BACTERIAL RESISTANCE TO SILVER — A NEW OR AN OLD PROBLEM?

Summary

Silver has been known for its antibacterial activity since ancient times. First information about silver resistant microorganisms has appeared in 1975. Mechanism of resistance and biological activity of silver have been described as interaction between bacteria and silver ions (Ag+). Silver is one of many alternative ways of killing bacteria. For a long time silver has been used in medicine as silver nitrate or silver sulfadiazine. Progress in bionanotechnology offers us novel possibilities in production of silver -containing structures of high biological activity. Nanoparticles have bigger surface contact area and indicate higher biological activity than their larger equivalents. Due to broadening industrial usage of silver nanoparticles (often unreasonable) there is growing risk of appearance of microoganisms resistantce to silver.