

REFERENCES

- Ambache, N. (1946). Interaction of drugs and the effect of cooling on the isolated mammalian intestine. *J. Physiol.*, Lond., 104, 266-287.
- Ambache, N. (1951). A further survey of the action of Clostridium botulinum toxin upon different types of autonomic nerve fibre. *J. Physiol.*, Lond., 113, 1-17.
- Ambache, N. and Lessin, A.W. (1955). Classification of intestiomotor drugs by means of type D botulinum toxin. *J. Physiol.*, Lond., 127, 449-478.
- Anton, A.H. and Sayre, D.F. (1962). A study of factors affecting the aluminium oxide-trihydroxyindole procedure for the analysis of catecholamines. *J. Pharmac. exp. Ther.*, 138, 360-375.
- Appel, W.C. and Vincenzi, F.F. (1970). Effect of hemicholinium and bretylium on the release of autonomic transmitters in the isolated sinoatrial node. *Br. J. Pharmac.*, 40, 268-274.
- Armett, C. and Ritchie, J.M. (1960). The action of acetylcholine on conduction in mammalian nonmyelinated fibre and its prevention by an anticholinesterase. *J. Physiol.*, Lond., 152, 141-158.
- Armett, C. and Ritchie, J.M. (1961). The action of acetylcholine and some related substances on conduction in mammalian non-myelinated nerve fibres. *J. Physiol.*, Lond., 155, 732-384.
- Armett, C. and Ritchie, J.M. (1963 a). On the role of acetylcholine on mammalian non-myelinated nerve fibres. *J. Pharmac. exp. Ther.*, 137, 201-207.
- Armett, C. and Ritchie, J.M. (1963 b). The ionic requirements for the action of acetylcholine on mammalian non-myelinated fibre. *J. Physiol.* Lond., 165, 141-59.
- Armin, J., Grant, R.T., Thompson, R.H.S. and Tickner, A. (1953). An explanation for the heightened vascular reactivity of denervated rabbit's ear. *J. Physiol.*, Lond., 121, 603-622.

Armitage, A.K., and Burn, J.H. (1967). The effect of physostigmine on the contraction of the retractor penis muscle of the dog in response to sympathetic stimulation. Br. J. Pharmac. Chemother., 29, 218-229.

Arya, P.C. and Gulati, O.D. (1968). Cholinergic link hypothesis and sympathetic transmission at the nictitating membrane of the dog. Br. J. Pharmac. Chemother., 33, 413-425.

Babkin, B.P., Alley, A. and Stavaky, G.W. (1932). Humoral transmission of chorda tympani hormone. Canad. Med. Ass. J., 26, 582-583.

Bacq, Z.M. (1931). Presence, dans l'humeur aqueuse du lapin d'une substance sympathicomimétique après stimulation du sympathique cervical. Compt. rend. Soc. de biol., 107, 1584-1586.

Bacq., Z.M. (1933). Action de la sympathine sur l'iris. Compt. rend. Soc. de biol., 112, 1551-1552.

Banister, J. and Scrase, M. (1950). Acetylcholine synthesis in normal and denervated sympathetic ganglion of the cat. J. Physiol., Lond., 111, 437-444.

Barer, R. and Thompson, J.W. (1963). Roy. Coll. Surg. Ann. Rept. Cited in "Acetylcholine in Adrenergic Transmission". Burn, J.H. and Rand, M.J. (1965). Annu. Rev. Pharmac., 5, 163-182.

Bella D.D., Benelli, G. and Gandini, A. (1964). Eserine and autonomic nervous control of guinea pig vas deferens. J. Pharm. Pharmac., 16, 779-787.

Bentley, G.A. and Sabine, J.R. (1963). The effects of ganglion blocking and post-ganglionic sympathomimetic drugs on preparations of guinea pig vas deferens. Br. J. Pharmac. Chemother., 21, 191-201.

Bernard, P.J. and De Schaepper, A.F. (1964). Adrenergic mechanism in the dog hind-leg. Arch. int. Pharmacodyn., 148, 301-305.

Bevan, J.A. and Su, C. (1964). The sympathetic mechanism of the isolated pulmonary artery of the rabbit. Br. J. Pharmac. Chemother., 22, 176-182.

Bhagat, R., Robinson, I.M. and West, W.L. (1967). Mechanism of sympathomimetic responses of isolated guinea-pig atria to nicotine and dimethyl phenylpiperazinion. Br. J. Pharmac. Chemother., 30, 470-477.

Birmingham, A.T. and Wilson, A.B. (1963). Preganglionic and postganglionic stimulation of the guinea-pig isolated vas deferens preparation. Br. J. Pharmac. Chemother., 21, 569-580.

Blinks, J.R. (1966). Field stimulation as a mean of effecting a graded release of autonomic transmitters in isolated heart muscle. J. Pharmac. exp. Ther., 151, 221-235.

