

ATLANTIC SALMON - *PISCIRICKETTSIA SALMONIS*

Introduction

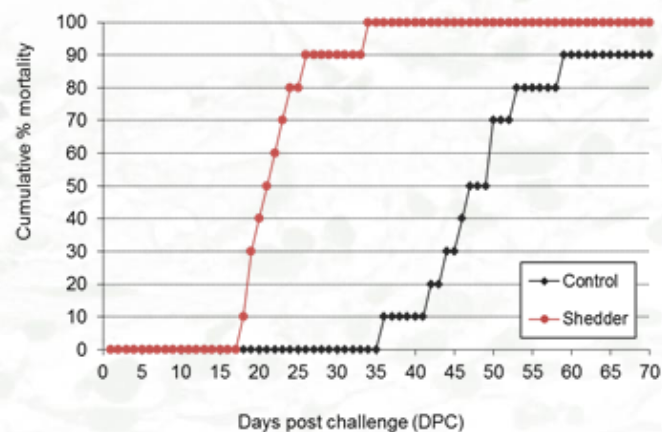
Piscirickettsia salmonis is the etiological agent of Salmon Rickettsial Septicemia (SRS) or Piscirickettsiosis. The disease causes high mortality and significant economic losses to the Chilean salmon industry. Experimental trials are indispensable to evaluate the efficacy of prophylactic measures against Piscirickettsiosis, such as vaccination, selective breeding for resistance or functional feeds. VESO offers experimental challenge models for pre-smolts (parr) 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 pre-smolts (parr)

Pre-smolts will be acclimatized 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 acclimatized 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 cohabitation with i.p. injected shedder 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