Table of Contents

Preface
Linda Pescatello, Ph.D. and Stephen M. Roth, Ph.D. (dedications included in Preface file)

Forward: Exercise, Fitness and Performance Genomics Poised to Make Significant Contributions to Health and Performance Traits
Claude Bouchard, Ph.D.

Chapter 1: Fundamental Concepts in Exercise Genomics
Stephen M. Roth, Ph.D. and Martine Thomis, Ph.D.

Chapter 2: Statistical and Methodological Considerations in Exercise Genomics
Heather Gordish-Dressman, Ph.D. and Joseph M. Devaney, Ph.D.

Chapter 3: Can You Be Born a Couch Potato? The Genomic Regulation of Physical Activity
J. Timothy Lightfoot, Ph.D.

Chapter 4: Interaction between Exercise and Genetics in Type 2 Diabetes Mellitus: An Epidemiological Perspective
Paul W. Franks, Ph.D. and Ema C. Brito, Ph.D.

Chapter 5: The Interaction between Genetic Variation and Exercise and Physical Activity in the Determination of Body Composition and Obesity Status
Mary H. Sailors, Ph.D., and Molly S. Bray, Ph.D.

Chapter 6: Interactive Effects of Genetics and Acute Exercise and Exercise Training on Plasma Lipoprotein-Lipid and Blood Pressure Phenotypes
James M. Hagberg, Ph.D.

Chapter 7: Genetic Aspects of Muscular Strength and Size
Monica J. Hubal, Ph.D., Maria L. Ures, Ph.D., and Priscilla M. Clarkson, Ph.D.

Chapter 8: Genomics of aerobic capacity and endurance performance: clinical implications
Yannis Pitsiladis Ph.D., Guan Wang MRes, Bernd Wolfarth MD

Chapter 9: A Synopsis of Exercise Genomics Research and a Vision for its Future Translation into Practice
Linda Pescatello, Ph.D. and Stephen M. Roth, Ph.D.

Appendix I: Web-based Resources