More on RIA Documentation

To the Editor:
I fully agree with the views Farmer, (1) and Pratt (2) expressed with respect to lack of documentation in some published radioimmunoassays. I wish to add further to this discussion, which in my opinion needs careful consideration. Many recent publications are based on "kit methods." In most cases the kit manufacturers do not give any details of the procedures involved in raising antiserum, choice of animals immunized, or antiserum specificity and affinity, which the above two authors have also noted. Currently there is a growing trend to publish data on comparison of two or more kits from different manufacturers on similar assays. The publication may simply end in a few words of praise for one kit or another, which may not be of any obvious use to the laboratory but does wonders for the manufacturer's business. I wonder if such publications have any scientific value in general. The other problem related to the kit procedures is the variation in their quoted normal ranges, which is partly due to the fact that their reagents are not standardized to a common level of acceptability. Perhaps the kit manufacturers should also act on the guidelines proposed by Dr. Pratt and, before publishing results obtained on kit procedures, authors should obtain relevant information from the manufacturers to include in their data.

However, I disagree with Dr. Pratt's suggestion that the authors should not use an exceptional antiserum to develop a method unless they have a large quantity of such antiserum available. Of course, it is essential for them to have a good source for their own use, but if they describe the method of antiserum preparation in detail and if the method is reproducible, anyone who wishes to follow this procedure should be able to do so in his own laboratory. Raising an exceptional antiserum itself is worth publishing on, whether or not the author has a large quantity or a limited quantity for his own use. It is now well accepted by every radioimmunoassayist that it is difficult to standardize the requirements and the sources of RIA reagents on a wider scale. Biochemists in the U.K. have been trying to do so for some time and at least groups involved in various national quality-control schemes have started standardizing RIA methods with a common source of reagents and it is to be hoped that one day we may even expect to see other countries doing something on similar lines.

References

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Improved Continuous-Flow Enzymatic Determination of Cholesterol with the SMA 12/60

To the Editor:
We would like to contribute to the discussion (1) on the enzymatic determination of cholesterol with the SMA 12/60 (Technicon Instrument Corp., Tarrytown, N. Y. 10591). We used the reagents in kit form (Auto-Test; Bio-Dynamics/bmc, Indianapolis, Ind. 46252) on our SMA 12/60 basic module with a specially designed cartridge shown diagrammatically in Figure 1. Other cartridges have been designed for enzymatic cholesterol determinations, but none has given us better results than the one shown here.

The results derived from the described method were compared with results obtained by using the enzymatic method on the ABA 100 (2) and using the manual reference method of Abell et al. (3). The final comparisons are illustrated in Figures 2 and 3. On the whole, a negative bias can be expected when enzymatic methods are compared with the Abell et al. methodology (4).

The original difficulties encountered with the enzymatic procedure on the SMA 12/60, as illustrated by linear regression analysis, were a low slope and a high y intercept. The method tended to underestimate high cholesterol values in patients' sera. We think the cause is inadequate activity of the cholesterol esterase (EC 3.1.1.13). We believe this to be true because cholesterol standards, either commercial ("Preciset"; Bio-

References