LETTER FROM DR. THEOBAld SMITH

Dr. Theobald Smith, at a dinner in his honor in Philadelphia more than a year ago, was asked about certain attitudes which had guided his research. His replies were so illuminating that one of the guests, Dr. E. B. Krumbhaar, subsequently asked if he would not elaborate them for the inspiration and guidance of the students of the University of Pennsylvania. Dr. Smith recently wrote the following letter in his own handwriting to Dr. Krumbhaar.

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THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH
DEPARTMENT OF ANIMAL PATHOLOGY
PRINCETON, N. J.

October 11, 33.

DEAR DR. KRUMBHAAR:

As we grow old we come to the end of an individual era in which we have tried "to do our part." We begin to realize the important function of the past in shaping the future. We also feel the at times benumbing and soporific effects of that past to be gotten rid of.

It is not uncommon for the younger generation to criticise or even disregard earlier work because it is not complete from the more recent standpoint. No research will answer all queries that the future may raise. It is wiser to praise the work for what it has accomplished and then to formulate the problems still to be solved. It is not profitable to enter into controversies especially with those working in another geographic area or continent unless the material on which their researches are based, has been examined.

To those who have the urge to do research and who are prepared to give up most things in life eagerly pursued by the man in the street, discovery should come as an adventure rather than as the result of a logical process of thought. Sharp, prolonged thinking is necessary that we may keep on the chosen road but it does not itself necessarily lead to discovery. The investigator must be ready and on the spot when the light comes from whatever direction.

There are many to compete with the young investigator. Oppor-
tunities for research have been increased a hundred fold in the past half century. More and more our colleagues fail to understand our work because of the high specialization of research problems. We must not be discouraged if the products of our labor are not read or even known to exist. The joy of research must be found in doing since every other harvest is uncertain and even the prizes do not always go to the discoveries to which we would assign them. Research has deserted the individual and entered the group. The individual worker finds the problem too large, not too difficult. He must learn to work with others.

In bacteriology and pathology research is slowly receding from the ultra-practical point of view of the early leaders. One group thought it possible to catch all bacteria in transit from one victim to another and to suppress disease in this way. Another group thought that a vaccine could be prepared for every disease. We have learned much since then and have become quite humble. Our researches no longer lead straight to Public Health regulations. They are more elusive and difficult to fit into any scheme for decreasing the incidence of disease. We must be content with the vision of future usefulness.

In general, a fact is worth more than theories in the long run. The theory stimulates but the fact builds. The former in due time is replaced by one better but the fact remains and becomes fertile. The fertility of a discovery is perhaps the surest measure of its survival value.

What is one man's meat is another's poison in research as in other vocations. Temperament goes far towards deciding our course. In the three different environments in which I have spent my active life I have always taken up the problems that lay spread out before me in the new environment, chiefly because of the easy accessibility of material without which research cannot go on; for in the early years material and resources were exceedingly scant and this meagerness determined the direction and scope of all research. My interest in a problem usually lagged when certain results could be clearly formulated or practically applied. To continue and analyze still further every link of the established chain either failed to hold my interest or was made difficult or impossible for causes lying outside the problem. As I look back it is precisely these links that have provided innumerable problems to others. Each link has grown into a chain and the end of successive chain making is not in sight.

Sincerely yours,

(Signed) Theobald Smith.