Hepatitis C Virus Disease
Emilio Jirillo
Editor

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Immunobiology and Clinical Applications
Preface

Hepatitis C virus (HCV) infection represents a worldwide disseminated disease, but despite numerous studies, its pathogenesis and medical treatment have not been completely elucidated.

As far as HCV pathogenesis is concerned, HCV genotypes and viral antigens have been investigated with the aim to find a correlation with disease severity and response to treatment. On the other hand, according to current literature, immunological response is implicated in disease progression rather than in host protection. Finally, use of interferon (IFN)-alpha alone or in combination with other antiviral drugs, e.g., ribavirin (RIB), at the moment represents the most effective treatment in chronic HCV disease, even if the percentage of cured patients is still low.

On these grounds, the present book, entitled *Hepatitis C Virus Disease: Immunobiology and Clinical Applications*, will emphasize the most recent advances in HCV infection, moving from basic research to clinical application. In particular, in the first chapters of this volume, the full spectrum of immune responses to HCV is analyzed, taking into account either innate or adoptive immunity involvement. In this respect, the role of antigen-presenting cells (macrophages and dendritic cells) and Toll-like receptors and that of T helper, T cytotoxic, natural killer, and T regulatory cells will be discussed in the course of HCV disease.

At the same time, deficits of innate immunity at the peripheral level with an easier access of microbes into the host will be described also in view of a putative interference of microbial products with IFN treatment.

In the last part of this volume, a series of contributions elucidates the state of the art of IFN-alpha treatment in HCV patients and the effectiveness of therapy also in relation to HCV genotypes. Besides the combined treatment with IFN-alpha and RIB, the use and applications of pegylated IFNs are the object of intensive speculation in specific chapters. Finally, the complicated HCV disease and its treatment are discussed.

In summary, this volume, written by various scientists with specific expertise in the field of HCV infection, should represent an efficacious up-to-date on the state of the art of HCV disease in different geographical areas. Moreover, a clear description of disease pathogenesis, a detailed clarification of immune mechanisms, and a deep elucidation of the pharmacology of antiviral drugs should be very useful for
a large readership, even including medical students who may wish to learn basic principles of HCV infection.

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Contents

1 Innate Immunity in Type C Hepatitis ........................................... 1
Tetsuo Takehara and Norio Hayashi

2 Mechanisms of Interferon Action and Resistance in Chronic
Hepatitis C Virus Infection: Lessons Learned from Cell Culture
Studies ................................................................. 16
Srikanta Dash, Sidhartha Hazari, Robert F Garry,
and Fredric Regenstein

3 Immunological Parameters Influencing Adaptive Immune Responses
to the Hepatitis C Virus ............................................... 39
Patrick Bertolino, Geoffrey W. McCaughan, and David G. Bowen

4 Immune Responses Against the Hepatitis C Virus and the Outcome
of Therapy ............................................................. 71
Paul Klenerman and Eleanor Barnes

5 Other Microbial Components Associated with Hepatitis C Virus
Infection: Their Effects on Interferon- α/Ribavirin Treatment ........ 87
Luigi Amati, Vittorio Pugliese, and Emilio Jirillo

6 Interferon-Induced Effector Proteins and Hepatitis C
Virus Replication ....................................................... 106
Michael Frese and Eva Dazert

7 Treatment of Chronic Hepatitis C with Different Genotypes .......... 130
James Fung, Ching-Lung Lai, and Man-Fung Yuen

8 Interferon Treatment of Hepatitis C Virus Infection: From Basic
Biology to Clinical Application ...................................... 148
Norihiko Furusyo, Masayuki Murata, and Jun Hayashi

9 Interferon-Based Therapy for Hepatitis C Virus Infections .......... 168
Ming-Lung Yu and Wan-Long Chuang
10 Treatment of Chronic Hepatitis C in “Difficult-to-Treat” Patients in the Clinical Setting ........................................ 192
Ana Moreno, Rafael Bárcena, and Carmen Quereda

11 Effects of Combined IFN-Alpha/Ribavirin Treatment in HCV Disease-Related Progression ............................. 215
Davide Festi, Francesca Lodato, Giuseppe Mazzella, and Antonio Colecchia

12 Pegylated Interferons: Clinical Applications in the Management of Hepatitis C Infection ........................................ 237
S. James Matthews and Christopher McCoy

Subject Index ................................................................. 297
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