causes, together with its astonishing virulence, they believe it should be named. This organism is therefore designated as *Klebsiella paralytica,* because of the paralysis it causes. A detailed report, covering all experimental and cultural work to date, is about to go to press.

A. R. CAHN,
G. I. WALLACE,
L. J. THOMAS

UNIVERSITY OF ILLINOIS, URBANA

CRYSTALLINE d-MANNURONIC ACID

CRYSTALLINE d-mannuronic acid has recently been isolated in my laboratory by Mr. Eugene Schoeffel. Heretofore, d-mannuronic was known only in the form of its lactone. The lactone m. p. 140–141° $(\alpha)\frac{25}{D}+89.8°$ was isolated for the first time by Nelson and Cretcher,[1] and subsequently by Schoeffel and Link.[2] The free acid was obtained by decomposing barium d-mannuronate, prepared from the algin of *Macrocystis pyrifera* and *Fucus serratus* after the procedure of Schoeffel and Link,[2] at $-10°$ in the presence of ethyl alcohol. The acid melts at 165°, has an initial specific rotation of –50° and a final value of –20° (after 2 hours) in water. Dr. C. S. Hudson, of the National Institute of Health, Washington, D. C., has calculated that the specific rotation of the beta form should be –37° (private communication). It appears, therefore, that the form of d-mannuronic acid which we have in hand is the beta variety. Experiments are under way by my collaborator, Mr. Carl Niemann, to synthesize d-mannuronic acid by the reduction of d-mannosaccharic acid. The details of this work will be published elsewhere.

KARL PAUL LINK

DEPARTMENT OF AGRICULTURAL CHEMISTRY
UNIVERSITY OF WISCONSIN

TWO BUSTS OF GREAT SCIENTIFIC MEN

DURING the past summer I happened upon two life-size marble busts that I am sure would be of interest to all physiologists and medical men—one of Johannes Müller, the biologist, and teacher of R. du Bois-Raymond, Helmholtz and Virchow, the other of the great Graefe, father of scientific ophthalmology. The sculptors, Drake and Siemering, respectively, are of hardly less renown. Their artistic and historical creations to-day adorn salons, public buildings or parks not only in Europe but also in America.

These two busts are now in the possession of Frau Professor Engelmann, of No. 52 Knesebeck Strasse, Berlin, W15, Germany, who must sell them at once on account of straitened circumstances. These busts would be a lasting adornment of historical value to any library of medicine, or to any medical school. Persons interested in the purchase of one or both statues should correspond with Frau Engelmann directly or with the undersigned.

CHARLES D. SNYDER

710 N. WASHINGTON STREET,
BALTIMORE, MD.

SCIENTIFIC BOOKS

Chemical Embryology. By JOSEPH NEEDHAM, M.A., Ph.D., fellow of Gonville and Caius College, Cambridge, and university demonstrator in biochemistry. Three volumes, 2021 pp., 1931. Cambridge: at the University Press; New York: The Macmillan Company. Price, $35.00.

THIS book, which, as its title indicates, marks a turning-point in the mode of approach to the traditional biological problems, is one of the most remarkable among recent works of biological scholarship—remarkable alike in its comprehensiveness, its critical and philosophical spirit, its excellence of style and arrangement, its clearness and lack of bias in discussion, its prevailing good sense and fairness in the appraisal of fact and theory. The treatment is extended and detailed, even leisurely. The author aims at giving an exhaustive account of our existing knowledge with regard to the chemical and physico-chemical aspects of embryonic development. He is well aware of the provisional nature of his undertaking, which is largely to clear the ground for the future; his main purpose is the furtherance of the study of embryology as an exact science, and he is conscious of the limitations of our present knowledge and of the need of advance in new directions and by new methods. The variety and range of material reviewed —not merely summarized but discussed with a keen sense of its general significance—are impressive. The bibliography alone occupies 242 pages, the reference to each treatise or paper being accompanied by a statement of the page where it is cited in the book. A feature of the treatment is the large number of original tables, graphs and diagrams. Wherever possible the material is presented quantitatively; in his final paragraph the author emphasizes the advantage,

[1] W. L. Nelson and L. H. Cretcher, SCIENCE, 67: 527, (1928); *Jour. American Chemical Society,* 51: 1914, (1929); 52: 2130 (1930).

[2] E. Schoeffel and K. P. Link, *Jour. Biol. Chem.,* 95: 213 (1932).