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Dissociation of a Streptococcus Hemolyticus.

F. B. JENNINGS, JR. (Introduced by S. A. Petroff.)

From the Research and Clinical Laboratory, Trudeau Sanatorium, Trudeau, N. Y.

A hemolytic streptococcus was isolated from 1 of 50 guinea pigs dying during an epidemic of streptococcus infection. The organism under consideration is also pathogenic for white mice, white rats and rabbits. The plates made from the heart's blood of the original guinea pigs showed for the most part colonies of a typical virulent streptococcus, except for 2 colonies which were flat, translucent, yellowish and conspicuously large. After fishing and replating these 2 colonies, the above characteristics were accentuated except for the fact that they were less flat. In broth the growth was homogeneous in contradistinction to the flocculent growth of the ordinary virulent type of hemolytic streptococcus.

The organisms from the particular colony under discussion have certain unusual characteristics. Apparently they remain true to type, no matter how they are cultivated or passed through animals. They also maintain their virulence after standing at room temperature in plain broth for 2 or 3 months and on repeated subcultivation. The virulence is such that ¼ cc. of a 16 hour growth diluted 1-100,000,000 will kill mice.

The organisms of the conventional colony mentioned above behave, as far as virulence is concerned, as any hemolytic streptococ-

TABLE I. *Representative Virulence Tests.*

	Dilution of Cultures.					
	1-100	1-10,000	1-100,000	1-1,000,000	1-10,000,000	1-100,000,000
Conventional type of colony after daily subculturing in broth for 2 weeks.	S	S		S		
Conventional type of colony after direct intraperitoneal passage through 8 mice.		2		2	2	S
Flat type of colony after daily subculturing in broth for 2 weeks.		2		2	2	3
Flat type of colony after direct intraperitoneal passage through 5 mice.				1	2	2

The mice received ¼ cc. of broth diluted 16 hour culture intraperitoneally.
"S" indicates a 96 hour survival.
The numbers indicate the day of death after inoculation.

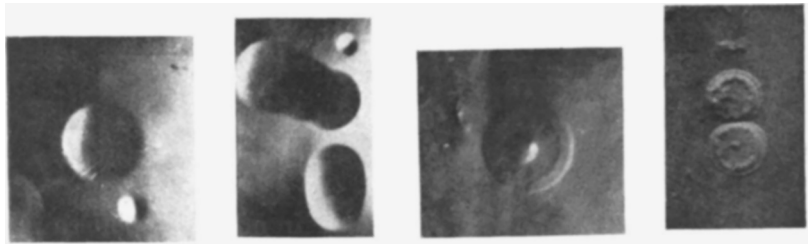

FIG. 1. FIG. 2. FIG. 3. FIG. 4.

Fig. 1. Typical large flat colony compared to the ordinary virulent streptococcus colony. *Fig. 2.* Variant forms of large flat colony and a virulent streptococcus colony. *Fig. 3.* Flat colony with central nipple and irregular raised periphery as may be seen after 48 hours. *Fig. 4.* Flat colony showing errosion which may also occur after 48 hours.

cus. However, upon cultivation in broth of a pH 6.5 and upon rapid mouse passage a few of the flat, translucent colonies eventually appear. On mouse passage they are recovered first from the peritoneal exudate rather than the heart's blood and apparently always predominate in the former. The organisms forming the flat colonies were found to be encapsulated when taken directly from the mouse, in contrast to non-encapsulated forms of the ordinary virulent streptococcus under similar circumstances.

There is some variation in the appearance as well as the behavior of these large colonies on different sorts of solid media. Agar enriched with some body fluid seems to stabilize them. Often on ordinary agar the colonies are seen to develop areas of erosion. Opacities also appear, as well as a central nipple and an irregular raised periphery.

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The Hyperglycemic Effect of Vasopressin, Oxytocin and Pituitrin.

E. M. K. GEILING AND C. A. EDDY. (Introduced by J. J. Abel.)

From the Pharmacological Laboratory, Johns Hopkins University.

Doctor Oliver Kamm and his associates kindly furnished us with experimental lots of their vasopressin and oxytocin and we were enabled to study in normal unanesthetized dogs and rabbits the changes in blood sugar following the intravenous injection of these 2 principles, as also the commercial pituitrin (obstetrical, Parke, Davis & Co.). We found that vasopressin, oxytocin and pituitrin