HORMONAL STEROIDS 2

Biochemistry, Pharmacology, and Therapeutics

PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON HORMONAL STEROIDS

Edited by L. MARTINI and A. PECILE

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Department of Pharmacology

University of Milan

Milan, Italy

VOLUME 2

1965

ACADEMIC PRESS · NEW YORK AND LONDON

ACADEMIC PRESS INC.
111 FIFTH AVENUE
NEW YORK, NEW YORK, 10003

United Kingdom Edition Published by
ACADEMIC PRESS INC. (LONDON) LTD
BERKELEY SQUARE HOUSE
LONDON, W. 1.

Library of Congress Catalog Card Number: 64-23201

Printed in Hungary

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Foreword

It is over thirty years since the isolation and chemical identification of the first hormonal steroid (estrone). There followed in the 1930's a brilliant series of investigations which led to the identification of most of the major steroids secreted by the ovaries, the testes, the adrenal cortex, and the placenta. Since those days, when these steroids were available at best in milligram amounts, there has been an exponential increase in the amounts of steroid hormones preparable by partial synthesis and in the investigation of their pharmacological, physiological, and biochemical properties. Keeping pace with, and, indeed, often anteceding our knowledge of the steroid hormones, has been the production of derivatives, analogues, and homologues of the hormones. In order to encompass the rich chemical, biochemical, and medical knowledge in the steroid hormone field, the inclusion of work with these steroid relatives led to the "International Congress on Hormonal Steroids." Our knowledge of the regulatory activity of the steroid hormones at the organ, tissue, and cellular levels has been aided and enlarged by studies with the synthetics. Their contribution to the sharpened insight is obvious in numerous papers presented to this Congress, and included in this volume.

As we review the subject matter presented in the symposia and round-table conferences, the major areas of research with steroids are sharply illuminated. These major areas may be listed as:

(1) Steroid chemistry, ranging from the natural product isolation to organic syntheses and including studies of reaction mechanisms.

(2) The biogenesis and metabolic transformations of the naturally occurring hormones.

(3) The secretion, transport, conjugation, and excretion of the steroid hormones and of synthetic chemical relatives.

(4) The control of steroid hormone secretion by endogenous humoral and neurohumoral agents and by diverse exogenous agents.

(5) The relationship between chemical structure and physiological function of hormonal steroids of all types.

(6) The regulatory effects of hormonal steroids on specific target tissues

(7) The repercussive, secondary or indirect actions of the hormonal steroids upon diverse processes.

(8) The role of hormonal steroids in endocrine and neuroendocrine pathology, including steroid therapy.

(9) Hormonal adjustments to physical and psychological stresses and to the aging process.

Among the papers presented to the Congress are accounts of data extremely pertinent to the foregoing topics. These papers illustrate the enormous amount of research activity devoted to the steroids and their biological and medical involvements. Indeed, they confirm the

impression that there is scarcely a vital process, an aspect of behavior or personality, or organic pathological lesion which is not in one way or another affected by steroids. From the crowns of our heads to the tips of our toes, the steroid flux is incessantly at work. In this volume, the reader will find able presentations by experienced and sagacious investigators of the what, how, and why of this multivarious steroid activity.

We wish to thank all the people who have contributed to the organization of the Congress and to the publication of these volumes and made them a successful reality: Drs. F. Fraschini, G. Gavazzi, G. Giuliani, G. Mangili, M. Motta, E. Müller, L. Martini, and A. Pecile.

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