# Mass Spectrometry-based Multi-Omics: Combinations of Proteomics, Metabolomics, and/or Lipidomics

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#### **Abstract**

## Introduction

Here is where we briefly go over the following:

- 1. Cover other reviews
- 2. What is proteomics
- 3. what is metabolomics
  - polar metabolomics
  - lipidomics
- 4. what does multi-omic integration mean?

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## **Sample Preparation for Multi-Omic Analysis**

- 1, sample preparation for proteomics
- 2, sample preparation for metabolomics 2.1 non-targeted metabolomics
- 2.2 targeted metabolomics
- 2.3 lipidomics

doi:10.1038/nprot.2016.156

https://www.nature.com/articles/s41596-020-0341-5

### **References**

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Jesse G Meyer, Natalie M Niemi, David J Pagliarini, Joshua J Coon *Nature Methods* (2020-12) <a href="https://www.nature.com/articles/s41592-020-00999-z">https://www.nature.com/articles/s41592-020-00999-z</a> DOI: <a href="https://www.nature.com/articles/s41592-020-00999-z">10.1038/s41592-020-00999-z</a>

2. Charge state coalescence during electrospray ionization improves peptide identification by tandem mass spectrometry.

Jesse G Meyer, Elizabeth A Komives

Journal of the American Society for Mass Spectrometry (2012-05-18)

<a href="https://www.ncbi.nlm.nih.gov/pubmed/22610994">https://www.ncbi.nlm.nih.gov/pubmed/22610994</a>

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