

MEDICINE IS FOR THE PATIENT, NOT FOR THE PROFITS

George W. Merck
President and Chairman
Merck & Co., Inc.
(1925-1957)

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Medical College of Virginia at Richmond



George W. Merck

Innovation. Teamwork. Quality. Efficiency. Safety. Social responsibility. All were embodied in the firm's second executive leader and last of his family to head the business: George W. Merck, president of Merck from 1925 to 1950, and chairman from 1949 to 1957.

This month, we celebrate the 50-year anniversary of the event that firmly established the Company's core values and standards: the speech during which George Merck proclaimed that "medicine is for the patient."

Five decades later, Merck people continue to live by his words. We repeat them again and again because we believe and take pride in them.

We have republished this historic speech to celebrate the vision of George Merck, who built what could arguably be called a model for the first modern research institution in corporate America and who helped to shape the Company we are today.

— December 2000

President Sanger, members of the faculties, fellows, students, and guests, it is a great pleasure to be with you while you are commemorating your Founder's Day.

There are several reasons why I am glad to be here today as your guest at these ceremonies. Your institution is one that we have known and admired for a long time. Virginia itself is close to my heart. At least for my family, this is like coming home, because Mrs. Merck's family came from Halifax Courthouse and later settled in Amherst County.

At Elkton, in The Valley, our company set out — less than 10 years ago — to build a chemical manufacturing center. It now employs almost 800 people. As you may know, it is named the Stonewall plant. We were made to feel most welcome there and our neighbors have treated us with the utmost cordiality and given us wonderful cooperation. This is true not only of the folks over in Rockingham County, but also of leaders elsewhere in the state. For example, your officials concerned with public health cooperated with us in working out a program to prevent stream pollution — a problem to which the chemical industry gives constant attention.

In my remarks today, I shall discuss some phases of the field of medicine and particularly research. In doing this, it will be as a businessman associated with that area of the chemical industry which serves chiefly the worlds of medicine and pharmacy. My emphasis naturally will be on economic and social aspects, for I do not want to make any claim to knowledge of medicine or science beyond that required for my executive work. I shall bear in mind the interests of the students of nursing and pharmacy, as well as the members of the faculties and the medical students. But I do believe that all of us in this chapel share an interest in the subject.

A friend of mine asked what I intended to talk about today. He wanted to know if I could sum up the message in about 100 words. Here is what resulted:

I believe there is before us a wider field of the *unknown* than all that is behind us. Based on knowledge already developed, there are many ideas to be discovered. The still greater progress to come will depend upon fine intellects, inspiration, and the efforts of both those who teach and those who benefit from such teaching. It also will depend upon the business and industrial world and upon teamwork on all fronts with, *above all*, a genuine and active interest in the welfare of humanity.

I would like first to go back a little to mention some of the remarkable progress which already has been made in medicine and medical research. Our company, along with others, has been very active on several fronts in this progress. Three chapters in the *Revelation of medical* knowledge seem to stand out:

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Chapter I — The microbic origin of disease was established, under the leadership of Pasteur. One after another, diseases for which there had been no adequate remedies were brought under control. With the “magic bullet” of Ehrlich, a new concept came into being —

internal treatment of disease by specific chemical agents. With the coming of sulfa drugs, specific internal medications against infections became a broad reality. And then came the antibiotics starting with penicillin.

Chapter II — It took a long time after Eijkman's epochal work on beri-beri before the significance of a new concept of nutritional deficiency eventually became appreciated. The genius and effort of many scientists transferred vitamins from the realm of the unknown to their present established position as being essential to growth, health and life. Now in association with antibiotics have come the newest agents affecting growth — vitamin B12 and the Animal Protein Factor.

Chapter III — A younger sphere of medical science is the one dealing with the glands of internal secretion and their products, the hormones. In this field of endocrinology our company has recently played a rather active role. The discovery of cortisone opens what may be the largest area ever revealed for medical research and new knowledge — perhaps a bigger one than all that has gone before.

I believe you may be interested in some concepts of modern research. These concepts happen to be those of my associates and myself, but are shared, no doubt, by some others in the chemical industry. Research has come to mean so many things that it may mean something a little different to everyone. But for us, research falls into four main, though somewhat overlapping, categories.

To begin with there is product improvement. In industry this is a must! It simply has to be done all the time. We cannot afford to remain static, because, if we do, we soon would be going backward and find ourselves overtaken by competitors. We must continually review and discard that which is outmoded or obsolescent.

Second comes what we call process development. In this area we take up an idea which has come to a point at which we believe it will pay to develop a manufacturing process. In such a case, we have to recognize quickly that opportunity is knocking at our door and we must act. This may involve stopping or postponing some other project in order to throw our energies into something which promises more benefit in the long run.

