1. Record Nr. UNINA9911049188703321

Autore	Tsai Pei-Shiue
Titolo	Extracellular Vesicles in Reproduction : Origin, Functions and Perspective / / edited by Pei-Shiue Tsai
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
ISBN	3-032-04489-8
Edizione	[1st ed. 2026.]
Descrizione fisica	1 online resource (249 pages)
Collana	Advances in Anatomy, Embryology and Cell Biology, , 2192-7065 ; ; 241
Altri autori (Persone)	Tsai
Disciplina	571.6
Soggetti	Cytology Reproductive health Reproduction Physiology Biochemical markers Cell Biology Reproductive Medicine Reproductive Physiology Biomarkers
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Extracellular Vesicles, Nutrient Balance, and Redox Metabolism During Epididymal Sperm Maturation — A Perspective on the Complexity of Intercellular Interplay -- Epididymosomes: Composition and Functions for Sperm Maturation -- Seminal Vesicle-Derived Exosomes for the Regulation of Sperm Activity -- The Influence of Ovarian-Derived Extracellular Vesicles in Reproduction -- Extracellular Vesicles in Implantation: Cross-Talk Between the Embryo and Endometrium.
Sommario/riassunto	This book reviews the role of exosomes in both male and female reproduction organs, focusing on the impact of extracellular vesicles on gamete maturation and embryo development. Fertilization is a complex process involving the fusion of two functionally matured gametes. Maturation of spermatozoa and/ or oocyte dependents on sophisticated, but highly regulated events during gamete transit in the reproductive tracts. Sperm maturation occurs within the epididymis, of

which segmented regions provide a distinct microenvironment to facilitate stage-wise maturation processes. Although oocyte maturation occurs within the ovary, communication between oocyte and its surrounding granulosa/cumulus cells is vital for the development and the resumption of meiotically arrested oocytes. Once the oocyte is released from the ovary, the oviductal epithelium continues to facilitate sperm-oocyte interaction to achieve fertilization. Increasing evidence suggests that the uterus, the site for embryo development, also carries out epithelia- embryo communication via uterosomes throughout the pregnancy. All above-mentioned processes rely on orchestrated communications between reproductive tract epithelia and gametes. In this book, we aim to summarize the origin of secretory vesicles from the reproductive tract and their functions for gamete and embryo development. It is written for researchers, physicians and medical students working in the field of reproductive science or with an interest in extracellular vesicles research.