Preface

This book is intended for scientific researchers, clinical laboratorians, clinical and translational scientists, and others interested in proteomics and biomarker discovery. Urine is one of the most easily accessible biological samples, and it provides a treasure trove of molecules important in clinical diagnostics. In this book, we review briefly the classical urine tests that are performed in the clinical laboratory and then delve into the state-of-the-art methods for proteomic analysis using urine specimens. The most recent advances are discussed with regard to sample preparation, data analysis, and finally methods and applications. A multitude of examples are provided including procedural details for the identification and characterization of urine biomarkers that hold potential for the diagnosis and treatment of many different disease conditions.

The text is arranged so as to read systematically: introduction, sample preparation methods, applications, and data analysis. However, it does not necessarily require the reader to read it from start to finish. Each chapter is organized such that it can be read individually without requiring knowledge from other chapters.

I would like to thank the many individuals who made this book possible. These include the many authors who contributed to each of the individual chapters, the corresponding authors who took responsibility in providing the complete and finished versions solicited for the peer review process, and the many scientific reviewers who provided their valuable input and guidance.

I would also like to thank my wife Shilpa and son Aseem who put up with me being at work late for many nights to get this book completed. Finally, I am grateful to Professor John Walker and his colleagues, Patrick Marton and David Casey, at Humana Press for giving me the opportunity and also for keeping things on track. Without them, this edition would not have been possible in its current form.

New York, NY

Alex J. Rai, PhD