

## **APPENDIX 1: Journal Article Critique**

Committee members will each provide one research article to chairing AA **2 months** prior to the oral comprehensive exam. The AA will select one article to send to the student **four weeks** prior to the oral comprehensive exam. The student will write a research article critique and will submit it to committee members **two weeks** prior to the oral comprehensive exam. Delays are not acceptable and will be taken into account in the evaluation. The student is expected to briefly summarize the article, critically evaluate the data and conclusions of the authors, and to present a plan for moving the project forward and to address questions that arise from data presented in the paper. This critique should be no more than 5 single-spaced pages and should be written by the student *without* help from the supervisor.

The following sections should be included in the research article critique:

**1. Brief summary of article** - What is rationale for the study? What are the main experimental approaches? What are the major findings? What are the main conclusions?

**2. Hypothesis** - Is a hypothesis stated? If so, what is the hypothesis? If the hypothesis is only implied, how would you state it? Is the hypothesis a weak or a strong one, and is it logical and rational based on previous observations?

**3. Organization** - Are the experimental data presented in a logical manner?

**4. Experimental approach** - Are the techniques used appropriate to address the hypothesis?

**5. Presentation of results** - Are the data convincing in their presentation? Are there sufficient and appropriate negative and positive controls? Is there appropriate statistical analysis?

**6. Data interpretation** - Do the authors over-interpret or under-interpret their data? Do the data support the authors' interpretations?

**7. Discussion and conclusions** - Do the authors discuss their data in relation to other relevant data in the literature, or do they simply reiterate their results?

**8. Follow-up investigation** - What follow-up experiments could be pursued to expand upon the findings presented in the paper?