1. Determining the Affinity of Hormone–Receptor Interaction 1
David Puett and Krassimira Angelova

2. Determination of Serum Estradiol Levels by Radiometric and Chemiluminescent Techniques 21
Carole Bryant, John Moore, and Thomas E. Curry, Jr.

3. Identification of Natural Human Glucocorticoid Receptor (hGR) Mutations or Polymorphisms and Their Functional Consequences at the Hormone–Receptor Interaction Level 33
Evangelia Charmandari, George P. Chrousos, and Tomoshige Kino

4. Monitoring Insulin-Stimulated Production of Signaling Lipids at the Plasma Membrane 61
Mary Osisami, Huiyan Huang, and Michael A. Frohman

5. Gene Expression Profiling in the Aging Ovary 71
Kathleen M. Eyster and John D. Brannian

6. Genomics Analysis: Endometrium 91
Ricardo Francalacci Savaris and Linda C. Giudice

7. Detection of Ovarian Matrix Metalloproteinase mRNAs by In Situ Hybridization 115
Katherine L. Rosewell and Thomas E. Curry, Jr.

8. Adenoviral Gene Transfer into Isolated Pancreatic Islets 131
Latha Muniappan and Sabire Özcan

9. Basic Molecular Techniques for the Detection of Single Nucleotide Polymorphisms: Genome-Wide Applications in Search for Endocrine Tumor Related Genes 143
Anelia Horvath and Constantine Stratakis

10. Methylated DNA Immunoprecipitation and Microarray-Based Analysis: Detection of DNA Methylation in Breast Cancer Cell Lines 165
Yu-I Weng, Tim H.-M. Huang, and Pearlly S. Yan

11. Use of Reporter Genes to Study the Activity of Promoters in Ovarian Granulosa Cells 177
Jingjing L. Kipp and Kelly E. Mayo

12. Use of Reporter Genes to Study Promoters of the Androgen Receptor 195
Lirim Shemshedini

13. Isolation of Proteins Associated with the DNA-Bound Estrogen Receptor α 209
Jennifer R. Schultz-Norton, Yvonne S. Ziegler, Varsha S. Likhite, and Ann M. Nardulli

14. Chromosome-Wide Analysis of Protein Binding and Modifications 223
Kevin D. Sarge, Hongyan Xing, and Ok-Kyong Park-Sarge

15. Genome-Wide Analysis for Protein–DNA Interaction: ChIP-Chip 235
Yunguang Tong and Jeff Falk

16. Detection of ERα-SRC-1 Interactions Using Bioluminescent Resonance Energy Transfer 253
Tamika T. Duplessis, Kristen L. Koterba, and Brian G. Rowan

17. Detection of Proteins Sumoylated In Vivo and In Vitro 265
Kevin D. Sarge and Ok-Kyong Park-Sarge

18. Identification of Alternative Transcripts Using Rapid Amplification of cDNA Ends (RACE) 279
Oladapo Yeku, Elizabeth Scotto-Lavino, and Michael A. Frohman

19. Use of Laser Capture Microdissection in Studying Hormone-Dependent Diseases: Endometriosis 295
Sachiko Matsuzaki, Michel Canis, and Gérard Mage

20. Reporter Mice for the Study of Intracellular Receptor Activity 307
Adriana Maggi and Gianpaolo Rando

21. Real-Time Non-invasive Imaging of ES Cell-Derived Insulin Producing Cells. 317
Sudhanshu P. Raikwar and Nicholas Zavazava

22. Transgenic Mouse Technology: Principles and Methods 335
T. Rajendra Kumar, Melissa Larson, Huizhen Wang, Jeff McDermott, and Illya Bronshteyn

23. Breast Tumor-Initiating Cells Isolated from Patient Core Biopsies for Study of Hormone Action 363
Carolyn G. Marsden, Mary Jo Wright, Radhika Pochampally, and Brian G. Rowan

24. Markers of Oxidative Stress and Sperm Chromatin Integrity 377
Ashok Agarwal, Alex C. Varghese, and Rakesh K. Sharma

25. Planning and Executing a Genome Wide Association Study (GWAS) 403
Michèle M. Sale, Josyf C. Mychaleckyj, and Wei-Min Chen

Subject Index 419