Dr. Ellice McDonald, *chairman,* Professor William Seifriz, of the department of botany, and Dean George H. Meeker, of the graduate school of medicine. The plan of research is the study of the physico-chemical aspects of cancer and will have associated with it a number of non-medical chemists and physicists. Three scholarships in research will be open in the graduate school for workers familiar with the colloidal aspects of blood such as cataphoresis, particle size determination, tissue cultures, etc.

ANNOUNCEMENT has been made of the gift to the state of Massachusetts of a new wild life sanctuary of 125 acres adjoining the East Sandwich Bird Farm, by the associated committees for Wild Life Conservation, made up of representatives of the Federation at the Bird Clubs of New England, the Massachusetts Audubon Society and the Massachusetts Fish and Game Association. A fresh-water stream, which separates the new sanctuary from the bird farm, will later be dammed up to make a fresh-water pond on the edge of a salt marsh, which has a variety of cover frequented by many species of song and insectivorous birds, as well as game birds. A small portion of the land is now occupied with pens for the breeding of bob-whites. The property borders on Scorton Creek and Mill Stream and will provide the first public fishing ground that has ever been especially established in the state.

AT the British Embassy in London on November 18 the ambassador presented the vice-minister for communications, representing the Japanese government, with a new standard mutual inductance made at the National Physical Laboratory and given to Japan by the British government in place of the one destroyed in the earthquake of 1923. Representative scientists and engineers attended the ceremony. Professor Sakurai, president of the National Research Council, in a cordial speech, paid tribute to the constant assistance Japanese science had received from Great Britain for more than half a century.

UNIVERSITY AND EDUCATIONAL NOTES

THE state legislature has appropriated $3,481,541 for carrying on the work of the University of Wisconsin. There is available $50,000 for research on special investigations, $341,220 for university extension, $30,000 for farmers' institutes, $60,000 for agricultural extension, $30,000 for substations, $5,000 for corn borer work, $63,100 for county agricultural representatives, $5,000 for the state soils laboratory, $2,500 for hog cholera serum, $6,950 for tobacco experiments and $5,000 for experiments with truck crops.

ANTIOCH COLLEGE has received a gift of approximately $300,000 for a new science building from Charles F. Kettering, head of the General Motors Corporation research bureau. Construction will be started as soon as possible.

FREDERICK W. VANDERBILT has given $116,666.67 toward the construction and equipment of the Vanderbilt clinic at the Columbia Presbyterian medical center. Harold S. Vanderbilt has given $50,000 toward the construction and equipment of the clinic.

N. B. GUERRANT has resigned his position as associate professor of chemical research at the Oklahoma Agricultural and Mechanical College, to fill a position in the department of animal industry, Alabama Polytechnic Institute, where he is devoting his full time to research in nutrition.

DR. W. H. FELDMAN, assistant professor and assistant in veterinary pathology at the University of Colorado, has resigned to accept a position with the Institute of Medical Research of the Mayo Foundation at Rochester, Minn., and has been succeeded by Dr. Henry L. Morency.

APPOINTMENTS to the department of biology in Union College for the present academic year include Dr. Robert K. Enders, assistant professor of zoology, and Mr. Ralph G. Clausen, instructor in biology.

DR. RALPH T. K. CORNWELL, formerly instructor in organic chemistry at Cornell University, is now at the University of Pittsburgh. Dr. Cornwell spent last year in Europe, studying at the University in Munich, Germany, and with Professor Fritz Pregl, Graz, Austria.

AT the University of Chicago, Dr. Warren C. Johnson has been appointed instructor in general and inorganic chemistry, to succeed Assistant Professor Terry-McCoy, who resigned last March.

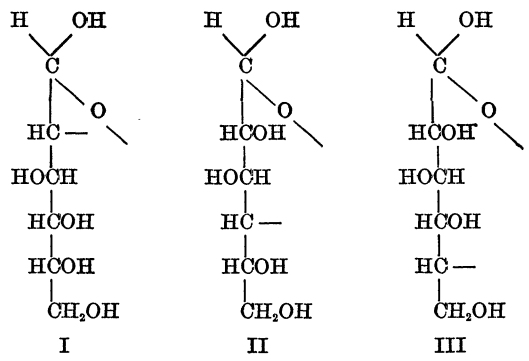
FLOYD S. DAFT, after spending a year of study with Professor S. P. L. Sørensen at Copenhagen, Denmark, as holder of the Cheney Fellowship of Yale University, has been appointed an assistant in the School of Public Health of Harvard University.

