

53. Axelrod, J.: The metabolism, storage, and release of catecholamines, *Rec. Progr. Hormone Res.* 21: 597, 1965.
54. Weil-Malherbe, H., Axelrod, J., and Tomchick, R.: Blood-brain barrier, *Science* 129: 1226, 1959.
55. Glowinski, J., Kopin, I. J., and Axelrod, J.: Metabolism of ( $^3\text{H}$ ) norepinephrine in the rat brain, *J. Neurochem.* 12: 25, 1965.
56. Burack, W. R., and Draskoczy, P. R.: The turnover of endogenously labelled catecholamines in several regions of the sympathetic nervous system, *J. Pharmacol. Exp. Ther.* 144: 66, 1964.
57. Gordon, R., Spector, S., Sjoerdsma, A., and Udenfriend, S.: Increased synthesis of norepinephrine and epinephrine in the intact rat during exercise and exposure to cold, *J. Pharmacol. Exp. Ther.* 153: 440, 1966.
58. Draskoczy, P. R., and Lyman, C. P.: Turnover of catecholamines in active and hibernating ground squirrels, *J. Pharmacol. Exp. Ther.* 155: 101, 1967.
59. Champlain, J. de, Krakoff, L. R., and Axelrod, J.: A reduction in the accumulation of  $\text{H}^3$ -norepinephrine in experimental hypertension, *Life Sci.* 5: 2283, 1966.
60. Kopin, I. J., Hertting, G., and Gordon, E. K.: Fate of norepinephrine- $\text{H}^3$  in the isolated perfused heart, *J. Pharmacol. Exp. Ther.* 138: 34, 1962.
61. Blaschko, H., Hagen, J., and Hagen, P.: Mitochondrial enzymes and chromaffin granules, *J. Physiol. (London)* 139: 316, 1957.
62. Shore, P. A., Mead, J. A. R., Kuntzman, R. G., Spector, S., and Brodie, B. B.: On the physiological significance of monoamine oxidase in brain, *Science* 126: 1063, 1957.
63. Barger, G., and Dale, H. H.: Chemical structure and sympathomimetic action of amines, *J. Physiol. (London)* 41: 19, 1910.
64. Hertting, G., Axelrod, J., and Patrick, R. W.: Actions of bretylium and guanethidine on the uptake and release of  $\text{H}^3$ -noradrenaline, *Brit. J. Pharmacol.* 18: 161, 1962.
65. Axelrod, J., Hertting, G., and Patrick, R. W.: Inhibition of  $\text{H}^3$ -norepinephrine release by monoamine oxidase inhibitors, *J. Pharmacol. Exp. Ther.* 134: 325, 1961.
66. Ahlquist, R. P.: In Drill, V. A., editor: *Pharmacology in Medicine*, second edition. New York, McGraw-Hill, 1958, p. 378.
67. Rosell, S., Kopin, I. J., and Axelrod, J.: Fate of  $\text{H}^3$ -noradrenaline in skeletal muscle before and following sympathetic stimulation, *Amer. J. Physiol.* 205: 317, 1963.
68. Whitby, L. G., Hertting, G., and Axelrod, J.: Effect of cocaine on the disposition of noreadrenaline labelled with tritium, *Nature (London)* 187: 604, 1960.
69. Axelrod, J., and Laroche, M. J.: Inhibitor of O-methylation of epinephrine and norepinephrine, *in vitro* and *in vivo*, *Science* 130: 800, 1959.
70. Bacq, Z. M., Cosselin, L., Bresse, A., and Renson, J.: Inhibition of O-methyl transferase by catechol, and sensitization to epinephrine, *Science* 130: 453, 1959.
71. Kopin, I. J., Gordon, E. K., and Horst, D.: Studies of uptake of L-norepinephrine- $^{14}\text{C}$ , *Biochem. Pharmacol.* 14: 753, 1965.
72. Armstrong M. D., McMillan, A., and Shaw, K. N.: 3-methoxy 4-hydroxy D-mandelic acid, a urinary metabolite of norepinephrine, *Biochim Biophys. Acta* 25: 422, 1957.

---

### Drugs

**ETHACRYNIC ACID** The acute hemodynamic effects of intravenous ethacrynic acid (100 mg.) were studied in 27 patients. One hour following the drug there were significant decreases in pulmonary blood volume, cardiac output and stroke volume. Urine flow in the study period ranged from 800 to 1,400 ml. The physiologic basis for the beneficial effects of this drug in the treatment of pulmonary edema is related to decreased pulmonary blood volume and previously noted decreased plasma volume. (*Samet, P., and others: Acute Effects of Intravenous Ethacrynic Acid Upon Cardiovascular Dynamics, Amer. J. Med. Sci.* 255: 78 (Jan.) 1968.)

**QUININE BLINDNESS** Blindness due to quinine overdose can be treated only by producing retinal vasodilation. The most effective known method for producing this is stellate ganglion block. (*Bricknell, P. P., and others: Stellate Ganglion Block in Treatment of Total Blindness Due to Quinine, Brit. Med. J.* 2: 400 (Nov.) 1967.)