STOKES, BEERMAN and INGRAHAM’S
MODERN CLINICAL SYPHILIOLOGY

The New (3rd) Edition, is really a new book; rewritten, remade, giving the very latest knowledge of syphilis—the knowledge not only gained by the unsurpassed experience of the authors and their associates in their own clinical work, but that learned by Army and Navy doctors abroad and at home, as well as the findings of the U. S. Public Health Service.

Here is today’s knowledge of syphilis—everything, at every stage. Here is full diagnostic guidance. Here are treatments so new that publication of the book had to be delayed in order to include them—especially the use of penicillin. Here, in fact, is one of the all-time masterpieces of medical literature.

By JOHN H. STOKES, M.D., Professor of Dermatology and Syphilology; HERMAN BEERMAN, M.D., Assistant Professor of Dermatology and Syphilology; and NORMAN R. INGRAHAM, JR., M.D., Assistant Professor of Dermatology and Syphilology, University of Pennsylvania Medical School. 1352 pages, with 854 illustrations on 503 figures, and 455 summaries. $10.00

Routh’s Inorganic, Organic and Biological Chemistry

This new text has been designed expressly to give students the material that will prove most useful and interesting to them. The recent advances in biochemistry and their widespread application have made necessary greater emphasis on this phase of the subject. Dr. Routh has taken this into full account. Consequently, this book is so planned as to devote a good share of the study time to biochemistry, with presentation of those fundamentals of inorganic and organic chemistry necessary for a sound grasp of biochemistry.

By JOSEPH L. ROUTH, PH.D., Assistant Professor of Biochemistry, State University of Iowa. 274 pages, with 72 illustrations. $2.25. Ready January 2nd!

Thompson’s Introduction to Microorganisms

This new text emphasizes what bacteria do rather than mere details of morphology and classification. It is divided into five units. Unit I, Life in Miniature. Unit II, Bacteria and Environment. Unit III, Parasites and the Host. Unit IV presents the pathogens and infections which they cause. Unit V, Man against Parasites, traces the evolution of man’s ideas concerning the transmission of disease.

By LA VERNE RUTH THOMPSON, R.N., M.A., M.S. in Public Health; Instructor in Microbiology, Division of Nursing Education, Teachers College, Columbia University. 445 pages, Illus. $2.75

Williams’ Anatomy and Physiology

This proven text is meeting, admirably, the demands of present-day teaching trends. Anatomy and physiology, in this Seventh Edition, are clearly interwoven to provide a unified picture of structure and function.

By JESSE FURRING WILLIAMS, M.D., Sc.D., Emeritus Professor of Physical Education, Teachers College, Columbia University. 573 pages, with 344 illustrations, 31 in colors. $2.75

W. B. SAUNDERS COMPANY
West Washington Square
Philadelphia 5

Science: published weekly by The Science Press, Lancaster, Pa.
Entered as second-class matter July 18, 1923 at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.
THE CENOZOIC BRACHIOPODA OF WESTERN NORTH AMERICA
By Leo George Hertlein and U. S. Grant IV

Publications of the University of California at Los Angeles in Mathematical and Physical Sciences, Volume 3.
vi + 236 pages, 21 plates, 34 figures in text

Price $3.00

UNIVERSITY OF CALIFORNIA PRESS
Berkeley 4 Los Angeles 24
Please address all communications to the Berkeley office.
The following forms of crystalline carotene, isolated and purified by General Biochemicals, Inc., are currently available:

**ALPHA CAROTENE—CRYSTALLINE**
10 milligram ampul . . . $5.00

**BETA CAROTENE—CRYSTALLINE**
10 milligram ampul . . . $5.00

**CAROTENE—CRYSTALLINE (90% Beta—10% Alpha)**
100 milligram ampul . . . $2.00
1 gram ampul . . . 5.00

Crystalline carotene is supplied in vacuum sealed ampuls to insure complete protection of its biologic activity. For further information and complete price lists of special products for nutritional research, write:

**GENERAL BIOCHEMICALS, INC.**
DIVISION WYETH INCORPORATED
CHAGRIN FALLS, OHIO
with precision tangent screw

Tangent Screw has 5° range permits direct reading to 6 seconds. Convenient Manipulation. Stable Adjustments. Excellent Optical Parts. Rigid Construction.

Other types of Spectrometers are available.

We manufacture a variety of optical instruments such as spectroscopes, spectrographs, spectrophotometers, etc., also precision measuring instruments for industrial and educational laboratories.

THE GAERTNER SCIENTIFIC CORPORATION
1204 Wrightwood Avenue
Chicago 14, U. S. A.

this might be the most
IMPORTANT message you’ve ever read . . .

This message is addressed to the man—or woman—with a creative idea—an idea for the invention of a new scientific device or method, or an idea for the improvement of one already in use. There are, we know, many very important scientific advancements hidden away in laboratories and studies and lying dormant for the lack of facilities for their perfection, production and promotion.

Mark this well, please—we are not patent attorneys, nor are we interested in predatory exploitation. Ours is an organization of practical designers and engineers, with complete machine-shop production facilities and a vast fund of experience in this field. We have the skills and capacity to develop worthy projects, and are prepared to follow through to practical production.

