

Contents

Morphological and Metabolic Assessment of Oocytes and Embryos	1
Denny Sakkas	
Introduction	1
The Changing Practice of IVF Will Challenge Classic	
Morphological Assessment	2
Cleavage Stage Assessment	3
The Blastocyst	4
Real Time Morphology	5
Embryo Metabolism as a Means of Assessing Viability	6
Glucose	6
Metabolomics	7
Oxygen and Reactive Oxygen Species	9
Conclusion	9
References	10
 Diagnostic Techniques to Improve the Assessment of Human	
IVF Embryos: Genomics and Proteomics	15
Mandy G Katz-Jaffe	
Introduction	15
Genomics	15
PGD for Aneuploidy Screening	16
When should an Embryo be Biopsied?	16
Evaluation of Clinical Efficacy of Comprehensive	
Chromosome Screening	19
Proteomics	21
Non-Invasive Proteomic Secretome Approach	21
Mass Spectrometry Analysis of the Embryo Secretome	22
Protein Microarray Analysis of the Embryo Secretome	24
Conclusions	24
References	25

Assessment and Selection of Human Sperm for ART	29
Carlos E Sueldo	
Introduction	29
Sperm DNA Fragmentation	29
How to Test for Human Sperm DNA Fragmentation?	31
Sperm Morphology Assessment Beyond Kruger	33
Analysis of New Techniques of Sperm Selection	35
Conclusions	39
References	40

Gamete and Embryo Selection
Genomics, Metabolomics and Morphological
Assessment

Sakkas, D.; Katz-Jaffe, M.; Sueldo, C.

2014, VII, 45 p. 10 illus., 2 illus. in color., Softcover

ISBN: 978-1-4939-0988-9