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Hello,

I am pleased to submit our manuscript, "Lipid Interactome: An interactive and open access platform for exploring cellular lipid-protein interactomes," for consideration as an Application Note in Bioinformatics. This work introduces the **Lipid Interactome**, an interactive, centralized resource designed to harmonize, compare, and integrate lipid interactome datasets, adhering to the FAIR (Findable, Accessible, Interoperable, and Reusable) data principles.

Lipid–protein interactions play a crucial role in various cellular processes – and the growing field of photoaffinity-enabled interaction proteomics has allowed for significant progress in identifying the protein interactors of bioactive lipids. To date, there have been no efforts to centralize and consolidate the findings of disparate lipid interactomics studies, which has hindered the systematic study of lipid-binding proteins. The Lipid Interactome addresses this gap by consolidating proteomics data from multifunctional lipid probes into a standardized repository, facilitating comprehensive analysis and fostering new insights in lipidomics research.

The Lipid Interactome integrates diverse datasets into a cohesive, user-friendly platform. Its emphasis on data standardization, interactive visualization, and community engagement aligns with this journal's focus on advancing computational methods for biological data analysis. We believe this resource will be of significant interest to your readership, offering a valuable tool for researchers investigating lipid–protein interactions and their implications in health and disease. See below for a summary of the features of this data repository and information about availability and data submission.

We confirm that this manuscript has not been published elsewhere and is not under consideration by another journal. All authors have approved the manuscript and agree with its submission to Bioinformatics.

Thank you for considering our submission. We look forward to the possibility of contributing to Bioinformatics and are available to address any questions or provide additional information as needed.

Sincerely,

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**Key Features of the Lipid Interactome:**

* **Standardized Data Repository:** Curates and formats lipid interactome proteomics data from multiple studies, ensuring consistency and quality.
* **Interactive Visualizations:** Enables exploration of lipid–protein interactions via dynamic graphs and comparative tools, enhancing data interpretability.
* **Cross-Study Comparisons:** Supports direct analysis of lipid interactomes across different experimental datasets, promoting broader applicability of findings.
* **Data Download:** Provides datasets in .csv format for computational analysis, accommodating diverse research needs.
* **Community Contributions:** Encourages researchers to submit new datasets, fostering collaboration and continuous resource expansion.

**Additional Information:**

* **Availability:** The **Lipid Interactome** is accessible at [LipidInteractome.org](https://www.lipidinteractome.org/), with all datasets freely available for download.
* **Data Submission:** Guidelines for contributing new datasets are provided on the [Data Submission Page](https://www.lipidinteractome.org/DataSubmission.html), encouraging community involvement.