

if I talk about the Merck Sharp & Dohme research laboratories with pride. But it is pride in others: in the achievements of my fellow scientists, and in the consistent philosophy of a management that believes that the two most important ingredients of research are quality and integrity.

The pharmaceutical industry laboratory, Mr. Chairman, is organized to bring together scientists of widely different disciplines, all needed to carry a program from the conceptual stage through clinical investigation. They comprise men from at least 35 separate disciplines—from chemists to pharmacologists, pathologists, biologists, physicists, engineers, and physicians, who are joined together to seek solutions to medical problems. In our society, pharmaceutical research laboratories have almost unrivaled capacity for such collaborative research in medicine.

This is the way our laboratories are organized at Merck, which considers research to be the vital heart of the company. To the best of our knowledge, there is no sizable company outside the pharmaceutical industry that over the years spends a higher percentage of its own revenues—excluding government support—for research and development.

Our budget for this work is the largest published of any pharmaceutical concern in the free world—\$57 million this year, of which less than 2 percent comes from government. We have 2,300 people engaged in this work, of whom more than 500 have advanced academic degrees. Last year they published nearly 150 research papers in scientific journals.

Senator NELSON. Are you saying that \$57 million is the figure that you identify as a cost accounting factor for research in your company?

Dr. TISHLER. Yes, it is.

Senator NELSON. Some times we have had trouble trying to get figures on how much is research, because company officials say it is difficult to separate it out, and I suppose it is.

Mr. GADSDEN. I am not aware of your previous discussion on this point, Senator. I would assume that perhaps the problem had to do with the cost accounting principles of allocation to a specific project. However, under our system, we can tell you how much is spent for research throughout the company, and this is the figure to which Dr. Tishler is referring.

Senator NELSON. When you refer to 2,300 people engaged in this work, just so I have it clear in my mind, I am not sure how you distinguish research from something else, but does this involve quality control, too?

Dr. TISHLER. No, this does not involve quality control. If you would like a breakdown on the type of research I am referring to, we have exploratory research, fundamental research, basic research, developmental research, and applied research—five categories of research. It is broken down into these categories. Most of the research is directed toward investigating, searching for new therapeutic agents, trying to find the limitations and scope of therapeutic drugs, developing the processes to make the products, doing all the physical things that are part of the controls that we have to set up for the situation.

Senator NELSON. You have refined these categories a bit since I have been in school. It was pure and applied research in those days.