

induction of an e.m.f. the blood velocity during each phase of the cardiac cycle is instantaneously indicated. Fig. 3 shows a tracing of blood flow in an intact artery of a dog. The vessel was compressed from time to time to ascertain the location of the base line corresponding to zero flow. 0.1 cc/sec correspond at maximum amplification to a deflection of 1 mm so that a flow of .03 cc/sec still can be detected. The calibration is accomplished by perfusion of the excised blood vessel postmortem. The peak value of the magnetic field strength in the gap was 1500 Oersted. The entire magnet was coated with a layer of bakelite enamel, the pole pieces being particularly well insulated.

The method presented above has also been modified to permit the recording of flow in unexposed blood vessels *in situ*. A magnet with a gap large enough to enclose the neck of a medium-sized dog has been used. In order to measure the blood flow through the carotid artery, for instance, the sleeve is applied to the artery in the usual manner. The vessel is left in place, the lead wires are led off through the skin and the neck is closed. Thereafter one merely has to insert the neck between the large magnet poles to record blood flow. Further details on this modification of the method will be published elsewhere.

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Guinea Pig Copulatory Reflex in Response to Aqueous Extracts of Adrenal Cortex.

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It has been demonstrated that progesterone^{1, 2} and desoxycorticosterone³ will elicit the copulatory reflex in the spayed guinea pig

¹ Dempsey, E. W., Hertz, R., and Young, W. C., *Am. J. Physiol.*, 1936, **116**, 201.

² Collins, V. J., Boling, J. L., Dempsey, E. W., and Young, W. C., *Endocrinology*, 1938, **23**, 188.

³ van Heuverswyn, J., Collins, V. J., Williams, W. L., and Gardner, W. U., *Proc. Soc. Exp. Biol. and Med.*, 1939, **41**, 552.

TABLE I.
Effect of Cortin in Producing Copulatory Reflex in Guinea Pig.

*Group	Dose in cc	% positive response
A	0.5	36.7
A	1.0	55.0
A	1.5	81.7
B	0.5	36.4
B	1.0	54.5
B	1.5	72.7

*Groups A and B contained 60 and 11 pigs respectively.

after preliminary estrogen treatment but that certain androgens will not do so.⁴

We thought it of interest to determine whether aqueous extracts of the adrenal cortex which contain the life-maintaining principle would produce this reaction.

The method used to test the cortical extracts was similar to that described by other workers.⁴ Two groups of guinea pigs, A and B, consisting of 60 and 11 animals respectively, were used. The results obtained from administering graded doses of the extract on successive weeks are shown in Table I.

It will be seen that there is a relation between the dose administered and the number of animals showing the copulatory reflex. The data on the small group are included since the response to each dose agrees so closely with that of the larger group. Furthermore, group B was given each dose of the extract one week prior to the administration of the corresponding dose to group A. Since these figures were tabulated, 30 animals representing one-half of group A have given a 50% response to a dose of 1 cc. This result offers further evidence of the reliability of the method.

The extract used in obtaining the data shown in the table contained 2.9 rat units⁵ per cc. Other preparations which contained more than 2.9 rat units proved to be more active in producing the copulatory reflex. These preliminary findings indicate that there is a correlation between the life-maintaining and the copulatory-reflex activity of adrenal cortical extracts. It seems probable, therefore, that this reaction in the guinea pig might be used as a method for assaying such preparations.

Additional studies are being made of the relationship between the guinea pig copulatory-reflex response and other biological properties of adrenal cortical extracts.

⁴ Hertz, R., Meyer, R. K., and Spielman, M. A., *Endocrinology*, 1937, **21**, 533.

⁵ Cartland, G. F., and Kuizenga, M. H., *Am. J. Physiol.*, 1936, **117**, 678.