Work Experience

- **Professor and Head**, Department of Life Sciences, Shiv Nadar Institute of Eminence, Delhi-NCR *2012-2021*
- Group Leader, Panacea Biotech Ltd. New Delhi 2009-2012
- Group Leader, Invitrogen Bio services 2006-2008
- Senior Research Scientist, ICGEB 1999-2006
- Welcome Trust grant to visit the University of Sussex for collaboration
- Research Scientist (DBT), Indian Institute of Science 1995-2006
- Research Associate, University of Maryland, USA 1992-1994

Relevant Publications

- 1. <u>Redefining NSP12 activity in SARS-CoV-2 and its regulation by NSP8</u> and NSP7
- 2. <u>Psoralidin acts as a dual protease inhibitor against PLpro and Mpro of</u> <u>SARS-CoV-2</u>
- **3.** In silico identification of chikungunya virus replication inhibitor validated using biochemical and cell-based approaches
- 4. <u>AGC family kinase of Entamoeba histolytica: Decoding the members</u> <u>biochemically</u>
- 5. <u>Methotrexate, an anti-inflammatory drug, inhibits Hepatitis E viral</u> <u>replication</u>
- 6. Identification of a novel inhibitor of SARS-CoV-2 main protease: an in silico, biochemical, and cell-based approach
- 7. Inhibition of HEV Replication by FDA-Approved RdRp Inhibitors
- 8. <u>Molecular docking and dynamic simulation analysis of Hepatitis E virus</u> protease in complexing with the E64 inhibitor
- 9. P2.09-34 Design, Synthesis and Assessment of Novel Molecule against Drug-Resistant Dual Mutant EGFR (T790M/L858R) to Treat NSCLC
- 10. Interaction of SCoV-2 NSP7 or NSP8 alone with NSP12 causes constriction of the RNA entry channel: Implications for novel RdRp inhibitor drug discovery
- 11. <u>Repurposing of FDA Approved Drugs Against SARS-CoV-2 Papain-Like</u> <u>Protease: Computational, Biochemical, and in vitro Studies</u>
- 12. In silico identification of natural antiviral compounds as a potential inhibitor of chikungunya virus non-structural protein 3 macrodomain

- 13. Inhibition of Hepatitis E Virus Replication by Novel Inhibitor Targeting Methyltransferase
- 14. <u>Hepatitis E Virus Cysteine Protease Has Papain-Like Properties</u> <u>Validated by in silico Modeling and Cell-Free Inhibition Assays</u>
- 15. Development of BacMam-Induced Hepatitis E Virus Replication Model in Hepatoma Cells to Study the Polyprotein Processing
- 16. <u>Heparan Sulfate Proteoglycans Are Required for Cellular Binding of the</u> <u>Hepatitis E Virus ORF2 Capsid Protein and for Viral Infection</u>
- 17. Expression and processing of the Hepatitis E virus ORF1 non-structural polyprotein
- 18. Inhibition of hepatitis B virus DNA replicative intermediate forms by recombinant interferon-y
- 19. <u>Purification and diagnostic utility of a recombinant hepatitis E virus</u> <u>capsid protein expressed in insect larvae</u>
- 20. <u>Bombyx mori nucleopolyhedroviral: Molecular biology and</u> <u>biotechnological applications for large-scale synthesis of recombinant</u> <u>proteins</u>
- 21. <u>The ORF3 Protein of Hepatitis E Virus Binds to Src Homology 3 Domains</u> and Activates MAPK
- 22. <u>Recombinant Bombyx mori Nucleopolyhedroviral Harboring Green</u> <u>Fluorescent Protein</u>
- 23. The mulberry silkworm, a natural bioreactor
- 24. Purification of Oxalyl CoA Synthetase Enzyme from Lathyrus sativus and Raising of Antibodies

Projects Conducted (Industry)

Generation of stable clone for Darbepoetin an erythropoeitin analogue	Company support	Panacea Biotech	Jan, 2012
Development of Mab Etanercept an erythropoietin analogue	Company support	Panacea Biotech	Nov, 2011
Development of Trustuzumap	Company support	Panacea Biotech	April, 2011
HUPO Grant on "locus for hereditary hypotrichosis localized to human chromosome 18	Company support	Invitrogen Bioservices	June, 2008
HUPO Grant on "expression of gold standard markers using Mass spectroscopy".	Company support	Invitrogen Bioservices	June, 2008
Generation of Baculovirus vector with GST Tag	Company support	Invitrogen Bioservices	Dec, 2007

Projects Conducted (Academia)

Development of insects as bio- reactors for protein synthesis	35,00,000	DBT	Dec,2005
Structure characterization and inhibitors Development for HEV Methyltransferase	45,00,000	DBT	2016-2019
Development of an in vitro system for HEV propagation to study polyprotein processing and experimental infection in murine model.	59,10,000	DST	2016-2019

Preclinical Assessment of a novel Tyrosine Kinase Inhibitor, KKI04 as a Promising Therapeutic Agent for Non- Small Cell Lung Cancer (NSCLC) using Mice xenograft model	50,00,000	ICMR	April 2024
Structure-based design of nanobody inhibitors against EGFR: A Protein engineering approach to develop novel therapeutics for lung cancer	64,00,000	ICMR	Sep 2019