

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

**GOVERNMENT ACCOUNTABILITY)
PROJECT,)**

Plaintiff,)

v.)

Civ. No. 1:12-cv-01954 (KBJ)

**FOOD AND DRUG ADMINISTRATION)
U.S. DEPARTMENT OF HEALTH AND)
HUMAN SERVICES,)**

Defendant.)

DECLARATION OF RICHARD A. LEVINS, Ph.D.

I, Richard A. Levins, Ph.D., declare as follows:

1. I am legally competent to make this declaration.
2. I am Professor Emeritus of Applied Economics at the University of Minnesota, St. Paul. I have held university-level appointments in farm management and agricultural economics at the University of Florida (1973-1974, 1981-1984), the University of Maryland (1984-1988), and the University of Minnesota, St. Paul (1988-2003). I retired from the University of Minnesota in good standing in 2003, was granted Emeritus Professor status, and have since maintained an active consulting practice.
3. I hold a Ph.D. in agricultural economics from Mississippi State University in Starkville, Mississippi.
4. This declaration is based on my personal knowledge and expertise in agricultural economics, econometrics, and statistics.

5. I submit this declaration in support of the Government Accountability Project's motion for summary judgment. I understand that the Government Accountability Project has sued the Food and Drug Administration under the Freedom of Information Act, seeking the disclosure of information concerning the 2009 total sales volume of various antimicrobial drugs used in food producing animals.

6. I understand that some manufacturers have claimed that the 2009 antibiotic sales data could be used to develop or validate models used to predict future sales. For example, a declarant employed by Zoetis, Inc., wrote, "Many of the market intelligence reports that are available today in the animal health space employ predictive models based on historical information or knowledge. Because none of the animal drug manufacturers of which I am aware publicly report or disclose product sales data, the reports are most often generated from predictive models that use incomplete data and internal analyses and knowledge of historical market trends.... If the Redacted Information were to become publicly disclosed, market intelligence providers (or competitors who develop their own predictive models) could use the actual sales information from 2009 to validate existing predictive models, or to develop new ones. Those validated, more accurate models could then be used to generate more accurate forecasts of competitor market share or product sales."

7. It is clear enough that a single observation, or even multiple observations from a single point in time (*e.g.*, 2009), cannot be useful in any type of forecasting model. The *development* of a model or trend used to determine current sales and/or forecast future sales depends upon having observations from at least two points in time. This is obvious when one visualizes a trend line: a line connects two points; if there is just one point, there cannot be a line. As I understand that only data from 2009 are disputed in this lawsuit, and that the same data for

other years are not publicly available, there is no way to develop a model or trend based solely on the 2009 sales data.

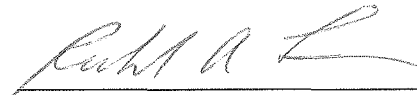
8. If the issue is not the development of a model or trend, but the *validation* of a model, or other inferences based on a single year's data, another significant issue arises. One must have confidence that the period during which the inferences are being made was relatively stable. A number of major shocks have impacted the livestock and poultry industries since 2009, the year to which the data in question refer. In fact, this has been one of the least stable times for the agricultural economy that I can recall since beginning my professional career in farm management 40 years ago.

9. The reasons for this instability are many and varied, and include the general economic crisis during the years since 2009, which affected consumer demand for livestock and poultry products as well as the availability of farm credit, and increased uncertainty in all business decisions. More recently, an extensive drought resulted in record-high feed prices and, in turn, significantly reduced the number of animals being raised (and therefore the number of animals that might receive antimicrobials or other inputs) and forced modifications to animal production practices. Beef production and prices have been especially volatile, resulting in shifts away from beef production and toward poultry and pork production. Global policies and business have rapidly entered livestock production decision making—the two largest dairy processors are foreign-owned, and Smithfield, a dominant processor and producer of pork in the United States, has been acquired by Chinese interests. Consumer demand for organic and related products (natural, GMO-free, antibiotic-free) has continued to grow since 2009, and producers have responded. For example, two of the largest poultry producers, Tyson Foods and Perdue Farms, have eliminated certain uses of antibiotic drugs and started antibiotic free brands.

Economic concentration at the retail level has increased, forcing changes in business practices by livestock companies. Additionally, since 2009 there has been a great deal of consolidation among the livestock producers who purchase and use these drugs, so that just a handful of large companies are now buying a majority of these drugs. These companies have preferences just like any other consumer, and I think it's reasonable to expect that on-farm practices have become more standardized as ownership has consolidated. Finally, federal farm policy, a perennial source of stability in difficult times, has all but disappeared from that role. Instead, federal policy now relies on subsidized insurance programs for farmers that, while compensating farmers for losses due to instability, do nothing to prevent that instability.

10. These shocks would be difficult to incorporate into a forecasting model, and it is difficult to see how 2009 sales data would be useful in validating a model in 2015 and subsequent years. Even if the model did accurately "predict" sales in 2009 (i.e., if the values it generated for 2009 were found to be reasonably accurate when compared to the redacted actual data for 2009), changes in the industry since 2009 will have diminished sharply the value of this accurate prediction.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.


Richard A. Levins, Ph.D.
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Executed on February 20, 2015 in St Paul, MN.