

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

NATURAL RESOURCES DEFENSE)
COUNCIL, INC.; CENTER FOR SCIENCE)
IN THE PUBLIC INTEREST; FOOD)
ANIMAL CONCERNS TRUST; PUBLIC)
CITIZEN, INC.; and UNION OF)
CONCERNED SCIENTISTS, INC.,)

Plaintiffs,)

v.)

UNITED STATES FOOD AND DRUG)
ADMINISTRATION; MARGARET)
HAMBURG, in her official capacity as)
Commissioner, United States Food and Drug)
Administration; CENTER FOR)
VETERINARY MEDICINE; BERNADETTE)
DUNHAM, in her official capacity as)
Director, Center for Veterinary Medicine;)
UNITED STATES DEPARTMENT OF)
HEALTH AND HUMAN SERVICES; and)
KATHLEEN SEBELIUS, in her official)
capacity as Secretary, United States)
Department of Health and Human Services,)

Defendants.)

11 CIV 3562 (THK)
ECF Case

**DECLARATION OF
MAX KAHN**

I, Max Kahn, declare as follows:

1. I am a member of the Natural Resources Defense Council, and have been since 2006.
2. I have been practicing general pediatrics for thirty-two years. My office is currently located at 390 West End Avenue, New York, NY 10024.
3. Like any responsible pediatrician, I am concerned about antibiotic resistance. Antibiotics are only useful if they kill the pathogens. I take great pains not to prescribe

antibiotics unnecessarily because I don't want to encourage the growth of resistant bacteria. This has always been a concern of mine, and it's how I was trained in medical school forty years ago. Limited use of antibiotics is a cornerstone of modern academically based medicine. Concern about antibiotic resistance has been a regular theme of outpatient practice in pediatrics since the 1960s and 1970s, when more resistance started to emerge.

4. I am a member of the American Academy of Pediatrics (AAP). I have read AAP's technical report entitled "Nontherapeutic Use of Antimicrobial Agents in Animal Agriculture: Implications for Pediatrics" (attached as Exhibit A). Like other practitioners in my field, I rely on such reports from AAP and generally consider them authoritative.

5. I am troubled by the agricultural practice of adding antibiotics to the feed of healthy livestock. It seems logical to me that this practice is related to the spread of antibiotic-resistant bacteria through the human population. It bothers me that while my colleagues and I spend a lot of our time trying to make sure we use antibiotics in judicious ways, farmers are giving them indiscriminately to animals that are not infected.

6. The rise of antibiotic resistance has had several effects on my practice. Most antibiotics used in pediatrics are in the beta-lactam family, specifically penicillins and cephalosporins. In general, I prescribe a wider range of antibiotics than I did twenty years ago because certain bacteria have developed resistance to some of the previously more commonly used drugs. Although I would like to prescribe amoxicillin, a simple penicillin-type drug, there are many infections that amoxicillin is no longer effective at treating. Some of the alternative drugs that we have to use are less palatable to children, and are more likely to produce side effects.

7. Even where amoxicillin is still effective, we now often have to use higher doses of it because of the resistance that has emerged. For example, I commonly prescribe amoxicillin for ear infections and pneumonia because many are caused by Haemophilus influenzae and pneumococcus. Because many strains of bacteria have developed partial resistance, we now use twice as high a dose of amoxicillin as before. I would prefer to use lower doses because at the higher dosage, the children I treat are more likely to experience side effects, such as an upset stomach and diarrhea. But too often, the lower dose is no longer effective.

8. In the treatment of urinary tract infections twenty to thirty years ago, we could count on amoxicillin to treat most uncomplicated cases. Now it is common for urinary tract pathogens to be resistant to all penicillins, thus requiring the use of a third-generation cephalosporin such as cefixime, or a fluoroquinolone, at much higher cost and risk of side effects. Because it is bacteria from the intestinal tract that usually cause urinary infections, the widespread presence of antibiotics in the food supply and the drug resistance they engender are particularly acute concerns in this area of medical practice.

9. I am concerned that in the future the beta-lactam antibiotics we have now won't be useful at all. In the 1970s and 1980s, there was much progress in the development of new antibiotics, particularly in the cephalosporin class. This made it much easier to keep up with emerging resistance in disease-causing bacteria. Now, however, we're not seeing the development of new antibiotics that we did years ago. I worry about losing the utility of the antibiotics we have, and not having new ones to replace them.

10. It would be better for human health and for patients in my own practice if routine uses of antibiotics in healthy livestock were discontinued. The rate at which bacteria are

developing resistance to antibiotics would decrease, and we would have a better chance of preserving these important drugs for human therapy.

I declare under penalty of perjury that the foregoing is true and correct, to the best of my knowledge, information, and belief.

Executed on September 27, 2011, at New York, New York.

Handwritten signature of Max Kahn, M.D. in black ink, consisting of stylized initials 'M. Kahn, MD'.

Max Kahn, M.D.