To you who may have such an idea, this message may present the opportunity you have been seeking. You may address us in complete confidence. We are prepared to furnish references for your re-assurance before you disclose any principles.
When you specify 'Roche' you specify UNCOMPROMISING QUALITY!

If you are using the pure crystalline vitamins in the course of your nutritional studies, specify 'Roche'. The name 'Roche' has been inseparably linked with scientific investigation of the vitamins, their synthesis, development, eventual quantity production.

Whatever your special research interests, whatever your special needs, whenever you want vitamin B₁ - B₂ - B₆ - C - E specify 'Roche' and you can rest assured of getting the finest science can give you, in the most desirable forms, and at the lowest prices consistent with highest quality.

HOFFMANN-LA ROCHE, INC. Vitamin Division • Nutley 10, N.J.
Mother is Proud of Him!

So are we, and it is our wish that he will develop into a useful citizen, with a trained mind in a healthy body.

In achieving this result, Coleman & Bell Laboratory Reagents are useful in guarding his well-being by protecting the quality of the water which he drinks, the food which he eats and the quality of the drugs, vitamins and innumerable other products essential or useful to his health and happiness.

Catalog upon request.

The COLEMAN & BELL Co., Inc.,
Manufacturing Chemists: NORWOOD, O., U.S.A.
Doubtful masses and tumors of the breast may now be visualized clearly on the x-ray plate, thanks to the development of soft-tissue radiography at the Warner Institute for Therapeutic Research.

Warner investigators have eliminated by means of aluminum filters the "secondary radiation fog" which ordinarily obliterates shadows produced by soft tissues; and a new, selective, color-forming developer brings out the finest gradations of tone . . .

Another example of the scope and ingenuity in research characteristic of the Warner Institute.

Adenofibroma superimposed on normal glandular hyperplasia of pregnancy. Soft-tissue radiography assists in diagnostic differentiation of benign or malignant neoplasm, the clear-cut contours of this tumor indicating characteristic adenofibroma rather than malignant neoplasm which would spread "crabwise."

William R. Warner & Co., Inc., 113 W. 18th St., New York 11, N. Y.
THE OPTICAL TOOLS OF SCIENCE...THE MICRO-PROJECTOR

The AA Micro-Projector arranged for projection with Achromatic Objectives and Projector Eyepiece.

In teaching, and in any presentation of scientific findings which involve microscopy...to civilian or military audiences...Bausch & Lomb Micro-Projectors make possible the projection of large, clear, brilliant screen images of microscopic subjects.

BAUSCH & LOMB
OPTICAL CO., ROCHESTER 2, N. Y.

EST. 1853
Some New Aspects of the Relationship of Chemical Structure to Biological Activity: Dr. D. W. Woolley

Obituary:

William Williams Henderson: Professor Charles J. Sorenson. Recent Deaths

Scientific Events:

Grants of the Nuffield Foundation; The Nutrition Foundation; The American Society of Tropical Medicine; The Oklahoma Academy of Science; Awards of the Television Broadcasters Association

Scientific Notes and News

Discussion:


Scientific Books:


Reports:

The Archbold Biological Station: L. J. Brass

Special Articles:

The Bb Series of Allelic Genes: Dr. Alexander S. Wiener. Antibacterial Substances in Organs of Higher Plants: Professor E. H. Lucas and Professor R. W. Lewis

Scientific Apparatus and Laboratory Methods:

A New Procedure for the Bioassay of Vitamin C: Professor E. W. Crampton and Others

Science News

SCIENCE: A Weekly Journal devoted to the Advancement of Science. Editorial communications should be sent to the editors of SCIENCE, Lancaster, Pa. Published every Friday by

THE SCIENCE PRESS
Lancaster, Pennsylvania

Annual Subscription, $6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary in the Smithsonian Institution Building, Washington 25, D. C.

SOME NEW ASPECTS OF THE RELATIONSHIP OF CHEMICAL STRUCTURE TO BIOLOGICAL ACTIVITY*

By Dr. D. W. Woolley

Laboratories of The Rockefeller Institute for Medical Research, New York, N. Y.

Although for many years it has been recognized that relationships exist between the chemical structures of certain compounds and their pharmacological properties, these interdependencies⁠¹ which have been observed have served more to correlate existing data in many isolated sectors of the field of drug action than to serve as guideposts on the road of medicine and research ahead. Therefore it has seemed desirable to examine some of the facts recently uncovered in nutritional research in an effort to gain new vantage points from which to survey the field of the relationship of chemical structure to biological activity. From these vantage points it may be possible to see some of the roads along which future progress may be made.

Much of the material from which conclusions will be drawn in this paper had its origin in the observation of Woods,² who in 1940 reported that the bacteriostatic action of sulfanilamide was reversed competitively by p-aminobenzoic acid. These two antagonistic substances are very closely related structurally, since they differ only in the fact that the sulfonamide group of the former is replaced by a carboxyl group in the latter. The hypothesis was

⁠¹ Received for publication October 27, 1944.