

## Thesis title

# Isolation of the antibiotic antitumor alboZ from the local isolate of *Streptomyces alboflavus* and improving its production

## Summary

The antibiotic alboZ was isolated and purified from culture broth and mycelium of *Streptomyces alboflavus*. alboZ has a broad spectrum of antimicrobial activity against Gram-positive and negative bacteria. Studying the physical and chemical properties of antibiotic were studied using thin layer chromatography, IR-spectrum, UV-spectrum, NMR-spectrum and solubility. Minimum inhibitory concentration was tested against five isolates of Gram positive and negative bacteria. Toxic effect of the alboZ determined by LD50 of laboratory animals. Testing of the antitumor activity showed that the antibiotic antitumor activity through its induction of prophage ( $\lambda$  phage). Two mutants from the exposure to gamma radiation and EMS were obtained (*S.alboflavus*  $\gamma$ 2 and *S.alboflavus*  $\gamma$ 2E200), these mutants exhibited a maximum production of 1.5 and 3 g/L of antibiotic compared with wild isolate which of 1 g/L.