273P THE PHARMACOLOGY OF 5-HT: AN INTERACTIVE, COMPUTER-BASED TUTORIAL PROGRAM FOR UNDERGRADUATE STUDENTS

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One of the major aims of the Pharma-CAL-ogy project, an initiative funded through the Teaching and Learning Technology Program (TLTP), is to promote the development of new teaching software in areas of pharmacology where there is an identified need. One such area is synaptic transmission and transmitter chemicals and two programs covering this topic have been developed to date and demonstrated to the Society (Collins, et al., 1995; Dewhurst, et al., 1995). Here we describe a further program which aims to teach the pharmacology of 5-HT. It is suitable for undergraduates from science, medical and a range of biomedical courses which include basic pharmacology modules.

The computer-based interactive tutorial program was developed using Multimedia Toolbook® (Asymetrix) to run on IBM PC compatibles (minimum delivery platform: 386 SX, 20 MHz PC running Windows™ version 3.1 (Microsoft), a sixteen colour VGA monitor and a mouse).

The menu has six options which may be accessed in any order: *introduction*: (the physiological role of 5-HT in the CNS and its clinical significance); *serotonergic transmission*: (synthesis, storage, release, pre- and post-synaptic receptors, uptake and inactivation); *central serotonergic pathways*: (main sites of serotonergic neurones and pathways in the rat brain); *5-HT receptors*: (familes of 5-HT receptors and their sub-types, transduction mechanisms); *Drugs and their sites of action on serotonergic transmission*:: synthesis (*p*-chlorophenylalanine), neuronally-evoked release of 5-HT (agonists of 5-HT_{1A} receptors (buspirone, ipsapirone, gepirone); agonists of 5-HT_{1D} receptors (sumatriptan); agonists of 5-HT_4 receptors (renzapride); antagonists of 5-HT_3 receptors (ondansetron); antagonists of 5-HT_{2A} receptors (ketanserin; ritanserin); storage of 5-HT (reserpine); and inhibitors of 5-HT inactivation (selective serotonin re-uptake inhibitors; COMT inhibitors, irreversible and reversible MAO inhibitors).

High quality colour graphics are used extensively throughout the program and features such as animation and a Hypertext facility are used to enhance student learning. The main sections all have associated questions, mostly of the true/false variety with feedback. These are designed to allow students to assess their understanding of the section they have completed and also to present additional information and explanations through the feedback.

The learning package is intended for independent study and could be used as an alternative to tutorials or to support lectures. It is estimated that it would occupy students for 2-3 hours of fairly intensive study and is suitable for primary learning or revision. The question-answer sections may also be useful for self-assessment.

Collins, G.G.S., Dewhurst D.G. & Ullyott, R.T. (1995) Brit. J. Pharmac. Proc. suppl. (in press).

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