Special Issue

The Cell Biology of Fertilization

Message from the Guest Editors

Fertilization that is required for activating oocytes stimulated at different maturation stages is a critical process in embryo development. During the past few years, studies on the sequential spatial/temporal series of fast events regulating the fertilization process have provided live cell imaging methodologies and insights for clarifying the changes induced by the egg's extracellular coats on the sperm physiology and the interaction of species–species complementary receptors on the sperm and egg plasma membranes. Following gamete fusion, the changes in the egg plasma membrane potential, intracellular calcium and pH, and the subsequent actin remodeling to ensure monospermic fertilization and regulate cleavage demonstrate the complex program of cell signaling in sustaining the control of vital cellular activities. Thus, in addition to shedding light on the cell signaling between male and female gametes, studies on maturation and fertilization processes using large cells will help us understand the basic structural and biochemical mechanisms regulating critical cellular functions in response to a myriad of stimuli.

Guest Editors

Dr. Luigia Santella
Research Director, Stazione Zoologica Anton Dohrn, Napoli, Italy

Dr. Nunzia Limatola
Research Infrastructures for Marine Biological Resources, Napoli, Italy

Deadline for manuscript submissions

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Cells
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
cells@mdpi.com

mdpi.com/journal/cells

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Message from the Editorial Board

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.

Editors-in-Chief

Dr. Alexander E. Kalyuzhny
Dental Basic Sciences, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

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