

3. List of CNS area, features, and structures: print from web page and bring to lab.

3. Electronic pre-lab – submit to me prior to lab (also send a copy to yourself for your records in case there are submission problems). Go to Martini companion site, select Chapter 15 (brain), Advanced review – complete the self quiz and labeling exercises.

Optional preparation

1. CNS lab notes on the web page – I have tried to outline the major areas/features of the CNS and their functions.