been established. Allantoin was determined by the method previously described.[5]

An increased elimination of allantoin following the injection of insulin has been observed in 6 dogs. A typical result is shown in Table I. Dog L was catheterized twice daily, at 8:35 a. m. and at 1:35 p. m., and fed daily at 1:45 p. m. On January 11th, 7 units of insulin were injected at 8:45 a. m. During the 5-hour interval following the injection of the hormone, the excretion of allantoin doubled. Since this effect is produced 19 hours after the ingestion of a purine-poor diet, it would seem that insulin is capable of affecting the endogenous metabolism of purines. In view of the well-known action of insulin hypoglycemia in evoking a secretion of epinephrine, the effect of the latter upon the excretion of allantoin is being investigated.

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Antihuman Fibrinolytic Streptococci.

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Tillett and Garner[1] have recently described a hitherto unknown antihuman fibrinolytic function of hemolytic streptococci. This function is demonstrable with *S. hemolyticus* of human origin, but is not demonstrable with apparently identical environmental or veterinary streptococci. Since the lytic factor is not active against normal rabbit fibrin, many of the results of streptococcus research on rabbits are presumably not applicable to human pathology. We have, therefore, extended the Tillett-Garner tests to include plasma-clots from other animal species. The object of these tests was to find a laboratory animal suitable for a direct study of the topographical distribution[2] and *in vivo* fibrinolytic function of *S. hemolyticus*.

The *S. hemolyticus* used in these tests were 2 human (C 203 and K 96) and 2 veterinary (P 454 and K 158 E) strains kindly furnished by Dr. Lancefield of the Rockefeller Institute. To these we

[5] Read, L. S., and Chaikoff, I. L., PROC. SOC. EXP. BIOL. AND MED., **1934, 31**, 818.

[1] Tillett, W. S., and Garner, R. L., *J. Exp. Med.*, 1933, **58**, 485.

[2] Menkin, V., *J. Exp. Med.*, 1933, **57**, 977.

have added a number of local strains, one of special interest being J 1, originally isolated from a clinical case in San Francisco. This strain contains the human-diagnostic carbohydrate fraction recently described by Lancefield.[3]

The fibrinolytic tests were made by the Tillett-Garner technic. To 1 cc. 20% oxalated plasma was added 0.25 cc. 0.25% $CaCl_2$-solution, followed by 0.5 cc. 18-24 hour broth culture of the microorganism to be tested. A semi-opaque agar-like clot is usually formed within 10 minutes. In nonlytic or negative tests no softening of this clot is demonstrable after 24 hours incubation at 37°C. In positive tests, beginning (+), well advanced (++), or complete (+++) liquefaction is noted within from 30 minutes to 2 hours.

Tests with plasma-clots from the rabbit, guinea pig, rat, domestic fowl, horse, cow, goat, sheep, dog and cat have all been negative with the 5 streptococcus strains herein reported. Twenty human plasmas and 12 rhesus plasmas have been tested with the same strains. Both human and rhesus fibrins are lysed by the 3 strains of human origin, but are not lysed by the 2 veterinary strains. Rhesus fibrin, however, is invariably dissolved less promptly or less completely than the human control. A typical comparison is recorded in Table I.

TABLE I.
Relative Effects of the Tillett-Garner Streptococcus Lysin on Normal Human and Rhesus Fibrins.

Streptococcus Strain	Lysis of Normal Human Clot					Lysis of Normal Rhesus Clot				
	½ hr.	1 hr.	2 hrs.	6 hrs.	24 hrs.	½ hr.	1 hr.	2 hrs.	6 hrs.	24 hrs.
J 1	+++	+++	+++	+++	+++	±	+++	+++	+++	+++
K 96	+±	+++	+++	+++	+++	0	0	+++	+++	+++
C 203	0	0	+	++	+++	0	0	0	±	++
P 454	0	0	0	0	0	0	0	0	0	0
K 158 E	0	0	0	0	0	0	0	0	0	0

For a direct study of the topographical distribution of *S. hemolyticus* in infected tissues[2] and its *in vivo* fibrinolytic activities, the rhesus monkey is apparently the only readily available laboratory animal which presumably would give results directly applicable to human pathology.*

[3] Lancefield, R. C., *J. Exp. Med.*, 1933, **57**, 571.

* It should be noted in this connection that Tillett and Garner found that rabbit fibrinogen clotted with human thrombin gives an atypical rabbit fibrin susceptible to the antihuman streptococcus lysin.