

Biosafety Clearing-House (BCH)

ORGANISM (ORGA)

BCH-ORGA-SCBD-48969-9

LAST UPDATED: 29 JUN 2020

Organism information

Scientific name

Gallid alphaherpesvirus 2

Taxonomic Classification

Kingdom Heunggongvirae
Phylum Pploviricota
Class Herviviricetes
Order Herpesvirales
Family Herpesviridae
Genus Mardivirus
Species Gallid alphaherpesvirus 2

Alternate scientific name(s) (synonym(s))

Marek's disease virus type 1
MDV1
GaHV-2
GAHVM

Additional classification

Group (virus)

I (dsDNA)

Type of organism

Viruses

Characteristics related to biosafety

Known pathogenicity and/or allergenicity

Gallid alphaherpesvirus 2 is an alphaherpesvirus that causes Marek's disease, a highly contagious viral neoplastic disease in chickens.

Marek's Disease (MD) is a viral neoplasia affecting young birds, characterized by tumors that may be found in the birds guts, central and peripheral nervous system, skin and globe of the eye. The disease is also characterized by presence of T cell lymphoma as well as infiltration

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of nerves and organs by lymphocytes. Birds infected with GaHV-2 can be carriers and shedders of the virus for life.

After infection, microscopic lesions are present after one to two weeks, and gross lesions are present after three to four weeks. The virus is spread in dander from feather follicles and transmitted by inhalation. Symptoms in practically all forms of the disease frequently lead to prostration, paralysis and eventually death.

There are three serotypes, one virulent in chicken (MDV1) and two avirulent found in chicken (MDV2/ GaHV3) and turkeys (Meleagrid herpesvirus 1/ Turkey Herpesvirus/ HVT/ MDV3). Virulent serotype 1 is oncogenic and causes T cell lymphomas and peripheral nerves demyelization in chicken. MDV1 is the only one of these viruses known to be pathogenic and due to the antigenic similarity between the three viruses the other two have been used to vaccinate against Marek's disease. These viruses have double stranded DNA genomes with no RNA intermediate.

Marek's Disease is easily transmitted and characterizes by displaying particles associated to, or inside the, host cell after its replication. The infection route is usually respiratory. This disease has harmful effects in the poultry farming since 1970, but is controllable by immunization.

Additional Information

Other relevant website addresses and/or attached documents

? [Marek's disease - Wikipedia](#) (*English*)

? [Mardivirus - Wikipedia](#) (*English*)

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Further Information

Questions about the Cartagena Protocol on Biosafety or the operation of the Biosafety Clearing-House may be directed to the Secretariat of the Convention on Biological Diversity.

Secretariat of the Convention on Biological Diversity

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