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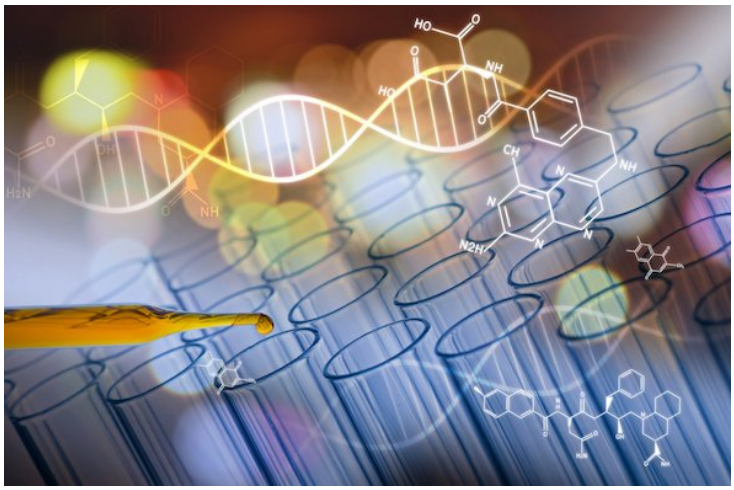
The researchers have come up with a chemical strategy based on the macromolecular mimicry



An interdisciplinary research group led by Prof V. Haridas from the Indian Institute of Technology (IIT) Delhi's Chemistry Department has designed and demonstrated a new strategy for developing potential drug molecules for treating various diseases.

Prof Haridas has collaborated with virologist Prof. Guruprasad Medigeshi from the Translational Health Science and Technology Institute (THSTI), and biochemist Prof. Bishwajit Kundu from the Kusuma School of Biological Sciences, IIT Delhi for this research work.

The researchers utilised the tools of Organic Chemistry and Biophysics to design molecules that target protein interface. They developed a universal privileged scaffold approach for the design of a variety of inhibitors. The universal scaffold could be converted to specific inhibitor for a given Protein-Protein Interaction (PPI), which makes the drug design approach relatively easier.

"We used the macromolecular mimicry strategy to design drug molecules, which could be useful for treatment of Japanese Encephalitis Virus (JEV), the main cause for viral encephalitis in Southeast Asian countries, and protein aggregation diseases such as Alzheimer's and other related diseases. We have also patented the JEV inhibitor drug molecule," Prof Haridas, Chemistry Department, IIT Delhi said.