

# Preface

For many years, those of us working in the field of steroid hormones were used to looking at the steroidal receptor as ligand inducible transcriptional factors. In the late 1960s, a lone voice (the mind goes to the pioneering work of C. Szego) began to raise the hypothesis that estrogens could act through different ways. Nowadays, after more than 40 years, no one has any doubts that steroids through their receptors, in addition to regulating gene transcription, activate outside from the nucleus a plenty of signaling pathways involved in the most important hormone actions, such as the cell growth, differentiation and motility.

Nevertheless, despite the large amount of information about steroid signaling gained in the last years, the definite understanding of the mechanism of action of the steroid hormones appears as a puzzle that challenges our mind. In particular, a drawing of the interplay between the different signaling cascades and receptor dependent transcriptional activation is still far from being exhaustive.

Of course, this book does not pretend to address this issue but is rather aimed to provide up to date information about some exciting new insights into the cooperative interaction between the c-Src, other tyrosine kinases, PI3-K and steroid receptors. The molecular events are analyzed in two different settings: breast and prostate cancer. Furthermore, a small section of this book is dedicated to new tools for steroid receptor analysis and regulatory networks.

The simple message that this book conveys is that the dissection of these networks could definitely change our understanding of the role of steroid hormones in biology and disease. The combinatory targeting of all hormone signaling effectors could dramatically change the outcome of breast and prostate cancers.

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