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CIBA FOUNDATION SYMPOSIUM

Jointly with

COMMITTEE FOR SYMPOSIA ON DRUG ACTION

on

ADRENERGIC MECHANISMS

Editor for the British Pharmacological Society

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With 163 Illustrations



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for the Promotion of International Co-operation in Medical and Chemical Research

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PREFACE

MEMBERS of the Biological Council's Co-ordinating Committee for Symposia on Drug Action have many excellent reasons to be grateful to Sir Charles Harington, Chairman of the Committee from its inception in 1951 to 1960. The succession of conferences jointly organized each Spring by various societies, among which it would not be invidious to single out the British Pharmacological Society, have greatly extended the international range of indebtedness to Sir Charles for his guidance in the selection and treatment of subjects designated by the committee for special attention. In addition to the work of co-ordinating the conference programme of a number of organizations, the committee has itself initiated successful symposia on Anticholinesterases, Histamine, Hypotensive Drugs, 5-Hydroxytryptamine, Quantitative Methods in Human Pharmacology and Therapeutics, and Polypeptides which Affect Smooth Muscles and Blood Vessels.

The Ciba Foundation has been privileged to join the Wellcome Trust and the Wellcome Foundation, Limited, in support of these symposia, mostly by assistance with accommodation and travelling expenses and on social occasions; but in 1955 also by joining in the programme for the symposium on Histamine, held in honour of Sir Henry Dale. On that occasion, to supplement the programme of papers presented at the Wellcome Building, the Ciba Foundation provided facilities for two further days of more intimate discussion, and assumed responsibility for publication of the complete proceedings. It was with pleasant memories of this earlier collaboration that the Director readily agreed to a similar plan in the organization and publication of an international symposium on "Adrenergic Mechanisms."

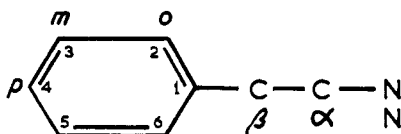
Main responsibility for the meeting lay in the hands of a committee representing the British Pharmacological Society, with the co-operation of the Physiological Society, the Biochemical

Society, and the Royal Society of Medicine. It was arranged that there should be two days for formal presentations and brief discussion at the Wellcome Building on the 28th and 29th March 1960, attended by some 300 people, and two further days on the 30th and 31st March at the Ciba Foundation for unscripted discussion by one-tenth of this number.

Every member and reader will wish to acknowledge the essential and notable parts played in the preparation and management of both sections of this symposium by Dr. H. Blaschko, Dr. H. O. Schild, Dr. W. A. Bain, Dr. G. B. West, Dr. J. H. Gaddum and Dr. J. R. Vane. The responsibilities of the latter as Organizing Secretary continued into his joint-editorship of this volume, to the relief and pleasure of his co-editors and the benefit of all who find value and enjoyment in it.

EDITORS' NOTE

THE following convention has been used for identifying substituents on the phenylethylamine skeleton:



o = ortho; *m* = meta; *p* = para.

The terms and abbreviations given below have been used; the abbreviations therefore have not been explained every time they appear:

adrenaline	β (3,4-dihydroxyphenyl) β -hydroxy N-methyl ethylamine
noradrenaline	β (3,4-dihydroxyphenyl) β -hydroxy ethylamine
metanephrine	β (3-methoxy-4-hydroxyphenyl) β -hydroxy N-methyl ethylamine
normetanephrine	β (3-methoxy-4-hydroxyphenyl) β -hydroxy ethylamine
ATP	adenosine triphosphate
dopa	β (3,4-dihydroxyphenyl)alanine
dopamine	β (3,4-dihydroxyphenyl)ethylamine
5HT	5-hydroxytryptamine
5HTP	5-hydroxytryptophan
LSD	lysergic acid diethylamide
MAO	monoamine oxidase

Where possible names approved by the British Pharmacopoeia Commission have been used. Trade names are indicated by the use of a capital letter; British trade names have been used if these differ from American ones (Dibenyline rather than Dibenzyline).

Some sections of the discussion at the Ciba Foundation, which were particularly relevant to papers given at the Wellcome Building, have been transferred to the discussions after those papers.

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OPENING ADDRESS

SIR HENRY DALE, O.M.

I REALLY am greatly indebted to all those who have planned this symposium, for the honour and privilege accorded to me of presiding at this, its opening session. For my own part, I greatly welcome the recent growth of the symposium habit, and the facilities now offered for its indulgence. I am sure that it is giving us help, of which the importance is bound to increase, in the breathless, stumbling effort which we now have to make, if we are to maintain even a conversational contact with the progress of science at its present rate, only a little beyond the narrowing limits of what are, or for some of us were formerly, our own special lines of scientific interest and activity. I think that, on the whole, my personal preference is for those symposia in which, as in this one on Adrenergic Mechanisms, the chosen field is, in itself, one of relatively small compass, but of correspondingly intensive cultivation during recent years; so that even those among you whose rôle, like my own, will in the main be that of interested onlookers, may have the privilege of watching some of the most productive present-day workers in this special field, as they endeavour to wring from their recent harvests the last available drops of significant fact, or of stimulating theory. Many of us others, however, will doubtless be watching for opportunities of intervention with provocative questions, and challenging arguments. In which connexion, it is satisfactory to observe that those responsible for the programmes have planned such generous rations of time for free discussion, between those allotted to the selected participants.

I think that my own most useful contribution to these proceedings will be to recall some points about the early history,