

# Preface

This book is devoted to some aspects of the prolactin action. Although prolactin (PRL) was discovered more than 80 years ago, our understanding of the roles of PRL in the human physiology is still very incomplete. Thus, PRL is not only a pituitary hormone with an important role in the reproduction but also acts as a cytokine, eliciting a wide variety of actions. Data gathered during the last decade have demonstrated that locally produced PRL acts as the autocrine/paracrine factor and plays a role in breast cancer. Following the reestablishment of a contributory role for PRL during breast oncogenesis, the scientific and clinical communities have held great hope that manipulation of the PRL axis may lead to the successful treatment of breast cancer. This hope is not yet dashed, however the role of the PRL axis is now being shown to be more complex than was primary envisaged. The first aim of this book is to overview major advances in the field.

Secondly, this book presents information on the role of PRL in non-mammary tissues in physiological and patho-physiological conditions. About 100–300 functions or targets have been identified for PRL in various species. This is true for the prostate, the skin, the decidua, the brain, some immune cells, adipocytes, and several others. The book discusses the role of PRL in adipocytes, immune response, angiogenesis, as well as in prolactinomas and prostate tumorigenesis.

This book also aims to summarize current knowledge about PRL and its receptor, plasticity of the PRL axis, PRL signaling pathways, and PRL crosstalk with other oncogenic factors.

Overall, the goal of this book is to identify and review new experimental findings that have provided further insight into the role of PRL in human physiology and patho-physiology. Thus, this book bridges between new research results, as published in journal articles, and a contextual literature review.

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