By forcing the dissociation of the original culture, 2 aberrant types were obtained upon subculture, one hemolytic and non-proteolytic, while the other was proteolytic and non-hemolytic.

The data indicate that hemolytic and proteolytic activities of filtrates prepared from cultures of both of these organisms are manifested by individual extracellular substances, and that hemolytic and proteolytic properties of viable staphylococci may be independently altered by means of bacterial dissociation.

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A Useful Modification in the Preparation of Therapeutic Sera.

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There are two recognized categories of individuals who are potentially subject to acute complications incident to serum therapy. One group is composed of those naturally hypersensitive to horse protein. The other is composed of individuals who are so constituted that they become hypersensitive to horse protein on the first exposure, and henceforth react like the individuals of the first group to the injection of the horse serum. (The latter category of individuals is likely to increase in the future due to toxin-antitoxin immunization.) While accidents of this sort can be avoided by the use of therapeutic sera derived from such animals to the protein of which the recipients show no hyper-susceptibility, in practice this procedure can not be carried out because therapeutic sera are prepared in horses almost exclusively. It is evident that if the protein of the therapeutic serum could be deprived of its species specificity the difficulty might be solved. The work of Obermeyer and Pick, of Landsteiner and of others has shown that by subjecting proteins to azotization, acetylation, halogenation, or by coupling with carbohydrates or lipoids, it is possible to destroy the species specificity of proteins while imparting to them new artificial specificities. In the past these experiments were made only with the view of eliciting the interdependence between the chemical structure and antigenic specificity. Accordingly chemical procedures selected were often so drastic that they would not be applicable to the problem at hand without some modification. By excluding such procedures which

are accompanied by excessive oxidizing or reducing processes, or those in which the temperature or hydrogen-ion levels are not compatible with the preservation of specific properties residing in the serum proteins encouraging results have been secured. Therapeutic sera derived from horses treated under these conditions retained considerable portion of therapeutic value, and yet they did not cause anaphylaxis when injected into guinea pigs sensitized to native horse serum. Thus far only two mutually heterologous couplings have been secured but the experiments are being continued in the search for further and simpler procedures in order to secure sufficient variety of coupled sera so that 3, 4 and more reinjections of therapeutic sera may be made without the danger of shock. At the same time the couplings already secured are being tested for the toxicity when injected into animals in large amounts.

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Some Chemical and Physical Properties of the Crystalline Follicular Ovarian Hormone: Theelin.

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The quantity of the earlier preparations of the crystalline hormone was insufficient for much chemical work. Three samples which were carefully assayed showed a potency exceeding 3000 rat units per milligram. The melting point of the crystals of preparations No. 119 and No. 143 was 243°C. (uncor.).

When larger quantities of the crystals became available an investigation of the chemical and physical properties of the compound was begun. The data given in Table I were obtained by micro methods which had been studied with known compounds.

The melting point was taken by the open beaker method. The corrected temperature is approximately 6° higher. The molecular weight determined by the Rast micro method gives values which agree with the values calculated from the Iodine number upon the assumption that there is one double bond in the molecule. The Iodine number was determined at 0°C. in the dark by a micro modification of the Hanus method. The hormone was acetylated with acetic anhydride in pyridine and the weight obtained indicated two hydroxyls. The molecular weight of the recrystallized derivative