

stated that 14 companies which failed to submit toxicity reports included some of the largest and most scientifically capable pharmaceutical houses. We do not know the extent to which adverse reactions to drugs are a problem in American society, and probably we will never know since the physician and the drug company both attempt to conceal evidence of toxicity.

NATIONAL TESTING POLICIES

The medical profession has generally felt that the practitioner should be allowed to use any drug in any way he sees fit. Attempts to control his use of drugs or to prevent him from using new compounds would be interpreted as an infringement of his basic right to practice medicine and to prescribe in a way in which he sees fit. The FDA does not actually prevent doctors from experimenting with new drugs, but does request the physician to register with the agency, keep accurate records, and that either he or his sponsor promptly informs the agency of adverse reactions. The American Medical Association, which receives over half its income from drug industry advertising, has not been vigorous, in fact not even feeble, in demanding careful clinical testing, honest advertising, or the control of highly toxic drugs.

The pharmaceutical industry itself has demanded a hands-off attitude and has vigorously fought every attempt at any inquiry into drug testing or drug toxicity and has opposed all legislation aimed at controlling drugs in any way. It has done little to police itself and undoubtedly will do little in the future. The industry has established warm and cordial relationships with, and donates funds to, medical organizations. In return, the pharmaceutical industry has an undue influence over the policies of these organizations.

America's great disease-oriented foundations, that rely on public contributions to study cancer, heart disease, arthritis, and so forth, have not made any major attempt to protect the public against drug reactions. This is perhaps understandable, since most of the fund-raising abilities of these organizations is based on promising the public a cure, usually by drugs, and scary stories about toxic reactions to drugs will hardly help fund raising. Furthermore, these foundations have strong ties with the drug industry.

The nation's medical schools are too poor financially to do much to promote either better trials or good postgraduate education on the use of drugs. The faculty of medical schools probably represents the only major source of physicians with the talent and skill required to scientifically test and evaluate new drugs. Contrary to what most people believe, the drug industry is not pumping money into medical schools to support research on drugs. During 1965-66 the medical schools' total expenditures for sponsored research was \$375 million. Of this, they received \$3 million from nongovernment sources for unrestricted research. If one assumed half of this came from the drug industry, this would amount to about half of one per cent of the total research budget of the schools. The widely publicized Pharmaceutical Manufacturer's Association Foundation, which devotes itself to the "betterment of public health," had awarded only \$55,000 in faculty development awards in clinical pharmacology up to the end of 1967. A few companies—notably Burroughs Wellcome—provide excellent faculty fellowships, but these are few and far between—about 20 in the entire country. Considering the numbers of MDs and PhDs which the drug industry consumes annually, they may actually make no net contribution and may even represent a drain on the resources of the schools.

NIH SUPPORT

The only substantial source of support for good testing and research on drugs comes from the National Institute of Health (NIH). The total expenditures for support of research on drugs are about \$50 million, of which \$3.5 million is specifically earmarked for drug testing. This amount, less than five percent of the total NIH budget, is hardly enough to support all the work that needs to be done. Because of the difficulties in obtaining funds for clinical pharmacology, most departments have drifted to where the money is: basic molecular biology. The result has been good, but medical pharmacology has become lopsided. Most departments are headed by molecular biologists, and emphasize basic research. Only two or three real departments of clinical pharmacology are to be found in the entire country. The bright young clinical investigator finds support difficult to obtain for testing drugs, and tends to gravitate into other areas where funding is easier to obtain.