Boatman, D.L., Shaffer, R.A., Dixon, R.L. and Brody, M.L. (1965). Function of vascular smooth muscle and its sympathetic innervation in the newborn dog. J. Clin. Invest., 44, 241-246.

Boura, A.L.A. and Green, A.F. (1959). The actions of bretylium: adrenergic neurone blocking and other effects. Br. J. Pharmac., 14, 536-548.

Bowman, W.C. and Hemsworth, B.A. (1965). Effect of triethylcholine on the output of acetylcholine from the isolated diaphragm of the rat, Br. J. Pharmac. Chemother., 24, 110-118.

Brandon, K.W. and Rand, M.J. (1961). Acetylcholine and the sympathetic innervation of the spleen. J. Physiol. Lond., 157, 18-32.

Brooks, V.B. (1956). An intercellular study of the action of repetitive nerve volleys and of botulinum toxin on miniature end plate potentials. J. Physiol., Lond., 134, 264-277.

Brown, G.L. and Gray, J.A.B. (1948). Some effects of nicotine-like substances and their relation to sensory nerve endings. J. Physiol., Lond., 107, 306-317.

Brown, M.C. and Matthews, P.B.C. (1960). The effect on a muscle twitch of the back response of its motor nerve fibres. J. Physiol., Lond., 150, 332-346.

Brücke, F.T.v. (1935). Über die Wirkung von Acetylcholine auf die Pilomotorm. Klin. Wochschr. 114, 7-9.

Bulbring, E. and Burn, J.H. (1935). J. Physiol., Lond., 83, 483. Cited in "Acetylcholine in Adrenergic transmission" Burn, J.H. and Rand, M.J. (1965). Annu. Rev. Pharmac., 5, 163-182.

Bunting, H., Meek, W.J. and Maaske, C.A. (1935). Chemical transmission of vagal effects to small intestine.  
Am. J. Physiol., 114, 100-105.

Burack, W.R. and Badger, A. (1964). Sequential appearance of dopa decarboxylase, dopamine<sub>β</sub>-oxidase and norepinephrine N-,ethyltransferase activities in the embryonic chick. Fed. Proc., 23, 516.

Burn, J.H. (1968 a). The development of adrenergic nerve fibre. Br. J. Pharmac. Chemother., 32, 575-582.

Burn, J.H. (1968 b). The mechanism of the release of noradrenaline in adrenergic neurotransmission. In : Ciba Foundation Study Group No. 33, p. 16. Edited by G.E.W. Wolstenholme and M. O'Connor. J. & A. Churchill Ltd., London.

Burn, J.H. and Froede, H. (1963). The action of substances which block sympathetic postganglionic nervous transmission. Br. J. Pharmac. Chemother., 20, 378-387.

Burn, J.H. and Gibbons, W.R. (1964). The sympathetic postganglionic fibre and the block of bretylium; the block prevented by hexamethonium and imitated by mecamylamine. Br. J. Pharmac. Chemother., 22, 549-557.

Burn, J.H. and Gibbons, W.R. (1965). The release of noradrenaline from sympathetic nerve fibres in relation to calcium concentration. J. Physiol., Lond., 181, 214-223.

Burn, J.H., Leach, E.H., Rand, M.J. and Thompson, J.W. (1959). Peripheral effects of nicotine and acetylcholine resembling those of sympathetic stimulation. J. Physiol., Lond., 148, 332-352.

Burn, J.H. and Rand, M.J. (1958). Noradrenaline in artery walls and its dispersal by reserpine. Br. Med. J., 903-908.

Burn, J.H. and Rand, M.J. (1959). Sympathetic post-ganglionic mechanism. Nature, Lond., 184, 163-165.

Burn, J.H. and Rand, M.J. (1960 a). The effect of precursors of noradrenaline on the response to tyramine and sympathetic stimulation. Br. J. Pharmac. Chemother., 15, 47-55.

Burn, J.H. and Rand, M.J. (1960 b). Sympathetic postganglionic cholinergic fibres. Br. J. Pharmac. Chemother., 15, 56-66.

Burn, J.H. and Rand, M.J. (1962). "A new interpretation of the adrenergic nerve fiber". Advances in Pharmacology Vol. 1, p. 1 - 30. Edited by S. Garantini and P.A. Shore, London. Academic Press.

Burn, J.H. and Rand, M.J. (1965). Acetylcholine in adrenergic transmission. *Annu. Rev. Pharmac.*, 5, 163-182.

Burn, J.H., Rand, M.J. and Wein, R. (1963). The adrenergic mechanism in the nictitating membrane. *Br. J. Pharmac. Chemother.*, 20, 83-94.

Burn, J.H. and Welsh, F. (1967). The effect of calcium in removing the blocking action of bretylium and guanethidine. *Br. J. Pharmac. Chemother.*, 31, 74-81.

