



Contribution ID: 57

Type: **Talk**

Time-Travelling Proteins: Unraveling Biochemical Evolution through Ancestral Sequence Reconstruction

Saturday 20 April 2024 15:05 (20 minutes)

One of the central goals in biochemistry is to reveal the relationships between sequence, structure, and function within protein systems. One way to accomplish this is through a vertical evolutionary approach using Ancestral Sequence Reconstruction (ASR). This method relies on a computational inference of an ancestral protein sequence, followed by an experimental workflow that aims to dissect the protein molecular evolution. This talk will delve into the workflow of such an analysis, highlighting its advantages and notable examples. Additionally, it will explore a specific research case, in which ASR was employed to resurrect ancestral features of a cell division system in Archea, in an effort to trace its biochemical evolution.

Field

Biosciences

Length

Short 15 min

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