American Industrial Radium and X-Ray Society and the Society for Experimental Stress Analysis. Technical sessions will be held each morning, afternoon and evening. In addition to reports on research developments of the past year, there will be presented a series of practical panel-type production meetings each afternoon and evening, with the exception of Thursday evening when the annual dinner will be held.

THE first Institute of Dental Health Economics, sponsored by the School of Health of the University of Michigan, was held from June 26 to July 1 with an attendance of about a hundred. Twenty-six states were represented.

AN increase in quotas for admission to officer candidate courses leading to commissions in the Medical Administrative Corps of the Army, has been announced by the War Department. Quotas which until recently have been extremely limited have been revised to permit acceptance of 2,000 men within the next seven weeks for 17-week courses. The primary reason for the increase is the need for more officers qualified for administrative duties in the Army Medical Department to free members of the Medical Corps for professional duties. In recent months only the Medical Administration Corps Officer Candidate School at Camp Barkeley, Texas, has been accepting candidates. Under the new plan, the Officer Candidate School at Carlisle Barracks, Pennsylvania, has been reopened.

FIFTY-FIVE local governmental units in the Upper Peninsula of Michigan have availed themselves of the counseling service on post-war planning provided by the Michigan College of Mining and Technology. This service was first offered on July 1. Units which have received guidance include counties, all large cities in the Upper Peninsula, villages, townships, school districts and road commissions. The work falls under the Extension Division, and is conducted by Assistant Professor E. J. Townsend, a member of the staff both of the department of civil engineering and the department of economics. Professor Townsend has been designated by the Michigan State Planning Commission as its Upper Peninsula representative.

MR. AND MRS. MACO STEWART, of San Antonio and Galveston, recently offered their Galveston Island estate to the Medical Branch of the University of Texas for use as a convalescent home for children. The offer was accepted at the July meeting of the Board of Regents. The estate was named the Margie B. Stewart Convalescent Home for Children. Exceptional facilities are available for handling between thirty and fifty convalescent children, with outdoor fresh and salt water pools and special facilities for physical and occupational therapy. The project will comprise an important part of the Child Health Program of the Medical Branch as supported by the William Buchanan Foundation of Texarkana. The medical work of the new home will be under the direction of Dr. Arild E. Hansen, professor of pediatrics, while the surgical aspects and physical therapy will be under the direction of Dr. G. W. N. Eggers, professor of orthopedic surgery.

DISCUSSION

THE NATURE OF RH AGGLUTINATION REACTIONS[1]

THE question may be posed whether the special nature of the Rh reactions[2] is due to (1) some property of the Rh antigens, or (2) whether this can be traced to some special quality of the antibodies, or (3) whether peculiarities of both antigens and antibodies are responsible. Some observations by the authors have led us to the conclusion that the nature of the Rh antibodies is chiefly responsible for the peculiarities of the Rh reactions, though in addition special qualities of the agglutinogens may also play a rôle.

The anti-Rh sera most often used for diagnostic tests are human sera, obtained from mothers of erythroblastic babies.[3] The peculiarities of these sera are apparently due to the fact that they are *immune* sera, since they are produced in the mother in response to the stimulation of antigens of fetal origin, in contrast to the common blood grouping sera which are natural sera. This idea is supported by observations on human iso-immune sera against the properties A and B. (Such sera can be obtained from patients who have had transfusions of blood or plasma of an incompatible group, or from volunteer donors who have been given injections of small amounts of Witebsky's group substances A and B.) While most of these sera have approximately the same titer at room, body and refrigerator temperature, some have a much higher titer and react much more intensely and rapidly at body temperature than in the cold.[4] It is significant that these special human sera give less satisfactory reactions by the common slide technique at room

[1] From the Serological Laboratory of the Office of the Chief Medical Examiner of New York City. Aided by a grant from the United Hospital Fund of New York City.

[2] *Cf.* K. Landsteiner and A. S. Wiener, *Jour. Exp. Med.*, 74: 309, 1941.

[3] P. Levine, L. Burnham, E. M. Katzin and P. Vogel, *Am. Jour. Obstet. and Gynec.*, 42: 925, 1941.

[4] A. S. Wiener and R. B. Belkin, unpublished observations.

temperature than natural anti-A and anti-B sera of lower titer.

