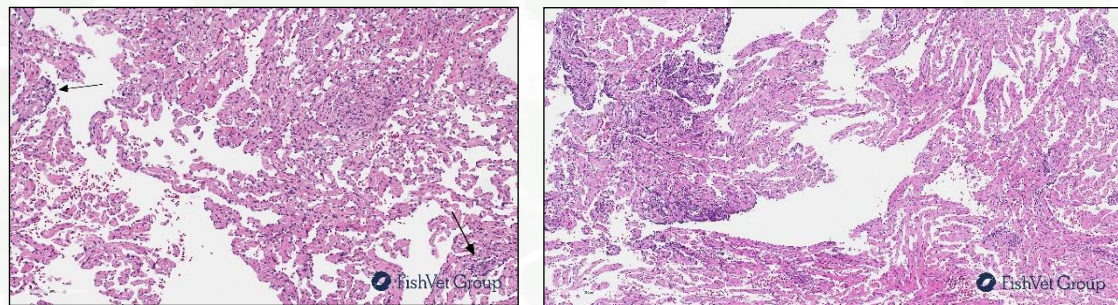


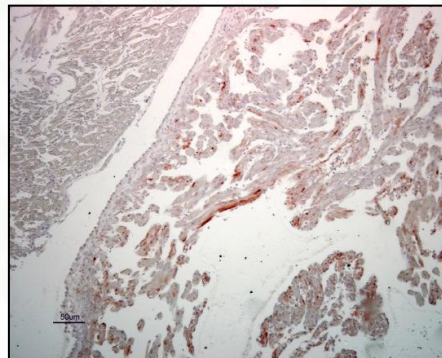
## ATLANTIC SALMON - PISCINE MYOCARDITIS VIRUS (PMCV)

Piscine myocarditis virus (PMCV) is the causative agent of cardiomyopathy syndrome (CMS). VESO Vikan has established an experimental challenge model for infection with PMCV. Smolts can be challenged through the intraperitoneal or intramuscular route. The diagnosis is typically based on qPCR and histopathology, and trials are run for 8 – 9 weeks post challenge. There is a strong correlation between viral load and histopathological changes in the heart.

Cultivation of PMCV in cell line systems has so far not been successful. Experimental transmission of CMS has therefore been demonstrated using tissue homogenate from CMS-diagnosed fish. The challenge material produced at VESO Vikan originates from a highly virulent field outbreak of CMS. The homogenate was screened for all known pathogens by qPCR. It was thereafter passed repeatedly through our pathogen free test fish to ensure a tissue homogenate containing PMCV only.



Histopathological changes in the heart after experimental infection with PMCV. Left: 9 wpc i.m., right: 9 wpc i.p. High viral loads were detected by qPCR.



Detection of PMCV (red) in heart by *in situ* hybridization.

### Available models

Salmon			Water			Challenge model		
Fry	Parr	Smolt	FW	SW	°C	Ip	Im	Cohab
		X		X	12	X	X	