University of Chicago, will deliver the fourth Edwin R. Kretschmer Memorial Lecture of the Institute of Medicine of Chicago on the evening of April 27. His subject will be "Experiments on Hematopoiesis."

DR. WILLIAM HOBBS, professor of geology emeritus of the University of Michigan, delivered on March 23 an illustrated lecture before the department of geology of Columbia University entitled "Our Fortress Islands of the Pacific."

DR. GEORGE HERRMANN, professor of medicine at the Medical Branch at Galveston of the University of Texas, spoke on the history of cardiology at the annual meeting of the Celsus Society of San Antonio.

DR. RALPH LINTON, professor of anthropology at Columbia University, delivered at the University of Pennsylvania on March 22 a lecture entitled "What the Science Teacher Should Know about Man."

SIR HENRY DALE, president of the Royal Society, delivered before the Royal Institution, London, during March three lectures on "Nerve-endings and Chemical Transmitters."

THE entomologists of the North Central States, at a conference held at Purdue University on March 30, organized the North Central States Entomologists Association. Dr. J. J. Davis, head of the department of entomology, was elected president and Dr. M. D. Farrar, research entomologist of the Illinois Natural History Survey, was elected secretary. The first regular meeting of the association will be held at the University of Illinois in March, 1946.

THE National Committee for Mental Hygiene is receiving nominations for the annual award of $1,000 established by the Mary and Albert Lasker Foundation for meritorious service in the promotion of mental hygiene.

MRS. THOMAS A. EDISON has allowed the use of her estate at Fort Myers, Fla., as a site for a proposed Polytechnic Institute in honor of Thomas A. Edison.

THE National Research Corporation of Boston has established at the Massachusetts Institute of Technology a fellowship to be known as the National Research Corporation Fellowship for an American graduate student undertaking research in the field of high vacuum. The initial grant will be $2,500.

THE late William T. Davis, formerly president of the Staten Island Institute of Arts and Sciences, bequeathed his residuary estate, which is expected to amount to about $200,000, to the institute for its "natural science fund" and, in addition, the Davis homestead at 146 Stuyvesant Place, St. George, with its furnishings and natural history collections.

AN annual cash award of $1,000, open to postgraduate students, college technical men, independent research workers and technical workers, will be made by the soft drink industry in recognition of outstanding scientific achievement or technical contributions to the progress and advancement of the industry. The award will be known as the Chesterman Award, honoring C. B. Chesterman, manufacturer of Sioux City, Iowa, who sponsored the first research program conducted by the industry at Iowa State College from 1923 until the outbreak of the war. The award has been established to encourage continuation and expansion of the technical progress which has contributed greatly in the past to the quality of the products of the industry.

THE New Jersey State Senate has passed bills merging seven existing agencies to form a new State Department of Education and designating Rutgers University as "the State University of New Jersey." The university and the college for women will continue to receive from the state appropriations which now amount to approximately $1,500,000. One third of the members of the board of trustees will be named by the state and two thirds by the university. The reorganization bill will consolidate the State Board of Education, the State Board of Regents, the Board of Visitors of the State Agricultural College at Rutgers, the Commissioner of Education, the State Library, the Public Library Commission and the State Museum to form the new Department of Education. The department will be controlled by an unsalaried board of twelve members and a state commissioner of education, who will receive a salary of $15,000 a year. The commissioner and the board members will be named by the Governor with the consent of the Senate.

DISCUSSION

TRYPSIN AND CHYMOTRYPSIN VERSUS HEPARIN[1]

RECENT interest in the antagonism between heparin and trypsin,[2] as evidenced by the publication of Wells, Dragstedt, Cooper and Morris,[3] and Grob,[4] makes it pertinent to point out that different results may be

[1] From the Biochemical Research Laboratory, Elgin State Hospital, and the Department of Biological Chemistry, University of Illinois College of Medicine.

[2] M. K. Horwitt, SCIENCE, 92: 89, 1940.

[3] J. A. Wells, C. A. Dragstedt, J. A. Cooper and H. C. Morris, *Proc. Soc. Exp. Biol. and Med.*, 58: 57, 1945.

