

Preface

The collective technologies that form the basis of the Omics revolution is changing the field of reproductive medicine and pushing research to greater heights. The use of the Omics technologies allows deeper examination into the proteomic basis (including the structure, function and interaction of the proteins involved) of a variety of specific infertility pathologies. Through the application of mass spectrometry and gel-based methods, proteomics investigations could potentially provide novel insights into the molecular basis of infertility. Moreover, the diagnostic and prognostic disease markers that could emerge from these studies may contribute towards the identification of possible therapeutic targets in the management of infertility. *Proteomics in Human Reproduction: Biomarkers for Millennials* provides an authoritative insight into the essential aspects of proteomics technologies, its role and application in male and female infertility as well as in assisted reproductive technology. Targeted at both clinicians and reproductive scientists involved in the field of human infertility, this brief aims to provide the reader with a thought-provoking and engaging review of the current findings and future possibilities of infertility-related proteomics studies. Moreover, the inevitable challenges that accompany the expanding area of proteomics are detailed along with a discussion on what lies ahead as proteomics research advances. This unique compilation of fundamental and comprehensive information pertaining to proteomics research associated with infertility will have an extensive appeal to both basic scientists in reproductive medicine and clinicians dealing with infertility. Furthermore, the authors are confident that this book will bridge the knowledge gap between laboratory-based researchers and clinical scientists who deal with patients seeking medical intervention for their fertility concerns. Ultimately via teamwork between the patient, clinician and researcher, the discovery of novel molecular

biomarker(s) for infertility is poised to benefit subfertile couples. And with the refinement of high-throughput technologies, the goal of using biomarkers for the management of infertile couples could become a reality in the future.

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Proteomics in Human Reproduction

Biomarkers for Millennials

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