

BOOK REVIEW #6

Claude Gagnon (editor). *The Male Gamete: From Basic Science to Clinical Applications*. 1999. xi + 516 pages; table of contents; list of contributors; photographs; light and electron micrographs; figures; tables. Cache River Press, IL. Glossy Paper. Hard Cover. Price: US \$99.95. Available from Cache River Press, 2850 Oak Grove Road, Vienna, IL 62995.

“Is sperm dead?” That is a question I overheard a few years ago while exiting a just-completed symposium at which alternative methods of oocyte activation were discussed. Indeed, searches of recent reference indexes generally yield very few entries under the title, sperm. Spermatozoa have not been the most popular subjects for investigation in the last decade; however in *The Male Gamete: From Basic Science to Clinical Applications*, the reader will discover that research on sperm is still a very productive endeavor.

The sperm is, of course, the vehicle by which the male’s nuclear payload is delivered to the female gamete. It was one of the first cell types observed by early microscopists and has been an object of study for centuries. Some of the first investigators believed that they could visualize a complete, small person inside the sperm head. Fortunately, that notion was short-lived. Over time, with the discovery of chromosomes and with an increased knowledge of genes, the sperm’s role in sexual reproduction became more clearly understood. And during the last half of the twentieth century spermologists have elucidated the mechanisms of the functions of spermatozoa. Gagnon, a reproductive biologist, at McGill University and the Royal Victoria Hospital, has assembled forty-six papers that detail many spermatozoic functions. Over a hundred authors describe work that has been carried out on a range of species including several taxa of vertebrates and invertebrates.

The book is divided into two sections. The first, Basic Knowledge, addresses the physiological aspects of spermatozoic functions. The subheadings are: Regulation of spermatogenesis, Sperm-reproductive tract interaction, Signal transduction and regulation of sperm function, Sperm receptors for the zona pellucida, Egg-sperm interaction, Fate and importance of sperm structures, and Advances in sperm taxonomy and phylogeny. Each subheading contains multiple papers and provides a comprehensive and balanced review of each topic. Furthermore, there are intimations throughout the entries of avenues for further work. The second section, Clinical Applications, is divided into three subheadings. They are: Structured management of male infertility, Controversies in applied spermatology, and Current topics in spermatology. As in the first section, each subheading contains several papers. Although the majority of these entries deal with human and clinical aspects, several relate to reproduction in domestic species and one addresses population control of wild animals.

The editor has done an excellent job preparing this volume. Perhaps the most difficult task for any editor is deciding what topics to exclude (or finding contributors for selected topics). There are few inclusions on the role of the male tract beyond the testis and only one paper is devoted to the function of the epididymis. Furthermore, there are no papers that deal with the male accessory glands. But in spite of these shortcomings, the book is

a solid contribution to the field of reproductive science. It would enhance the reference shelf of any reproductive biologist and any university library.

Reviewer: Richard Beil, Professor of Physiology, Department of Biological Sciences, Chicago State University, Chicago, IL 60628