

Chlorpromazine (0.0314 mM) raised the l.v.p. to  $175 \pm 4.9$  vesicles/ $\mu\text{m}^2$ , which might reflect decreased release of quanta of ACh in the treated ganglion or the initial stimulant action of the drug observed by Elliott & Quilliam (1964) in the isolated rabbit ganglion.

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#### **The expansor secundariorum of the domestic fowl: a smooth muscle-nerve preparation without cholinergic receptors**

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The expansor secundariorum (ESM) is smooth muscle present in most birds and has the function of controlling the secondary and tertiary feathers during flight. The muscle is embedded in subcutaneous connective tissue at the elbow joint. The nerve supplying the ESM is a branch of the radial nerve. It runs parallel with the radial nerve, becoming more superficial as it approaches the distal end of the humerus.

Some of the properties of the isolated ESM of domestic fowl have been described by Buckley & Wheeler (1968), who suggested that the muscle may be innervated only by postganglionic adrenergic fibres. This report describes briefly the use of the ESM indirectly, *in vivo* and *in vitro*.

For *in vivo* studies fowls were anaesthetized and the nerve supply to the ESM dissected free, transected at the mid-point of the humerus and placed over shielded bipolar platinum electrodes. The humerus was drilled and clamped in a vertical position. A cotton thread passing through the bases of the secondary feathers inserted into the ESM was connected to a lightly sprung lever writing on a smoked drum. Stimulation was by supramaximal square wave pulses of 2 ms duration and a frequency of 15 Hz.

For *in vitro* studies, the birds were anaesthetized with ether and the muscle and nerve dissected free. The preparation was bathed with Tyrode's solution in an 80 ml tissue bath at 21° C. Stimulation was similar to that used *in vivo*.

The height of contractions was not affected by  $10^{-5}\text{M}$  hexamethonium bromide or  $2 \times 10^{-5}\text{M}$  tubocurarine chloride but was reduced by  $10^{-6}\text{M}$  phentolamine mesylate.

The isolated expansor secundariorum nerve-muscle preparation and some of its properties will be demonstrated.

#### REFERENCE

- BUCKLEY, G. A. & WHEELER, L. E. (1968). The isolated expansor secundariorum—a smooth muscle preparation from the wing of the domestic fowl. *J. Pharm. Pharmac.*, **20**, 114S-121S.