

Special Issue

Molecular Physiology of Human Sperm Cells

Message from the Guest Editors

The purpose of this issue is to summarize our current understanding of the molecular basis of normal sperm function, the way in which these mechanisms become perturbed in cases of male infertility and the development of effective methods to detect and treat this distressingly common condition. The detailed scope of this issue will encompass the molecular modelling of spermatozoa during epididymal transit in order to generate functionally competent cells, the intricacies of sperm transport to the site of fertilization and the complex cascade of intercellular interactions that lead to the recognition and fusion of male and female gametes and the formation of a developmentally-competent zygote. We will also examine the extent to which defective sperm function is genetically or environmentally induced, including an assessment of the role played by oxidative stress in the genesis of male infertility. Recent developments in the methods employed to detect and treat impaired sperm function will be reviewed with particular focus on the way in which we are using our fundamental knowledge of sperm physiology to fashion new approaches to infertility diagnosis and management.

Guest Editors

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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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