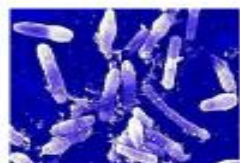
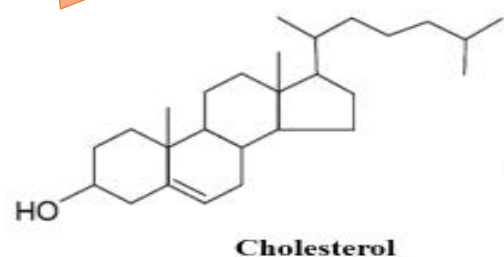


Cholesterol degradation and production of extracellular cholesterol oxidase from *Bacillus pumilus* W1 and *Serratia marcescens* W8.

Graphical Abstract



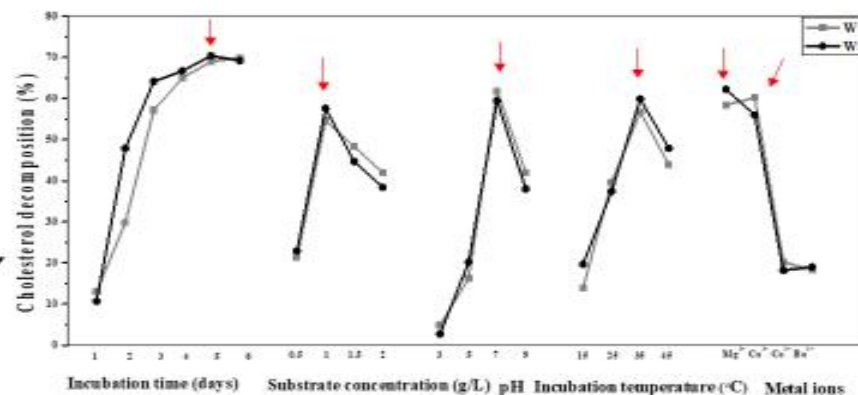
Bacillus pumilus cells



Serratia marcescens cells



Cholesterol degradation



Cholesterol oxidase production



Cholesterol oxidase indicator plate With Cholesterol and *Bacillus pumilus* W1 + *Serratia marcescens* W8.

The paper describes degradation of cholesterol by bacterial isolates. The enzyme in the process was identified as cholesterol oxidase by plate assay producing color on indicator plates. The degradation of cholesterol was the maximum at 5 days of incubation, with 1g/L substrate concentration, at pH 7.0 and 35°C in M9 medium with cholesterol as sole carbon and energy source. Metal ions, Ca⁺² and Mg⁺² had positive effect while Co⁺² and Zn⁺² showed negative effect on degradation. The study revealed potential of bacterial enzymes for medical bioremediation of age related products in the body.