AIM

The present study aims at identifying the vancomycin resistance and intermediate both phenotypically and genotypically among the MRSA isolates from a tertiary care hospital in Kanpur and selection of the most effective plant extract showing highest activity of zone of inhibition.
Our study is focus on the following objectives:

1. To screen, isolate *staphylococcus aureus* from patients population and detection of VRSA and VISA among the MRSA isolates.

2. To study the antibiotic resistance pattern present in these isolates.

3. Isolation and purification of phytomolecules from the plants *Allium sativum* and *Cannabis sativa* with the use of column and HPL chromatography techniques.

4. To study the inhibitory effect of plant extracts of *Allium sativum* and *cannabis sativa* from the crude plant extract as well as from the purified compounds on the VRSA and VISA strains among the MRSA isolates.

5. To optimise the effective dose of the final purified compounds.

6. To perform PCR for the detection of Van A gene at a molecular level in VRSA and VISA strains among MRSA isolates from a tertiary care hospital in Kanpur.

7. Identification of an alternative and safer antimicrobial substance for the control of VISA and VRSA among the MRSA isolates to combat this world wide problem.