

---

# Contents

Preface .....	v
Contributors .....	ix

## PART I. HISTORY AND OVERVIEW

1 Pharmacogenomics: <i>Historical Perspective and Current Status</i> <i>Werner Kalow</i> .....	3
---	---

## PART II. FUNCTIONAL ANALYSIS OF GENE VARIATION

2 Transfection Assays With Allele-Specific Constructs: <i>Functional Analysis of UDP-Glucuronosyltransferase Variants</i> <i>Hideto Jinno, Nobumitsu Hanioka, Toshiko Tanaka-Kagawa,</i> <i>Yoshiro Saito, Shogo Ozawa, and Jun-ichi Sawada</i> .....	19
3 Snapshot of the Allele-Specific Variation in Human Gene Expression <i>Hai Yan</i> .....	31
4 Genome-Wide Analysis of Allele-Specific Gene Expression Using Oligo Microarrays <i>Maxwell P. Lee</i> .....	39
5 HaploChIP: <i>An In Vivo</i> Assay <i>Julian Charles Knight</i> .....	49

## PART III. GENOTYPING TECHNIQUES

6 Aspects Influencing Genotyping Method Selection <i>Peter Imle</i> .....	63
7 Denaturing High-Performance Liquid Chromatography for Mutation Detection and Genotyping <i>Donna Lee Fackenthal, Pei Xian Chen, and Soma Das</i> .....	73
8 Pyrosequencing of Clinically Relevant Polymorphisms <i>Sharon Marsh, Cristi R. King, Adam A. Garsa,</i> <i>and Howard L. McLeod</i> .....	97
9 Kinetic Fluorescence-Quenching Detection Assay for Allele Frequency Estimation <i>Ming Xiao and Pui-Yan Kwok</i> .....	115
10 Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry <i>Matthias Wjst and Dirk van den Boom</i> .....	125

11 Fluorescence-Based Fragment Size Analysis  
**Peter Imle ..... 139**

12 Single-Nucleotide Polymorphism Genotyping  
in DNA Pools  
**Ian Craig, Emma Meaburn, Lee Butcher, Linzy Hill,  
and Robert Plomin ..... 147**

13 TaqMan Genotyping of Insertion/Deletion Polymorphisms  
**Renato Robledo, William R. Beggs, and Patrick K. Bender ..... 165**

**PART IV. MANAGEMENT OF PHARMACOGENOMIC INFORMATION**

14 PharmGKB: *The Pharmacogenetics and Pharmacogenomics  
Knowledge Base*  
**Caroline F. Thorn, Teri E. Klein, and Russ B. Altman ..... 179**

15 Systems for the Management of Pharmacogenomic Information  
**Alexander Sturn, Michael Maurer, Robert Molidor,  
and Zlatko Trajanoski ..... 193**

Index ..... 209



<http://www.springer.com/978-1-58829-440-1>

Pharmacogenomics

Methods and Protocols

Innocenti, F. (Ed.)

2005, X, 214 p., Hardcover

ISBN: 978-1-58829-440-1

A product of Humana Press