

NANOPARTICULATE AND CONTROLLED RELEASE COMPOSITIONS COMPRISING A CEPHALOSPORIN

ABSTRACT

The present invention is directed to compositions comprising a nanoparticulate antibiotic having improved bioavailability. Preferably, the antibiotic comprises nanoparticulate cephalosporin particles with an effective average particle size of less than about 2000 nm and are useful in the treatment of bacterial infection. The invention also relates to a controlled release composition comprising a cephalosporin or a nanoparticulate cephalosporin that in operation delivers the drug in a pulsed or bimodal manner for the treatment of bacterial infection. The nanoparticulate cephalosporin particles may be formulated as a controlled release drug delivery system whereby the particles are coated one or more times with one or more natural or synthetic hydrophilic or hydrophobic polymer coating materials or dispersed throughout a natural or synthetic hydrophilic and/or hydrophobic polymer matrix.

(no figure)