Contents

Dedication .................................................................................................................. v
Foreword by Timothy M. Block and Baruch S. Blumberg ........................................ vii
Foreword by T. Jake Liang ...................................................................................... ix
Preface ...................................................................................................................... xi
Contributors ............................................................................................................. xvii
Contents for Volume 1 ............................................................................................ xxi

PART I. VIRAL-SPECIFIC IMMUNOLOGICAL AND OTHER HOST RESPONSES

1 Studying Host Immune Responses Against Duck Hepatitis B Virus Infection
Darren S. Miller, Edward M. Bertram, Catherine A. Scougall, Irva Kotlarski, and Allison R. Jilbert ................................................ 3

2 Measurement of Cell-Mediated Immune Response in Woodchucks
Stephan Menne and Paul J. Cote ........................................................................... 27

3 Study of Liver-Specific Expression of Cytokines During Woodchuck Hepatitis Virus Infection
Mengji Lu and Michael Roggendorf ....................................................................... 37

4 Induction of Anti-Hepatitis B Virus Immune Responses Through DNA Immunization
Michael Geissler, Robert Weth, Christian F. Grimm, Dörte Ortmann, and Hubert E. Blum ..................................................... 43

5 Monitoring Gene Expression Using DNA Microarrays During Hepatitis B Virus Infection
Michael R. Beard and Stephen Locarnini ................................................................. 55

6 Determination of Hepatitis B Virus-Specific CD8+ T-Cell Activity in the Liver
Michelina Nascimbeni and Barbara Rehermann ................................................... 65

7 Determining the Precursor Frequency of HBV Nucleocapsid Antigen-Specific T Cells
Jennifer A. Waters and Howard C. Thomas ............................................................. 85

8 Detection and Characterization of Virus-Specific CD8+ T Cells Using the Tetramer Approach
Xiao-Song He and Harry B. Greenberg ................................................................. 89

9 In Vitro Analysis of Hepatitis B Virus Specific CD4+ T Cells
Shilpa Chokshi and Nikolai V. Naoumov ................................................................. 97
Induction of Humoral and Cellular Immune Responses to Hepatitis Delta Virus Through DNA Immunization in BALB/c Mice
Ren-Shiang Lee, Shih-Jer Hsu, Li-Rung Huang, Hui-Lin Wu, Shiou-Lin Lin, Ding-Shinn Chen, and Pei-Jer Chen

PART II. IN VITRO AND IN VIVO MODELS

Infection of Primary Chimpanzee Hepatocytes with Recombinant Hepatitis D Virus Particles: A Surrogate Model for Hepatitis B Virus
Azeneth Barrera and Robert E. Lanford

Study of the Endocytosis and Intracellular Localization of Subviral Particles of Hepatitis B Virus in Primary Hepatocytes
Dieter Glebe and Wolfram H. Gerlich

The Tupaia Model for the Study of Hepatitis B Virus: Direct Infection and HBV Genome Transduction of Primary Tupaia Hepatocytes
Fritz von Weizsäcker, Josef Kock, Sabine MacNelly, Shaotang Ren, Hubert E. Blum, and Michael Nassal

Delivery of Hepatitis B Virus Therapeutic Agents Using Asialoglycoprotein Receptor–Based Liver-Specific Targeting
Masayoshi Konishi, Catherine H. Wu, and George Y. Wu

Woodchuck Hepatitis Virus Hepatocyte Culture Models
Norma D. Churchill and Tomasz I. Michalak

Duck Hepatitis B Virus Primary Hepatocyte Culture Model
Olivier Hantz and Fabien Zoulim

Enhancement of Infection of HepG2 Cells in Culture by Predigestion of Hepadnavirus with V8 Protease
Xuanyong Lu and Timothy M. Block

Construction of Recombinant Adenoviruses that Produce Infectious Hepatitis B Virus
Martin Sprinzl, Jérôme Dumortier, and Ulrike Protzer

Baculovirus-Mediated Gene Transfer for the Study of Hepatitis B Virus
Harriet C. Isom, Ayman M. Abdelhamed, John P. Bäelhol, and Thomas G. Miller

Transgenic Hepatitis B Virus Mouse Model in the Study of Chemotherapy
John D. Morrey
Contents

21 Transplantation of Human Hepatocytes in Immunodeficient UPA Mice: A Model for the Study of Hepatitis B Virus
   Jörg Petersen, Martin R. Burda, Maura Dandri, and Charles E. Rogler ........................................... 253
22 Duck Hepatitis B Virus Model in the Study of Hepatitis B Virus
   Lucyna Cova and Fabien Zoulim ................................................................. 261
23 Hepatitis B Virus Transgenic Severe Combined Immunodeficient Mouse Model of Acute and Chronic Liver Disease
   Mark A. Feitelson, Jonathan D. Larkin, and Raymond F. Schinazi... 269
24 The Chimpanzee Model: Contributions and Considerations for Studies of Hepatitis B Virus
   Pascal Gagneux and Elaine A. Muchmore ........................................... 289
25 Hepatitis B in Liver Transplant Recipients as a Special Model of Antiviral Drug Development
   Robert G. Gish and Adil Wakil ................................................................. 319
26 Hepatitis Delta Virus Transfection for the Mouse In Vivo Model
   Jinhong Chang, Anthony Lerro, and John M. Taylor ........................ 343
27 Hepatitis Delta Virus RNA Transfection for the Cell Culture Model
   Thomas B. Macnaughton and Michael M. C. Lai .............................. 351

PART III. ANTIVIRAL TESTING AND CLINICAL STUDIES

28 Analysis of Hepatitis B Virus Dynamics and Its Impact on Antiviral Development
   Manuel Tsiang and Craig S. Gibbs ......................................................... 361
29 Genotyping Anti-Hepatitis B Virus Drug Resistance
   Eric J. Bourne, Josée Gauthier, Vincent A. Lopez, and Lynn D. Condreay ........................................ 379
30 A Parsimonious Method for Screening Drug Combinations for Antiviral Activity Using a Parametric Dose–Response Surface Approach
   Tim Shaw and Stephen Locarnini ......................................................... 387
31 Hepatitis B Virus: Where Are We and Where Are We Going?
   Michael P. Manns, Johannes Hadem, and Heiner Wedemeyer ......................................................... 415
32 Designing Studies to Evaluate Anti-Hepatitis B Virus Therapies:
   From the Perspective of Studies for the Registration of Pharmaceutical Products
   Alison B. Murray .................................................................................. 445
Hepatitis B and D Protocols
Volume 2: Immunology, Model Systems, and Clinical Studies
Hamatake, R.K.; Lau, J.Y.N. (Eds.)
2004, XXIII, 572 p., Hardcover
ISBN: 978-1-58829-108-0
A product of Humana Press