

Comprehensive Seminar

Targeting Conserved *P.falciparum* Protein-Protein Interfaces via Antibody-Recruiting Molecules

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Malaria is one of the oldest and deadliest diseases known to mankind, caused by protozoan parasites belonging to the genus *Plasmodium*. Even after decades of clinical research, it still remains difficult to treat due to several factors. These include its complex multi-stage life cycle, antigenic variation and the growing problem of drug-resistant strains, and the waning protection of vaccines. In my talk, I will introduce an emerging concept called Antibody Recruiting Molecule, a ligand-hapten conjugate that can recruit existing endogenous antibodies toward a pathogen. ARM-mediated opsonisation engages Fc-dependent effector mechanisms, including phagocytosis via FcγR, complement activation, and antibody dependent cellular cytotoxicity (ADCC) to drive immune-mediated target clearance. In this presentation, I would like to advance the argument that chemical biology through rational ARM design targeting conserved and essential *P. falciparum* protein-protein interaction (PPI) surfaces offers a promising, affordable and underexplored strategy for antimalarial immunotherapy as a new class of antimalarial.

Friday, May 29th 2026

14:30 Hrs (Tea / Coffee 14:15 Hrs)

Seminar Hall, TIFRH