# SCIENCE

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## CHEMISTRY IN RELATION TO BIOLOGY AND MEDICINE WITH ESPECIAL REFERENCE TO INSULIN AND OTHER HORMONES[1]

YOUR speaker to-day is one who is primarily a worker in the field of experimental medicine; a chemist, if at all, only in so far as an imperfect mastery of your science became necessary for the solution of physiological and pharmacological problems that could not be undertaken or even formulated if their chemical aspects were to be ignored. Under the circumstances I can but feel a sense of deep unworthiness in venturing to address an audience in which are gathered so many distinguished representatives of your noble science. I am highly appreciative of the signal honor conferred upon me by the board of award of the Chicago Section of the American Chemical Society in the bestowal of the Willard Gibbs Medal and I beg the members of the board to believe that I am duly grateful to them.

There exists in our day an essential unity of outlook and interest among the majority of professional chemists, biologists and medical men in respect to the physical and chemical aspects of life. This unity of interest and unanimity of opinion in respect to the applicability of the laws of physics and chemistry to the elucidation of vital processes have their origin far in the past and date from a time long before chemistry had attained to its present dignity as an independent science. It is not my purpose to attempt to record even briefly the history of chemistry or that of medicine, subjects that have been so well treated by many learned men of both professions, but I would ask your forbearance toward an imperfect sketch of the points of contact between your professional ancestors and mine. I leave out of consideration here any reference to such contacts in the ancient or later alchemical periods, or to Arabian science in Western Europe, further than to remark that alchemy, which at its best combined far-reaching metaphysical speculations with a crude experimental chemistry, had, as one of its several aims, not alone the transmutation of the baser metals into gold, thus abolishing that "great disease, poverty," but also

[1] The Willard Gibbs lecture delivered before the Seventh Midwest Intersectional Meeting on the occasion of the award of the Willard Gibbs Gold Medal by the Chicago Section of the American Chemical Society, May 27, 1927.

## NEW SCIENTIFIC BOOKS

**The McGraw-Hill Book Company, New York**

MUSCULAR MOVEMENT IN MAN. A. V. Hill. 100 pp. $2.50.

The lectures on which this book is based were delivered during the second semester of 1926-27, under the Non-Resident Lectureship in Chemistry at Cornell University, which was endowed by George Fisher Baker.

ORCHARDING. Victor Ray Gardner, Frederick B. Bradford and Henry D. Hooker, Jr. 305 pp. $3.00.

A comprehensive treatment of orcharding for beginners in the study of fruit growing. A clear picture of the functioning of fruit trees and an outline of the methods and problems of the fruit industry is presented.

**John Wiley and Sons, New York**

THE LITERATURE OF CHEMISTRY. E. J. Crane and A. M. Patterson. 424 pp. $5.00.

The information on chemical literature, as here given, should be of very great use not only to the student, but to the experienced chemist. Much time can be saved by knowing exactly where to go for a desired piece of information.

**P. Blakiston's Son & Company, Philadelphia**

BIOLOGY. William H. Atwood. 506 pp. $1.68.

In the preparation of this new "Biology," great care has been exercised to comply with the suggestions of the Committee of Reorganization of Science in the Secondary Schools, and to adapt it, so far as possible, to the requirements of the various state syllabi.

**The Macmillan Company, New York**

INTEGRAL BASES. W. E. H. Berwick. 95 pp. $2.10.

The result of an attempt to obtain the modulus of complex integers in the field of algebraic numbers defined by $\theta\eta-\alpha=0$.

**The Open Court Publishing Company, Chicago**

ELEMENTS OF MATHEMATICS. D. Caradog Jones and G. W. Daniels. $3.00.

For students of economics and statistics. The book is designed for students who have had only a slender training in mathematics and who, in consequence, are afraid of symbols and statistics. No knowledge is assumed beyond a matriculation standard.

MATHEMATICAL STATISTICS. H. L. Rietz. $2.00.

This is the third of the Carus Mathematical Monographs. Considerable portions of the monograph can be read by those who have relatively little knowledge of college mathematics.

**The Bruce Publishing Company, Milwaukee**

THE LAWS OF LIVING THINGS. E. J. Menge. 516 pp. $1.72.

A biology text for high schools, this offers a variation of the usual presentation of subject-matter of this kind. The perch is the type form used; an introductory and explanatory vocabulary precedes each chapter.

**G. P. Putnam's Sons, New York**

MANUAL FOR SMALL MUSEUMS. Laurence Vail Coleman. 386 pp. $5.00.

This book is intended for the use of those who set about to found museums or to build up small museums now existing. The writing of it has been prompted by the rapid growth of interest in museum-making.