

## Defense of Dissertation Results

(See Article 10.2.2 of the Graduate School Policy Handbook)

**Submit to Graduate School N204**



**THE GRADUATE SCHOOL OF  
BIOMEDICAL SCIENCES**

Student Name: \_\_\_\_\_ BCM ID #: \_\_\_\_\_

Graduate Program: \_\_\_\_\_ Are you also in the MD/PhD Program?  YES  NO

Completion of all requirements for the Ph.D. degree occurs with submission of final (signed) dissertation.

Date of Exam: \_\_\_\_\_

Exam Results: \_\_\_\_\_  
*Pass or Fail*

|                  | Printed Name | Signature | Date | <b>INITIAL</b><br><small>if present at<br/>Defense</small> |
|------------------|--------------|-----------|------|--|
| Chairperson      |              |           |      |  |
| Committee Member |              |           |      |  |
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| Committee Member |              |           |      |  |
| Committee Member |              |           |      |  |
|                  |              |           |      |  |
| Program Director |              |           |      |  |
| Dean of GSBS     |              |           |      |  |

**PLEASE RETURN THIS FORM, A COMPLETED DEFENSE-WRITTEN EVALUATION RUBRIC AND A DEFENSE-ORAL RUBRIC TO THE GRADUATE SCHOOL OFFICE IMMEDIATELY FOLLOWING THE EXAM.**

*If there are any significant deficiencies of the thesis (other than typographical errors) that must be corrected before final approval, indicate directly below or on attached pages:*

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# Defense Written Rubrics

(attach to defense results form)

Student Name: \_\_\_\_\_

| Criterion  | Unacceptable = 1 point   | Acceptable = 2 points   | Very Good = 3 points  | Outstanding = 4 points   | Score |
|--|--|---|---|--|-------|
| Knowledge of fundamental concepts                  | <ul style="list-style-type: none"> <li>• Fails to display general knowledge of biomedical concepts</li> <li>• Lacks a good understanding of basic concepts, processes or conventions of the subject matter</li> </ul>  | <ul style="list-style-type: none"> <li>• Demonstrates basic, general knowledge of fundamental biomedical concepts</li> <li>• Knows the subject matter adequately, but is not critical of it</li> </ul>  | <ul style="list-style-type: none"> <li>• Demonstrates an in-depth understanding of biomedical concepts</li> <li>• Shows understanding and mastery of the subject matter</li> </ul>  | <ul style="list-style-type: none"> <li>• Exemplifies an in-depth and abstract knowledge of foundational biomedical concepts, and can discuss implications to related fields of inquiry</li> <li>• Exhibits command and authority over subject matter</li> </ul>  |       |
| Ability to critically evaluate research literature | <ul style="list-style-type: none"> <li>• Demonstrate knowledge of factual material limited to a level appropriate for an undergraduate student</li> <li>• Fails to identify relevant literature in the field of inquiry</li> </ul>   | <ul style="list-style-type: none"> <li>• Demonstrates an awareness of the research literature in the field of inquiry</li> <li>• Identifies some unanswered questions/gaps in the literature</li> </ul>   | <ul style="list-style-type: none"> <li>• Understands and can integrate the current research literature in the field of inquiry</li> <li>• Successfully identifies and illustrates the importance of unanswered questions/gaps in the literature</li> </ul>                          | <ul style="list-style-type: none"> <li>• Demonstrates a command and deep understanding of the current research literature in the field</li> <li>• Identifies unanswered questions/gaps in the literature and can relate these to more abstract or inter-related questions/theories beyond the immediate topic</li> </ul>                                   |       |
| Research design and data analysis                  | <ul style="list-style-type: none"> <li>• Uses incorrect, inappropriate or outdated methodology</li> <li>• Data analysis is inappropriate or confused</li> <li>• Identifies no weaknesses in interpretation</li> </ul>  | <ul style="list-style-type: none"> <li>• Uses limited number of correct methodological approaches</li> <li>• Data analysis is acceptable, but fails to explore all possibilities and misses connections</li> <li>• Identifies no weaknesses in interpretation</li> </ul>  | <ul style="list-style-type: none"> <li>• Uses multiple correct methodological approaches</li> <li>• Data analysis is solid but misses opportunities to completely explore interesting issues or connections</li> <li>• Identifies some weaknesses in data interpretation</li> </ul> | <ul style="list-style-type: none"> <li>• Employs multiple and creative methodological approaches</li> <li>• Analysis is comprehensive, complete, sophisticated and convincing</li> <li>• Identifies most/all weaknesses in data interpretation</li> </ul>  |       |
| Ability to draw conclusions                        | <ul style="list-style-type: none"> <li>• Little discussion of research findings</li> <li>• Display poor grasp of material</li> <li>• Conclusion/summary not supported by findings</li> </ul>   | <ul style="list-style-type: none"> <li>• Discussion is present but lacking depth and/or some key concepts</li> <li>• Conclusion/summary not entirely supported by findings</li> </ul>   | <ul style="list-style-type: none"> <li>• Discussion is sufficient with few errors, but greater integration with past research is needed</li> <li>• Conclusions/summary based on outcomes and appropriate</li> <li>• Includes some recommendations</li> </ul>                        | <ul style="list-style-type: none"> <li>• Discussion is well-constructed, accurate and engaging</li> <li>• Conclusions/summary and recommendations are appropriate and clearly based on outcomes</li> </ul>   |       |
| Rigor & Reproducibility                            | <ul style="list-style-type: none"> <li>• Assessment of prior research lacks rigor</li> <li>• Potential biases &amp; biological variables were not considered in research design</li> <li>• No authentication of biological or chemical resources</li> </ul>                                    | <ul style="list-style-type: none"> <li>• Identifies major weaknesses in rigor of prior research</li> <li>• Potential biases and biological variables were superficially addressed</li> <li>• Some authentication of research resources</li> </ul>   | <ul style="list-style-type: none"> <li>• Accounts for rigor deficiencies of prior work in own research</li> <li>• Potential biases and biological variables were most addressed</li> <li>• Key biological/chemical resources authenticated</li> </ul>                               | <ul style="list-style-type: none"> <li>• Demonstrates in-depth understanding of rigor of prior research</li> <li>• Sophisticated research design and analysis fully addressed potential biases and biological variables</li> <li>• All resources authenticated in timely manner</li> </ul>   |       |
| Writing Skills                                     | <ul style="list-style-type: none"> <li>• Writing does not effectively communicate message</li> <li>• Numerous grammatical and/or spelling errors</li> <li>• Organization is poor</li> <li>• Quality of figures and tables is poor</li> <li>• Citations are missing or inappropriate</li> </ul> | <ul style="list-style-type: none"> <li>• Writing is weak, but essential elements are present</li> <li>• Some grammatical and/or spelling errors present</li> <li>• Organization is adequate</li> <li>• Figures and tables are complete and convey information effectively</li> <li>• Citations are appropriate</li> </ul> | <ul style="list-style-type: none"> <li>• Writing is adequate</li> <li>• Few to no grammatical or spelling errors</li> <li>• Organization is generally logical but with some minor gaps</li> <li>• Presentation of figures and tables enhances writing effectiveness</li> </ul>      | <ul style="list-style-type: none"> <li>• Writing is publication quality</li> <li>• Rules of grammar, syntax and spelling are consistently followed</li> <li>• Organization is excellent with smooth transitions</li> <li>• Figures and tables reflect careful consideration of effective data presentation</li> <li>• Skillful use of citations</li> </ul> |       |

TOTAL SCORE

## Required Approvals

Major Advisor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Graduate Program Director

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

