

# Influence of Anticholinesterase Diisopropylfluorophosphate on Cardio-vascular and Respiratory Reflexes of Carotid Sinus Origin.

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In previous investigations we were able to show that the anticholinesterase prostigmine has no effect on the central transmission of the carotid sinus pressoreceptive reflexes acting on the cardio-inhibitory, vasomotor and respiratory centers.<sup>1</sup> Recently O. Bodansky and A. Mazur<sup>2</sup> reported on the very marked anticholinesterase activity on blood and tissues of diisopropylfluorophosphate (D.F.P.).

The influence of the anticholinesterase D.F.P. on the respiratory, cardiac and the vasomotor reflexes induced by the carotid sinus pressoreceptors in the dog has been investigated.

**Method.** In the dog, under chloralose anesthesia, the efferent arteries of the carotid sinus were ligated, care being taken not to sever the pressoreceptive innervation. The cephalic end of the common carotid artery was connected with a pressure device. By means of this technic, the hydrostatic pressure may be increased or decreased in the

isolated pressoreceptive innervated carotid sinus. The cardio-vascular and respiratory reactions of the animal to the intracarotid sinus pressure changes were registered before and after injection of the anticholinesterase D.F.P. The cholinesterase activity of the blood was determined by means of the method described by A. L. Delaunois and H. Casier.<sup>3</sup>

**Results.** Intravenous injections of doses of D.F.P. (0.12-1 mg/kg) inhibiting completely the cholinesterase activity of the blood, do not stimulate the respiratory center and do not affect either the heart rate or the blood pressure. The cardio-vascular and respiratory reflexes induced by increase or decrease of the intracarotid sinus pressure are not affected by the administration of D.F.P. and the inhibition of the cholinesterase activity. The above results do not support the theory of a cholinergic transmission of the respiratory and cardio-vascular reflexes induced by means of a physiological stimulation of the carotid sinus pressoreceptors.

<sup>1</sup> Heymans, C., Pannier, R., and Verbeke, R., *Thirtieth An. Meet. Fed. Am. Soc. f. exp. Biol.*, 1946.

<sup>2</sup> Bodansky, O., and Mazur, A., *Fed. Proc.*, 1946, 5, 123.

<sup>3</sup> Delaunois, A. L., and Casier, H., *Experientia*, 1946, II, 2, 4.

# Growth of Influenza Virus in Eggs in the Presence of Bacterial Contamination and Streptomycin.\*

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(Introduced by Chester S. Keefer).

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With a few possible exceptions viruses appear to be unaffected in their growth in living hosts in the presence of a wide variety

of antibiotics.<sup>1</sup> In general one would ex-

Jewell and Miss Carla Bryan for determining the streptomycin levels.

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<sup>1</sup> Kramer, S. D., Geer, H. A., and Szobel, D. A., *J. Immunol.*, 1944, 49, 273.