Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad – 500 046

Seminar

Rationally designed biologically active heterochiral peptides with enhanced proteolytic stability

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In our recent work, we demonstrated the design of a hybrid peptide (RR) derived from the native ligand PfRON2 and the R1 peptide obtained from a phage-display screen to generate a highly potent inhibitor of PfAMA1 that targets the invasion of red blood cells (RBC) by malaria parasites. However, despite remarkable inhibitory activity, like most potential therapeutic peptides, it showed extremely poor proteolytic stability and a short half-life in circulating plasma, making it a less bioavailable therapeutic candidate. Our effort to systematically increase the proteolytic stability of the chimeric peptide (RR) without compromising the biological activity using a combination of unique strategies involving incorporation of a series of D-amino acids into the parent peptide sequence and the restriction of the conformational freedom by covalent stitching will be discussed.

Wednesday, Oct 26th 2022

12:00 PM (Tea/Coffee at 11:45 AM)

Auditorium, TIFR-H