On the other hand, we have encountered a number of anti-Rh sera which give reactions comparable to those of the common grouping sera. These rather exceptional sera were of high titer, and were relatively insensitive to temperature variations, the reactions in some cases being even sharper in the cold than at body temperature. Such sera give good clumping by the common slide technique, and this we believe to be due to their wide temperature range of action. In addition, it may be mentioned that in the first report on the role of the Rh factor in hemolytic transfusion reactions Wiener and Peters[5] described post-transfusion sera which had the peculiarity that they reacted only in the cold.

In this connection, it would seem that agglutinins should be named according to their specificity rather than the optimum temperature at which they react. The recent tendency of some workers to designate autoagglutinins merely as cold agglutinins is therefore to be condemned. The term autoagglutinins is unambiguous and therefore should be retained, though if one wishes, one may use the expression "cold autoagglutinins" to indicate that the reactions are most distinct or occur only in the cold.

As already mentioned we believe that in addition to the special properties of the Rh antisera certain peculiarities of the agglutinogen may play a part in the nature of the reactions. Even with the most potent Rh antisera, in tests at body temperature, isohemolysis has rarely, if ever, been observed in the test-tube. Moreover, the Rh agglutination reactions are more easily reversed by shaking than in the case of the common grouping tests. Finally, only about 2 per cent. of Rh negative individuals respond to transfusions of Rh positive blood by the production of isoantibodies, while A and B appear to be regularly antigenic in man. One of us (W)[6] has previously suggested that the reason for this may be that Rh is a sub-surface antigen, while A and B may be located at the surface of the erythrocyte. Recent studies[7] on the capacity of red-cell stromata to inhibit anti-Rh as well as anti-A and anti-B sera, indicate that a more likely explanation may be that there are far fewer Rh hapten groups than A and/or B hapten groups per erythrocyte. This hypothesis would account for the peculiar *in vitro* behavior of the Rh tests as well as the apparently poor antigenic action of the Rh factors. If the hypothesis proves to be correct, then this would be a serious obstacle to attempts at extraction of large amounts of Rh antigen from human erythrocytes for clinical use.

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[5] A. S. Wiener and H. R. Peters, *Ann. Int. Med.*, 13: 2306, 1940.

[6] A. S. Wiener, "Yearbook of Pathology and Immunology for 1941," p. 499.

[7] A. S. Wiener and R. B. Belkin, unpublished observations. This effect would be exaggerated if the testing serum contains "blocking" antibodies (A. S. Wiener, *Proc. Soc. Exp. Biol. and Med.*, June, 1944), which would further reduce the number of sites available for attachment of anti-Rh agglutinins.

USE OF TERMS RELATING TO VEGETATION

PLANT-COVER data are commonly added to military maps for various theaters of war. Members of our armed forces in many countries quickly learn to distinguish hitherto strange types of vegetation, as they appear from the air as well as on the ground. Investigators of economic plants are rapidly adding to our knowledge of vegetation of Latin America. This recently increased awareness of vegetation is unprecedented. Suggestions toward accurate use of names for certain vegetation-types should be timely.

"Vegetative cover" is frequently used by many workers in applied ecology, by some geographers, and others. The only objection to it is the long-sanctioned use in biology of "vegetative" to contrast with "reproductive." Vegetative as applied to herbage or other plant cover thus introduces an irrelevancy. This is easily avoided by substituting "vegetation" or "plant cover." When an adjective derived from vegetation is desired, vegetational or the rather rare word "vegetal" may be used.

Terms such as prairie, meadow, savanna, woodland, scrub forest, evergreen forest, etc., convey distinctive impressions of appearance or physiognomy of vegetation, without commitment as to the plant species which make it up. Unfortunately the impressions are not the same for all persons, largely through limited knowledge of the history and applications of particular terms. Thus "savanna" was first applied to extensive grasslands in the West Indies, and is now most commonly so used there and in central and northern South America. In some of these savannas single trees or small clumps or groves of trees, or thickets of shrubs, occur. The proportion of area occupied by taller woody vegetation, and its composition, are highly variable. This accompaniment of savanna trees and shrubs, though incidental, has led some travelers or readers of travels to consider that savannas necessarily are tree-and-grass combinations, synonymous with "parkland." The primary significance of the grassland, by itself or serving as a matrix for trees, should be kept in mind. A two-phase vegetation should be named after both phases, as prairie with hazel thickets, or palm savanna (*i.e.*, savanna with palms). Tendencies to extend the term savanna to