signs of calcification only after 7 or 8 months from the date of infection has been set forth by various observers in the field of parasitology and is in agreement with the experiments performed in this laboratory. The results of the experiments here reported are in striking contrast to the normal course of trichiniasis as shown by the marked calcification obtained in less than 6 weeks in treated animals by the administration of irradiated ergosterol and calcium lactate.

The treatment of trichinized rabbits with irradiated ergosterol apparently has a definite therapeutic value. It still remains to be tested in human cases of trichiniasis.

7716 P

Fibrinolytic Streptococci from Lower Animals.*

R. R. MADISON. (Introduced by W. H. Manwaring.)

From the Laboratory of Bacteriology and Experimental Pathology, Stanford University, California.

In addition to hemolytic streptococci specifically lytic for human fibrin there are at least 2 apparently distinct fibrinolytic strains of *S. hemolyticus* (or strains intermediary between *S. hemolyticus* and

TABLE I.

Lysis of Lower Animal Fibrins by *S. hemolyticus*.

24-hour veal-infusion broth cultures of *S. hemolyticus* tested against veterinary fibrins by the serum-free fibrin-clot technic of Tillett and Garner.[1]

++++ represents complete liquefaction of the fibrinogen-thrombin complex within 10 minutes; +++, 30 minutes; ++, 1 hour; and +, 2 to 3 hours.

+++ and ++++ fibrinolytic strains are + and ++ thrombolytic, by the plasma-clot technic.

Origin of strain	Fibrin				
	Horse	Hog	Cow	Rabbit	Man
Horse, "Strangles" (10 strains)	+	0	0	0	0
" "	++	0	0	0	0
Colt, "Navel ill"	+++	0	0	0	0
Rabbit, "Pneumonia"	+	0	0	0	0
Man, "Prostate abscess"	+	0	0	0	+
" "Knee "	+	0	0	0	++++
Hog, "Septicemia" (2 strains)	0	++++	0	0	+
" "Mixed infection"	0	+	0	0	0
Control (Autolytic test)	0	0	0	0	0

* Supported in part by the Rockefeller Fluid Research Fund of Stanford University School of Medicine.

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

S. viridans), which are apparently equally specific for the fibrins of certain domestic animals. A summary of our streptococcus strains which dissolve fibrins from lower animals is given in Table I.

7717 C

Enzyme-Concentration Method of Titrating Bacterial Fibrinolysins.*

R. R. MADISON. (Introduced by W. H. Manwaring.)

From the Laboratory of Bacteriology and Experimental Pathology, Stanford University, California.

Since but 17% of all local strains of *Streptococcus hemolyticus* originally isolated from superficial infections of man are demonstrably thrombolytic[1] by the Tillett-Garner plasma-clot technic,[2] we have retitrated these strains by their more delicate serum-free fibrin-clot method. This retitration has raised the percentage of demonstrably fibrinolytic strains to 25%.

It is of basic interest to determine whether or not the remaining 75% have or have not a demonstrable antihuman fibrinolytic capacity. To determine this we have again retitrated all local strains, using a modification of the Tillett-Garner enzyme-concentration method.

Since at least 75% of the fibrinolysin in a 24-hour broth culture of *S. hemolyticus* is usually lost as a result of filtration, enzyme-concentrates were prepared from unfiltered broth cultures. To prepare such a concentrate, 20 cc. unfiltered 24-hour veal-infusion broth culture is added to 60 cc. 96% alcohol, both culture and alcohol being ice-cold at the time of mixing. The resulting mixture is allowed to stand at refrigerator temperature for at least an hour. The precipitate is then collected by centrifugation, and rapidly dried in a vacuum desiccator.

To make the fibrinolytic test, the crude precipitate is suspended in 1 cc. buffered salt-solution and freed from undissolved residue by centrifugation. The resulting centrifugate usually has a fibrinolytic titer at least 20 times that of the original broth-culture, which is generally equivalent to at least 80 times that of the broth-filtrate.

* Supported in part by the Rockefeller Fluid Research Fund of Stanford University School of Medicine.

[1] Madison, R. R., PROC. SOC. EXP. BIOL. AND MED., 1934, **31**, 1018.

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