References

ARBILLA, S. & LANGER, S.Z. (1978). Morphine and β-endorphine inhibit noradrenaline release from cerebral cortex but fail to reduce dopamine release from the rat striatum. *Nature (Lond.)* (in press).

BISWAS, B. & CARLSSON, A. (1977a). The effect of intraperitoneally administered GABA on brain monoamine metabolism. *Naunyn-Schmiedeberg's Arch. Pharmac.*, **299**, 47–51.

BISWAS, B. & CARLSSON, A. (1977b). The effect of intracerebroventricularly administered GABA on brain monoamine metabolism. *Naunyn-Schmiedeberg's Arch. Pharmac.*, **299**, 51–56.

FARAH, M.B., ADLER-GRASCHINSKY, E. & LANGER, S.Z. (1977). Possible physiological significance of the initial step in the catabolism of noradrenaline in the central nervous system of the rat. *Naunyn-Schmiedeberg's Arch. Pharmac.*, **297**, 119–131.

JESSEL, T.M. & IVERSEN, L.L. (1977). Opiate analgesics inhibit substance P release from rat trigeminal nucleus. *Nature*, **268**, 549–551.

LANGER, S.Z. (1974). Presynaptic regulation of catecholamine release. *Biochem. Pharmac.*, **23**, 1973–1800.

LANGER, S.Z. (1977). Sixth Gaddum Memorial Lecture. Presynaptic receptors and their role in the regulation of transmitter release. *Br. J. Pharmac.*, **60**, 481–497.

LANGER, S.Z. & LUCHELLI-FORTIS, M.A. (1977). Subsensitivity of the presynaptic alpha-adrenoceptors after short-term surgical denervation of the cat nictitating membrane. *J. Pharmac. exp. Therap.*, **202**, 610–621.

STARKE, K. (1977). Regulation of noradrenaline release by presynaptic receptor systems. *Rev. Physiol. Biochem. Pharmac.*, **77**, 1–124.

STOOF, J.C. & MULDER, A. (1977). Increased dopamine release from rat striatal slices by inhibitors of GABA-aminotransferase. *Eur. J. Pharmac.*, **46**, 177–180.

TAUBE, H.D., STARKE, K. & BOROWSKI, E. (1977). Presynaptic receptor systems on the noradrenergic neurones of rat brain. *Naunyn Schmiedeberg's Arch. Pharmac.*, **299**, 123–141.

Catalytic inhibitors of GABA-transaminase as anticonvulsants in baboons with photosensitive epilepsy

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Two catalytic inhibitors of GABA-transaminase, γ-acetylenic GABA (4-amino-hex-5-ynoic acid) and γ-vinyl-GABA (4-amino-hex-5-enoic acid) block sound-induced seizures in mice (Schechter, Tranier, Jung & Böhlen, 1977) at 41 mg/kg and 990 mg/kg i.p., respectively.

We have tested these compounds for anticonvulsant action and acute toxicity in baboons from Senegal, *Papio papio*, naturally showing photosensitive epilepsy, both with and without priming with a subconvulsant dose of allylglycine (Meldrum, Horton & Toseland, 1975).

Complete protection against photically-induced seizures or generalized myoclonus was seen after γ-acetylenic-GABA (160–200 mg/kg i.v.) or γ-vinyl-GABA (450–950 mg/kg i.v.). Maximal protection occurred 3–8 h after injection; partial protection persisted for 24 hours. Toxic signs characteristic of classical anticonvulsant drugs (i.e. nystagmus and ataxia) were not seen.

References

MELDRUM, B.S., HORTON, R.W. & TOSELAND, P.A. (1975). A primate model for anticonvulsant drugs. *Arch. Neurol. (Chicago)*, **32**, 289–294.

SCHECHTER, P.J., TRANIER, Y., JUNG, M.J. & BÖHLEN, P. (1977). Audiogenic seizure protection by elevated GABA concentration in mice: effects of γ-acetylenic GABA and γ-vinyl GABA, two irreversible GABA-T inhibitors. *Eur. J. Pharmac.*, **45**, 319–328.