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Time of Onset of Vagal Function in the Heart of Mammals.

HOWARD B. KELLOGG. (Introduced by A. C. Ivy.)

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Electrical stimulation of the peripheral end of the right vagus in ten pig fetuses which were about three-fourths term did not cause inhibition of the heart. Stimulation of the peripheral ends of the right and left vagus nerves of rabbits and dogs ranging from one hour to five days after birth caused no cardiac inhibition in 20 per cent of 32 animals examined; very weak inhibition was found in 36 per cent, and strong inhibition in 44 per cent. One rabbit and one dog showed a strong cardiac inhibition on stimulation of the sino-auricular node, even though stimulation of the vagi caused no such effect. It was very noticeable that in a large number of cases where inhibition was obtained it resulted from a vagal heart block, in which the atrial beat was increased in rate and frequently in amplitude. Stimulation of the central end of the vagus nerves inhibited respiration in all of the rabbits and dogs.

Apparently the afferent respiratory fibers of the vagus nerves are functional at birth, but in a large percentage of animals the cardio-inhibitor fibers either react weakly or are non-functional. There is some indication that the post ganglionic mechanism of the vagus in the heart may be functional before the preganglionic fibers are capable of transmitting impulses.

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Precipitation of Proteolytic Enzymes of *Bacillus Proteus* by Azine and Azonium Bases.

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That there is a definite chemical union between a proteolytic enzyme and an azine or azonum base was first suggested by Robertson,¹ who observed that if a drop of a saturated solution of safranin was added to a solution of trypsin a flocculent precipitate was formed which gradually settled to the bottom of the tube.