

# Proteome Database

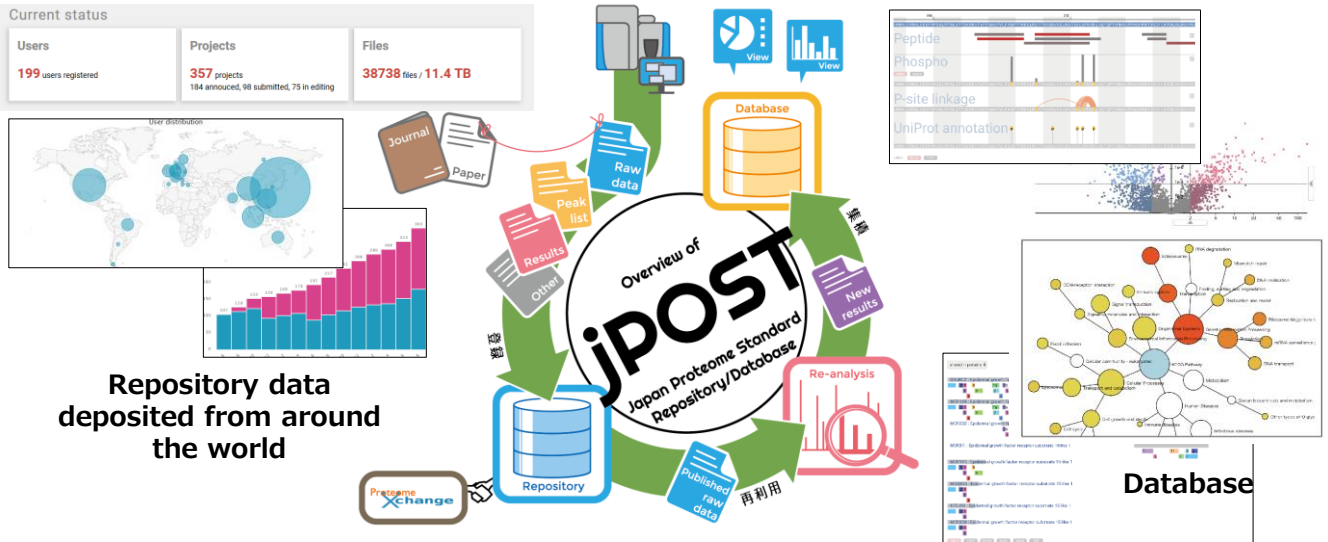


jPOST

<https://jpostdb.org/>



jPOST (Japan Proteome Standard Repository/Database) is an integrated database that standardizes and centrally manages diverse proteomic data from Japan and abroad. Through international collaboration and linkage with other databases, it aims to become a core component of life science data integration.



## Features

jPOST consists of the following three elements:

- 1) Data Repository:** A site for depositing and publishing raw proteomics measurement data, often required for manuscript submission. It issues international standard IDs, and its data upload speed is exceptionally fast compared to other existing repositories worldwide.
- 2) Database:** Contains diverse data including protein expression, post-translational modification, and absolute quantitative information. It is not merely a data aggregation service; it provides a variety of analysis and visualization tools. Because proteins serve as a bridge between genetic information and various functional molecules, jPOST links to a wide range of databases.
- 3) Reanalysis Protocol:** This includes a newly developed method to obtain highly accurate results from raw data for inclusion in the database, facilitating integration with other omics databases and pathway analysis.

Further support for metaproteomics (simultaneous measurement of proteomes from multiple species) and proteogenomics (simultaneous analysis of genome and proteome) is planned.

## Examples of Use

The repository has gained strong international recognition; deposits from around the world have exceeded initial targets set for Japan and Asia. Furthermore, the database is continuously being updated with new data, and is expected to be used for a wide range of needs, from basic biology to medical and drug discovery, including biomarker discovery.

jPOST is supported under JST Database Integration Coordination Program (DICP), "jPOST prime: proteome database environment based on community cooperation (Principal Investigator: ISHIHAMA Yasushi, Professor, Graduate School of Pharmaceutical Sciences, Kyoto University)".

