

GMS-BI-793 Final paper instructions

The final paper is due May 11, 2023

Select a primary paper from the list below. If you have a paper that you wish to use that is not on the list, please send it to one of the instructors. If the instructor approves, you may use that as your primary paper.

Claim this paper by emailing Joe Zaia (jzaia@bu.edu). Each student must select a different primary paper.

Choose two other related papers from the recent literature.

Write a paper using the following format:

Written commentary. Describe each of the three papers, pointing out the major features of the research, important novel results and provide criticism of any flaws you see in either the methods or the conclusions.

Proposed research project. Describe a project that would extend the observations made in these three papers. Include the following:

- i. Rationale for the proposed work
- ii. Proposed experiments
- iii. Expected results and significance
- iv. Description of possible pitfalls/difficulties that may be encountered and alternative strategies.

The project should be one that a graduate student could accomplish in about one year.

Total paper length should be 10-12 pages, double-spaced. It should be emailed to jzaia@bu.edu on or before the due date.

Include copies of the three papers chosen for discussion.

Reminder: You must write the entire paper in your own words. To copy any text from any source and use it in your paper without making proper bibliographic reference is plagiarism.

<http://en.wikipedia.org/wiki/Plagiarism>

List of primary papers:

1. Medzihradzky, K. F.; Kaasik, K.; Chalkley, R. J. "Characterizing sialic acid variants at the glycopeptide level" *Anal Chem* **2015**, *87*, 3064-71.
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3. Dhabaria, A.; Cifani, P.; Reed, C.; Steen, H.; Kentsis, A. "A High-Efficiency Cellular Extraction System for Biological Proteomics" *J Proteome Res* **2015**, *14*, 3403-8.
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5. Hoopmann, M. R.; Zelter, A.; Johnson, R. S.; Riffle, M.; MacCoss, M. J.; Davis, T. N.; Moritz, R. L. "Kojak: efficient analysis of chemically cross-linked protein complexes" *J Proteome Res* **2015**, *14*, 2190-8.
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8. Medzihradzky, K. F.; Kaasik, K.; Chalkley, R. J. "Tissue-Specific Glycosylation at the Glycopeptide Level" *Mol Cell Proteomics* **2015**, *14*, 2103-10.
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10. Pankow, S.; Bamberger, C.; Calzolari, D.; Martinez-Bartolome, S.; Lavalley-Adam, M.; Balch, W. E.; Yates, J. R., 3rd "F508 CFTR interactome remodelling promotes rescue of cystic fibrosis" *Nature* **2015**, *528*, 510-6.
11. Rardin, M. J.; Schilling, B.; Cheng, L. Y.; MacLean, B. X.; Sorensen, D. J.; Sahu, A. K.; MacCoss, M. J.; Vitek, O.; Gibson, B. W. "MS1 Peptide Ion Intensity Chromatograms in MS2 (SWATH) Data Independent Acquisitions. Improving Post Acquisition Analysis of Proteomic Experiments" *Mol Cell Proteomics* **2015**, *14*, 2405-19.
12. Riley, N. M.; Rush, M. J.; Rose, C. M.; Richards, A. L.; Kwiecien, N. W.; Bailey, D. J.; Hebert, A. S.; Westphall, M. S.; Coon, J. J. "The Negative Mode Proteome with Activated Ion Negative Electron Transfer Dissociation (AI-NETD)" *Mol Cell Proteomics* **2015**, *14*, 2644-60.
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