chemical entities and compounds sold on the market which are sold under 21,000 different labels.

Can you tell us how many drugs you know about which meet standards set by the USP and the National Formulary and are not clinically effective?

Dr. APPLE. We have published in our journal, as I recall, one or two isolated experiences of this kind.

Mr. GORDON. Well, to your knowledge, has the report of these cases been based on high-quality scientific studies?

Dr. APPLE. I do not think that I could characterize the quality of the study. I do know from the reading I have done, and I do not claim to have any expertise in this particular area, that there is a great deal of concern about the quality of some of this type of research and verification process itself.

There was a book recently published by Dr. Barnard Beard, who is a sociologist, but also serves on the National Research Council, that characterized this whole type of research, and pointed out that the most qualified researchers do not seem to have any appetite for this routine type of testing. But I would be glad to ask our scientific division to submit to the committee any information we have on this subject.

Mr. GORDON. I think the subcommittee would appreciate that very much.

I want to pursue this a little further. Do you happen to be acquainted with the material which currently appears in the Reader's Digest as a paid advertisement of the Pharmaceutical Manufacturers Association?

Dr. APPLE. You mean "Medicines and Your Family's Health"?

Mr. GORDON. I believe that is what it is called.

Now, there is a reference to a patient almost losing his life because a pharmacist dispensed tolbutamide under its official name.

What is your reaction to this article?

Dr. APPLE. We were concerned when we first read that article because there was an implication, of course, that the pharmacist—regarding the pharmacist's conduct, No. 1.

No. 2, we were concerned in finding out the facts, so we proceeded to go back to the original report in the literature, and we traced the situation back from there. According to the information we have received from our colleagues in Canada, this particular drug was dispensed as a brand-name drug to a patient a number of times, and then subsequently because of the complaint of the patient about the cost of the drug, the pharmacist was authorized to use a drug under its established name which cost considerably less, and the patient received supplies of this drug in May, June, and July of 1962, and then in September of 1962 he received another prescription for tolbutamide tablets, and it was this last prescription that the tablets were found to pass through the patient and found in the stool unchanged.

At that point, the drug was assayed to determine whether or not it met the standards, and they quickly found out it did not disintegrate after 45 minutes in gastric juice, followed by 63 minutes in intestinal juice. The point was the drug did not meet the established standards of the law of Canada and, therefore, should not have been on the market.