

Abstract Submitted
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Does a simple lattice protein exhibit self-organized criticality?

DANA GIBBON, ALISSA RUNYON, ARUN BAJRACHARYA, JOELLE MURRAY, Linfield College — There are many unanswered questions when it comes to protein folding. These questions are interesting because the tertiary structure of proteins determines its functionality in living organisms. How do proteins consistently reach their final tertiary structure from the primary sequence of amino acids? What explains the complexity of tertiary structures? Our research uses a simple hydrophobic-polar lattice-bound computational model to investigate self-organized criticality as a possible mechanism for generating complexity in protein folding and protein tertiary structures.

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