2. AIM AND OBJECTIVES OF THE STUDY

Bacterial urinary tract infection (UTI) becomes the most common type of infection affecting the urinary tract and causing inflammation of bladder and kidneys. Most of the clinicians prescribe antibiotics to treat UTI infections, resulting in failure of treatment in many cases due to occurrence of bacterial drug resistance. The purpose of this study to know the bacterial causative agents causing UTI, antimicrobial susceptibility pattern of isolates and plasmid profile of different age group of persons from Government hospital, Namakkal, Tamil nadu, India.

The present study approaches the following objectives:

- Isolation, identification and characterization of urinary tract infection causing bacteria.
- Incidence of UTI among various patients on the basis of age, sex and socioeconomic status.
- To ascertain the antibiotic sensitivity pattern of the bacterial isolates.
- To ascertain the antibiotic resistant pattern of the bacterial isolates.
- To determine the virulence factor of the bacterial isolates.
- To study the plasmid profile antibiotic resistant bacterial isolates.
- To study the antibiotic resistant characteristics by multiplex PCR.
- Phylogenetic analysis of the isolates on the basis of 16s rRNA sequences and their genetic relatedness.