About the Editors

Evanthia Diamanti-Kandarakis

Evanthia Diamanti-Kandarakis is Professor of Internal Medicine (Endocrinology and Metabolism) and Chairman of the Third Department of Medicine, Medical School, University of Athens (Greece). She received her MD from Medical School of Athens (Greece) and her PhD in Experimental Endocrinology on the effects of androgens in hypophysectomized rats from the same university. She did her training in internal medicine in England (1974–1980), and her training in endocrinology and metabolism in the USA (1980–1986). Her research interests have focused for the last 15 years on clinical, molecular and environmental aspects of metabolic and hormonal abnormalities in polycystic ovary syndrome. This work has generated more than 120 publications and more than 3500 citations. She has been invited by the international academic community as a speaker and has given more than 100 lectures in Europe, Asia, Africa, and North and South America.

Shahla Nader

Shahla Nader is Professor in the Departments of Obstetrics and Gynecology and Internal Medicine, Divisions of Endocrinology at the University of Texas Medical School (TX, USA). Her focus is reproductive endocrinology and her major interest is in ovarian function.

Dimitrios Panidis

Dimitrios Panidis is Professor of Endocrinology at the Aristotle University of Thessaloniki, Greece. He completed his residency at the Evangelismos Medical Center in Athens, Greece. He then served as a Fellow in Reproductive Endocrinology at the University College Hospital, London, UK, and at the Karolinska Institutet in Stockholm, Sweden. He has authored more than 150 peer-reviewed scientific articles with an impact factor higher than 300 and more than 1000 citations. He has served as President of the Ethics Committee at the Hippokration General Hospital in Thessaloniki and as President of the Hellenic Endocrine Society.

Foreword

Novel insights into the pathophysiology and treatment of polycystic ovary syndrome

Evanthia Diamanti-Kandarakis,
Shahla Nader & Dimitrios Panidis

Polycystic ovary syndrome (PCOS), a state of hyperandrogenism and anovulation affecting approximately 7% of reproductive-age women, has assumed center stage in the field of reproductive endocrinology. Not only do women with this condition suffer real, debilitating symptoms such as hirsutism, acne and abnormal menstruation, but the associated anovulation is a major cause of infertility in these young women. In addition, the metabolic derangements and obesity that are very frequent accompaniments of this disorder foreshadow the major diseases of western civilization, namely diabetes, dyslipidemias, hypertension and cardiovascular disease. This book, authored by renowned physicians in endocrinology, gynecology and reproductive sciences, summarizes current knowledge as related to PCOS, its management and its adverse long-term consequences. It also, rather uniquely, provides an opportunity for these experienced authors to provide an opinion or perspective on their chosen topic. It is hoped that the information provided will benefit practising physicians, provide those new to this field a framework for the management of these patients and encourage others to research and explore the many remaining uncertainties.

Chapters 1 and 2 by Orio and Fulghese and their colleagues review the definitions of PCOS and address its pathogenesis. In Chapter 3, Diamanti-Kandarakis explores endocrine disruptive chemicals, particularly bisphenol A and advanced glycated end products, as reproductive toxins and provides evidence associating their presence with the PCOS phenotype. In Chapter 4,

Lombardi *et al.* review the uterine effects of unopposed estrogen stimulation, as commonly seen in PCOS, and the resultant hyperplasia and/or endometrial cancer and discuss treatment options. In Chapter 5, Goldenberg and Glueck explore infertility and anovulation in PCOS, outline treatment options and review the use of metformin in this context and in this patient population. Panidis and Tziomalos discuss and review potential risks and benefits of metformin use in early pregnancy in Chapter 6. In Chapter 7, Nader gives an overview of the benefits of oral contraceptives and explores their potential long-term risks in the context of a heterogeneous population of PCOS patients, as commonly seen in practice. In Chapter 8, Palomba *et al.* give an overview of ovulation induction in PCOS, including use of surgical options such as laparoscopic ovarian drilling and discuss predictors of success. In Chapter 9, Pasquali explores the relationship between PCOS, Type 2 diabetes and the metabolic syndrome and reviews treatment options and outcomes. Finally, in Chapter 10, Hardy *et al.* outline comorbidities of PCOS as related to pregnancy, mental health, cancer risk as well as cardiovascular disease, diabetes and metabolic dysfunction.

The editors wish to thank the authors for sharing their expertise and for their dedication to this book and hope the readers will find it illuminating.

Financial & competing interests disclosure

The authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript. This includes employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties.

No writing assistance was utilized in the production of this manuscript.