Developmental Neurobiology

Term Paper

Each student is to write a term paper proposing a study dealing with any aspect of developmental neurobiology (approximately 10 pages, typed, double-spaced, 12 pt font, 1" margins). The first and major part of the paper is to be the 'Background' section. This is typically about 6 pages. This section should first define a question. Typically this would ask what mechanism is responsible for some aspect of development of the nervous system. Then a hypothesis should be developed based on what is known from the literature. The hypothesis is a possible answer to the question posed. The background section would more appropriately be titled the 'rationale', which is meant to convince the reader that the problem is important and that the hypothesis is reasonable. Important references should be cited (by authors' names and year), but it need not be an exhaustive review of the literature. The second part of the paper is to be the 'Methods' section, typically 2-3 pages. This should briefly outline one or more experiments designed to test the hypothesis. A complete step-by-step description of the methods is not appropriate. Give just enough detail that it is clear what methods will be employed. Essential controls also should be mentioned. Possible results should be given, and it should be indicated how each possible result would relate to the hypothesis posed in the background section. The final part of the paper should be a 'Literature Cited' section, which should give the complete citations for each reference.

Each paper will be reviewed by at least two students in the class, and in turn, each student will review at least two other papers. Reviews are to be 1-2 pages (typed, double-spaced). Reviewers will also meet with authors to discuss each paper. The reviews should address several questions. First, does the paper clearly state a hypothesis or problem? Second, does the background provide a compelling rationale for the stated hypothesis or problem? Third, does the proposed study or experiment address the hypothesis or problem, and are the potential outcomes of the project clearly tied back to the hypothesis or problem? Fourth, are essential controls adequately addressed? Finally, are there any major problems with the writing or other aspects of the presentation?

Based on the reviews, students should revise their papers to address the major problems. [Suggestion: Reviewers are always right! Even though you might think that you covered something adequately, if the reader does not see it that way, then you did not do a good enough job.] Grades on this part of the class will be based on the revised paper and reviews.