Burnstock, G. (1958). The effect of drugs on spontaneous motility and on response to stimulation of the extrinsic nerves of the gut of a teleost fish. *Br. J. Pharmac. Chemother.*, 13, 216-226.

Burnstock, G. (1969). Evolution of visceral and cardiovascular systems in vertebrates. *Pharmac. Rev.*, 21, 248-324.

Cabrera, R. and Torrance, R.W. (1964). Arch. Biol. Med. Exptl. I: 169. Cited in "Cholinergic Link Hypothesis in Adrenergic Neuroeffector Transmission". Ferry, C.B. (1966), *Physiol. Rev.*, 46, 420-456.

Cannon, W.B. and Uridil, J.E. (1921). Studies on the conditions of activity in endocrine glands. VIII. Some effects on the denervated heart of stimulating the nerves of the liver. *Am. J. Physiol.*, 58, 353-354.

Carlyle, R. (1964). The possibility that intracellular acetylcholine maintains the inherent tone of the guinea pig tracheal muscle. *J. Physiol.*, Lond., 170, 56.

Caston, J.D. (1962). Appearance of catecholamines during the development of *Rana pipiens*. *Develop. Biol.*, 5, 468-482.

Chang, V. and Rand, M.J. (1960). Transmission failure in sympathetic nerves produced by hemicholinium. *Br. J. Pharmac. Chemother.*, 15, 588-600.

Comline, R.S. (1947). Synthesis of acetylcholine by non-nervous tissue. *J. Physiol.*, Lond., 105, 6-7.

- Coon, J.M. and Rothman, S. (1940). The nature of pilomotor response to acetylcholine, some observations on the pharmacodynamics of the skin. *J. Pharmac. exp. Ther.*, 68, 310-311.
- Csillik, B. and Koelle, G.B. (1965). *Acta Histochem.*, 22, 350. Cited in "Histochemistry of Nervous Tissue: by Catecholamines and Cholinesterases". Eranko, O.(1967). *Annu. Rev. Pharmac.*, 7, 203-222.
- Cuthbert, A.W. (1963). An acetylcholine-like substance and cholinesterase in the smooth muscle of the chick aminon. *J. Physiol.*, Lond., 166, 284-295.
- Dale, H.H. (1914). The action of certain esters and ethers of choline and their relation to muscarine. *J. Pharmac. exp. Ther.*, 6, 147-190.
- Dale, H.H. and Feldberg, W. (1934). Chemical transmitter of vagus effects to stomach. *J. Physiol.*, Lond., 81, 320-334.
- Daly, M.De B. and Scott, M.J. (1961). The effects of acetylcholine on the volume and vascular resistance of the dog's spleen. *J. Physiol.*, Lond., 156, 246-259.
- Day, M.D. (1962). Effect of sympathomimetic amines on the blocking action of guanethidine, bretylium and xylocholine. *Br. J. Pharmac. Chemother.*, 18, 421-439.
- Day, M.D. and Rand, M.J. (1961). Effect of guanethidine in revealing cholinergic sympathetic fibres. *Br. J. Pharmac. Chemother.*, 17, 245-260.
- Day, M.D. and Rand, M.J. (1962). Antagonism of guanethidine by dexamphetamine and other related sympathomimetic amines. *J. Pharm. Pharmac.*, 14, 541-549.
- de La Lande, I.S. and Waterson, J.G. (1967). Site of action of cocaine on the perfused artery. *Nature*, Lond., 124, 313-314.
- De Robertis, E. and Pella Grino, A. De Iraldi (1961). A Plurovesicular component in adrenergic nerve endings. *Anat. Record*, 139, 299.
- Diamond, J. (1955). Observations on the excitation by acetylcholine and by pressure of sensory receptors in the cat's carotid sinus. *J. Physiol.*, Lond., 130, 513-532.

Dixit, B.N., Gulati, O.D. and Gokhale, S.D. (1961). Action of bretylium and guanethidine at the neuromuscular junction. *Br. J. Pharmac. Chemother.*, 17, 372.

Dixon, W.E. (1907). On mode of action of drugs. *The Med. Mag.*, 16, 454-457.

Douglas, W.W. and Gray, J.A.B. (1953). The excitant action of acetylcholine and other substances on cutaneous sensory pathways and its prevention by hexamethonium and d-tubocurarine. *J. Physiol.*, Lond., 119, 118-128.

Douglas, W.W. and Ritchie, R.P. (1960). The excitatory action of acetylcholine on cutaneous nonmyelinated fibres. *J. Physiol.*, Lond., 150, 501-514.

Douglas, W.W. and Rubin, P.R. (1961). Mechanism of nicotinic action at the adrenal medulla: Calcium as a link in stimulus-secretion coupling. *Nature*, Lond., 192, 1087-1089.

