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| Altri autori (Persone) | AlbertiniDavid F<br>De SantisLucia |
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| Livello bibliografico | Monografia |
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| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Imaging strategies for studying mammalian oogenesis -- Origin, migration and proliferation of human primordial germ cells -- Damage control in the female germline; protecting primordial follicles -- Regulation of quiescence and activation of oocyte growth in primordial follicles -- The structural basis for coordinating oogenesis and folliculogenesis -- How the Oocyte Influences Follicular Cell Function and Why -- Changes of large-scale chromatin configuration during mammalian oocyte differentiation -- The Quest for Oogenesis and Folliculogenesis In Vitro -- Regulation of oogenesis by oocyte-specific gene networks -- An epigenomic biography of the mammalian oocyte -- Epigenetic Regulation of Oocyte Function and Developmental Potential -- Signalling for Meiotic Resumption in Granulosa Cells, Cumulus cells, and Oocyte -- Start and stop signals of oocyte meiotic maturation -- Cytoskeletal correlates of oocyte meiotic divisions -- Organelle rearrangement in the maturing oocyte -- Origins of oocyte aneuploidy -- Cumulus Cell Gene Expression As A Marker of Oocyte Quality -- Oocyte Polarity and its Developmental Significance -- The Role of the Plasma Membrane and Pericortical Cytoplasm in Early Mammalian Development -- The Choreography of Fertilization -- Determinants of Oocyte Quality: Impact on In Vitro Fertilization Failures -- Maternal diet, oocyte nutrition and metabolism, and offspring |

health.

Sommario/riassunto

The oocyte is the largest and most mysterious cell in the body of mammalian organisms. Through its growth and maturation, it reaches extreme levels of specialization, while maintaining at the same time a condition of totipotency. Its unique ability, in co-operation with the spermatozoon, to give rise to a fully developed organism formed from hundreds of different tissues and myriads of individual cells has inspired intellectuals of all ages. Oogenesis finds impetus and purpose in casting scientific perspective towards this unique cell for the benefit of scientists and assisted reproductive technology (ART) specialists. The authors of the chapters are distinguished authorities in their respective areas of competence. From the opening of the book the reader is lead on a fantastic voyage from the formation of the primordial oocyte to the development of the early embryo, passing through crucial processes of oogenesis, such as co-ordination of oocyte and follicle growth, gene expression and organelle reorganization during growth and maturation, epigenetic mechanisms, regulation of meiosis, totipotency, cell polarity, oogenesis in vitro and maternal regulation of early development.