

From Fig. 1A it can be seen that L-dopa displays a mild hypothermic action in monoamine oxidase-blocked mice. This hypothermia is reversed to a clear hyperthermia not only by amphetamine but also by fenfluramine and S992 at any dose studied. The hyperthermia was accompanied by clear signs of excitation. From a more detailed examination it appears that amphetamine (2 mg/kg) and fenfluramine (7.5 mg/kg) act similarly in all the four experimental conditions (Fig. 1B and 1D). At higher doses (Fig. 1C, E, F) the picture is different. Amphetamine itself elicits hyperthermia, which is further increased by L-dopa or pheniprazine. On the contrary, fenfluramine alone produces hypothermia which is unaffected by L-dopa or pheniprazine.

In comparison with the above conditions, where catecholamine levels are increased, the effect of fenfluramine on body temperature was tested on mice made hypothermic by reserpine. After reserpine, amphetamine increases the body temperature while fenfluramine and S992 fail to modify it (Fig. 1 I).

These studies show that the effect of fenfluramine and its derivative may differ from or be similar to amphetamine according to the availability of catecholamines. Also Le Douarec & others (1966) concluded, on the basis of different experiments, that fenfluramine may show both sedative and stimulant effects at the same time.

*Istituto di Ricerche Farmacologiche 'Mario Negri',
Via Eritrea, 62, 20157 Milan, Italy.*
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S. JESPERSEN*
A. BONACCORSI
S. GARATTINI

* Visiting Scientist from Department of Pharmacology, Alfred Benzon, Copenhagen V, Denmark.

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BOOK REVIEW

ISOLATION AND IDENTIFICATION OF DRUGS in pharmaceuticals, body fluids and post-mortem material. Edited by E. G. C. Clarke assisted by Judith Berle. Pp. xxii + 870 (including index). The Pharmaceutical Press, London, 1969. £14.

Isolation and Identification of Drugs is, as is claimed in the descriptive brochures, an entirely new book which should fill a gap which has long been apparent in the literature of human toxicology. This book has been produced as a companion volume to the Extra Pharmacopoeia and indeed there is a marked resemblance in size and style. It is offered as a practical manual and data book for forensic scientists, toxicologists, analytical chemists, pharmacists, biochemists, pathologists and police surgeons; whilst of undoubted value to the former groups the value to police surgeons must be limited. Since it is a companion volume to the Extra Pharmacopoeia, it is perhaps unfortunate that the habit encountered in the toxicological literature of intermixing data for mice (rats, guinea-pigs etc.) and men has been allowed to invade the present volume. However, Professor Clarke and his team of collaborators and assistants have succeeded admirably in their task and are to be congratulated on the production of a volume which has been in almost constant use (in at least one laboratory) since its publication.

The concept of this work is ambitious in that an attempt has been made to provide details of methods and techniques for the identification of many drugs under condi-

tions ranging from the primitive to the more sophisticated. The book is divided into four parts and a little time spent in studying the layout and mastering the coding systems used to refer, for example, to chromatographic systems, will speedily repay the effort involved. Part 1 contains ten chapters describing the theory and practice of the relevant experimental methods, for example, extraction methods, the various chromatographic techniques, ultraviolet and infrared absorption spectrophotometry, colour tests and microcrystal tests. Also included is a useful summary of the pathways of biotransformation which drugs undergo in biological systems. The remaining chapter in Part 1 describes some rapid screening methods suitable for the hospital biochemist working against the clock; it was disappointing to find that the comparatively inexpensive and rapid technique of thin-layer chromatography was not adopted in this section in preference to traditional tests, many of which have outlasted their usefulness. The data obtained for a very wide range of drugs, by following the methods and using the chromatographic systems described in Part 1, are given in most instances in the text of Part 1, the drugs being listed in alphabetical order. The same data are classified, for example in ascending order of Rf value, and tabulated in Part 3 of the book which also includes reproductions of some 450 infrared spectra with the major peaks labelled.

Part 2 contains monographs for over 1000 compounds. Each monograph includes synonyms, structural formula, molecular weight, melting point and solubilities. In addition, some or all of the following are given: notes on suitable extraction methods of recovery of the drug from biological systems, references to appropriate chromatographic systems, ultraviolet and infrared absorption data, methods for quantitative analysis, details of metabolism, dose, toxicity (mostly animal data) and summaries of relevant published cases.

Part 4 comprises appendices giving details of reagents and tests referred to in Parts 2 and 3 and a bibliography of the references cited in the text. Finally there is an excellent index.

Isolation and Identification of Drugs is undoubtedly destined to become one of the classic books of toxicological literature: it contains well-tryed and properly evaluated techniques and data relating to an extensive range of drugs. It is to be hoped that this book will enjoy the wide circulation that it deserves and that prospective purchasers will not be deterred by its price, since the extensive content of the book and its overall usefulness will be found to amply repay this.

ANN E. ROBINSON