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Third is the category of appraising and classifying ideas or "leads." Before we decide upon a project for development we must be very sure not to waste or misdirect precious effort. I have been told that in our company we get as many as 25 new ideas or possible leads added to our stockpile in a single week. Obviously, careful appraisal and selection must be made, because a single idea may involve vast investments of time and money. And, more obviously, many ideas — including some good ones — must be dropped. You can't do everything.

Fourth is the category of exploratory research. Perhaps we should turn the series around and name this as the first. It is in this area that one seeks new basic knowledge, new substances, and new methods. Our generation has made huge strides in such fundamental research both in academic and industrial worlds.

Not everyone would want to examine his research work in quite so categorical a manner, but we have found it to be helpful. But, speaking generally: You do what helps you understand best; what aids you to plan best; what will

use your facilities most intelligently. The intellectual considerations come first, but the fiscal and physical factors are also governing.

The all-important question in research, which must be asked constantly, is: What is the right thing to do? Dr. Vannevar Bush, who among his many other responsibilities serves as a Director for our company, gave us some more specific questions to ask ourselves at the various stages of research work from its earliest beginnings through to consideration by the Board of Directors.

1. What is the object? and
2. How is it justified?
 - a. Why do it at all?
 - b. If successful, what will we know?
 - c. What can we do which is now out of reach?
 - d. What is the probability of success? and always,
 - e. How does the cost compare with the potential benefit?

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I believe that these questions can be applied to research anywhere, whether it is in an endowed institution or in a business where profits must be shown to insure its continuance.

Perhaps it is too far-reaching to think of all medicine as research, for to apply the word in that sense would undoubtedly be confusing.

However, I do not want to set this thought aside without emphasizing the view that here, too, there still is more that we do not know than what we know. Much that we know is probably of diminishing use. Some undoubtedly is wrong. Newer knowledge is bound to correct old knowledge and to open new unknown fields in which to do more research. All knowledge, new and old, must be well coordinated and we should do our utmost to see if it can be practically applied, no matter how vague it is or how impractical it seems at the start.

In this talk I have said a few things about progress in the past and principles on which research work is carried out today. It has been suggested that you might be interested in hearing one specific example — at least something of the story of cortisone.

The entrance of our scientific group into this situation came about in an interesting way. As I think back, it seems but a very little time ago that a mutual friend of Dr. Kendall (of Mayo) and of mine telephoned me. His conversation ran something like this: "Dr. Kendall is working on the synthesis of adrenal hormones. He has to spend a great deal of time doing again things which he has already succeeded in doing. I wonder if you can give him a hand? Even if you could just take over the 'horsework' it would help."

So Dr. Kendall took the next train to our laboratories at Rahway, N.J., met several of our group, including Dr. Randolph Major, our Scientific Director. Right there our collaboration began.

First, we worked with him on Compound A. Twenty-one months after Dr. Kendall announced its synthesis Merck produced enough of it so it could be tried out. Addison's disease was the target for that initial part of the program.

Compound A proved unsatisfactory. So a new program was opened on Compound E — later called cortisone. And here we come to the dramatic story which you all know, of how Dr. Sarett and his associates at our laboratories achieved the synthesis starting from bile and about what it did for sufferers from rheumatoid arthritis and various other diseases.

The clinical work at Mayo went forward under the direction of Dr. Philip Hench, making use of the small quantities of material that Dr. Kendall and the Merck group were able to supply.

A representative from our group, Dr. James Carlisle, our Medical Director, gave considerable assistance to Dr. Kendall, providing liaison, ideas and, no doubt, encouragement. Dr. Kendall and Dr. Hench pay high tribute to his contributions.

At our laboratories in Rahway an inspired team worked through to the successful end and provided increasing quantities of cortisone from the Mayo clinic. These amounts seem infinitesimal now and they seemed astronomically expensive then. None could be wasted for every milligram was vital.

This year's Nobel Prize in medicine awarded to Drs. Kendall and Hench (and to Reichstein the Swiss chemist) marked the great significance to the world of the discovery of cortisone and its wonder-working uses. The part played by the Merck group was generously acknowledged by Dr. Kendall in his response to a congratulatory message we sent him. He responded: "You know that without you people it wouldn't have happened!" (That for our crowd is almost as good as a Nobel Prize!)

Particularly noteworthy is the fact that the supply of cortisone now is much larger than is generally realized. With volume production, prices have been greatly reduced, and cortisone is giving relief to sufferers all over the country (and soon throughout the world).

