

Final Research Presentation (exp 1 additions & exp 2 content) S23

Course: BS171 Cell and Molecular Biology Lab Spring 2023

Presentation 1 score	Level 4 10 points	Level 3 8 points	Level 2 6 points	Level 1 4 points	Criterion Score
Revised presentation 1	Score input from re-graded revised research presentation 1. For progressive grading, the final research presentation was uploaded to the original research presentation 1 assignment dropbox and research presentation 1 regraded based on revisions.	Score input from re-graded revised research presentation 1. For progressive grading, the final research presentation was uploaded to the original research presentation 1 assignment dropbox and research presentation 1 regraded based on revisions.	Score input from re-graded revised research presentation 1. For progressive grading, the final research presentation was uploaded to the original research presentation 1 assignment dropbox and research presentation 1 regraded based on revisions.	Score input from re-graded revised research presentation 1. For progressive grading, the final research presentation was uploaded to the original research presentation 1 assignment dropbox and research presentation 1 regraded based on revisions.	/ 10

Experiment 1 sub-community comparisons	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Comparison to E. coli sub-community	Accurately state the findings of at least one team focusing on this sub-community in your section, state the team ID, and compare the team's results to yours (in agreement or conflict with yours).	1 - 2 components are incomplete, vague, missing or contains errors.	> 2 components are incomplete, vague, missing or contains errors.	/ 0.5
Comparison to streptomycin-resistant sub-community	Accurately state the findings of at least one team focusing on this sub-community in your section, state the team ID, and compare the team's results to yours (in agreement or conflict with yours)	1 - 2 components are incomplete, vague, missing or contains errors.	> 2 components are incomplete, vague, missing or contains errors.	/ 0.5
Comparison to tetracycline-resistant sub-community	Accurately state the findings of at least one team focusing on this sub-community in your section, state the team ID, and compare the team's results to yours (in agreement or conflict with yours)	1 - 2 components are incomplete, vague, missing or contains errors.	> 2 components are incomplete, vague, missing or contains errors.	/ 0.5

Experiment 2 Objective	Level 2 0.25 points	Level 1 0 points	Criterion Score
Team's experiment 2 Objective	Team's Experiment 2 objective is accurate and written as a question	Absent or incorrect or has serious errors.	/ 0.25

Approach	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
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Approach	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Experimental Design : gene table	Include the table with the genes/trait, gene function, and amplicon size with content for the four genes your team is screening for. Primer names , sequences, annealing temperatures not required.	1 - 2 components missing, incomplete, or incorrect.	> 2 issues with data in table or table missing	/ 0.5

Approach	Level 2 0.25 points	Level 1 0 points	Criterion Score
Experimental Design : gene table formatting	Appropriate table number and title provided above the gene/trait table	> 1 component missing, incomplete, or incorrect.	/ 0.25

Approach	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Protocol Flow Chart - Experiment 2	Methods (techniques) used to achieve Experiment 2 objectives are effectively communicated with accurate headers and captions	1 - 2 issues with correct flow, methods, captions, or images.	> 2 issues with correct flow, methods, captions, or images.	/ 0.5
Manipulated and Response Variables - Experiment 2	Manipulated and response variables are effectively communicated with accurate captions	1 variable missing, incomplete, or incorrect.	Both variables missing, incomplete, or incorrect	/ 0.5

Results	Level 5 1 point	Level 4 0.75 points	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Data Gel A	Gel A data properly formatted and effectively labeled to enable analyses	1 issue with formatting or labeling.	2 issues with formatting or labeling.	3 issues with formatting or labeling	> 3 issues with formatting or labeling or content missing	/ 1
Data Gel B	Gel B data properly formatted and effectively labeled to enable analyses	1 issue with formatting or labeling.	2 issues with formatting or labeling.	3 issues with formatting or labeling	> 3 issues with formatting or labeling or content missing	/ 1

Results	Level 4 0.75 points	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Figure #, Title, Legend	Single figure number, title, legend based on instructions provided in lab and from Appendix F, placed correctly	1 - 2 issues	2 - 3 issues	Missing or > 3 issues	/ 0.75

Results	Level 4 1 point	Level 4 0.75 points	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
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Results	Level 4 1 point	Level 4 0.75 points	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Evidence statements - Controls	Results are accurately and concisely described and properly formatted for each gene's positive and negative controls (instructions provided in lab and in App. F). Claims are not included	1 issue with accuracy, conciseness, format or contains minor errors or includes claims or is missing an evidence statement.	2 issues with accuracy, conciseness, format and/or contains minor errors and/or includes claims and/or is missing an evidence statement.	3 issues with accuracy, conciseness, format and/or contains minor errors and/or includes claims and/or is missing an evidence statement.	> 3 issues with accuracy, conciseness, format and/or contains minor errors and/or includes claims and/or is missing an evidence statement.	/ 1
Evidence statements - samples	Evidence statements Results are accurately and concisely described, comparing upstream and downstream sample results, and properly formatted for each gene/trait using guidelines from Appendix F. You can combine statements for genes with similar results. (instructions provided in lab and in App. F) Claims are not included	1 issue with accuracy, conciseness, format or contains minor errors or includes claims or is missing an evidence statement.	2 issues with accuracy, conciseness, format and/or contains minor errors and/or includes claims and/or is missing an evidence statement.	3 issues with accuracy, conciseness, format and/or contains minor errors and/or includes claims and/or is missing an evidence statement.	> 3 issues with accuracy, conciseness, format and/or contains minor errors and/or includes claims and/or is missing an evidence statement.	/ 1