Douglas, W.W. and Rubin, P.R. (1963). The mechanism of catecholamine release from the adrenal medulla and the role of calcium in stimulus-secretion coupling. *J. Physiol.*, Lond., 167, 288-310.

DuBois-Reymond, E. (1877). Gesammelte Abhandlung fur allgemeinen Muskel - und Nervenphysik. Two volumes. Veit u. Comp., Leipzig. Cited in "Pharmacological Basis of Therapeutics" (1960) by Goodman and Gilman, MacMillan Co., New York, 389-421.

Eccles, J.C. (1964). The Physiology of Synapses. Berlin: Springer-Verlag. Cited in "Cholinergic Link Hypothesis in Adrenergic Neuroeffector Transmission". *Physiol. Rev.* 46, 420-456.

Ehinger, B. and Falck, B. (1965). *Life Sci.*, 4, 2097-2100. Cited in "Histochemistry of Nervous Tissues: Catecholamines and Cholinesterases". Franko, O. (1967). *Annu. Rev. Pharmac.*, 7, 203-222.

Elliott, T.R. (1904). On the action of adrenaline. *J. Physiol. Proc.*, Lond., 31, 20-21.

Franko, O. and Harkonen, M. (1963). *Acta Physiol. Scand.*, 58, 285. Cited in "Histochemistry of Nervous Tissues: Catecholamines and Cholinesterases". Franko, O. (1967). *Annu. Rev. Pharmac.*, 7, 203-222.

- Eranko O. and Harkonen, M. (1965). Effect of axon division on the distribution of noradrenaline and acetylcholinesterase in sympathetic neurones of the rat. *Acta Physiol. Scand.*, 63, 411-412.
- Eranko, O., Harkonen, M., Kokko, A. and Raisanen L., (1964). Histochemical and starch gel electrophoretic characterization of desmo- and lyo -esterases in sympathetic and spinal ganglia of rat. *J. Histochem. Cytochem.*, 12, 570-581.
- Eranko, O. and Raisanen, L. (1965). Fibres containing both noradrenaline and acetylcholinesterase in the nerve net of the rat iris. *Acta Physiol. Scand.*, 63, 505-506.
- Esterhuizen, A.C., Graham, J.D.P., Lever, J.D. and Spriggs, T.L.B. (1968). Catecholamine and acetyl-cholin-esterase distribution in relation to nor-adrenaline release. An enzyme histochemical and autoradiographic study on the innervation of the cat nictitating muscle. *Br. J. Pharmac. Chemother.*, 32, 46-56.
- Euler, U.S.v. (1946). A specific sympathomimetic ergone in adrenergic nerve fibres (sympathin) and its relations to adrenaline and noradrenaline. *Acta Physiol. Scand.*, 12, 73-97.
- Euler, U.S.v. (1970). In: New Aspects of Storage and Release Mechanisms of Catecholamines. Bayer symposium, II, 144-158. Edited by H.J. Schumann and G. Krönerberg. Springer Verlag, Berlin, Heidelberg, New York.
- Exley, K.A. (1957). The blocking action of choline 2:6 xylyl ether bromide on adrenergic nerves. *Br. J. Pharmac. Chemother.*, 12, 297-305.
- Feldberg, W. (1943). Synthesis of acetylcholine in sympathetic ganglia and cholinergic nerves. *J. Physiol.*, Lond., 101, 432-445.
- Feldberg, W. and Krayer O. (1933). Das Auftreten eines azetylcholinartigen Stoffes in Herzvenenblut von Warmblutern bei Reizung der Nervi vagi. *Arch. f. exper. Path. u. Pharmakol.*, 172, 170-193.
- Ferry, C.B. (1963). The sympathomimetic effect of acetylcholine on the spleen of the cat. *J. Physiol.*, Lond., 167, 487-504.