## References

1. Nucleic Acids Research "jPOSTrepo: an international standard data repository for proteomes" DOI: 10.1093/nar/gkw1080
2. Nucleic Acids Research "The jPOST environment: an integrated proteomics data repository and database" DOI: 10.1093/nar/gky899
3. TogoTV "Register data in the Proteome data repository jPOSTrepo" DOI: 10.7875/togotv.2018.163



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# International collaboration on proteome databases



## ProteomeXchange

<https://www.proteomexchange.org/>

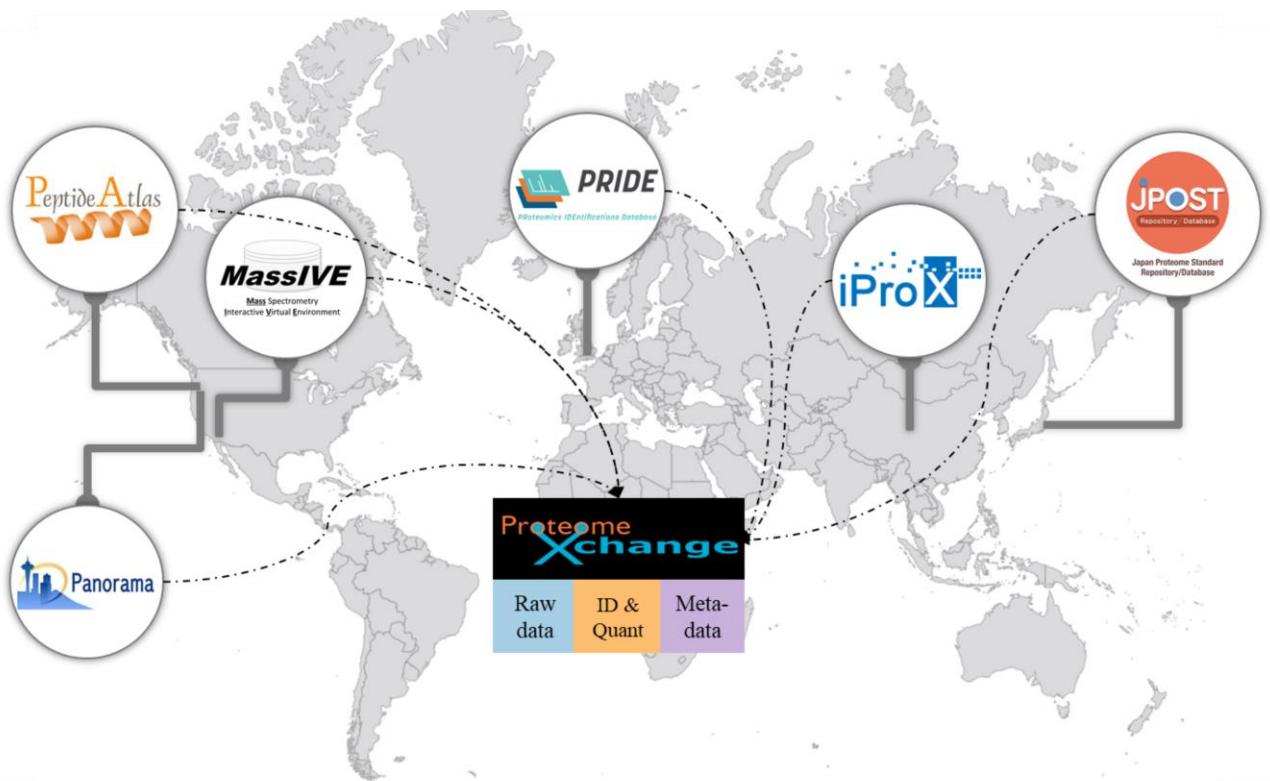


The ProteomeXchange consortium for proteomics resources was established in 2012 with the aim of standardizing open data operations in the mass spectrometry-based proteomics. Currently, major global proteomics data repositories such as PRIDE (Europe), MassIVE (USA), jPOST (Japan), and iProX (China), as well as smaller proteomics data resources such as Panorama Public (USA) and PASSEL (USA), are working together under the ProteomeXchange banner.

Based on the FAIR principles for biological data, ProteomeXchange operates ProteomeCentral, a common web portal for accessing datasets published by its member repositories. As of June 2025, 64,330 datasets have been registered as ProteomeXchange resources.

In Dec 2022, the ProteomeXchange resource was selected as a Global Core Biodata Resource by the Global Biodata Coalition, recognizing it as an essential and important biological resource for the scientific community.

## ProteomeCentral

<https://proteomecentral.proteomexchange.org/ui>

### References

1. Eric W Deutsch *et al.*, The ProteomeXchange consortium in 2017: supporting the cultural change in proteomics public data deposition. *Nucleic Acids Research*, Volume 45, Issue D1, January 2017, Pages D1100–D1106, <https://doi.org/10.1093/nar/gkw936>
2. Eric W Deutsch *et al.*, The ProteomeXchange consortium in 2020: enabling ‘big data’ approaches in proteomics. *Nucleic Acids Research*, Volume 48, Issue D1, 08 January 2020, Pages D1145–D1152, <https://doi.org/10.1093/nar/gkz984>
3. Eric W Deutsch *et al.*, The ProteomeXchange consortium at 10 years: 2023 update. *Nucleic Acids Research*, Volume 51, Issue D1, 6 January 2023, Pages D1539–D1548, <https://doi.org/10.1093/nar/gkac1040>



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