

ATLANTIC SALMON - INFECTIOUS PANCREATIC NECROSIS VIRUS (IPNV)

Introduction

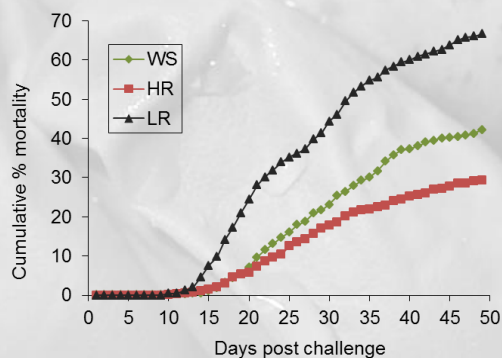
Atlantic salmon are susceptible to IPN by experimental infection as first feeding fry (fresh water) and as post-smolts (sea water). Challenge by bath and cohabitation closely mimics natural infection. The genetic characteristics of the test fish (susceptibility to IPN) influence on the level of control mortality. An IPNV strain originating from an outbreak in post-smolts is used for all challenges. The virus is a serotype Sp/N1, characterized as highly virulent and carrying putative molecular virulence marker motifs.

Cohabitation challenge of smolts (sea water)

Pre-smolts to be included in a bath or cohabitant challenge study are photoperiod-manipulated to smoltify. Challenges can be performed within 1-3 weeks after transfer to sea water. For cohabitant challenge studies, 20% shedders (i.p. injected) are introduced to the challenge tank. Fish are observed throughout a <35 days period.

Immersion challenge of fry (fresh water)

Fish of different genetic characteristics can be kept in separate tanks, or mixed in one tank during challenge. By mixing all families in one tank, possible tank effects can be reduced. The fish (0.1-0.2 grams in average weight) will be challenged by immersion 1-3 weeks after onset of start feeding. Mortality is recorded for 35-50 days. Subpopulations of fish from the challenged fish pool are typically identified by DNA fingerprinting.



Challenge test in three Atlantic salmon strains with different susceptibility to IPN. High resistance (HR), low resistance (LR) and wild salmon (WS).

Available models

| Salmon | | | Water | | | Challenge model | | |
|--------|------|-------|-------|----|-------|-----------------|------|-------|
| Fry | Parr | Smolt | FW | SW | °C | Ip | Bath | Cohab |
| X | | X | X | X | 10-12 | | X | X |