

Spermatogenesis

Methods and Protocols



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Comment

Deficiencies in sperm function are usually the result of spermatogenic defects. Spermatogenesis is a biologically complex and essential process during which spermatogonia undergo meiotic recombination, reduction of the genome to a haploid state, and extensive cellular modifications that result in a motile cell capable of traversing the female reproductive tract, withstanding various potential assaults to viability, and finally successfully fertilizing a mature oocyte to give rise to an embryo. Defects in any step of spermatogenesis or

spermatogenesis can lead to male infertility, a disease that affects approximately 5-7% of the population. *Spermiogenesis and Spermatogenesis: Methods and Protocols* details protocols used in the study of spermatogenesis, clinical analytical protocols, and basic techniques used in clinical andrology laboratories, such as obtaining accurate results for a sperm count, and advanced procedures, such as genome-wide genetic study tools and evaluation of nuclear proteins. Written in the successful *Methods in Molecular Biology*TM series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and notes on troubleshooting and avoiding known pitfalls.