HYPOTHESIS

 ► The increase in isolates of *S. aureus* with resistance to methicillin and decreased susceptibility to vancomycin has created an urgent and consideration need for the development of new anti-staphylococcal agents that kill the resistant mutants.

 ► So, the identification of an alternative and safer drug for the control of MRSA is necessary to combat this worldwide problem.

 ► Nature is the only source to provide a good variety of chemical compounds that can be used for new drug discovery especially from mineral, plant and animal products.

 ► These metabolites includes flavonoids, phenols and phenolic glycosides, saponins, cyanogenic glycosides, unsaturated lactones and glucosinolates.

 ► Recent studies showed the plants either as pure compounds or as standardized extracts, supported to demonstrate unlimited opportunities for new drug discovery with different chemical nature.

 ► These types of studies should continue and a number of pivotal quality standards need to be set at a level of extract detection, processing and primary evaluation in pharmacological screening models.

 ► Many researchers have conducted antimicrobial screening of plant extracts or isolated compounds.

 ► The screening of plant extracts for the detection of its antimicrobial activity is by itself a research area of major significance with resistance modifying action of interest.

 ► Chances have increased in the emergence of Vancomycin resistance and Vancomycin intermediate MRSA among *S. aureus* and excessive use of antimicrobial agents have worsened the sensitivity. My study aims in isolating VRSA and VISA among MRSA isolates from tertiary care hospitals in Kanpur, Uttar Pradesh, and to determine the sensitivity of these isolates to different antimicrobial agents. My study aims in finding the antimicrobial activity of the plants extracts of *Allium sativum* and *cannabis sativa* which are active against MRSA and also in investigation of the plant extract which could be more effective than the antibiotic Vancomycin, thus showing greater zone of inhibition and providing promising results.

 ► Further search is also conducted for the VanA gene in VRSA strains.

 ► My study could add a additional help for the treatment as now a days, drug resistance have become a major problem in most percent of individuals from a population and also could be of great help in solving the problem of Drug resistance.