

From these investigations the conclusion can be drawn that the experimentally produced deciduomata differ in the rabbit and in the guinea-pig in the same way as the natural placentas do. Whether the dissimilar reactions of homologous tissues to similar stimuli in the rabbit and in the guinea-pig depend upon a difference in the structure of the protoplasm, or upon a quantitative or qualitative difference of the internal secretion of the ovaries, or upon a combination of these two factors, are questions which cannot be answered at present.

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Hemolytic action of the venom of *Heloderma suspectum*.

By **ELIZABETH COOKE** and **LEO LOEB**.

[*From the Laboratory of Experimental Pathology, University of Pennsylvania.*]¹

1. The venom of *Heloderma suspectum* alone does not cause hemolysis of blood corpuscles (ox, sheep, dog, guinea-pig, rabbit, *Heloderma*, frog). Fresh and dried venom behave alike in this and other respects. It must be mentioned that on a few occasions guinea-pig corpuscles showed a trace of hemolysis with venom alone, but as this usually did not occur, it is likely that the corpuscles which behaved as exceptions, had, in some way, lost part of their natural resistance.

2. In combination with lecithin the venom causes hemolysis. The amount of lecithin necessary varies for corpuscles of different species.

3. Certain blood sera, heated or unheated, act like lecithin (dog, horse, turtle), others do not (guinea-pig, rabbit, ox, sheep, *Heloderma*). Only those activate which are supposed to act through lecithin, not those which act through complement.

4. A number of non-activating sera, heated or unheated, inhibit the venom-lecithin hemolysis. Different sera possess different inhibiting values, the greatest observed inhibition being due to *Heloderma* serum and the next greatest to guinea-pig serum. But the

¹These experiments represent part of an investigation upon the toxic action of venom of *Heloderma* carried out in this laboratory under a grant from the Carnegie Institution.

inhibiting action of a certain serum varies to some extent for different corpuscles. Details concerning these differences will be published later.

5. *Heloderma* serum does not activate its own venom.

6. Although *Heloderma* is naturally immune against the chief toxic effects of its own venom, the venom will, when added to lecithin or to an activating serum, cause hemolysis of the blood corpuscles of *Heloderma*, *in vitro*.

7. The hemolysin passes through a Berkefeld filter, dialyzes very slowly, resists a temperature of 100° C. for 10 minutes, and is wholly or partially destroyed by heating to 100° C. for 30 minutes. It is, therefore, relatively very resistant to heat.

8. As the preceding statements indicate, the hemolysin of *Heloderma suspectum* differs in several respects from the hemolysins of snake venoms. It may also be added that compared with such powerfully hemolytic agents as the venom of cobra, the venom of *Heloderma* is only weakly hemolytic.

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The biological relations of seed proteins.

By THOMAS B. OSBORNE.

[From the Connecticut Agricultural Experiment Station, New Haven, Conn.]

At a recent meeting of this society, Reichert and Brown gave the results of their examination of the crystal forms of hemoglobins obtained from a large number of different species of animals.¹

The crystallographic method was adopted because they believed that by this means they might succeed where the chemist had failed.

That the chemist has failed to establish differences between homologous proteins which are quite as marked as those indicated by the method employed by Reichert and Brown, I cannot admit.

Without wishing in any way to detract from the importance of the highly interesting results reported by Reichert and Brown, I would like to call your attention to the results obtained by purely chemical means in the investigations of the vegetable proteins

¹ Reichert and Brown : This journal, 1908, v, p. 66.