	Faculty Development Program	

Title : AI-driven RNA 3D Structure Prediction using trRosettaRNA tool

Date : 2025-04-15 - 2025-04-15
Time : 16:00 - 17:30
Venue : SJT-517

Event Outcome

- The participants will gain knowledge of employing the trRosettaRNA tool for RNA 3D structure prediction from RNA sequences.

Resource Person 1 - Details
Name : Dr Adi Idris
Designation : Lecturer in Virology, Centre for Immunology and Infection Control
University/ Company : Queensland University of Technology, Brisbane
Address : Australia, QLD4001.

Resource Person's Profile :

1. Profile of Dr Adi Idris

Dr Adi Idris is a viral immunology and antiviral therapies expert focusing on developing novel therapeutic strategies to treat a range of viral diseases including cancers and communicable diseases using gene editing and silencing technologies. He is an Australian Awards Endeavour Research Fellow 2018. He developed the worlds first RNA-based direct acting antiviral therapy for COVID 19. He is an adjunct faculty of SHINE school in VIT Vellore.

RNA 3D structure prediction is a long-standing challenge. Inspired by the recent breakthrough in protein structure prediction, trRosettaRNA - an automated deep learning-based approach to RNA 3D structure prediction is developed. The trRosettaRNA pipeline comprises two major steps: 1D and 2D geometries prediction by a transformer network; and 3D structure folding by energy minimization.

trRosettaRNA

Coordinator's: **Prof. KAMANASISH BHATTACHARJEE 20203 - Assistant Professor Sr. Grade 1 - SCOPE**
       Prof. YOGENDRA PRATAP SINGH 21846 - Assistant Professor Grade 2 - SHINE