Cyprinid herpesvirus 3 infection disrupts the skin barrier of common carp (*Cyprirtus carpio* L.)

Publons ID	14049016
Wos ID	WOS:000315003000018
Doi	10.1016/j.vetmic.2012.10.033
Title	Cyprinid herpesvirus 3 infection disrupts the skin barrier of common carp (*Cyprirtus carpio* L.)
First Author	
Last Author	
Authors	Adamek, M; Syakuri, H; Harris, S; Rakus, KL; Brogden, G; Matras, M; Irnazarow, I; Steinhagen, D;
Publish Date	MAR 23 2013
Journal Name	VETERINARY MICROBIOLOGY
Citation	79
Abstract	a:3:{i:0;s:899:"Cyprinid herpesvirus-3 (CyHV-3) is recognised as a pathogen which causes mass mortality in populations of carp, Cyprinus carpi. One of the characteristic symptoms of the disease associated with CyHV-3 infection is the occurrence of skin lesions, sloughing off the epithelium and a lack of mucus. Furthermore, fish then seem to be more susceptible to secondary infections by bacterial, parasitic or fungal pathogens which may cause further mortality within the population. The observed pathological alterations lead to the assumption that the carp skin barrier is strongly challenged during CyHV-3 associated disease. Therefore we examined mRNA expression of genes encoding inflammatory mediators, type I interferons, and the following skin defence molecules: antimicrobial peptides, claudins, and mucin. In addition, we monitored changes in the bacterial flora of the skin during disease conditions.";i:1;s:407:"Our results show that CyHV-3 associated disease in the skin of common carp leads to a reduction in mRNA expression of genes encoding several important components of the mucosal barrier, in particular mucin 5B, beta defensin 1 and 2, and the tight junction proteins claudin 23 and 30. This caused changes in the bacterial flora and the development of secondary bacterial infection among some individual fish.";i:2;s:477:"To our knowledge this is the first report showing that under disease conditions associated with virus infection, the mucosal barrier of fish skin is disrupted resulting in a higher susceptibility to secondary infections. The reported clinical signs of CyHV-3 skin infection can now be explained by our results at the molecular level, although the mechanism of a probable virus induced immunomodulation has to be investigated further. (C) 2012 Elsevier B.V. All rights reserved.";}
Publish Type	Journal
Publish Year	2013
Page Begin	456
Page End	470
Issn	0378-1135
Eissn	1873-2542
Url	https://www.webofscience.com/wos/woscc/full-record/WOS:000315003000018
Author	Dr.rer.nat. HAMDAN SYAKURI, S.Pi, M.Si