American Public Health Association Interim Policy
Adopted by the Governing Council November 15, 2000

LB-00-5: Addressing the Use of Fluoroquinolone Antibiotics in Agriculture

The American Public Health Association,

Recognizing that fluoroquinolone antibiotics are the treatment of choice for some human gastrointestinal infections, particularly severe food-borne illness caused by *Campylobacter* or *Salmonellae* bacteria; and that fluoroquinolones also are used to treat urinary tract infections, bone and joint infections, some types of pneumonia, and other human illness; and

Further recognizing that *Campylobacte*r, as the most common cause of food-borne illness in the U.S., accounts for nearly two million illnesses and about 100 deaths each year, according to estimates by the Centers for Disease Control (1); while *Salmonellae* bacteria are the leading cause of food-borne disease in many other countries (2), and in the U.S. account for an estimated 1.3 million food-borne illnesses and around 550 deaths each year (3);

Understanding that fluoroquinolones closely related to those used in humans are also used in poultry, which are a leading source of human food-borne illnesses (4), and that use in poultry has contributed to the generation of fluoroquinolone-resistant *Campylobacte*r (5), as well as resistant *Salmonellae* (6); and

Acknowledging that while treatment of human disease with fluoroquinolones began in 1986, little resistance developed in the U.S. until the first fluoroquinolone was approved for use in poultry in 1995, but resistance has since increased rapidly. By 1998, for example, the Centers for Disease Control found that over 13 percent of food-borne *Campylobacter* was resistant to fluoroquinolones, a figure which had risen to nearly 18 percent by 1999 (7,8);

Acknowledging that for immuno-compromised and other vulnerable patients, such as children and the elderly, antibiotic resistant strains of *Campylobacter* and *Salmonellae* can pose a serious and potentially fatal problem (9); also acknowledging that even in otherwise healthy patients, infection by fluoroquinolone-resistant strains of Campylobacter can lead to longer duration of symptoms; and

Recognizing that fluoroquinolone resistance is only part of a more widespread problem that has resulted in bacterial resistance to *all* available antibiotics (10), and that this widespread problem is addressed by APHA policy #9908; and

Recognizing that of the two fluoroquinolones used in poultry over the last five years, Abbott Laboratories has already requested that FDA withdraw the authorization for use of one, while the other, enrofloxacin, manufactured by Bayer Corporation, remains on the market;

Recognizing that at the time FDA first approved the application for use of enrofloxacin in poultry, the potential for antibiotic resistance was anticipated, and a stipulation was added to the application that the drug's sponsor had to agree to participate in a surveillance program for antibiotic resistance (11);

Recognizing that on October 31, 2000, the Food and Drug Administration's Center for Veterinary Medicine issued a Notice of Opportunity for American Journal of Public Health 43 March 2001, Vol. 91, No. 3 Hearing on a proposed withdrawal of authorization for use of enrofloxacin (12);

understanding that the FDA docket for this Notice provides extensive scientific evidence supporting the proposed action (13); and noting that the Notice provides Bayer Corporation thirty days to object to the proposed withdrawal, by requesting a hearing; therefore

1. Strongly supports the FDA's proposed withdrawal of remaining uses of fluoroquinolones in poultry as a firm step to meeting recommendations in APHA Policy #9908 that urged "the Center of Veterinary Medicine of the FDA to work for regulations eliminating the non-medical use of antibiotics and limiting the use of antibiotics in animal feeds".

2. Supports the FDA action as being firmly grounded in existing science and in public health protection;

3. Calls upon the manufacturers of enrofloxacin to voluntarily withdraw their product from world-wide use in poultry, recognizing that to do so constitutes the quickest, most responsible way to address the public health threat.

References

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2. Malorny B, Schrotter A, Helmuth R, Incidence of Quinolone Resistance Over the Period 1986 to 1998 in Veterinary Salmonella Isolates in Germany, Antimicrobial Agents and Chemotherapy 43: 2278-2282, 1999.

3. Mead et al., 1999.

4. Altekruse, SF, et. al., Campylobacter jejuni- an Emerging Foodborne Pathogen, 1999 Jan-Mar 5(1):. Available from: URL: www.cdc .gov/ncidod/eid/vol5no1/altekruse.htm.

5. Smith KE, Besser JM, Hedberg CW, Leano FT, Bender JB, et al., Quinolone-resistant campylobacter jejuni infections in Minnesota, 1992- 1998, *N Engl J Med* 1999;340: 1525-32.

6. Malorny et al., 1999.

7. Centers for Disease Control and Prevention, 1998 Annual Report NARMS National Antimicrobial Resistance Monitoring System: Enteric Bacteria, at www.cdc.gov/ncidod/dbmd/narms/annuals.htm.

8. Centers for Disease Control and Prevention, 1999 Annual Report NARMS National Antimicrobial Resistance Monitoring System: Enteric Bacteria, at www.cdc.gov/ncidod/dbmd/narms/annuals.htm.

9. Wegener HC (editorial), The Consequences for Food Safety of the Use of Fluoroquinolones in Food Animals, N Engl J Med 340(20), May 20, 1999, at www.nejm.org.

10. Levy SB. Clinical Care. *Resistant Organisms: Global Impact on Continuum of Care.* International Congress and Symposium Series 220, 1998.

11. New Animal Drug Application (NADA) 140-828, for Baytril 3.23% Concentrate Antimicrobial Solution, approved by the Food and Drug Administration, Department of Health and Human Services, October 4, 1996.

12. Food and Drug Administration, HHS, FR Notice Vol. 65, No. 211, 64954-64965, docket no. 00N-1571, October 31, 2000, www.fda.gov/OHRMS/DOCKETS/98fr/103100co.htm.

13. Food and Drug Administration, HHS, docket no. 00N-1571, www.fda.gov/OHRMS/DOCKETS.