

Table of contents

Foreword.....	v
Preface.....	vii
Unit 1	
Contextual framework for molecular epidemiology	
Chapter 1.....	1
Molecular epidemiology: Linking molecular scale insights to population impacts	
Chapter 2.....	9
Ethical issues in molecular epidemiologic research	
Unit 2	
Biomarkers: practical aspects	
Chapter 3.....	23
Biological sample collection, processing, storage and information management	
Chapter 4.....	43
Physical/chemical/immunologic analytical methods	
Chapter 5.....	63
Assessment of genetic damage in healthy and diseased tissue	
Chapter 6.....	99
Basic principles and laboratory analysis of genetic variation	
Chapter 7.....	121
Platforms for biomarker analysis using high-throughput approaches in genomics, transcriptomics, proteomics, metabolomics, and bioinformatics	
Chapter 8.....	143
Measurement error in biomarkers: sources, assessment, and impact on studies	
Unit 3	
Assessing exposure to the environment	
Chapter 9.....	163
Environmental and occupational toxicants	
Chapter 10.....	175
Infectious agents	
Chapter 11.....	189
Dietary intake and nutritional status	
Chapter 12.....	199
Assessment of the hormonal milieu	
Chapter 13.....	215
Evaluation of immune responses	

Unit 4	
Integration of biomarkers into epidemiology study designs	
Chapter 14.....	241
Population-based study designs in molecular epidemiology	
Chapter 15.....	261
Family-based designs	
Chapter 16.....	281
Analysis of epidemiologic studies of genetic effects and gene-environment interactions	
Chapter 17.....	303
Biomarkers in clinical medicine	
Chapter 18.....	323
Combining molecular and genetic data from different sources	
Unit 5	
Application of biomarkers to disease	
Chapter 19.....	337
Cancer	
Chapter 20.....	363
Coronary heart disease	
Chapter 21.....	387
Work-related lung diseases	
Chapter 22.....	407
Neurodegenerative diseases	
Chapter 23.....	421
Infectious diseases	
Chapter 24.....	441
Obesity	
Chapter 25.....	453
Disorders of reproduction	
Chapter 26.....	475
Studies in children	
Chapter 27.....	493
Future perspectives on molecular epidemiology	
Authors' list.....	501
Index.....	505