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ACTIONS OF HALLUCINOGENS ON SEROTONIN RECEPTORS ON ISOLATED UMBILICAL BLOOD VESSELS. Donald C. Dyer* and Douglas W. Gant* (SPON: A. Horita). Dept. of Pharmacology, University of Washington, Seattle, Washington 98105.

Isolated helically-cut strips of human umbilical veins and sheep umbilical arteries were suspended in 10 ml isolated organ baths in Krebs-Henseleit solution maintained at 37°C. Isotonic contractions were recorded under 1 gm tension. Cumulative dose-responses to serotonin were obtained on each tissue to establish maximal contractility. The effects of the following drugs were subsequently studied: bufotenine, psilocin, psilocybin, mescaline and lysergic acid diethylamide (LSD). All of these drugs produced contractions with LSD being the only one that was more potent than serotonin. Contractions to all hallucinogens were antagonized by cinanserin. Cinanserin did not appreciably affect contractions to angiotensin on sheep vessels, thus indicating its specificity. On sheep umbilical arteries piperoxan did not antagonize responses to mescaline whereas 2-bromolysergic acid diethylamide did shift the dose response to mescaline to the right. This study suggests that these hallucinogens including mescaline act on serotonin receptors in umbilical blood vessels. (Supported in part by USPHS, NIH Grant GM 15991 and by PHS Research Training Grant No. GM01458.)