

## CHAPTER III

### Objectives

1. To isolate and characterize the *sakA* and *atfA* genes from *P. marneffeii*.
2. To generate *P. marneffeii sakA* and *atfA* mutant strains.
3. To construct *P. marneffeii sakA* and *atfA* complemented strains.
4. To demonstrate the phenotypes associated with morphologies, asexual development, susceptibilities to osmotic, oxidative, cell wall, UV and heat stress and survival inside macrophages in *P. marneffeii sakA* and *atfA* mutants comparing with wild type and complemented strains.