



## What is a CIA?

Antibiotics that are used in human health are classified by the World Health Organisation as being 'critically important', 'highly important' and 'important' to human health. **Critically Important Antibiotics (CIAs)** are the most important and a number of these are currently licensed for veterinary use. There are only a limited number of antibiotics overall and so at times the same classes of antibiotics are used in both people and animals. It is crucial that these medically important antibiotics are available and effective in the future.

Some classes of CIAs are regarded as 'highest priority'. These **Highest-Priority CIAs (HP-CIAs)** are regarded as critical for human medicine. The development of widespread resistance to them by bacteria that cause human illness is a very serious threat to human health. Resistance can arise through the overuse of antimicrobials in human and veterinary medicine. Therefore, the use of HP-CIAs must be limited to reduce the risk of resistance developing. They should not be used in disease prevention and their use in animals should be limited to the rare occasions where no effective alternatives exist.

HP-CIA class	Antibiotic	Reason for being 'highest priority'*
Fluoroquinolones	Enrofloxacin Marbofloxacin Danofloxacin	Quinolones are known to select for Quinolone-resistant <i>Salmonella</i> and <i>E coli</i> in animals; fluoroquinolones are needed for serious <i>Salmonella</i> and <i>E coli</i> infections in humans.
Polymixins	Colistin	Polymixins are known to select for Polymyxin-resistant <i>E. coli</i> in food animals; intravenous polymyxins are one of few available therapies for serious <i>Enterobacteriaceae</i> and <i>Pseudomonas aeruginosa</i> multi-resistant infections in people, especially in seriously ill patients in critical care.
Cephalosporins	Cefoperazone Cefquinome Ceftiofur	Cephalosporins are known to select for cephalosporin-resistant <i>Salmonella</i> and <i>E. coli</i> in animals; they are needed for serious <i>Salmonella</i> and <i>E. coli</i> infections in humans, particularly in children.

\* There is a high incidence of the diseases listed in humans, so the number of human cases where these antibiotics are needed is considered as being substantial