

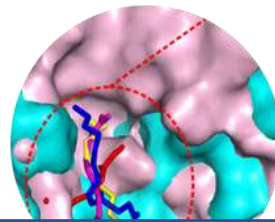


**Department of Zoology
KAKATIYA UNIVERSITY, WARANGAL**

RESEARCH THRUST AREAS



Infectious Diseases



Bioinformatics



Physiology



Environmental Biology



Seri-biotechnology

Infectious Diseases

- Validating ethno-medicines from tribal areas of Telangana with a view to isolation and developing new drug molecule for targeting HIV.
- In vitro HIV type 1 reverse transcriptase inhibitory activities of medicinal plants extracts.
- Isolation, partial purification and characterization of Human immunodeficiency virus (HIV-1) protease inhibitors from fresh water mussels.
- Synthesis, biological evaluation and molecular modelling studies of novel amide and ether conjugates of 2, 3-diaryl-1, 3-thiazolidin-4-ones as HIV-RT inhibitors.
- An ethnobotanical survey of medicinal plants used by traditional Healers of Telangana to treat different infectious diseases.

Bioinformatics

- In silico identification of potential inhibitors from different plants against various target enzymes of diabetes mellitus.
- *In silico* Prediction of different drugs and phytochemicals for SARS-CoV-2 infection via Binding Multiple Drug Targets.
- Different Phytochemicals as promising drug candidates against COVID-19 - an integrated molecular docking and dynamics simulation study,
- Molecular Docking and molecular dynamic simulation studies on different phytochemicals of medicinal plants as potential anti-HIV agent targeting HIV-1 Reverse Transcriptase

Physiology

- Molecular and Biochemical Characterization of Parotoid Gland Secretion and its extract of *Bufo melanostictus* (Schneider).
- Toxic effects of different pesticides on biochemical parameters of freshwater fishes
- Sub lethal effects of Malathion on (An organophosphate) on Biochemical parameters of fresh water fish *L. rohita* (Hamilton)
- The Antifungal Activity of Skin Secretion and its extract of Indian toad *Bufo melanostictus*
- Effect Of different pesticides On Esterase Isozyme Banding Patterns and electrophoretic patterns In Muscle and Brain Of Fresh Water Cat Fish *Heteropneustes fossilis*.

Seri biotechnology

- Studies on DNA and RNA components of nuclear matrix in *Antheraea mylitta*
- Analysis of DNA and RNA components of nuclear matrix in *B. mori* silk glands
- Studies on Genetic Diversity and Population Structure of Tasar Silkworm, *Antheraea mylitta*. Drury
- Genetic characterisation of an I flavivirus associated with a vomiting disease in the Indian tropical tasar silkworm, *Antheraea mylitta*
- Quantitative estimation of proteins in different tissues of V instar larvae, cocoon and yielded silk of tasar silkworm, *A. mylitta* D (Daba BV) treated by polyamines (spermidine, spermine and putrecine),
- NGS Studies and Quantitative Assessment of Cocoon Traits in F1 and F2 Hybrid Populations of Tasar Silkworm.

Environment Biology & Toxicology

- Diversity and density of termite mounds and zooplanktons in forest region of telangana state.
- Foraging activity and Degree of damage caused by subterranean termites in different wild life sanctuaries in and around in Telangana State.
- Limnological studies on fresh water fauna in different wild life sanctuaries in and around in Telangana State.
- Industrial Effluents, Their Bio-Mediation and Their Toxicity - The Chromatographic Evaluation Of ITC Bhardachalam Paper Industry Effluents.
- Study of Heavy Metals Analysis in Municipal Sewage water of telangana state.
- Analysis of Physico-Chemical Parameters of different reservoirs and pond Water in and around of Telangana state.