

ATLANTIC SALMON - *PISCIRICKETTSIA SALMONIS*

Introduction

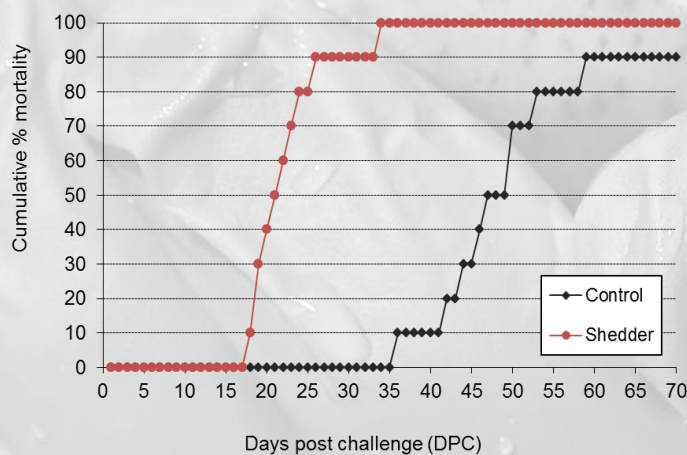
Piscirickettsia salmonis is the aetiological agent of Salmon Rickettsial Septicemia (SRS) or Piscirickettsiosis. The disease causes high mortality and significant economic losses to the salmon industry. To evaluate the efficacy of prophylactic measures against Piscirickettsiosis, experimental infection trials are indispensable. VESO offers experimental challenge models for parr (pre-smolts) and post-smolts. After challenge, the fish are observed daily and mortality recorded. The diagnosis of Piscirickettsiosis is based upon presence of the characteristic external and internal signs of the disease and cultivation of the bacterium on agar plates. Serum and tissue can be sampled for subsequent analysis by ELISA and RT-qPCR.

Challenge of parr (pre-smolts)

Pre-smolts will be acclimatised to 15°C before challenge. Fish are challenged by i.p. injection of bacteria, or cohabitation with i.p. injected shedders. After challenge the fish are kept under close observation and mortalities registered.

Challenge of post-smolts

Pre-smolts to be included in an i.p. or cohabitant challenge study are photoperiod-manipulated to smoltify before adaption to sea water. Fish will be acclimatised to 15°C before challenge. If the fish are included in a vaccination trial, vaccination will be performed during the smoltification period. The test fish are challenged after transfer to sea water, either by i.p. injection of bacteria or by addition of i.p. injected shedders to the tanks containing the test fish.



Mortality in groups of fish i.p. injected with *Piscirickettsia salmonis* (shedders), and in control fish (saline injected cohabitants).

Available models

Salmon			Water			Challenge model		
Fry	Parr	Smolt	FW	SW	°C	Ip	Bath	Cohab
	X	X	X	X	15	X		X