



Position on Responsible Use of Antibiotics in Animals

Zoetis supports the responsible use of antibiotic medicines in animals and in people. With few alternatives today for treating life-threatening bacterial infections in animals, antibiotics are essential to animal health and, in turn, to their welfare.

Our vision is a world where veterinary antibiotics are used responsibly in animals, and where they maintain their value as a therapeutic tool. As part of our commitment to responsibly using antibiotics in animals we do not sell medically important antibiotics (as classified by the U.S. Food & Drug Administration) for growth promotion in animals anywhere in the world. This change took effect in the EU at the beginning of 2006, in the U.S. at the beginning of 2017, and in remaining countries by June 2020.

Our commitment to responsible use of antibiotics in animals includes the following components:

We **advocate** for the health of animals and for the veterinarians and livestock farmers who care for them.

- We believe that veterinary professionals should be involved in all decisions about the use of antibiotic medicines in animals to protect animal and human health, to assure the safety of the food supply, and to help reduce the risk of resistance.
- Our priority is to help our customers prevent disease in animals – through the use of vaccines and good animal husbandry techniques – and reduce the need to treat disease with an antibiotic. We provide a range of animal health solutions to help veterinarians and livestock farmers care for animals. These tools include vaccines to help prevent disease; genetic tests and pioneering digital innovation to help predict disease earlier than ever before; diagnostics to detect disease and monitor health with point-of-care tools. And, when disease occurs, we believe veterinarians are in the best position to prescribe appropriate therapy, including antibiotics, and ensure responsible use.
- Our technical service veterinarians and field representatives support our customers by sharing knowledge on responsible use of our antibiotic medicines, as well as practices such as vaccination and other husbandry protocols that can help prevent common diseases.

We **innovate** by investing in research and development across the continuum of care to provide our customers with new and enhanced solutions to better predict, prevent, detect and treat disease in their animals. We support reducing the need to use antibiotics by encouraging a preventative approach through good animal husbandry,

nutrition, vaccination programs, and our programs emphasize helping our customers prevent disease – through vaccines targeted against viral and bacterial pathogens, for example – which can help reduce the need to use antibiotics for treatment. We’re also exploring additional diagnostics, immunomodulators, and other pathways, as well as precision animal health tools including genetic tests plus digital technologies and data analytics that can help livestock producers make earlier and more informed healthcare decisions for their animals. Despite the best of preventative care, disease can still occur, and treatment may be needed. To ensure viable treatment options for veterinary use, our scientists are looking for new classes of antibiotics for veterinary use only and novel, non-antibiotic anti-infective solutions.

We **collaborate** in a One Health approach, working with leaders from the veterinary and human health professions, food industry, and public health to advance the responsible use of antibiotics and preserve animal health and welfare.

- Surveillance monitoring – we conduct surveillance for antimicrobial resistance in pathogens that threaten the health of animal species to help preserve the efficacy of antibiotics. In 1998, Zoetis began actively monitoring the antimicrobial susceptibility of our approved products labeled for bovine and swine bacterial disease pathogens^{1,2,3,4} to identify potential changes in susceptibility and ultimately help ensure antibiotics remain effective. The program has grown to include 29 bacterial pathogens from 5 animal species through the participation of 32 veterinary diagnostic laboratories in the U.S. and Canada. Our program expanded to include monitoring bovine mastitis pathogens in 2001⁵, equine pathogens in 2010⁶ and canine and feline skin and soft tissue and urinary tract infection pathogens in 2017,⁸
- BCUN (Business Council of the United Nations) – Zoetis continues to participate in the Antimicrobial Resistance activities such as Food Safety Summit, World Antimicrobial Awareness Week, and Virtual Call to Action on AMR Conference.
- ICASA (International Consortium on Antimicrobial Stewardship in Agriculture) – we are actively advancing research to understand disease drivers so that we can reduce the need to use antibiotics. The collective investment in research yields practical solutions, such as new technologies and management practices that promote responsible use of antibiotics, raise healthier more productive livestock and improve animal welfare.
- TFAMR (Codex Task Force on Antimicrobial Resistance) – to develop both the Code of Practice and Integrated Surveillance documents, Zoetis has participated since 2010 as either a member of **HealthforAnimals** or the

¹ Portis E, Lindeman C, Johansen L, Stoltman G. A ten-year (2000-2009) study of antimicrobial susceptibility of bacteria that cause bovine respiratory disease complex--Mannheimia haemolytica, Pasteurella multocida, and Histophilus somni--in the United States and Canada. J Vet Diagn Invest. 2012 Sep;24(5):932-44. doi: 10.1177/1040638712457559. PMID: 22914822.

