

Peer Review

Review of: "New Approach for Targeting Small Molecule Candidates for Intrinsically Disordered Proteins"

Giuseppe Uras¹

1. University College London, University of London, United Kingdom

The study aims to identify small molecules that can modulate tau protein, a key factor in Alzheimer's disease pathogenesis, using a novel in silico method called ISM-SM (Informational Spectrum Method for Small Molecules). The aim of the study is to discover modulators for intrinsically disordered proteins (IDPs) like tau.

Comments:

- Improve figure legends.
- Clarify the rationale for selecting frequency windows in the ISM spectrum.
- Clarify the biological relevance of each frequency identified. In previous publications by the same authors, frequencies were biologically contextualized by mapping them to specific functional or interaction sites within the protein. A similar analysis would strengthen the current work by providing mechanistic insight into the spectral findings.
- Including some form of control or validation would enhance the quality of the study. For example, a well-characterized compound known to directly interact with tau could serve as a positive control and help highlight the predictive accuracy of the method.
- Improve referencing and clarity of the compound description.
- Provide a clearer comparison between the proposed method and existing approaches.

Declarations

Potential competing interests: No potential competing interests to declare.