- Ferry, C.B. (1966). Cholinergic link hypothesis in adrenergic neuroeffector transmission. *Physiol. Rev.*, 46, 420-456.
- Finkleman, B. (1930). On the nature of inhibition in the intestine. *J. Physiol., Lond.*, 70, 145-157.
- Folkow, B., Frost, J.H., Haeger, K. and Uvnas, B. (1948). Cholinergic fibres in the sympathetic outflow to the heart in the dog and cat. *Acta Physiol. Scand.*, 15, 421-426.
- Gardiner, J.B., Hellmann, K. and Thompson, J.W. (1962). Nature of innervation of smooth muscle, Harderian gland and blood vessels of cat's nictitating membrane. *J. Physiol., Lond.*, 163, 436-456.
- Gardiner, J.E. and Thompson, J.W. (1961). Lack of evidence for a cholinergic mechanism in sympathetic transmission. *Nature, Lond.*, 191, 86.
- Gillespie, J.G. and MacKenna, B.R. (1960). The inhibitory action of nicotine on the rabbit colon. *J. Physiol., Lond.*, 152, 191-205.
- Gillespie, J.S. and Wishart, M. (1957). The effect of cooling on the response of rabbit colon to nerve and to drug stimulation. *J. Physiol., Lond.*, 134, 45.
- Glowinski, J., Axelrod, J., Kopin, I.J., and Wurtman, J. (1964). Physiological disposition of  $^3\text{H}$ -norepinephrine in the developing rat. *J. Pharmac. exp. Ther.*, 146, 48-153.
- Gokhale, S.D., Gulati, O.D. and Joshi, N.Y. (1965). Antagonism of the blocking action of bretylium and guanethidine on the pressor effect of physostigmine in the rat. *Br. J. Pharmac. Chemother.*, 24, 624-631.
- Gokhale, S.D., Gulati, O.D., Kelkar, V.V. and Joshi, N.Y. (1963). Effect of bretylium and guanethidine on some cholinergic effectors. *Arch. int. Pharmacodyn.*, 145, 243-253.
- Gokhale, S.D., Gulati, O.D. and Panchal, D.I. (1967). An analysis of the sympathomimetic effects of acetyl-choline on the rat ileum. *Br. J. Pharmac. Chemother.*, 30, 38-45.

- Gokhale, S.D., Gulati, O.D. and Udwadia, B.P. (1966). Antagonism of the adrenergic neurone blocking action of guanethidine by certain antidepressants and antihistaminic drugs. *Arch. int. Pharmacodyn.*, 160, 321-332.
- Graham, J.D.P., Lever, J.D. and Spriggs, T.L.B. (1968). An examination of adrenergic axons around pancreatic arterioles of the cat for the presence of acetylcholinesterase by high resolution autoradiographic and histochemical method. *Br. J. Pharmac. Chemother.*, 33, 15-20.
- Hamberger B., Norberg, K.A. and Sjoqvist, F. (1962). The relative distribution of adrenergic neurones in the sympathetic ganglia of the cat. In: *Proc. Int. Pharmac. Meeting* (2nd), 1962, 41.
- Hamberger, B., Norberg, K.A., and Sjoqvist, F. (1963). Cellular localization of monoamines in sympathetic ganglia of the cat. *Life Sci.*, 9, 659-661.
- Hamilton, H.L. (1952). Lillie's Development of the chick. 3rd Ed. Edited by Holt, Rinehart and Winston, New York.
- Harkonen, M. (1964). Carboxylic esterases, oxidative enzymes and catecholamines in the superior cervical ganglion of the rat and the effect of pre- and post-ganglionic nerve division. *Acta Physiol. Scand.*, Suppl., 237, 1-94.
- Hausler, G., Thoenen, H., Haefly, W. and Huerliman, A. (1968). Electrical events in cardiac adrenergic nerves and noradrenaline release from the heart induced by acetylcholine and KCl. *Archs. exp. Path. Pharmak.*, 261, 389-411.
- Hazard, R. (1949). Cited in "The Manual of Pharmacology and its Applications to Therapeutics and Toxicology". By Torald Sollmann. p. 332., W.B. Saunders Company, Philadelphia, London.
- Hebb, C.O. (1961) Cholinergic neurones in vertebrates. *Nature*, Lond., 192, 527-529.
- Hebb, C.O. and Waites, G.M.H. (1956). Cholineacetylase in antero- and retrograde degeneration of a cholinergic nerve. *J. Physiol.*, Lond., 132, 667-671.

Hey, P. and Willey, G.L. (1954). Choline 2:6 xylyl ether bromide, an active quaternary local anaesthetic. Br. J. Pharmac. Chemother., 9, 471-475.

Hoffman, F.E., Hoffman, J., Middleton, S. and Talesnik, J. (1945). The stimulating effect of acetylcholine on the mammalian heart and the liberation of an epinephrine-like substance from the isolated heart. Am. J. Physiol., 144, 189-198.

Holton, P., and Rand, M.J. (1962). Sympathetic vasodilation in the rabbit ear. Br. J. Pharmac. Chemother., 19, 513-526.

Hubbard, J.I. and Schmidt, R.F. (1961). Stimulation of motor nerve terminals. Nature, Lond., 191, 1103-1104.

Hukovic, S. (1959). Isolated rabbit atria with sympathetic nerve supply. Br. J. Pharmac. Chemother., 14, 14, 372-376.

Hukovic, S. (1960). The action of sympathetic blocking agents on isolated and innervated atria and vessels. Br. J. Pharmac. Chemother., 15, 117-121.

Hukovic, S. (1966). The effect of anticholinesterases on the increases in rate of the isolated heart in responses to sympathetic stimulation. Br. J. Pharmac. Chemother., 28, 273-281.

