

Dr. TISHLER. We have good reasons for breaking it into five categories.

Senator NELSON. I am sure you do.

Mr. GADSDEN. I would have to tell you that this is Merck terminology, and what this means to us may not be the same as what it might mean in another research establishment.

Dr. TISHLER. That is correct.

Shall I proceed?

Senator NELSON. Please go ahead.

Dr. TISHLER. It is the quality and integrity of research that counts, not its quantity. To illustrate this point, it would be relevant, I believe, to give the committee a brief description of how Merck got into the long and difficult war against rheumatoid arthritis, a war in which indomethacin is one more significant advance.

Thirty-five years ago, a few years before I came to the company, hardly more than a young lecturer from the Harvard Chemistry Department, some Merck scientists became interested in helping to isolate the active ingredient of the yellowish outside layer, or cortex, of the adrenals—those two tiny glands that sit on top of each kidney. An insufficiency of this ingredient—even then thought to be a steroid hormone—causes Addison's disease, a normally fatal illness.

What was the basis for Merck's interest in this field? There was little or no commercial reward at the end of the road. Only 800 Americans were then known to have Addison's disease, and they were kept quite healthy on adrenal extracts. The only possible reward for the effort appeared then to be scientific and medical. The active ingredient of the adrenal cortex was believed to be vital to life. My colleagues were not looking for a commercial drug to cure a specific disease. They were chiefly seeking knowledge to cure ignorance, which is the greatest enemy of human health.

If this seems sententious, it is also practical. In 1933, when George Merck established the pioneer laboratory in our industry, he was persuaded that the long-range success of both our research and the company itself would depend primarily on our ability to make fundamental and lasting contributions to human health. This has been our philosophy and our practice ever since.

It took more than a decade of failures, however, to synthesize cortisone, which had been isolated earlier from the adrenal cortex. The first complete synthesis was achieved in 1944 by a 26-year-old Merck chemist, Dr. Lewis H. Sarett, who had come to us from Princeton 2 years before. Four more years were required to produce enough cortisone to try it in Addison's disease. It was successful for this use, but there was little interest on the part of clinical investigators in exploring uses in other diseases.

Then came the historic letter from Dr. Philip Hench, the great rheumatologist of the Mayo Clinic, explaining a scientific hunch and asking for some of this scarce chemical to try on a carefully studied bedridden rheumatoid arthritis patient. We sent Dr. Hench a single gram of cortisone for his patient. On September 28, 1948, a few days after treatment started, the patient rose from her bed and walked out of the clinic. From his scientific hunch, from one gram of cortisone and one well-studied patient, Dr. Hench made the epic discovery that won him the Nobel Prize.