The Gap

Avant propos to the editorial article

C.M.

Lapière

Service de Dermatologie, Hôpital de Bavière, Liège

'Basement membranes: current concepts of structure and synthesis' by N. Kefalides

The practicing dermatologist who subscribes to *Dermatologica* will certainly wonder why the beautiful editorial review 'Basement membrane', by N. Kefalides occupies space in his journal. He will undoubtedly be puzzled because he will not find how such accurate basic knowledge could be useful in his daily practice. This paradox reflects a 'gap' that separates basic research and applied medicine. It is compounded by a lack of mutual understanding and communication between the people involved in these disciplines.

We have now entered an era in which pathology should be progressively defined at the molecular level. Progress in this direction depends upon a better definition of the cells, their function and their products. A large body of information is already available. For those who want to enjoy the future, the basic knowledge about the living matter in its physiological state has to be known in order to evaluate the deviation that we call pathology, to understand the processes responsible for it and to propose a suitable therapy.

Most of the information about chemistry or structure of living organisms is published in specialized journals located in places where patients are not seen. It is written by scientists in very precise terms that are not readily understandable by the practitioners whose duties are or will be to apply it to medical care. A lack of exchange of ideas between the two communities is a serious problem that retards progress in medical practice parallel to those observed in basic biology. This gap has to be filled and an effort should be made to provide a discussion of problems of mutual interest.

Although the practitioner may feel that the basic researchers simply play at unravelling the secrets of nature, all biologists have in their mind the hope that the knowledge they accrue will be useful for solving human problems.

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The description of this knowledge uses specific terms, chemical or morphological similar for all cells or tissues, that are not commonly used in medical practice. This vocabulary, new for some of us, has to be learned because it introduces a new dimension in pathology. Beside this problem of semantics, another difficulty in establishing a dialogue is related to differences in the degree of preciseness of the information; in basic biology it is right or wrong, in medicine it is perhaps right. Both problems express themselves in the writing of scientific articles or reviews. A basic research scientist never likes to oversimplify the information up to the point where reality becomes questionable. Furthermore, for most topics the accumulation of facts is so large that any review will appear dense and overloaded. This seems true, but for the sake of completion and for the best use of such documents, they have to be prepared that way.

The importance of basic disciplines in medical training and practice can also be appreciated by observing the pathway of medical education. The neophyte medical student must learn the vocabularies of the basic and clinical sciences, and equally important, he must comprehend the 'scientific method'. In modern usage, this latter concept embraces both the acquisition of vital facts by properly controlled studies and the interweaving of these established facts into a tapestry of total medical knowledge. Students emerge from such an educational pathway well-armed to evaluate new information but this capacity is easily lost in the absence of a continuous effort. It is, after all, thought by the public that all physicians remain 'au courant' and this concept is equally important in applied and theoretical knowledge. No gap should exist and if one does, it has to be filled.

Being a practitioner, it is almost impossible to find time to reach and use basic information. These are the reasons why the most pertinent part of it has to be gathered in a summarized yet precise way in order to make it completely available to the attention of the reader. The editorial article about which these comments are proposed represents an example of such a situation. Scientists should present the information and propose reasonable hypotheses about its applications to pathology. Practitioners should use this information to find meaningful working hypothesis about specific medical problems. Every one has to know that such basic information exists and where to locate it. A review article contains the references to the most significant publications. It is as useful as a large library, more readily understandable and much more stimulating. I am most grateful to those who are willing to write them.