

Preface

Hormones are natural chemical signals synthesized from specialized group of cells to influence bodily functions. They are the excellent system of communication from one tissue/cell to others within an organism, and are involved in the dynamic control of biochemical and physiological functions. Hormonal imbalance creates an upset in the regulatory mechanisms thereby disturbing the homeodynamic balance. Besides the level of hormones, their cognate receptors and post-receptor events also have a large influence on the final response to a particular hormone. There also exists a cross-talk in such signaling with an added advantage to the organisms. Hormones also coordinate a wide range of processes in biological systems including neuroendocrine and immunological controls. However, the competence of body's homeodynamic adjustments tends to decline as one ages. A scholarly collection of updates on various hormonal signaling in ageing, health and longevity is of great importance to the readers working in the area of hormone signaling in general and in the field of ageing research in particular.

This multi-chapter review book presents the present state of knowledge on the role of hormones in health, ageing and longevity. The book is divided into four major parts: Part I embodies history and conflux on more than 100 years of hormone science and its challenges; Part II presents varied chapters on hormones involved in growth, stress and metabolism; Part III encompasses chapters on neuroendocrine axis and rhythms during ageing process; and Part IV has chapters on hormones affecting the brain, immunity and lifespan, including a chapter on plant-based cytokinin hormones for the modulation of ageing and longevity.

Engrained with the up-to-date information about role of hormones in health, ageing and longevity, this collection is a valuable addition to the book series "Healthy Ageing and Longevity", and provides a reliable source of information and knowledge useful for understanding and developing potential hormone-based interventions for modulating ageing and longevity.

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