Experiment 2 Claims	Level 4 0.75 points	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Experiment 2 Claims	An accurate claim is provided that is specific to each gene/trait in experiment 2. Do not include Evidence or Reasoning	1 component missing, not clearly stated, incomplete, or includes evidence or reasoning	2 components missing, not clearly stated, incomplete, and/or includes evidence or reasoning	> 2 components missing, not clearly stated, incomplete, and/or includes evidence or reasoning	/ 0.75

Claim for section's research question based on Experiment 2 data	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Claim for section's research question based on Experiment 2 data	An accurate claim is provided that addresses the section's research question and is updated based on experiment 2 results. Do not include Evidence or Reasoning.	1 - 2 components missing, not clearly stated, incomplete, or includes reasoning or evidence	> 2 components missing, not clearly stated, incomplete, or includes reasoning or evidence.	/ 0.5

Discussion	Level 2 0.25 points	Level 1 0 points	Criterion Score
Impact on Human Health	Statements are provided that effectively discuss <u>the implications of the experiment 2 findings on human health</u>	Incorrect, incomplete, or missing	/ 0.25

Discussion	Level 2 0.25 points	Level 1 0 points	Criterion Score
Connection to Relevance	Statements are provided that accurately and effectively discusses <u>how the findings address the issue of broad significance presented in the Relevance section.</u>	Incorrect, incomplete, or missing	/ 0.25

Discussion	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Experiment 2 comparison to at least one other E. coli & virulent bacteria team	Accurately state the findings of at least one team focusing on this community in your section, state the team ID, compare the team's results to yours (in agreement or conflict with yours)	1 - 2 components missing, incomplete, or incorrect	> 2 components missing, incomplete, or incorrect	/ 0.5
Experiment 2 comparison to at least one other antibiotic resistant bacteria team	Accurately state the findings of at least one team focusing on this community in your section, state the team ID, compare the team's results to yours (in agreement or conflict with yours)	1 - 2 components missing, incomplete, or incorrect	> 2 components missing, incomplete, or incorrect	/ 0.5
Reliability of experiment 1 and 2 claims	Provide statements about the reliability of your team's experiment 1 and experiment 2 claims (based on comparisons to other teams, control results, etc)	1 - 2 components missing, incomplete, or incorrect	> 2 components missing, incomplete, or incorrect	/ 0.5

Final Claim	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
For Section's Research Question	Provide a final, accurate claim that addresses your section's research question incorporating findings from <u>both</u> experiments 1 and 2	1 -2 issues, or missing findings from 1 experiment	> 2 issues, or missing findings from both experiments , or does not answer the question	/ 0.5

In-text citations	Level 2 0.25 points	Level 1 0 points	Criterion Score
Appropriate citations for Experiment 2 discussion have been provided for all statements of fact (information not generated by this study)	Appropriate citations for Experiment 2 discussion have been provided for all statements of fact (information not generated by this study). No more than 2 issues	Missing > 2 appropriate citations	/ 0.25
In-text citations for Experiment 2 are properly formatted based on guidelines from App. H	In-text citations for Experiment 2 are properly formatted based on guidelines from App. H. No more than 2 issues	> 2 issues	/ 0.25

References	Level 2 0.25 points	Level 1 0 points	Criterion Score
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References	Level 2 0.25 points	Level 1 0 points	Criterion Score
Full, properly formatted references for combined for both Experiment 1 & 2	Full, properly formatted references are provided so all Experiment 2 sources are cited and integrated into Experiment 1 references (which have been updated based on feedback provided). Whole list is in alphabetic order based on guidelines from Appendix H. ALL sources cited in-text have full references provided AND all references provided are cited in-text. No more than 2 issues	>2 issues	/ 0.25

References	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
A minimum of 4 or more appropriate primary/secondary references are included in the presentation	A minimum of 4 or more appropriate primary/secondary references are included in the presentation	1 - 2 issues	>2 issues	/ 0.5

Design	Level 3 0.5 points	Level 2 0.25 points	Level 1 0 points	Criterion Score
Appeal & Organization	Appeal & Organization – Presentation is attractive and design elements enhance the message. Message is well organized to maximize clarity and flow.	1 - 2 issues	> 2 issues	/ 0.5

Spelling & grammar	Level 2 0.25 points	Level 1 0 points	Criterion Score
Spelling and grammar	No more than two spelling or grammar issues; all gene and species names are <i>italicized</i> and properly capitalized as appropriate in the final research presentation.	> 2 issues with spelling or grammar	/ 0.25

Team contributions	Level 2 0.25 points	Level 1 0 points	Criterion Score
Team Contributions	individual student contributions to the team presentation are noted on the final slides	Incomplete or missing	/ 0.25

Delivery	Level 2 0.25 points	Level 1 0 points	Criterion Score
Verbal statements are accurate and match the information on each of the slides	Verbal statements are accurate and match the information on each of the slides. No more than 2 issues.	> 2 issues	/ 0.25

Delivery	Level 2 0.25 points	Level 1 0 points	Criterion Score
All pertinent information from each of the slides the slides delivered	All pertinent information from the slides delivered. No more than 2 issues.	> 2 issues	/ 0.25
Verbal cues or animation used to direct audience to what is being talked about on a slide	Verbal cues or animation used to direct audience to what is being talked about on a slide. No more than 2 issues.	> 2 issues	/ 0.25

Total / 25

Overall Score

Level 4
22.5 points minimum

Level 3
17.5 points minimum

Level 2
12.5 points minimum

Level 1
0 points minimum