

## Controversies in Neuroscience Report 1: The Hippocampus

What is the function of the hippocampus?

- Explain why the question above is important and clearly answer it.
  - o You may agree with the “general memory” theory, you may agree with the “spatial navigation” theory, you may propose a compromise theory, or you may propose a different theory all together.
- Discuss two pieces of evidence that the hippocampus is a general memory structure.
  - o What experiment was done?
  - o What result was obtained?
  - o How did this result lead the authors to conclude that the hippocampus is a memory structure?
  - o How does your theory account for the result?
- Discuss two pieces of evidence that the hippocampus is a spatial navigation structure.
  - o What experiment was done?
  - o What result was obtained?
  - o How did this result lead the authors to conclude that the hippocampus is a spatial structure?
  - o How does your theory account for the result?
- Propose a new experiment that could be done to support your theory directly.
  - o What would you do?
  - o What result do you expect?
  - o How would this result support your theory?

The paper is expected to be at least 8 pages long and should not be more than 15 (8.5” x 11”, 1” to 1.5” margins, 10-12 point font, 1.5x or 2x spacing), plus one page of references.

**The report is due on September 23<sup>rd</sup> at 4:30 pm.** It is strongly recommended that you begin working on the report early enough that you have an opportunity to discuss the topics with your classmates, the instructor, and the TA.

Although you are welcome to discuss the primary research paper with other students, you must write the report entirely on your own. All guidelines for plagiarism are strictly enforced (see the syllabus or <http://www.cmu.edu/policies/documents/Cheating.html>). You should add a page of references to the end of your report (the reference page does not count toward the **8-15 page** total). **You should reference any published or unpublished source from which you gained ideas and insights (even if you do not directly quote the source).** Quotations must also be clearly attributed.

The report will be graded on successful completion of all of the bulleted items above. The portions that have given people the most difficulty in the past are:

- 1) describing the logical connections between published experiments and author’s interpretation,
- 2) accounting for published experiments in your own theory,
- 3) proposing a creative new experiment with a specific prediction, and
- 4) providing a logical connection between your expected result and your overall theory.