Ignarro, L.J. and Shideman, F.E. (1965). Catechol-O-methyl transferase and monoamine oxidase activities in the heart of developing chick embryo. Fed. Proc., 24, 388.

Ignarro, L.J., and Shideman, E.F. (1968 a). Catechol-O-methyl transferase and monoamine oxidase activities in the heart and liver of the embryonic and developing chick. J. Pharmac. exp. Ther., 159, 29-37.

Ignarro, L.J. and Shideman, E.F. (1968 b). Appearance and concentrations of catecholamines and their biosynthesis in the mebryonic and developing chick. J. Pharmac. exp. Ther., 159, 38-48.

Ignarro, L.J. and Shideman, E.F. (1968 c). Norepinephrine and epinephrine in the embryo and embryonic heart of the chick: uptake and subcellular distribution. J. Pharmac. exp. Ther., 159, 48-58.

Ignarro, L.J. and Shideman, F.E. (1968 d). The requirement of sympathetic innervation for the active transport of norepinephrine by heart. *J. Pharmac. exp. Ther.*, 159, 59-65.

Iversen, L.L. (1958). Role of noradrenaline uptake in adrenergic neurotransmission. In "Adrenergic Neurotransmission". Ciba Foundation Study Group No. 33, p. 44. Edited by Wolstenhome, G.E.W. and O'Connor, M.; J. and A. Churchill Ltd., London.

Iversen, L.L., De Champlain, J., Glowinski, J. and Axelrod, J. (1967). Uptake, storage and metabolism of norepinephrine in tissues of developing rat. *J. Pharmac. exp. Ther.*, 157, 509-516.

Jacobowitz, D., Johnson, P., Kitchner, I. and Koelle, G.B. (1965). The effect of hemicholinium (HC-3) on sympathetic transmission at the nictitating membrane of the rabbit. *Br. J. Pharmac. Chemother.*, 25, 527-533.

Jacobowitz, D. and Koelle, G.B. (1965). Histochemical correlations of acetylcholinesterase and catecholamines in postganglionic autonomic nerves of the cat, rabbit and guinea pig. *J. Pharmac. exp. Ther.*, 148, 225-237.

Khan, M., Mantegazza, P. and Piccinini F. (1965). Effects of low temperature on the responses of guinea pig isolated atria to nicotine and to sympathetic and parasympathetic stimulation. *Br. J. Pharmac. Chemother.*, 25, 119-125.

Knoll, J. and Vizi, E.S. (1971). Effect of frequency of stimulation on the inhibition by noradrenaline of the acetylcholine output from parasympathetic nerve terminals. *Br. J. Pharmac.*, 42, 263-272.

Koelle, G.B. (1955). The histochemical identification of acetylcholinesterase in cholinergic, adrenergic and sensory neurons. *J. Pharmac. exp. Ther.*, 114, 167.

Koelle, G.B. (1963). In: Heffter-Heubner Handbook Experimental Pharmacology, Cholinesterases and Anti-cholinesterase Agents., Suppl. 15, 189-298. Edited by Koelle, G.B., Springer Verlag, Heidelberg, 1963.

Kosterlitz, H.W., Lydon, R.J. and Watt, A.J. (1970). The effects of adrenaline, noradrenaline and isoprenaline on inhibitory alpha and beta adrenoceptors in the longitudinal muscle of the guinea pig ileum. *Br. J. Pharmac.*, 39, 398-413.

Kottekoda, S.R. (1953 a). Stimulation of isolated rabbit auricle by substances which stimulate ganglia. Br. J. Pharmac. Chemother., 8, 83-86.

Kottekoda, S.R. (1953 b). The action of nicotine and acetylcholine on the vessels of the rabbit's ear. Br. J. Pharmac. Chemother., 8, 156-161.

Krauss, K.R., Carpenter, D.O. and Kopin, I.J. (1970). Acetylcholine-induced release of noradrenaline in the presence of tetrodotoxin. J. Pharmac. exp. Ther., 173, 416-421.

Kuntz, A. and Jacobs, M.W. (1955). Components of periarterial extensions of celiac and mesenteric plexuses. Anat. Record, 123, 509-520.

Langley, J.N. (1901). The difference of behaviour of central and peripheral pilomotor nerve-cells. J. Physiol., Lond., 27, 224-236.

Leaders, F.E. (1963). Local cholinergic adrenergic interaction, mechanism for biphasic chronotropic responses to nerve stimulation. J. Pharmac. exp. Ther., 142, 31-38.

Leaders, F.E. and Dayrit, C. (1965). The cholinergic component in the sympathetic innervation to the spleen. J. Pharmac. exp. Ther., 147, 145-152.

Leaders, F.E. and Long, J.P. (1962). Mechanism of the positive chronotropic response to nicotine. J. Pharmac. exp. Ther., 137, 206-212.

