Michael Hansen
CEO, Health Sciences
Elsevier Press
3521 Riverport Lane
Maryland Heights, MO 63043

Dear Mr. Hansen,

The paper *"Association of phenylbutazone usage in horses bought for slaughter: A public health risk"* by Nicolas Dodman, Nicolas Blondeau, and Ann M. Marini published by Food and Chemical Toxicology in February 2010 is a classic example of utilizing unrelated scientific information to support an unfounded conclusion. By mixing sound research conducted on humans with unrelated sound research from horses, the authors attempt to formulate an unfounded and unsubstantiated conclusion that horsemeat derived from American horses contains residues of phenylbutazone that are harmful to humans. This conclusion is not supported by the research cited or any other research that we have discovered.

The Research Methods described in the article indicate that out of 68 horses, 34 had received phenylbutazone. Out of this group, 18 "were not rescued" and presumed to have gone to slaughter. The other 16 were rescued. No information is given on the remaining 34 horses. None of the horses were tested for the presence of phenylbutazone at the time of presumed slaughter or at any other time following the listed administration.

In the Results, no data are presented indicating the level of phenylbutazone residue in the horses. This section emphasizes that possibly 9 horses were slaughtered within 6 months of phenylbutazone administration. There is no indication if these horses had any detectable residues at that time.

The Discussion, as well as the Introduction, spends considerable time presenting data from the administration of phenylbutazone to humans and a clear-cut relationship to aplastic anemia and leukemia. This led to the banning of this drug for human use by the Food and Drug Administration. This information is not in dispute. The authors also spend considerable space presenting information concerning utilization of phenylbutazone in horses. Again, the data from these cited reports are not in question. What *is* in question is the conclusion drawn from these unrelated studies that phenylbutazone usage in horses presents a public health risk.

To our knowledge, there has never been a documented case of human illness caused by ingestion of horsemeat from a horse that was administered phenylbutazone prior to slaughter. The European Food Safety Authority has never reported an incident of horsemeat contaminated by phenylbutazone residues. Reports by Dr. Thomas Tobin and associates of the Maxwell H. Gluck Equine Research Center have shown that the half-life of phenylbutazone in the horse is 7.22 hours. These researchers have demonstrated that 90% of a dose will be eliminated in 24 hours. At 48 hours post administration the level of phenylbutazone in the blood was less than 0.4% of the initial dose and at 72 hours it was 0.02%. Since, as the article states, Phenylbutazone and its metabolites are highest in the blood, it is more than likely that the level found in muscle tissue would be totally undetectable at 72 hours post administration.

There are no data concerning the residual lifespan of many drugs commonly administered to horses because the research has never been conducted. Since phenylbutazone is not labeled for use in animals intended for meat there have been no research efforts to define an adequate withdrawal time from this drug. Although assumed that residues might be present, no research has been conducted in horses. Horses have been specifically targeted in this publication, suggesting that they are unique among livestock species in their exposure to phenylbutazone. However, it is well known that off-label use of the drug has occurred in other meat animals. The 2004 Proceedings of The United States Pharmacopeial Convention reported that evidence had been compiled by the Canadian FARAD leading to the recommendation of a withdrawal time of 60 days following administration of phenylbutazone paste to beef animals and a withholding time of 10 days in milk would be sufficient to avoid residues. Phenylbutazone has been shown to be cleared from the bovine system more slowly than in the horse. Therefore there is information that supports a hypothesis that a withdrawal time could be set for phenylbutazone in all animals intended for slaughter. Specific research in all meat producing animals needs to be conducted.

The article in question also appears to have some very serious political implications that should have prevented its publication in any reputable research journal. Aside from its obvious lack of true scientific basis, the background of the article's authors as well as several persons in the acknowledgements calls attention to the strong animal rights agenda behind the publication. Dr. Nicolas Dodson is an animal behaviorist with expertise in dogs and cats. He has a strong affiliation with the Humane Society Veterinary Medical Association – formerly known as the Association of Veterinarians for Animal Rights before the group combined forces with the largest and wealthiest animal rights organization in the world, the Humane Society of the United States (HSUS). Co-author Nicolas Blondeau is a horse trainer with no scientific credentials whatsoever, and Dr. Ann Marine serves as the Food Safety Advisor for the Equine Welfare Alliance, an animal rights group affiliated with HSUS and foursquare in the fight to end production of horsemeat for human consumption. Of the personnel acknowledged for their input into the publication, Dr. Galen Barbour, who was presumably asked to critique the technical aspects of the article, has no apparent credentials in toxicology. John Holland is associated with the Humane Society of the United States and linked to People for the Ethical Treatment of Animals. Valerie James-Patton is the Vice-President of the Equine Welfare Alliance, and Jo Anne Normile is the founder of CANTER, an organization devoted to saving racehorses from slaughter. In addition to the affiliations of the authors, recognition of these last three persons in the article makes it clear that it was written with the express political purpose to raise questions concerning the safety of horsemeat for public consumption. While the safety of *all* meat products consumed by the public should receive the highest scrutiny, the obvious bias and lack of scientific data makes this article obviously politically motivated. Publication by a peer-reviewed journal such as Food and Chemical Toxicology and printed under the auspices of the normally highly regarded Elsevier press should not have occurred.

As Equine Science Instructors, we strive to present factual information to our students in an unbiased manner. The topic of horse slaughter is controversial and emotional. No horse owner looks forward to making end of life decisions concerning their animals. Humane euthanasia, whether it is done at the veterinarian's facility, the owner's facility, or the slaughter facility, is not an easy decision to make. We

believe that the decision should be left up to the individual horse owner. In the current economic climate, the availability of humane euthanasia must remain a viable option for the health of the horse industry. The publication of this obviously biased article by such a reputable source raises real concerns about the value of the peer review process. We trust that future acceptance of articles by Food and Chemical Toxicology concerning the horse will be properly reviewed prior to acceptance and publication.

Thanks for your consideration.

Sincerely,

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