The Staphylococcus bacteriophage was titrated and found to be active in 1:10,000,000,000 dilution. One cubic centimeter of this lytic principle was added to 9 cc. of fresh rabbit serum. One cubic centimeter of the mixture was removed for titration and was found to be as active as the original lytic principle. To the remaining 9 cc. of serum-phage mixture 20 volumes of distilled water were added. CO_2 gas was then bubbled through the mixture, following which the material was centrifuged and the globulins were resuspended in 9 cc. of saline made slightly alkaline with a 1% solution of sodium carbonate. The globulin fraction was then tested for lytic activity against the sensitive *Staphylococcus aureus* and the bacteriophage was found to be present in undiminished concentration. Lytic principle, however, could not be detected in the albumin fraction. This phenomenon may be explained upon the basis of the negative charge carried by the bacteriophage and the opposite charge of serum globulin at or below its isoelectric point at pH 5.4 which is reached by treating the serum-phage mixture with CO_2 gas. The isoelectric point of serum albumin is at pH 4.7 and this degree of acidity is not reached by the method employed, the electric charge of the albumin remaining negative, and hence there is no adsorption of the negatively charged bacteriophage by this fraction of the serum.

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Further Note on the Salivary Gland Poison of Aëdes Aegypti.

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In a previous communication[1] we described the poisonous substance contained in the salivary glands of *Aëdes aegypti* and the types of reactions which are produced by introducing this substance intradermally into the human skin. This substance gives rise to a reaction which is practically identical to that following the bite of this insect. The poison is resistant to both freezing and boiling temperatures and contains no hemolytic or anticoagulant substances. It does not produce antitoxin when introduced intravenously into rabbits.

Further studies upon the properties of the salivary gland poison

[1] McKinley, E. B., PROC. SOC. EXP. BIOL. AND MED., 1929, xxvi, 806.

from *Aëdes aegypti* indicate that the poison does not deteriorate on standing for several months. Material tested after 8 months from the time of preparation is just as active as in the beginning. Furthermore the poison may be diluted with 5 volumes of 95% alcohol or ether, desiccated at room temperature over calcium chloride, redissolved in physiological saline, and still retain its full potency when tested by intradermal skin injection. The poison when shaken out several times in ether does not lose any of its strength. Exposure of the salivary gland poison in saline to the action of ultra violet light, at one foot distance, in quartz tubes, for a period of 20 minutes has no apparent effect. The saline extract of the salivary glands gives a negative biuret reaction, a negative Fehlings test but a definitely positive Molisch reaction. The chemical tests indicate the carbohydrate nature of the toxic substance and the skin reactions obtained (wheel, without pseudopods, surrounded by erythema) are quite similar to those obtained with carbohydrates isolated from certain microorganisms.

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Resistance of Hemolytic Staphylococci to Bacteriophage Lytic for Non-Hemolytic Staphylococcus Aureus.

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A very common infection in Porto Rico is caused by a hemolytic *Staphylococcus aureus.* These infections are exceedingly virulent as a rule and offer a serious problem in our clinics and hospitals. Pomales[1] has shown that this organism is present in the throat flora of about 19% of supposedly healthy individuals and in pathological cases it predominated in 24%. This organism proved to be the predominating microbe in the crypts and the interior of 65 pairs of tonsils removed at operation. Because of the severity of infections with this organism we have attempted treatment in a few cases with a bacteriophage which is lytic for a non-hemolytic *Staphylococcus aureus.* The administration of the bacteriophage has had no effect upon the course of the infection. The bacteriophage employed was

[1] Pomales, A., *Porto Rico J. Pub. Health and Trop. Med.*, 1929, v, 196.