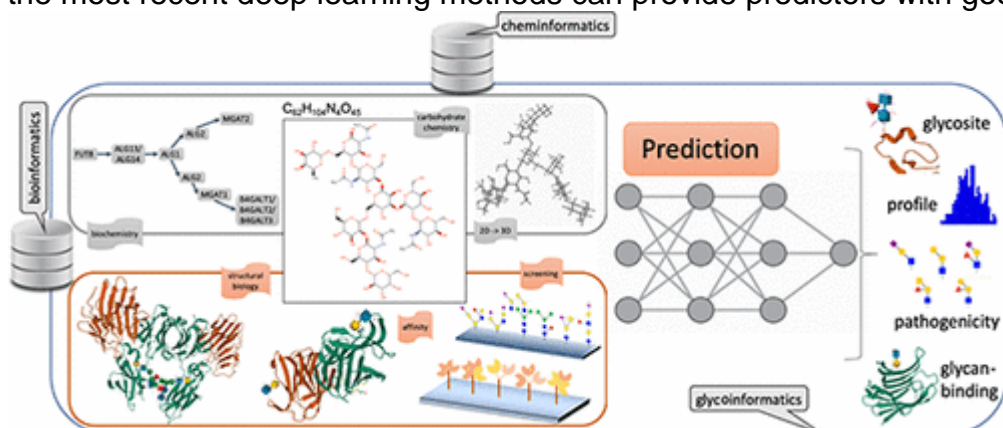


Glycoinformatics in the Artificial Intelligence Era

Description

Artificial intelligence (AI) methods are being increasingly integrated into prediction software implemented in bioinformatics with the emerging glycoinformatics. Their limited use in glycoscience is partly explained by the peculiarities of glyco-data that are notoriously hard to produce and analyze. The accumulation of glycomics, glycoproteomics, and glycan-binding data has reached a point where even the most recent deep learning methods can provide predictors with good performance.



The authors discuss the historical development of the application of various AI methods in the broader field of glycoinformatics. A particular focus is placed on highlighting challenges in glyco-data handling, contextualized by lessons from related disciplines. The future of glycoinformatics is envisioned, including development that must occur to unleash glycoscience's capabilities in the systems biology era.

Category

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