

## Article

# Gammaherpesvirus infections in cattle in Europe

**Table S1.** BoHV-6 infection in female and male animals and in the different age groups. The sex was not known for 5 of the 448 examined animals. The frequency of the probabilities for BoHV-6 infection in the different age and sex groups is based on the Chi2 test. Differences (“Expected – Observed”) higher than 0.05 and lower than -0.05 between expected and observed (in bold) represent an unexpected result, not following the distribution.

BoHV-6 Infection in Male and Female Animals								
Sex	Neg		Pos		All			
Male	107		33		140			
Female	194		109		303			
Total	306		142		443			
Frequency of The Probabilities for BoHV-6 Infection								
Age Group (y)	Male				Female			
	Expected		Observed		Expected		Observed	
	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos
0 <1	0.11	0.01	0.61	0.06	0.24	0.02	0.22	0.02
1 <2	0.05	0.02	0.12	0.13	0.10	0.05	0.16	0.05
2 <3	0.02	0.01	0.01	0.03	0.05	0.02	0.10	0.03
3 <4	0.01	0.01	0.00	0.01	0.03	0.03	0.06	0.07
4 <5	0.01	0.01	0.01	0.01	0.02	0.03	0.04	0.05
5 <6	0.00	0.01	0.00	0.00	0.01	0.02	0.02	0.04
≥6	0.01	0.02	0.01	0.00	0.02	0.05	0.05	0.11

neg – PCR for BoHV-6 negative in all tested organs; pos – PCR for BoHV-6 positive in at least one tested organ; y – years.

**Table S2.** Frequency of BoHV-6 infection in animals grouped according to the main affected organ system or the disease entity, based on recorded pathological diagnoses.

Grouping According to the Primarily Affected Organ Systems			
Affected Organ System	Neg	Pos	All
No abnormality detected	6	0	6
No information available	16	2	18
Systemic disease and/or multiple organs affected	36	9	45
Musculoskeletal	18	9	27
Liver	9	7	16
Gastrointestinal	85	23	108
Cardiovascular	11	4	15
Body cavities	8	9	17
Respiratory	39	21	60
Reproductive	9	9	18
Others	8	10	18
Slaughtered animals	61	39	100
Total	306	142	448
Grouping According to Disease Entity or Aetiology			
Disease Entity/Etiology	Neg	Pos	All
Slaughtered animals	67	39	106

Unknown	43	13	56
Trauma	23	11	34
Congenital	5	2	7
Metabolic	6	6	12
Degenerative	2	2	4
Toxic	2		2
Bacterial	105	48	153
Parasitic	11	5	16
Viral	10	2	12
Neoplastic	2	2	4
Organ misalignment	15	7	22
Multifactorial	15	5	20
Total	306	142	448

Others: Due to the low number of cases, animals which showed primary affection of the haemolymphatic, neurological or urinary system or the integument were assembled under this heading. Abbreviations: y – years; neg – PCR for BoHV-6 negative in all tested organs; pos – PCR for BoHV-6 positive in at least one tested organ.

**Table S3.** Comparison of OvHV-2 loads in lung, spleen, bronchial ln and tongue of cattle with MCF with BoHV-6 loads in the same organs in cattle without MCF.

Viral Loads	Lung		Spleen		BLN		Tongue	
	MCF (OvHV-2)	Non-MCF (BoHV-6)	MCF (OvHV-2)	Non-MCF (BoHV-6)	MCF (OvHV-2)	Non-MCF (BoHV-6)	MCF (OvHV-2)	Non-MCF (BoHV-6)
Median (copies/100 ng)	10,063.46	15.35	13,749.81	72.67	4,430.70	193.08	17,320.12	21.58
Average (copies/100 ng)	25,135.96	195.66	16,294.11	1,232.27	10,530.52	1,873.49	19,235.23	431.10
Max (copies/100 ng)	77,350.72	4,558.00	36,829.21	46,222.00	32,312.40	47,609.00	37,262.72	20,441.00
Min (copies/100 ng)	3,066.22	0.13	847.59	0.14	948.26	0.45	5,037.91	0.41
No tested positive	4	115	4	134	4	122	4	102

Abbreviations: copies/100 ng – BoHV-6 or OvHV-2 copy numbers/100 ng DNA; No tested positive – number of animals in which the organ tested positive for BoHV-6/OvHV-2 DNA by PCR.