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Nota di contenuto	Intro -- THE PLACENTA: DEVELOPMENT, FUNCTION AND DISEASES -- Library of Congress Cataloging-in-Publication Data -- Contents -- Preface -- Chapter 1: An Overview of Development, Function, and Diseases of the Placenta -- Abstract -- Introduction -- Placental Development -- Placental Functions -- Placental Diseases -- Conclusion -- References -- Chapter 2: Emerging Tasks of PAR1 and PAR2 in the Placenta Trophoblast Anchoring to the Uterus Deciduas -- Abstract -- Introduction -- PAR1 Expression in Human Placental Villi -- PAR1 and b-Catenin Stabilization in a Physiological Invasion Process: The Placenta Trophoblasts -- Conclusion -- References -- Chapter 3: Leptin Action and Leptin Receptor Signaling in Human Trophoblasts -- Abstract -- Introduction -- Leptin Receptor Signaling in Placenta -- JAK/STAT Signal Transduction Cascade -- MAPK (Mitogen-Activated Protein Kinase) Cascade -- The PI3K (Phosphoinositide 3-Kinase) Pathway -- Sam68 (Src-Associated in Mitosis) -- Leptin Action in Placenta -- References -- Chapter 4: Immunology of Human Pregnancy: Transfer of Antibodies and Associated Placental Function -- Abstract -- Introduction -- The Human Placenta -- Exploring Methods of Human Placental Function -- Placental Transport Mechanisms -- Transport of Immunoglobulin G and Its Subclasses across the Human Placenta -- Ex Vivo Investigations -- Immunologic Diseases of Human Pregnancy and Suggested Therapies -- The Potential of Stem Cells

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Sommario/riassunto

The placenta plays an essential role in childbirth. It becomes disposable after the baby is born which makes it the only organ in the human body that serves a vital function and then becomes obsolete. It is an extremely complex piece of biological equipment which allows the mothers and the baby's blood to come into very close contact, without mixing, to supply nutrients and oxygen to the baby, and move waste products like carbon dioxide back from baby to mother. Thus, the placenta acts as the lung, kidney and digestive system for the baby. The placenta also plays an important role in hormone production. Human chorionic gonadotropin is produced by the placenta and can be found in the baby's blood as early as 10 days into pregnancy. The placenta is also responsible for the production of other hormones including oestrogen and progesterone and protects the baby from possible infection or from damage by substances found in the environment or used by the mother, such as alcohol, drugs, pollutants and endocrine disrupters. This book presents the reader with a comprehensive, well written and informative collection of chapters written by experts from around the world. It will be a valuable asset for anyone interested in reproduction and pregnancy and wanting to access excellent reviews as well as the most current discussion of the biology and medicine of the placenta.
