Centre 8: MADURAI KAMARAJ UNIVERSITY, MADURAI

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Manpower

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Objectives:

1) **Fit-for-purpose diagnostics/surveillance tools**
i) To identify the marker gene for molecular fingerprinting of *Bacillus anthracis* byemploying genome-wide associated studies
ii) To identify novel biomarkers for the rapid diagnosis of anthrax
iii) To understand host pathogen interactions using NGS
2) **Surveillance, epidemiology and risk communication**
i) To sequence the whole genomes of *Bacillus anthracis* strains isolated from infected animals and human, and environmental samples
ii) To identify the marker gene for molecular fingerprinting of *Bacillus anthracis* byemploying genome-wide associated studies
iii) To predict the host-pathogen interactions based on the protein-protein interactionnetworks.
3) **Prevention and outbreak response/intervention**
i) To identify novel targets for therapeutic interventions.
ii) To identify novel vaccine candidates through the pan-genome-based reverse vaccinology strategies.

Role in A-INP Network:

Role will be to identify the marker gene for molecular fingerprinting of *Bacillus anthracis* by employing genome-wide associated studies and develop novel biomarkers for the rapid diagnosis of anthrax. Sequencing of the whole genomes of *B. anthracis* strains isolated from infected animals and human, and environmental samples, predicting the host-pathogen interactions based on the protein-protein interaction, identify novel targets for therapeutic interventions and to identify novel vaccine candidates through the pan-genome-based reverse vaccinology strategies.