The reason for giving you this example of research work is not to “gild the lily” in reference to a story that is already widely known. It is to point out the fact that research has made similar gains many times and should do even more in the future. Sometimes the attempts are less successful and sometimes there is no success at all. But the example of cortisone describes a pattern for applying the principles I mentioned earlier. It shows the need for everlasting search for new knowledge; sound appraisal of leads; rapid development of the best ones and a program striving to perfect the practical application of what has been learned.

In the earliest stage of research there is a place for the “ivory tower.” To a certain extent the individual intellect and genius play a very real role, not only at the outset, but also in the subsequent stages. But throughout all steps, all research projects today require teamwork — often involving many individuals and many fields of knowledge.

In the earliest stage of research the individual intellect and genius play a very real role. But throughout all steps, all research projects today require teamwork — often involving many individuals and many fields of knowledge.

The individual intellect (yes, genius) is absolutely essential, but it cannot go beyond a certain point. Certainly it cannot, within reasonable time-limits, carry out a large project to full practical realization as a solitary task. The enlisting of other intellects, the correlation of effort, the drive to full consummation, requires leadership, fellowship, and even companionship. That is why the atmosphere, the climate, of a

research laboratory is so important. That is why people such as ourselves try to give professional character to what they set out to do in the scientific field. Incidentally, the place where we house the Merck research laboratories, including the pilot plants, has such an academic atmosphere and appearance, it has become known as "The Merck Campus." It looks like a college and it really was planned that way.

The relationship of colleges and industry is of vast importance as we look toward the expanding research needs for the future. Intellects must be encouraged if these needs are to be met — intellects that can "forge the anchors or spin the gossamers of the mind," as Thomas Huxley said.

To those of you who are students I want to point out especially the opportunities for young people in research. Research requires youth. It may interest you to know that the average age in our research and development laboratories is about 32 years. Dr. Sarett, the most recent of our group to announce an important discovery — his was the synthesis of Compound E — cortisone — was only about 28 when he completed it. Hundreds of excellent research workers in America are in their twenties.

I was telling this story to Mr. Thomas J. Watson, the creator and head of International Business Machines. I believe he is about 76 years old. He stopped and thought a minute and then said, "I think if they chased me out of our I.B.M. laboratories it would bring our average age figure down even below yours."

Research in both college and industries will expand to meet the growing needs.

Great facilities have been created in the fields of chemicals, petroleum, motors, metals, electronics, foods, and so on. They are manned by high-grade scientific personnel who feel proud of their standing and their accomplishments — not

unlike the feeling of the members of university faculties. This applies to many companies, especially to those in the chemical industry whose forces are fitted largely to medicinal chemicals. To single out even a few as examples would not be fair to others too numerous to name.

I want to add just one other thought which has a bearing on this whole subject. It has to do with policy which has come to express the principles which we in our company have endeavored to live up to. It is founded on a concept which I feel has been too often lost in the hurly-burly of politics, in the stir of doing-good, and also in the field where profits must be shown in the financial reports (and in business and industry there is no future — and no research — without profits). Here is how it sums up:

We try to remember that medicine is for the patient. We try never to forget that medicine is for the people. It is not for the profits. The profits follow, and if we have remembered that, they have never failed to appear. The better we have remembered it, the larger they have been.

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Nor is medicine for the politicians, except in so far as they are statesmen. I could add that medicine also is not for the professions, unless it is for the patient — first and last!

How can we bring the best of medicine to each and every person? It won't be solved by

wrangling with words and it won't be settled by slogans and by calling names. We will fall into gross error with fatal consequence unless we find the answer- how to get the best of all medicine to all the people.

“How can we bring the best of medicine to each and every person? We cannot rest till the way has been found, with our help, to bring our finest achievement to everyone.”

It is up to us in research work, in industries, and in colleges and other institutions, to help keep the problem in this focus. We cannot step aside and say that we have achieved our goal by inventing a new drug or a new way by which to treat presently incurable diseases, a new way to help those who suffer from malnutrition, or the creation of ideal balanced diets on a worldwide scale. We cannot rest till the way has been found, with our help, to bring our finest achievement to everyone.

Among the colleges such as yours, among clinics, in libraries and industrial laboratories, there is a vast gathering of ideas — many still not clearly delineated, ideas to be drawn from the books on the back shelves, ideas that are being exposed to new light, and facts perhaps long known and not yet subjected to new viewpoints. And out of it surely will come something good, as we know when industry invests its millions in research. We are not sure what will come, but that it will come, we know.

Here at Medical College intellects are developing, and one of the things I am sure of is that this something fine will result. I envy you and wish I could be starting all over again into the great era of the future. My heartiest good wishes for a successful future to each and every one of you.

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