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ABSTRACT BOOK

BOOK OF ABSTRACTS

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Confirmation of spring viremia of carp virus in wild common carp (*Cyprinus carpio* L.) in Mexico

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Introduction: This study confirms the presence of spring viremia of carp virus (SVCV) in wild common carp (*Cyprinus carpio* L) in central Mexico. Fish exhibited lesions suggestive of SVC, and samples were analyzed by cell culture, molecular techniques, gene sequencing, and electronic microscopy, resulting in the isolation and identification of SVCV.

Methodology: Ten specimens of common carp were collected from a natural freshwater lagoon where no disease outbreaks and/or disease-related mortalities have been reported. Internal samples were processed to describe histopathological alterations; fragments of kidney were collected and processed for virus isolation in cell monolayers of *epithelioma papulosum cyprini* (EPC), according to the OIE Manual and for electron microscopy. Total RNA was extracted from the supernatant of cell cultures and the molecular diagnosis of SVCV was performed according to OIE Manual; samples were considered positive if the expected sizes of the primary and secondary PCR products were 714 and 606 bp, respectively. The secondary amplification products were sequenced, and alignments were performed with the ClustalW algorithm and the two-nucleotide sequences were deposited in GenBank.

Results: Five fish presented signs of septicemic disease, with sero-hemorrhagic ascites and adhesions between abdominal organs, and diffuse hemorrhages in the coelomic cavity; histologically, the internal organs presented systemic damages associated with SVCV. The kidney homogenates showed a CPE between 24 and 48 h post-inoculation in EPC cell cultures; the electron microscopy revealed the characteristic bullet-shaped viral particles with structural traits typical of rhabdovirus (110 - 123 nm long, 75.5 - 78.1 nm wide) and also the expected specific amplification product for SVCV was observed (716 bp for the first reaction and of 606 bp for the second round). The phylogenetic analyses of partial SVCV glycoprotein gene sequences of Mexican SVCV isolates were classified into the Ia genogroup.

Conclusion: The analyses confirm the presence of SVCV in common carp in Mexico. The phylogenetic analyses classified the isolates into the Ia genogroup. However, it is difficult to estimate the risk of SVCV for other wild/feral cohabitating cyprinid species in the lagoon. The status of this virus in other water sources within this region and in the country is also unknown

Keywords: SVCV, carp, Mexico, viremia