

New insight into how bacterial communicate socially in natural host

By Dr. Bilqeesa Bhat

Research carried out at Hyderabad based research institute, the Centre for DNA Fingerprinting and Diagnostics (CDFD) reported for first time that phenotypic heterogeneity in cell-cell communication or quorum sensing in bacteria is very important for causing disease. Understanding this heterogeneity process will enable researchers/scientists to devise strategies in future to alter the bacterial switch between homogeneous and heterogeneous sub population, which may greatly facilitate antibiotic treatment or antimicrobial therapy.

Several bacteria cause severe infection in human and other living organism. Bacteria communicate and coordinate by producing and sensing signalling molecules in group. The bacteria maintain two population one active and other silent to do two functions. One is causing disease and infection and the other silent population is maintained as a backup for any antibacterial challenge and to cope up any host response to eliminate infection. This work has elucidated secret communication strategies which bacteria utilize in the natural environment to facilitate their spread and survival.

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