[4] D. Grob, *Jour. Gen. Physiol.*, 26: 423, 1943.

obtained if one uses commercial preparations of trypsin instead of crystalline trypsin. That certain commercial preparations of trypsin contain a protease which has different chemical properties from crystalline trypsin prepared according to Northrop[5] can be demonstrated.

Since pancreatic trypsin-inhibitor has an effect on trypsin which is markedly greater than that on chymotrypsin, one could use this inhibitor to distinguish between trypsin and mixtures of trypsin and chymotrypsin. With this in mind it has been shown[6] that a given amount of pancreatic trypsin-inhibitor which markedly inhibits crystalline trypsin has much less effect on trypsin, Fairchild. It is probable that most commercial preparations labelled trypsin are mixtures of trypsin and chymotrypsin.

It has already been proved that heparin has no inhibitory effect upon the protease activity of chymotrypsin.[2, 7] Obviously, then, one can not use an indefinite mixture of trypsin and chymotrypsin[3] to study the effects of heparin on the inactivation of pure trypsin.

Since both chymotrypsin and trypsin are inhibited by blood serum, the above facts may not effect any physiological conceptions of anti-proteolytic activity. A calculation of the relative anti-proteolytic effects of heparin and blood serum indicates that it is hardly likely that the anti-tryptic action of heparin is an important factor in its physiological action. The anti-proteolytic effects of serum is so powerful that for many years it has been customary to use diluted solutions of the serum when testing any anti-protease effects on blood. A ml of heparin solution containing 4 mg of heparin has no more inhibiting power than 0.1 ml of ordinary serum. One would have to assume the presence of about 100 grams of heparin to explain the anti-proteolytic action of serum as being due to this compound, and a similarly large amount if it were due to a substance like pancreatic anti-trypsin. This is probably not the case.

The reported observations of the difference between crystalline trypsin and trypsin, Fairchild, need in no way invalidate past and future work with the latter preparation. We should, however, distinguish between crystalline trypsin and other proteases. This would be especially true in those experiments in which blood clotting is an important factor.

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PLASMODIUM VIVAX CHESSON STRAIN

AN infection of *Plasmodium vivax* was diagnosed in a soldier at Harmon General Hospital in August, 1944. The history of the patient indicated that the infection was contracted in New Guinea during 1944. It was carried on our records as v–1027–N.G.

On August 25, 1944, transmissions by *Anopheles quadrimaculatus* were begun. Observations indicated that this *vivax* infection in man reacted differently to certain drugs than did the St. Elizabeth strain of *P. vivax* which has been extensively used for drug testing. This and other characteristics suggest that it might be a strain distinct from some of the American malarias.

As there are indications that this new strain might be widely used for experimental procedures, it seems desirable to give it a definite designation. The strain is given the name of the patient from whom it was obtained. It, therefore, is designated as the Chesson strain of *Plasmodium vivax*.

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REACTION OF VITAMIN A WITH SUPER-FILTROL

I HAVE read with interest the article under "Scientific Apparatus and Laboratory Methods" entitled, "A New Reagent for Vitamin A," by Arnold Lowman in the February 16 issue of SCIENCE.

Because I am interested in both adsorption and the determination of vitamin A, it occurred to me that the phenomenon of color formation might be due to an impurity which reacted with the vitamin A in the fish oils and which was subsequently adsorbed by the Super-Filtrol. Mr. Lowman's observations were repeated and found to be correct. However, it was also found that when a fish liver oil was added to a suspension of florisil (Floridin Co., Warren, Pa.) no color was formed. When one ml of antimony trichloride in chloroform was added a blue color similar to the one described by Mr. Lowman was formed and immediately adsorbed on the florisil. This was similar in all respects to the super-filtrol preparation. It was also found that when a mixture of florisil and antimony trichloride in chloroform was evaporated to dryness and carefully dried it would react similarly to Super-Filtrol with vitamin A.

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BIOLOGICAL RESEARCH AND PUBLICATION

THE article by Professor Weiss, published in SCIENCE of February 2, is very interesting, but I think too

[5] J. H. Northrop, "Crystalline Enzymes," Columbia University Press, 1939.
[6] M. K. Horwitt, Elgin Papers, 4: 102, 1941.
[7] M. K. Horwitt, *Jour. Biol. Chem.*, 156: 427, 1944.