The Urinary Proteome

Methods and Protocols

Edited by

Alex J. Rai

Department of Pathology & Cell Biology, Columbia University Medical Center, New York, NY, USA

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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.

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Alex J. Rai, PhD
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Contributors

KEITH A. BAGGERLY • Department of Bioinformatics and Computational Biology, The University of Texas M. D. Anderson Cancer Center, Houston, TX, USA
REBECCA E. CAFFREY • Consultant, Richmond, VA, USA
UTA CEGLAREK • Institute of Laboratory Medicine, Clinical Chemistry and Molecular Diagnostics, University Hospital Leipzig, Medical Faculty, University Leipzig, Leipzig, Germany
SHUI-TEIN CHEN • Institute of Biological Chemistry and Genomics Research Center, Academia Sinica, Taipei, Taiwan; Institute of Biochemical Sciences, College of Life Science, National Taiwan University, Taipei, Taiwan
WILLIAM CLARKE • Department of Pathology, Johns Hopkins Medical Institutions, Baltimore, MD, USA
KEVIN R. COOMBES • Department of Bioinformatics and Computational Biology, The University of Texas M. D. Anderson Cancer Center, Houston, TX, USA
DAVID R. CRAFT • BD Diagnostic, Franklin Lakes, NJ, USA
GERMÁN ECHEVERRY • Mount Sinai School of Medicine, New York, NY, USA
GEORG MARTIN FIEDLER • Institute of Laboratory Medicine, Clinical Chemistry and Molecular Diagnostics, University Hospital Leipzig, Medical Faculty, University Leipzig, Leipzig, Germany
AUDE L. FOURCHER • BD Diagnostic, Franklin Lakes, NJ, USA
KRIS E. GASTON • Department of Urology, The University of Texas M. D. Anderson Cancer Center, Houston, TX, USA
CRAIG A. GELFAND • BD Diagnostic, Franklin Lakes, NJ, USA
PATRICIA A. GONZALES • Laboratory of Kidney and Electrolyte Metabolism, NHLBI, National Institutes of Health, Bethesda, MD, USA
Department of Chemical and Biomolecular Engineering, University of Maryland, College Park, MD, USA
DAVID GOZAL • University of Louisville, Louisville, KY, USA
H. BARTON GROSSMAN • Department of Urology, The University of Texas M. D. Anderson Cancer Center, Houston, TX, USA
HOWARD B. GUSTEIN • Department of Anesthesiology and Perioperative Medicine, The University of Texas M. D. Anderson Cancer Center, Houston, TX, USA
WALTER HOFMANN • Institut für Klinische Chemie, Städtisches Klinikum München GmbH, München, Germany
GLEN L. HORTIN • Departments of Pathology, Immunology, and Laboratory Medicine, University of Florida, Gainesville, FL, USA
MIROSLAV IVANDIC • Synlab GmbH & Ko.KG, München, Germany
SAEED A. JORTANI • University of Louisville, Louisville, KY, USA
MARK A. KNEPPER • Laboratory of Kidney and Electrolyte Metabolism, NHLBI, National Institutes of Health, Bethesda, MD, USA
Contributors

Alexander Lichtle • Institute of Laboratory Medicine, Clinical Chemistry and Molecular Diagnostics, University Hospital Leipzig, Medical Faculty, University Leipzig, Leipzig, Germany

Wenlin (Wendy) Li • Pfizer Global Research and Development, Michigan Laboratories, Ann Arbor, MI, USA

Shu-Ling Liang • Department of Pathology, Johns Hopkins Medical Institutions, Baltimore, MD, USA

Peter B. Lupp • Institut für Klinische Chemie, Krankenhaus München Rechts der Isar, München, Germany

Dawn Mattoon • Protein Array Center, Invitrogen Corporation, Branford, CT, USA

Li Hao Meng • Protein Array Center, Invitrogen Corporation, Branford, CT, USA

Jochen Metzger • Institut für Klinische Chemie, Krankenhaus München Rechts der Isar, München, Germany

Jeffrey S. Morris • Department of Biostatistics, The University of Texas M. D. Anderson Cancer Center, Houston, TX, USA

Olga Nemirovsky • Pfizer Global Research and Development, St. Louis Laboratories, St. Louis, MO, USA

Brianne Olivieri • Memorial Sloan-Kettering Cancer Center, New York, NY, USA

Laurence D. Parnell • Nutrition and Genomics Laboratory, Jean Mayer Human Nutrition Research Center on Aging at Tufts University, US Department of Agriculture, Boston, MA, USA

Suree Phutrakul • Department of Chemistry, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand

Trairak Pisitkun • Laboratory of Kidney and Electrolyte Metabolism, NHLBI, National Institutes of Health, Bethesda, MD, USA

Alex J. Rai • Department of Pathology and Cell Biology, Columbia University Medical Center, New York, NY, USA

Suvi Ravela • Department of Clinical Medicine, Division of Clinical Chemistry, Biomedicum, University of Helsinki, Helsinki, Finland

Dagmar Ruth • Siemens Healthcare Diagnostics, Marburg, Germany

Heike Schneider • Institut für Klinische Chemie, Krankenhaus München Rechts der Isar, München, Germany

Christine M. E. Schueller • Biomax Informatics AG, Cambridge, MA, USA

Barry Schweitzer • Protein Array Center, Invitrogen Corporation, Branford, CT, USA

Cornelia Sedlmeier-Hofmann • Unterhaching, Germany

Martin Shaw • Argutus Medical Inc., Dublin, Ireland

Supachok Sinchaikul • Institute of Biological Chemistry and Genomics Research Center, Academia Sinica, Taipei, Taiwan

Ayelet Snow • University of Louisville, Louisville, KY, USA

Kimia Sobhani • Department of Clinical Pathology, Cleveland Clinic, Cleveland, OH, USA

Supawadee Sriyam • Institute of Biological Chemistry and Genomics Research Center, Academia Sinica, Taipei, Taiwan; Department of Chemistry, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand
ROBERT A. STAR • Renal Diagnostics and Therapeutics Unit, NIDDK, National Institutes of Health, Bethesda, MD, USA

ULF-HÅKAN STENMAN • Department of Clinical Medicine, Division of Clinical Chemistry, Biomedicum, University of Helsinki, Helsinki, Finland

GABRIELLA SZEKELY-KLEPSER • Allergan Inc., Irvine, CA, USA

PAYUNSAK TANTIPAIIBOONWONG • Institute of Biological Chemistry, Department of Chemistry, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand

JOACHIM THIERY • Institute of Laboratory Medicine, Clinical Chemistry and Molecular Diagnostics, University Hospital Leipzig, Medical Faculty, University Leipzig, Leipzig, Germany

CHING TZAO • Division of Thoracic Surgery, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

ROLAND VALDES JR. • University of Louisville, Louisville, KY, USA

LEENA VALMU • Department of Clinical Medicine, Division of Clinical Chemistry, Biomedicum, University of Helsinki, Helsinki, Finland; Finnish Red Cross Blood Service, Helsinki, Finland

NAM SUN WANG • Department of Chemical and Biomolecular Engineering, University of Maryland, College Park, MD, USA

PETER S.T. YUEN • Renal Diagnostics and Therapeutics Unit, NIDDK, National Institutes of Health, Bethesda, MD, USA

HUA ZHOU • Renal Diagnostics and Therapeutics Unit, NIDDK, National Institutes of Health, Bethesda, MD, USA