

HANDBOOK OF ANDROLOGY

Second Edition



The American Society of Andrology

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Preface

Since the first edition of the Handbook of Andrology, published by the American Society of Andrology 15 years ago, over 20,000 printed copies, as well as uncounted numbers of electronic copies, have been distributed to colleagues and trainees around the world. The first edition was translated into Spanish, Italian and Chinese. Most of the fundamental information provided in the first edition is still valid; however, the volume of scientific literature on the various facets of the subject of andrology has expanded tremendously. This has resulted in a constantly growing body of knowledge, not only in basic science but also in the clinical management of men's health issues.

In this edition, we have increased the number of chapters from 24 to 41, but have made every effort to retain a style that will allow trainees to be introduced to the field of Andrology and become as excited about working in this field as are the contributing authors. Our chapters encompass the wide range of topics that characterizes the field of Andrology, from molecular biology to veterinary and human medicine, from applied research to ethics. We once again have been extremely fortunate to have as authors world-renowned Andrologists who are experts in the various subjects included in the Handbook; we wish to thank each of them for their valuable contributions.

With the advances in information technology, we feel that it is time to drop the traditional format of a paper bound book and move to an electronic only version for this edition of the Handbook. With the support of the American Society of Andrology, this edition of the Handbook will be freely available to all members of the Society. The electronic version is available as a single PDF or as PDFs of individual chapters. We believe that this approach will allow for a wider scope of circulation of the Handbook, permit more frequent updates of the content, and help save a forest of trees.

It is our hope that this second edition of the Handbook of Andrology lays the foundation for basic scientists, clinician scientists, healthcare professionals, trainees, policy makers and anyone who has an interest in the discipline to acquire the relevant knowledge that they seek.

Finally, we would like to acknowledge the dedicated secretarial support of Ms. Elise Boivin-Ford and to thank all the contributors and various members of the American Society of Andrology for their assistance and support in making this Handbook possible.

Bernard Robaire and Peter Chan
Co-Editors
February 2010

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Forward by Philip Troen

Reprinted from the first edition of the Handbook of Andrology

“What a piece of work is a man”

Shakespeare, *Hamlet*, Act ii, scene 2, line 316

Why a handbook of andrology? Some handbooks are published to bring together multiple aspects of a diversified subject. Some handbooks are designed to present an overview of a rapidly expanding subject for those working in the field while other handbooks are intended to codify the progress already made. Although there are elements of each of these approaches in this handbook of andrology, our main purpose is to present to scientists/clinicians early in their careers the scope, importance, and excitement of our discipline.

What is andrology? Simplistically, one might say that andrology is to the male what gynecology is to the female. That is, andrology deals with matters affecting the male reproductive system. The earliest use of the term andrology, as reported by Mikko Niemi, appears to have been in 1891 in the Journal of the American Medical Association, reporting on the formation of the American Andrological Association. Little more was heard from that association and it was not until the latter half of this century that there emerged an andrology journal in 1969 and an active andrology organization, *Comite Internacional de Andrologia*, in 1970. In the quarter century since, there has been a veritable explosion of journals and publications, of societies and congresses, and of workshops and symposia devoted to andrology. Thus, we appear to be on a rapidly rising growth curve of knowledge and application in andrology. The scope of modern day andrology is strikingly indicated by the range of topics discussed in this handbook. Written by distinguished leaders in their fields, these topics were chosen to indicate the exciting breadth of andrology and the opportunity it holds for graduate students in the biological sciences, veterinary students, and medical students.

Why become an andrologist? In choosing a career one, first of all, tries to identify an area of interest. Then one looks at the opportunity to succeed and the likelihood of making a contribution. As an andrologist for 40 years, I can testify to the continued excitement and interest the discipline has held for me. As noted above, there has been a rapid escalation of growth so that our discipline now ranges from genetic studies to pubertal changes in the male and from infertility and assisted reproduction techniques to disorders of the

prostate, sexual function and contraception. Advances in these and other areas have been made possible by a remarkable series of clinical studies and scientific discoveries using the classical disciplines of physiology, biochemistry, neuroscience, and molecular biology. As we have entered each new stage of understanding and science, there has been no waning of the stimulus that I and my colleagues experience. At the same time, because of the multidisciplinary nature of andrology, unsolved problems present themselves and the opportunities for advancement and success continue to expand. As Alexander Albert has noted, "Nature has experimented lavishly with the reproductive system." This fact provides both challenge and opportunity. Andrology covers a wide spectrum from before conception to aging. As you peruse this handbook, we hope you will appreciate the scope of the field and share our excitement in the study of andrology.

Handbook of Andrology

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