

December 7, 1962

Mr. J. E. Corbin, Manager
Dog Research Division
Research Department
Ralston Purina Company
Checkerboard Square
St. Louis 2, Missouri

Dear Mr. Corbin:

I have not intended any negligence or discourtesy in delaying so long before replying to your letter of August 17th. The fact is that I have been swamped with many things since my return from my vacation, and only those items of correspondence that were of immediate significance have been attended to. Your letter raised a question about a matter in which I could not honestly encourage your interest and, therefore, I made the mistake of laying it aside for later consideration.

I know of no good reason for carrying out experiments in which dogs, or, for that matter, other animals, are fed on diets containing lead compounds, unless one determines the extent of the imbalance between intake and output. Unless quantitative data as to these relationships are forthcoming from such experiments one is merely doing (with poor experimental design and technique) what has been done many many times in the past. There is no doubt that a sufficient level of dosage will produce adverse effects. These effects, however, must be correlated to the extent of the accumulation of lead in the body if they are to have meaning. We are far beyond that point of time and procedure. My answer to your query as to our interest in collaborating in such experiments must, therefore, be in the negative. I regret this from the aspect of professional courtesy, but not from that of experimental procedure, for I am convinced that there is no virtue in such experiments at this stage of our knowledge of the subject. Moreover, one cannot extrapolate to man from the results of experiments with dogs, and here again, we find ourselves in difficulty as to the significance of the results obtained in such experiments.

I am not saying by these words that there is no usefulness in animal experimentation. Rather, the extent of such usefulness depends upon the state of our knowledge. As a rule in experimental medicine and toxicology, we are undertaking to examine the facts through animal experimentation in their qualitative relationship to human behavior, when we know so little about the material in question that we dare not subject men to observation. We should get to the human

problem as rapidly as we can, with safety, and this is one reason why, in the case of lead compounds, there is little to be learned from feeding experiments with animals which cannot better be found by the study of men in the laboratory or in industry. It is especially true of industrial chemicals that our best way of learning about them is found in the careful investigation of workmen under measured occupational conditions, after it has been established that these materials can be handled in industry by means that are potentially safe. We start, therefore, by using animals to obtain some idea of the toxic properties of a chemical, its effects in terms of abnormal behavior and of the damage inflicted upon the tissues and organs of animals, the approximate levels of lethal and tolerable dosage for animals, and the means of its absorption. Under ordinary circumstances we can discover general methods of controlling the hazards of workmen, and can allow the material to be carried through the various stages of development, production and use, applying the necessary safeguards as required, quantitatively, by men who are maintained under careful medical supervision.

Perhaps I should point out one other feature of the methods and policies of this Laboratory. We engage in the investigation of problems of industrial health at the expense (at the cost to us) of industrial organizations that seek our guidance. We have no other source of funds for the support of our work (with the exception that we sometimes seek and obtain grants of funds from the Public Health Service and other agencies to enable us to extend the work sponsored by industry in directions that seem productive). We can undertake work only when there are funds to support it, for we have no endowment funds and few gifts without "strings". Even so, we have had no trouble in keeping busy, and our staff and facilities have grown steadily over the years, since this is the oldest and largest unit of the type in American universities, and one to which industry can come for expert advice and guidance, as well as for the investigation of specific problems. We undertake to be equipped with personnel and facilities to take on any problem of industrial health which arises, and our staff is kept busy. Only rarely, therefore, can we take on a job of collaboration with other investigative groups, although, of course, we undertake to give every aid and assistance which we can within this Medical Center in training, teaching, consulting and in providing diagnostic services within our field.

These matters may or may not be of major interest to you, but because of your inquiry, I have felt that I should explain our situation.

Cordially yours,

Robert A. Kehoe, M. D.

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