DISCUSSION AND CORRESPONDENCE

ON ACTIVE GLUCOSE

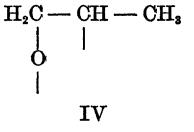
IN an address delivered September 6, 1927, before the division of organic chemistry of the American Chemical Society, the thought was developed that the active forms of glucose, *i.e.,* the fermentable forms, are the free radicles resulting from the opening of the oxygen bridges.

This thought had its origin in the observations of Levene and Walti on the behavior of propylene oxide



I II III

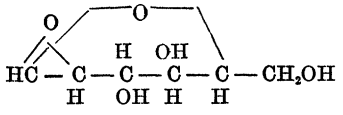
and of glycidol.[1] Each of these two substances shows a greater tendency towards condensation as well as towards intramolecular rearrangement than the corresponding alcohol. Furthermore, optically active propylene oxide was found to undergo Walden Inversion on hydrolysis with acids. This observation was interpreted to mean that in course of the reaction of hydrolysis of the oxide, the free radicle



IV

has for a finite, even though infinitesimal, interval of time an independent existence. From this assumption it would naturally follow that the reactivity of an oxide depends upon the stability of the ring structure and indeed <1, 3> and <1, 4> oxides were found more stable than the ethylene oxide structures. In application to sugars, this assumption would mean that those having the ring structure (I) should be more reactive than those with structure (II) and that those with structure (II) should be more reactive than those with structure (III).

Two independent significant communications have recently been published which bear on our theory. Gottschalk[2] has observed that α-glucosan, having the structure



V

and containing an ethylene oxidic ring, ferments at a higher velocity than ordinary glucose and Pictet[3] has found that the same glucosan readily condenses with glucose to form maltose. The reactivity of the α-glucosan is explained by our assumption of the formation of a radicle with free valences on carbon atoms (1) and (2). Thus, these communications furnish additional evidence in favor of our assumption.

P. A. LEVENE

THE ROCKEFELLER INSTITUTE,
NEW YORK

[1] Levene, P. A., and Walti, A., *J. Biol. Chem.* 73, 263, 1927; 75, 325, 1927.

[2] Gottschalk, A., *Z. physiol. Chem.* 170, 23, 1927.

[3] Pictet, A., and Vogel, H., Helv. Chim. Acta 10, 588, 1927.

THE STEPHEN HALES PRIZE FUND OF THE AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS

THE year now ending is the two hundred and fiftieth anniversary of the birth of Stephen Hales and it is just two hundred years since the publication of his best known book, "Vegetable Staticks." Now is therefore a most appropriate time to commemorate the life and works of Hales, and the American Society of Plant Physiologists is planning a Stephen Hales session as an attractive feature of its approaching annual meeting in Nashville. At that session will be officially established the Stephen Hales Prize Fund, an endowment fund that is being accumulated in the form of personal subscription by members of the society. The endowment is to be administered as a perpetual trust by the American Society of Plant Physiologists. The income therefrom is to be devoted to prizes in plant physiology, which are to be awarded by the society from time to time. Subscriptions already in hand make it certain that an award of fifty dollars can be made every two years, but the amount of each prize may be increased or the award may become an annual occurrence as soon as such changes become possible. The prize is to be known as the Stephen Hales Prize in Plant Physiology.

The establishment of this prize will certainly mark a definite forward step, it will surely become a milestone in the progress of the botanical aspect of physiological science. In the first place, it will aid in perpetuating the memory of the great pioneer experimenter whose name the prize bears, whose work looms so large in the historical background of plant physiology. Also, the establishment of this prize may tend to emphasize plant physiology as a science, implying its close relation to the other branches of physiology and perhaps offsetting in some degree a noticeable tendency for present writers to allow this particular branch of fundamental knowledge to become indistinct as such, masked or even lost among its numerous and rapidly increasing applications in plant culture and sometimes overshadowed in its basic relations to descriptive morphology and phylogenetic and genetic botany. And the awards themselves may stimulate research