

Preface

In this volume of *Vitamins and Hormones*, our readers are once again presented with the most timely and up-to-date reviews on topics of current interest.

Recent developments in the field of hormone receptors have centered around the study of adrenergic receptors as molecularly cloned proteins. S. Collins and her co-authors review this area and also provide a highly utilitarian comparison of amino acid sequences for many members of this protein family which is characterized by seven trans-membrane-spanning hydrophobic regions.

T. J. Chambers and T. J. Hall present an important analysis of the fast-paced field of osteoclast maturation and function. Osteoclasts are the cells that control bone resorption, and their development and actions are regulated by a panoply of systemic hormones, locally acting cytokines, growth factors, and cell adhesion molecules. This presentation will be of value to investigators in the field as well as to the general reader.

M. Zaidi and his colleagues present a comprehensive description of the expression and function of calcitonin gene products. Expression of these genes is differentially regulated via alternative mRNA splicing between the endocrine and central nervous systems, with calcitonin produced in the thyroid, and CGRP (calcitonin-gene related peptide) type compounds produced in the CNS (CGRP) and pancreas (amylin).

Pantothenic acid is an important vitamin that is a key component of coenzyme A (the cofactor essential for a multitude of active ester reactions). The interwoven biochemistry and physiology of pantothenic acid is discussed by A. G. Tahiliani and C. J. Beinlich. They have developed an impressive treatise on the complex synthetic control and metabolism of this vitamin.

A rapidly changing field is the study of pyrroloquinoline quinones, a class of compounds important in enzymatic dissimilation of methanol, ethanol, and a number of other substrates. M. Ameyama and colleagues provide a new and extensive discourse on these cofactors,

analyzing the clinical and basic nutritional significance of these metabolically important quinones.

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