

readily soluble in aqueous body fluids. For this reason, different salts and esters are regarded by the FDA, the official compendia, and the scientific community as entirely different drugs, since in fact they are entirely different compounds. It is inappropriate, therefore, to include in this listing studies which principally appear to compare different compounds rather than different formulations of the same drug entity. This would exclude, for example, references number 27, 30, 34, 41, 72, 73, 80, 86, and 96.

11. Certain references appearing on the list are duplicative of others already included on the list. The duplicative references include editorials, review articles, and general statements which are based on studies already included in the listing. Consequently, inclusion of these latter references could be misleading since their presence suggests a larger number of original reports in the literature than actually exists in fact. References in this category which appear to provide no new data include, for example, numbers 22, 26, 38, 45, 51, 53, 58, and 66.

12. Several of the references referred to appear to be inconclusive or borderline regarding the conclusions which are drawn as to existence or nonexistence of therapeutic equivalency. Such references include numbers 5 and 31.

13. A number of the references cited indicate that current standards are satisfactory to assure quality drugs. See, for example, references number 57 and 65.

14. Several of the references listed appear to constitute articles in which the conclusions of the respective authors show that drug product variation was *not demonstrated* on the basis of the particular study reported. The references which appear to support therapeutic equivalency include numbers 61, 62, 63, and 77. Moreover, references 61 and 77 specifically refute other articles appearing on this list which apparently report clinical differences among drug products.

15. None of the examples of questionable references listed in the above paragraphs are duplicative. Furthermore, in each instance the references cited above are just some examples chosen at random to illustrate each of my points; hence, additional references probably could be similarly disqualified if a closer scrutiny were made. Consequently, significant question exists concerning the pertinency or appropriateness of including a large proportion of the references tabulated. Moreover, it appears that a substantial portion of the remaining references may in fact support the idea of "therapeutic equivalency" of drug products rather than refute it.

16. After eliminating the above-mentioned questionable, inappropriate or refuting references, a limited number of references still remain which appear valid as documentation to demonstrate instances in which "therapeutic equivalency" may not exist. It should be noted, however, that these remaining references do not all pertain to studies on different drugs. In other words, some of them constitute confirmatory studies regarding certain drugs discussed in other reports on this list. Hence, while it is appropriate to include these confirmatory references in this listing, the number of drugs concerning which non-equivalency of some sort has been observed is substantially less than the total number of references which remain after excluding the invalid or inappropriate reports. For example, references 18, 32, 42, 43, 49, and 67 all pertain to enteric coated aspirin tablets.

17. Your letter to me dated March 5, 1968, quoted a statement by Dr. Slesser explaining that the compilation contained references which "* * * are related to factors which can affect the therapeutic effectiveness and safety of products."

After eliminating the inappropriate studies, some of the remaining references do appear to provide some support to Dr. Slesser's statement. It should be noted, however, that his statement says that these considerations are "*related to factors*," and that the factors "*can affect*" effectiveness and safety. This broad generalization does not really answer the basic question implied during the Subcommittee hearings; namely, "Does the scientific literature reveal many studies showing that a significant clinical difference (effectiveness or safety) has been demonstrated in comparing two drug products which meet applicable official compendia standards?"

In conclusion, it appears from the above point-by-point evaluation, that this compilation actually supports and substantiates the testimony presented by me and a number of other witnesses during the hearings of the Senate Subcommittee on Monopoly during 1967. In my testimony before your Subcommittee on June 8, 1967, I stated under conclusion number 6:

"Information available in the published literature reveals only isolated case histories, and very few scientifically performed studies, which demonstrate sub-