



New strategies to combat bacterial infections

Disease-causing bacteria that resist antibiotic treatment are now widespread in every part of the world and have reached "alarming levels" in many areas as stated by the World Health Organization. "The problem is so serious that it threatens the achievements of modern medicine," entering to *A post-antibiotic era* in which common infections and minor injuries can kill. Nowadays, bacterial biofilm-based infections have emerged as a major public health concern.

We aim to explore and characterize new antimicrobial molecules that specifically inhibit bacterial DNA replication. In addition to new strategies based on nanoparticles to deliver new and pre-existing antimicrobials with the capacity to evade the immune system and able to penetrate formed bacterial biofilms.