

Antimicrobials and antimicrobial resistance

Dr. Patrick Craig



Antimicrobials are substances of natural, synthetic or semisynthetic origin that kill or stop the growth of microorganisms but cause little to no damage to the host. They include agents that act against bacteria (antibacterial), viruses (antiviral), fungi (antifungal) and protozoa (antiprotozoal). These are used in the treatment of infections in animals or humans and are sometimes used in animal feeds to prevent various illnesses and for growth promotion.

The introduction of antimicrobials has had major benefits for both animals and humans alike. They have helped to reduce pain and suffering in animals, to ensure continuous production of safe foods of animal origin, to prevent the shedding of diseases into the environment and the food chain which can affect both animals and humans (zoonosis), and, most importantly, they help to prevent or stop large scale epidemics that could potentially result in significant loss of animal and human lives.

It is therefore clear that the proper use of antibiotics in veterinary medicine has many advantages beyond just the treatment of illnesses in animals, but also for the economic benefits to food animal producers and the protection of human health.

Because of the risk, however, of breeding resistant microorganisms that would be unresponsive to current drugs used in both animals and humans, the unnecessary application or overuse of antimicrobial drugs must be curtailed. Optimal selection of antimicrobial drugs based on correct diagnosis and the correct dose and duration of treatment to ensure that microorganisms are completely eliminated are important to slow the emergence of antimicrobial resistance.



Dr. Gabrielle Young (left) and Dr. Patrick Craig (right) of the Caribbean Broilers Group treat a pig.

Veterinarians are at the forefront in upholding the judicious use of antimicrobials in animals and serve a dual role in protecting the welfare of animals while safeguarding the interest of public health.

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