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Book Review

Progress in drug research, Vol. 39, by Ernest Jucker, Birkhauser Verlag, AG, P.O. Box. 133, CH-4010, Basel, Switzerland, 1992, pp. 408, SFr. 328.

Revolutionary developments in molecular biology in the last decade or two have left a deep impression on biomedical sciences. Nowhere is this more evident than in the contents of the volume under review. Thus, among the nine chapters that the book contains, only the second one on Developments in antihistamines (H_1) may be considered to belong to the 'classical' medicinal chemistry variety. This review which includes QSAR and molecular modelling studies is exhaustive.

The third chapter (The histamine H_3-receptor: A target for developing new drugs) describes a number of molecules as antagonists and at the same time typifies one of the target-oriented approaches to drug discovery, based upon cloning receptors and finding ligands. Interestingly at the moment, the approach is mostly a pharmacological tool, although it is likely that H_3 receptor agents may provide new therapies in airway and gastrointestinal disorders and CNS.

The eighth chapter (Catechol O-methyl transferase (COMT) and properties of selective COMT inhibitors) is again illustrative of the preceding approach to drug discovery. The main clinical usefulness of COMT inhibitors appears to be in the therapy of Parkinson's disease, as an adjunct to combination of L-DOPA and a peripheral DOPA decarboxylase inhibitor, to suppress high and considerable levels of L-DOPA-3-methyl ether.

The first chapter (Polyamines as markers of malignancy) deals critically with the possibility of using putrescine, spermidine and spermine, evaluating their potentials and limitations. Two of the major conclusions are that these amine levels may reflect proliferation rates but not tumor size and that polyamines cannot be used as a single marker for the detection of cancer.

Chapters 4 (Clinical applications of cytokines for immunostimulation and suppression), 5 (Mechanism of fibrinolysis and clinical use of thrombolyic agents), 6 (The potential role of cytokines in cancer therapy) and 7 (Recent progress in understanding cholinergic function at the cellular and molecular level) portray beautifully and in great depth the revolution in the approach to drug discovery, now centering mainly on therapeutic peptides available by cloning or recombinant techniques. Chapters 4 and 6 have considerable overlap in their description of the use of cytokines in cancer therapy.

The eighth and final chapter, a rather small one on 'The effects of NSAIDs and E-prostaglandins on bone: A two signal hypothesis for the maintenance of skeletal bone' leaves us with the hope that aryl propionic acid NSAIDS may have been bone sparing and anabolic bone activity and proposes that it will be useful to add PGE_2 to this therapy.

All the chapters are written authoritatively and in depth, conforming to the standards of the earlier volumes, although 'progress series' of this kind will necessarily be somewhat heterogenous in their themes. The printing and presentation of the book are excellent. Errors as usual are practically nonexistent: the reviewer used a magnifying glass to find 'sefuential' instead of 'sequential' (p.352, line 1) and a somewhat awkward sentence subsequently 'Largely independent of... packets, (p. 352, lines 15–17). At SFr 328 (Rs 6500), this very useful book will be a luxury to the individual researcher, as also for most of the impoverished universities, but it will be a useful addition to all institutions engaged in drug research. It is a good buy considering that it has over 400 pages of valuable information and 1863 references!

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