Lee, W.C. and Shideman, F.E. (1959). Mechanism of the positive inotropic response to certain ganglionic stimulants. J. Pharmac. exp. Ther., 126, 239-249.

Lewandowsky, M. (1898). Über eine Wirkung des Nebennierenextractes auf das Auge. ZentBl. Physiol., 12, 599-600.

Lindmar, R., Loffelholz, K. and Muscholl, E. (1968) . A muscarinic inhibitory mechanism inhibiting the release of noradrenaline from peripheral adrenergic nerve fibres by nicotinic agents. Br. J. Pharmac. Chemother., 32, 280-294.

- Loewi, O. (1921). Über humorale Übertragbarkeit der Herznervenwirkung. Arch. f.d. ges. Physiol., 189, 239-242.
- Loewi, O. and Navratil, E. (1926). Über humorale Übertragbarkeit der Herznervenwirkung. X. Mitteilung über das Schicksal des Vagusstoff. Pflugers. Arch. ges. Physiol., 214, 678-688.
- Long, J.P. and Schueler, F.W. (1954). J. Am. Pharm. Assoc., Sci. Ed., 43, 79. Cited in "A New Interpretation of Adrenergic Nerve Fiber". By Burn J.H. and Rand, M.J. (1962) Advances in Pharmacology, 1, 1-30. Edited by S. Garattini and P.A. Shore.
- MacIntosh, F.C., Birks, R.I. and Sastry, P.B. (1956). Pharmacological inhibition of acetylcholine synthesis. Nature, Lond., 178, 1181.
- McCarty, L.P., Lee, W.C. and Shideman, F.E. (1960). Measurement of the inotropic effects of drugs on the innervated and noninnervated embryonic chick heart. J. Pharmac. exp. Ther., 129, 315-321.
- McEwen, L.M. (1956). The effect on the isolated rabbit heart of vagal stimulation and its modification by cocaine, hexamethonium and ouabain. J. Physiol., Lond., 131, 678-689.
- McGiff, J.C., Burns, R.B.P. and Blumenthal, M.R. (1967). Role of acetylcholine in the renal vasoconstrictor response to sympathetic nerve stimulation in the dog. Circulation Res., 20, 616-629.
- Malik, K.U. (1970). Potentiation by anticholinesterases of the response of rat mesenteric arteries to sympathetic postganglionic nerve stimulation. Circulation Res., 27, 647-655.
- Malik, K.U. and Ling, G.M. (1969 a). Modification by acetylcholine of the response of rat mesenteric arteries to sympathetic stimulation. Circulation Res., 25, 1-9.
- Malik, K.U. and Ling, G.M. (1969 b). The effect of 1,1-dimethyl-4-phenyl-piperazinium on the response of mesenteric arteries to sympathetic nerve stimulation. J. Pharm. Pharmac., 21, 514-519.

- Malik, K.U. and McGiff, J.C. (1971). Modification by choline of adrenergic transmission in rat mesenteric arteries. *Br. J. Pharmac.*, 431, 776-783.
- Maxwell, R.A., Plummer, A.J., Schneider, F., Povalski, H. and Daniel, A.I. (1960). Pharmacology of (2-(octahydro-1-azocinyl)-ethyl)- guanidine sulfate (SU-5864). *J. Pharmac. exp. Ther.*, 128, 22-29.
- Mirkin, B.L. (1969). Proc. IIInd Intern. Neurochemistry Meeting, Milan, Italy, Sept. Cited in "Developmental Pharmacology". Mirkin, C.B. (1970). *Annu. Rev. Pharmac.*, 10, 255-272.
- Murray, J.G. and Thompson, J.W. (1957). The occurrence and function of collateral sprouting in the sympathetic neurons system of the cat. *J. Physiol.*, Lond., 135, 133-162.
- Muscholl, E. and Vogt, M. (1964). Secretory responses of extramedullary chromaffin tissue. *Br. J. Pharmac. Chemother.*, 22, 193-203.
- Narahashi, T., Moore, J.W. and Scott, W. (1964). Tetrodotoxin blockade of sodium conductance increase in excitation. *J. Gen. Physiol.*, 47, 965-974.
- Ng, K.K.F. (1966). The effect of some anticholinesterases on the response of the taenia to sympathetic nerve stimulation. *J. Physiol.*, Lond., 182, 233-243.
- Nordenfelt, I. (1965). Choline acetylase in salivary glands of the cat after sympathetic denervation. *Quart. J. exp. Physiol.*, 50, 57-61.
- Ozawa, H. and Suguwara, K. (1967). Sites of action of crystalline tetrodotoxin on sympathetic nervous system. *Jap.-J. Pharmac.*, 17, 287-297.
- Paton, W.D.M. and Zaimis, E. (1952). The methonium compounds. *Pharmac. Rev.*, 4, 219-253.
- Peart, W.S. (1949). The nature of splenic sympathin. *J. Physiol.*, Lond., 108, 491-501.
- Pellegrino de Iraldi, A. and De Robertis, E. (1963). *Int. J. Neuropharmac.*, 2, 231. Cited in "Acetylcholine in Adrenergic Transmission". By Burn J.H. and Rand, M.J. (1965). *Annu. Rev. Pharmac.* 5, 163-182.

