

Expression of Specific Mitochondrial Proteins in Germ Cells during Spermatogenesis

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The current review is focused on the identity and function of some specific mitochondrial proteins/enzymes, their localization, gene expression, properties and activity, as well as their significance in the normal development of different germ cell populations during spermatogenesis and thus, sperm quality and fertility. Some of these molecules could be used as valuable markers for the diagnosis/prognosis of male infertility. Characterization of the potential of the mitochondrial proteins could open infinite possibilities for future research in the field of andrological clinical practice, but it may also be successfully applied for assisted reproduction procedures.

Key words: mitochondrial membrane proteins, mitochondrial genome/mtDNA, spermatogenesis, spermatozoa.