

Epigenetics And Human Reproduction

[DOWNLOAD HERE](#)

1;Preface to the Series;6 2;Foreword;8 2.1;References;10 3;Contents;12 4;Contributors;14 5;Part I: Medical Aspects and Questions Raised on the Molecular Basis of Epigenome Involvement in Reproduction;18 5.1;Chapter 1: Potential Epigenetic Consequences Associated with Assisted Reproduction;19 5.1.1;1.1 Introduction;20 5.1.2;1.2 ARTs and the Timing of Epigenetic Events during Gametogenesis and Embryogenesis;20 5.1.2.1;1.2.1 Gamete Development;21 5.1.2.2;1.2.2 Preimplantation Embryo Development;22 5.1.3;1.3 Assisted Reproduction and Imprinting Disorders;22 5.1.4;1.4 Searching for Epigenetic Abnormalities in Children Conceived Using ARTs;24 5.1.5;1.5 Underlying Infertility as a Contributor to Imprinting Defects After ART;25 5.1.6;1.6 Techniques Used in ART and Imprinting Defects;27 5.1.7;1.7 Assisted Reproduction and Other Potential Epigenetic Effects;27 5.1.8;1.8 Lessons from Animal Models: Mimicking Techniques Used in Human-Assisted Reproduction;28 5.1.8.1;1.8.1 Superovulation and Gamete Manipulation;28 5.1.8.2;1.8.2 Embryo Culture;29 5.1.9;1.9 Future Directions;30 5.1.10;References;31 5.2;Chapter 2: Germ Cell Cancer, Testicular Dysgenesis Syndrome and Epigenetics;35 5.2.1;2.1 Introduction;36 5.2.2;2.2 Epigenetics in Testicular Development: From Specification of Primordial Gem Cells to Formation of the Gonads;36 5.2.3;2.3 TDS: A Collection of Reproductive Disorders with a Possible Common Pathogenesis;39 5.2.3.1;2.3.1 Testicular Cancer;39 5.2.3.2;2.3.2 Undescended Testis and Hypospadias;41 5.2.3.3;2.3.3 Impaired Spermatogenesis with Developmental Aetiology;41 5.2.4;2.4 Endocrine Disrupters and Their Possible Influence on Epigenetic Patterns;42 5.2.4.1;2.4.1 Evidence from Human Studies;42 5.2.4.2;2.4.2 Evidence from Studies in Animals;43 5.2.5;2.5 Epigenetics of Germ Cell Tumors and Testicular Dysgenesis;44 5.2.5.1;2.5.1 Chromatin Changes;44 5.2.5.2;2.5.2 Methylation Profiles of Specific Genes Important for Pluripotency and Tumorigenesis;46 5.2.5.3;2.5.3 X-Linked Genes and XIST Expression;47 5.2.5.4;2.5.4 Gene Imprinting;48 5.2.5.5;2.5.5 Possible Involvement of miRNAs in TGCTs and Neoplastic Transformation;50 5.2.6;2.6 Open Questions and Perspectives;51 5.2.7;References;52 5.3;Chapter 3: Medical Implications of Sperm Nuclear Quality;61 5.3.1;3.1 Fundamental Knowledge on Sperm Genome and Proteome/Epigenome Constitution;62 5.3.1.1;3.1.1 Changes in Sperm Nuclear Composition and

Structure During Spermatogenesis;62 5.3.1.2;3.1.2 Sperm Cell Nuclear Proteome;64 5.3.1.3;3.1.3 Sperm Cell Epigenome;69 5.3.2;3.2 Approaches/Tests for Exploring Sperm Nuclear Quality in Human Infertility;72 5.3.2.1;3.2.1 Sperm DNA Quality and Integrity;72 5.3.2.2;3.2.2 Measurement of the Protamine Content in Infertile Patients;76 5.3.2.3;3.2.3 Correlation Between Protamines and Sperm DNA Integrity;79 5.3.3;3.3 Sperm Nuclear Quality and Outcome of ART;80 5.3.4;3.4 Present Limitations of Sperm Nuclear Quality Assessment and Open Questions;84 5.3.5;References;85 5.4;Chapter 4: Gene Expression/Phenotypic Abnormalities in Placental Tissues of Sheep Clones: Insurmountable Block in Cloning Progress?;100 5.4.1;4.1 Introduction;100 5.4.2;4.2 Abnormal Nuclear Reprogramming in Clones and Related Placental Phenotypes;102 5.4.3;4.3 Possible Directions to Improve SCNT;106 5.4.4;4.4 Concluding Remarks;108 5.4.5;References;109 6;Part II: Fundamental Aspects of Genome and Epigenome Reprogramming During Gametogenesis;112 6.1;Chapter 5: Epigenetic Reprogramming Associated with Primordial Germ Cell Development;113 6.1.1;5.1 Introduction;113 6.1.1.1;5.1.1 From Fertilization to the Specification of the New Germ Cell Lineage;114 6.1.2;5.2 A Brief Overview of the Epigenetic Reprogramming During PGC Development;116 6.1.3;5.3 The Cell Cycle State of PGCs;118 6.1.4;5.4 Genome-Wide DNA Demethylation in Migrating PGCs;119 6.1.5;5.5 Genome-Wide Demethylation of H3K9me2 in Migrating PGCs;120 6.1.6;5.6 Global Transcriptional Rep EAN/ISBN : 9783642147739 Publisher(s): Springer, Berlin Discussed keywords: Epigenetik, Reproduktionsmedizin Format: ePub/PDF Author(s): Rousseaux, Sophie - Khochbin, Saadi

[DOWNLOAD HERE](#)

Similar manuals: