

# Contents

<b>1</b>	<b>Introduction</b> . . . . .	1
<b>2</b>	<b>Etiology</b> . . . . .	3
2.1	Structure of the Virus and Genome Organization . . . . .	3
2.2	Taxonomy and Nomenclature . . . . .	5
2.3	Viral Replication Cycle . . . . .	9
<b>3</b>	<b>Epidemiology of the Human HEV Infection</b> . . . . .	11
3.1	Epidemiology of Human Infection in Regions with High Disease Endemicity . . . . .	12
3.2	Epidemiology of Human Infection in Regions with Low Endemicity . . . . .	14
3.3	Routes of Transmission . . . . .	16
3.3.1	Waterborne Transmission . . . . .	16
3.3.2	Foodborne Transmission . . . . .	17
3.3.3	Professional Exposure Transmission . . . . .	18
3.3.4	Other Routes of Transmission . . . . .	19
3.4	Evidence of Zoonotic Transmission . . . . .	20
<b>4</b>	<b>Pathogenesis in Humans</b> . . . . .	23
4.1	Incubation Period and Clinical Manifestations . . . . .	23
4.2	Pathological Lesions . . . . .	26
4.3	Immunity . . . . .	26
<b>5</b>	<b>Epidemiology of HEV Infection in Animals</b> . . . . .	29
5.1	HEV Infection in Domestic Pigs . . . . .	30
5.2	HEV Infection in Wild Boars or Wild Pigs . . . . .	36
5.3	HEV Infection in Other Wild Mammals (Deer and Mongoose) . . . . .	38
5.4	HEV Infection in Rats, Rabbits, Ferrets, and Bats . . . . .	38
5.5	HEV Infection in Avian Species . . . . .	40
5.6	Other Potential Animal Reservoirs for HEV . . . . .	41
5.7	Routes of Transmission and Risk Factors in Swine . . . . .	42
5.7.1	Transmission Dynamics of HEV in Pigs . . . . .	45
5.7.2	Disease Associated with HEV Infection . . . . .	46

<b>6 Pathogenesis in Swine</b> . . . . .	49
6.1 Incubation Period and Clinical Manifestations . . . . .	49
6.2 Pathological Lesions. . . . .	50
6.3 Immunity . . . . .	51
<b>7 Diagnosis of Hepatitis E Infection</b> . . . . .	53
7.1 Laboratory Detection and Diagnosis in Humans . . . . .	53
7.2 Laboratory Detection and Diagnosis in Swine. . . . .	56
7.3 Virus Isolation in Cell Cultures . . . . .	57
<b>8 Hepatitis E Virus: Food Related Issues</b> . . . . .	61
<b>9 Conclusions</b> . . . . .	67
<b>References</b> . . . . .	69
<b>Index</b> . . . . .	87



<http://www.springer.com/978-1-4614-7521-7>

Hepatitis E Virus

An Emerging Zoonotic and Foodborne Pathogen

Ruggeri, F.M.; Di Bartolo, I.; Ostanello, F.; Trevisani, M.

2013, VI, 88 p. 8 illus. in color., Softcover

ISBN: 978-1-4614-7521-7