Aim and Objectives
2.0. AIM AND OBJECTIVES

The present investigation has been undertaken to portray the urinary tract infection in various parts of the Kanyakumari District to isolate and identify the presence of antibiotic resistant urinary tract infecting bacterial pathogen and find out the alternative therapeutics agents from mangrove plants. The study was planned

1. Survey of the incidences of urinary tract infection among people living in different localities like land, hill and coastal regions so as to establish the prevalence of the disease in various localities of the district

2. The urinary tract bacterial pathogen commonly encountered in patients suffering from UTI and recording them after isolation and identification

3. Antibiotic sensitivity assay to record the antibiotic resistant bacteria in UTI case of this area.

4. Selecting the mangrove plants available in this area and extracting the bioactive principle from various parts of the selected plants
5. Determining the antibiotic efficiency of bioactive compounds extracted from mangrove plants on antibiotic resistant urinary tract infectious bacterial pathogens.

6. Toxicity studies of the most effective mangrove herbal bioactive principle in albino mice and rats in order use them safely in human beings.
LOCATION OF STUDY AREA

INDIA

TAMILNADU

KANYA KUMARI DISTRICT

KERALA STATE

KOTHAYAR

PECHIPPARI

THUVATTER

THIRUVANADU

MELPURAM

MUNCHIRA

TIRUNELVELI DISTRICT

THUCLAY

NAGERCOIL

COLAGHEL

RAJAKKAMANGALAM

INDIAN OCEAN

GULF OF MANAR
PLAN OF WORK

Survey of UTI in Kannakumari district

- Land
  1. Nagercoil
  2. Thauklay

- Coastal
  1. Colachel
  2. Rajakkamangalam

- Hills
  1. Kothayar
  2. Peechipari

Mid stream urine sample collection from suspected UTI patients
Males - 75 : Females - 75

Staining method
1. Grams Staining

Biochemical tests
1. TSI
2. Mannitol
3. Indole
4. Methyl red
5. Voges-Proskauer
6. Citrate
7. Urease
8. Oxidase
9. Catalase

Isolation of antibiotic resistant strains by using commercial antibiotics

Mangrove Plant species and parts used
Separation of Mangrove plant extract by using ethanol solvent

Evaluation of antimicrobial activity of Mangrove extract against UTI drug resistant bacterial pathogens
1. Pseudomonas aeruginosa
2. Klebsiella pneumoniae
3. Enterobacter
4. Proteus morgoni
5. Escherichia coli
6. Staphylococcus aureus

Toxicity Studies in Albino mice model
1. Acute toxicity studies.
2. Subacute toxicity studies.

1. Avicennia marina – Bark, Flower, Leaf
2. Bruguiera cylindrica
3. Ceriops ecandra Collar, Hypocotyl, Leaf
4. Lumnitzera racemosa
5. Leafe, Stem
6. Rhizophora apiculata Bark
7. Suada maritima Leaf