With your permission, I will submit for the record a statement of my educational and professional background.

At the time of the review of data submitted in support of MER/29, I was a pharmacologist in the Division of Pharmacology. At that time, pharmacologists reviewing data on New Drug Applications (NDAs) were located organizationally in the Division of Pharmacology of the Bureau of Biological and Physical Sciences, and not part of the Bureau of Medicine. Comments or recommendations by the pharmacologists on NDAs were of an advisory nature. In this same advisory capacity, individual pharmacologists frequently participated in meetings at the Bureau of Medicine with representatives of the pharmaceutical industry.

The New Drug Application for MER/29 was submitted by the William S. Merrell Company on July 21, 1959. I did not make the initial review of the application but was involved, in a supervisory capacity, with pharmacological reviews of all New Drug Applications. Based on the pharmacology review of the application, FDA notified the drug's sponsor, in a letter dated September 14, 1959, that the application was incomplete because of a questionable margin of safety. We suggested a one-year oral study in rats and a three-month oral study in dogs, with one dosage level in each of these experiments selected with production of specific evidence of toxicity as a goal. Dr. F. Joseph Murray, Executive Assistant to the Director of Research of the William S. Merrell Company, by letter of September 24, 1959, to Dr. Jerome Epstein, the medical officer assigned this application, indicated his firm's disagreement with our conclusions. Dr. Murray maintained that the submitted animal data, particularly the results of the monkey study, showed MER/29 to have an "exceptionally good" margin of safety.

On October 6, 1959, Dr. Murray and another Merrell representative, Dr. William King, met with several members of the Division of Pharmacology to discuss the New Drug Application. I was present at that meeting. They advised us that they had some additional animal studies underway; specifically, a six-month dog study and a six-month rat study. They indicated that these tests were not mentioned in the initial NDA submission because no results had been obtained. We recommended that they administer the drug to one group of dogs for a minimum of three months, at the highest dose the dogs could tolerate, in an attempt to produce some evidence of toxicity.

We also recommended that they start an additional two groups of rats at dosage levels higher than those used in previous studies, and that treatment be continued for a period of one year.

In a letter to Dr. Epstein of October 13, 1959, Dr. Murray again asserted that the animal studies had demonstrated safety of MER/29, and stated: "We feel that the significance of the studies carried out in monkeys has been entirely overlooked."

On October 16, 1959, representatives of the William S. Merrell Company met with members of the Administration to discuss further the toxicological studies which we felt were necessary to support the safety of MER/29. They indicated they were planning to initiate a six-month dog study at dosage levels expected to produce toxicity and a rat study of twelve months' duration. In a letter dated November 6, 1959, the Administration acknowledged the firm's correspondence of September 24 and October 13, and said the results of the additional toxicity studies agreed upon would be reviewed when submitted.

On February 12, 1960, the firm submitted additional toxicity data on MER/29 consisting of results of three-month and nine-month studies in rats and a three- to six-month study in dogs. These data were reviewed in my memorandum, dated February 23, 1960, to Dr. Frank Talbot, the medical officer who was handling the MER/29 application at that time. The conclusion was that, on the basis of the animal toxicity data, there was little margin of safety with the drug. I indicated my serious concern about the safety of the use of such a drug for reducing blood cholesterol. I was concerned about the inherent toxic potential of the drug and the possible long term effects of elevated blood desmosterol. MER/29 was believed to reduce cholesterol levels by blocking the metabolic conversion of desmosterol to cholesterol. My recommendation was that the application should not be approved in the absence of satisfactory results from extensive, well-controlled clinical studies in which individuals received the drug for a period of several years. This was based on the high potential toxicity of the drug shown in the animal studies. By letter of February 29, 1960, Dr. Murray referred me to our telephone conversation in which adverse effects of MER/29 on the eyes of rats were discussed. He alleged that "the corneal changes have now been found in the