Pellegrino de Iraldi, A., Duggan, F. and De Robertis, E. (1963). Adrenergic synaptic vesicles in the anterior hypothalamus of the rat. *Anat. Record*, 145, 521-531.

Rand, M.J. and Ridelalgh, A. (1965). Actions of hemicholinium and triethylcholine on responses of guinea pig colon to stimulation of autonomic nerves. *J. Pharm. Pharmac.*, 17, 144-156.

Rand, M.J. and Whaler, B.C. (1965). Impairment of sympathetic transmission by botulinum toxin. *Nature, Lond.*, 206, 588-591.

Randic, M. and Straughan, D.W. (1964). Antidromic activity in the rat phrenic nerve diaphragm preparation. *J. Physiol., Lond.*, 173, 130-148.

Richardson, K.C. (1964). The fine structure of the albino rabbit iris with special reference to the identification of adrenergic and cholinergic nerves. *Am. J. Anat.*, 114, 173-205.

Romanoff, A.L. (1960). *The Avian Embryo*. The MacMillan Company, New York.

Rylent, P. La (1927). "transmission humorale de l'action des nerfs cardiaques" de Lowei chez le mammifere. *Compt. rend. Soc. de biol.*, 96, 204-205.

Schueler, F.W. (1960). The mechanism of action of the hemicholinium. *Int. Rev. Neurobiol.*, 2, 77-97.

Shute, C.C.D. and Lewis, P.R. (1966). *Z. Zellforsch. Mikroskop. Anat.*, 69, 334. Cited in "Histochemistry of Nervous Tissues: Catecholamines and Cholinesterases". Eranko, O. (1967). *Ann. Rev. Pharmac.*, 7, 203-222.

Sjöqvist, F. (1963). Correlation between occurrence and location of acetylcholinesterase-rich cell bodies in stellate ganglion and outflow of cholinergic sweat secretory fibres to forepaw of cat. *Acta Physiol. Scand.*, 57, 339-351.

Szepeswol, J. and Bron, A. (1935 a). Le premier contact du système nerveux vago-sympathique avec l'appareil cardio-vasculaire chez les embryons d'oiseaux (canard et paulet). *Compt. rend. Séances Soc. biol.*, 118, 946-948.

Szepeswol, J. and Bron, A. (1935 b). L'origine des cellules nerveuses sympathiques dans le cœur des oiseaux. *Compt. rend. Séances Soc. biol.*, 118, 1030-1031.

Thesleff S. (1960). Supersensitivity of skeletal muscle produced by botulinum toxin. *J. Physiol.*, Lond., 151, 598-607.

Thompson, J.W. (1958). Studies on the responses of the isolated nictitating membrane of the cat. *J. Physiol.*, Lond., 141, 46-72.

Tranzer, J.P. and Thoenen, H. (1967). *Experientia*, 23, 123. Cited in "Adrenergic Neurotransmission" Ciba Foundation Study Group No. 33. p. 39, 1968. Edited by G.E.W. Wolstenholme and M. O'Connor; J. and A. Churchill Ltd., London.

Vincenzi, F.F. (1967). Effect of botulinum toxin on autonomic nerves in a dually innervated tissue. *Nature*, Lond., 213, 394-395.

Vincenzi, F.F. and West, T.C. (1965). Effect of hemicholinium on the release of autonomic mediators in the sino-atrial node. *Br. J. Pharmac. Chemother.*, 24, 773-780.

Waterson, J.G., Hume, W.R. and de La Lande, I.S. (1970). Distribution of cholinesterase in the rabbit ear artery. *J. Histochem. Cytochem.*, 18, 211-216.

West, W.L., Bhagat, B. and Robinson, I.M. (1966). Responses of isolated atria to various ganglion stimulating agents. III Int. Pharmac. Congress Abstracts, p. 128.

Wolfe, D.E., Potter, L.T., Richardson, K.C. and Axelrod, J. (1962). Localizing tritiated norepinephrine in sympathetic axons by electron microscopic autoradiography. *Science*, 138, 440-442.

Wright, P.G. and Shepherd, J.J. (1965). Responses to drugs of isolated human colonic muscle from a case of Hirschsprung's disease. *Lancet*, 2, 1161-1164.

Young, J.Z. (1936). The innervation and reactions to drugs of the viscera of teleostean fish. *Proc. R. Soc. B.*, 120, 303-318.

\*\*\*\*\*

\*\*\*

\*