² Portis E, Lindeman C, Johansen L, Stoltman G. Antimicrobial susceptibility of porcine Pasteurella multocida, Streptococcus suis, and Actinobacillus pleuropneumoniae from the United States and Canada, 2001 to 2010. J Swine Health and Prod. 2013;21:30-41.

³ Sweeney MT, Lindeman C, Johansen L, et al. Antimicrobial susceptibility of Actinobacillus pleuropneumoniae, Pasteurella multocida, Streptococcus suis, and Bordetella bronchiseptica isolated from pigs in the United States and Canada, 2011 to 2015. J Swine Health Prod. 2017;25(3):106-120.

⁴ Sweeney MT, Gunneth LA, Kumar DM, Lunt BL, Galina Pantoja L, Bade D, Machin C. Antimicrobial susceptibility of Actinobacillus pleuropneumoniae, Bordetella bronchiseptica, Pasteurella multocida, and Streptococcus suis isolated from diseased pigs in the United States and Canada, 2016 to 2020. J Swine Health Prod. 2022;30(3):130-144. <https://doi.org/10.54846/jshap/1282>

⁵ Lindeman CJ, Portis E, Johansen L, Mullins LM, Stoltman GA. Susceptibility to antimicrobial agents among bovine mastitis pathogens isolated from North American dairy cattle, 2002-2010. Journal of Veterinary Diagnostic Investigation. 2013;25(5):581-591. doi: [10.1177/1040638713498085](https://doi.org/10.1177/1040638713498085)

⁶ L. Johansen, C. Lindeman, S. Kotarski, J. Donecker, M. Crisman, C. North, J. Boggs. Minimal inhibitory concentrations of frequently used antimicrobial agents against equine pathogens isolated from 2010-2012. Poster E-54 at 2014 ACVIM Forum – Abstract published: J Vet Intern Med 2014;28:976-1134. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/jvim.12361>

⁷ L. Johansen, C. Lindeman, D. Bade, A. Trettien. Antimicrobial susceptibility of Staphylococcus pseudintermedius isolated from canine skin and soft tissue infections isolated from 2011-2015. Poster Abstract, 2017 North American Veterinary Dermatology (NAVDF) Forum 26-29 April 2017 Orlando, Poster #37. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/vde.12452>

⁸ L. Johansen, C. Lindeman, D. Bade, G. Rodgers. Minimal Inhibitory Concentrations of Antimicrobials Against Escherichia coli Isolated from Companion Animal Urinary Tract Infections. Poster ID18 at 2017 ACVIM Forum – Abstract published: J Vet Intern Med 2017; 31:1225-1361. [ps://onlinelibrary.wiley.com/doi/epdf/10.1111/jvim.14778](https://onlinelibrary.wiley.com/doi/epdf/10.1111/jvim.14778)

United States Delegations to the task force. Both the Code of Practice and the Integrated Surveillance documents provide specific guidance on the responsible use of antibiotics in veterinary medicine as well as the development of country-based surveillance programs for quantitating change in AMR resulting from these practices.

- Alianca in Brazil – providing educational content and training to veterinarians on responsible use of antibiotics.

We recognize that animal and human health are interdependent. Zoetis advocates for taking a One Health approach to the responsible use of antibiotics across human and veterinary medicine. Healthy animals help reduce the risk of zoonotic infectious diseases that can pass between animals and people. And healthy livestock, poultry, and fish are essential to a safe, sustainable food supply. Responsible use of antibiotics in food-producing animals makes a difference in being able to meet the challenge of maintaining and increasing food safety and food security.