
Contents

Part I Imaging

- 1 Imaging Strategies for Studying Mammalian Oogenesis 3**
S. Darlene Limback and David F. Albertini

Part II Folliculogenesis and Oogenesis

- 2 Origin, Migration, and Proliferation
of Human Primordial Germ Cells 19**
Massimo De Felici
- 3 Damage Control in the Female Germline:
Protecting Primordial Follicles 39**
Michelle Myers and Karla J. Hutt
- 4 Regulation of Quiescence and Activation of Oocyte
Growth in Primordial Follicles 49**
Deepak Adhikari and Kui Liu
- 5 The Structural Basis for Coordinating Oogenesis
and Folliculogenesis 63**
Maria Cristina Guglielmo and David F. Albertini
- 6 How the Oocyte Influences Follicular Cell Function
and Why 75**
Martin M. Matzuk and Qinglei Li
- 7 Changes of Large-Scale Chromatin Configuration
During Mammalian Oocyte Differentiation 93**
Alberto Maria Luciano and Valentina Lodde
- 8 The Quest for Oogenesis (Folliculogenesis) In Vitro 109**
Sergio Romero, Sandra Sanfilippo, and Johan Smitz

Part III The (Epi)Genetic Making of the Oocyte

- 9 Regulation of Oogenesis by Oocyte-Specific
Gene Networks 129**
Swamy K. Tripurani and Stephanie A. Pangas

10	An Epigenomic Biography of the Mammalian Oocyte	141
	Maurizio Zuccotti, Valeria Merico, Carlo Alberto Redi, and Silvia Garagna	
11	Epigenetic Regulation of Oocyte Function and Developmental Potential	151
	Wendy Dean	
Part IV Oocyte Meiosis and Cytoplasmic Dynamics		
12	Signaling for Meiotic Resumption in Granulosa Cells, Cumulus Cells, and Oocyte	171
	Lisa M. Mehlmann	
13	Start and Stop Signals of Oocyte Meiotic Maturation	183
	Keith T. Jones, Simon I.R. Lane, and Janet E. Holt	
14	Cytoskeletal Correlates of Oocyte Meiotic Divisions	195
	Marie-Hélène Verlhac and Manuel Breuer	
15	Organelle Rearrangement in the Maturing Oocyte	209
	Lucia De Santis and Tiziana A.L. Brevini	
16	Origins of Oocyte Aneuploidy	219
	Liborio Stuppia	
Part V Oocyte Developmental Potential		
17	Cumulus Cell Gene Expression as a Marker of Oocyte Quality	231
	Mourad Assidi and Marc-André Sirard	
18	Oocyte Polarity and Its Developmental Significance	253
	Anna Ajduk, Agnieszka Jedrusik, and Magdalena Zernicka-Goetz	
19	The Role of the Plasma Membrane and Pericortical Cytoplasm in Early Mammalian Development	265
	Jonathan Van Blerkom	
20	The Choreography of Fertilization	289
	Giovanni Coticchio and Fausta Brambillasca	
21	Determinants of Oocyte Quality: Impact on In Vitro Fertilization Failures	307
	Catherine M.H. Combelles and Vanesa Y. Rawe	
22	Maternal Diet, Oocyte Nutrition and Metabolism, and Offspring Health	329
	Miguel A. Velazquez and Tom P. Fleming	
	Index	353



<http://www.springer.com/978-0-85729-825-6>

Oogenesis

Coticchio, G.; Albertini, D.F.; De Santis, L. (Eds.)

2013, XII, 364 p. 62 illus., 42 illus. in color., Hardcover

ISBN: 978-0-85729-825-6