

# Pancreas Disease - PD Heart and Skeletal Muscle inflammation - HSMI

## Situation in Chile



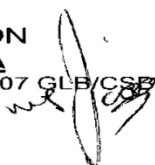
**SERNAPESCA**  
Ministerio de  
Economía, Fomento  
y Turismo

September 2012

# Salmon Alpha Virus / PD

- May 2008: inclusión of PD as a High Risk Disease (List 1, exotic and mandatory declaration disease).

MINISTERIO DE ECONOMIA,  
FOMENTO Y RECONSTRUCCION  
**SUBSECRETARIA DE PESCA**  
Modifica enfermedades de Alto riesgo 2007 GLB/CSP



MODIFICA RESOLUCIÓN QUE  
ESTABLECE CLASIFICACIÓN DE  
ENFERMEDADES DE ALTO RIESGO.

VALPARAISO, 30 MAY 2008

-N° **1393**

1.- Modifícase la Resolución N° 2572 de 2007, de esta Subsecretaría, que estableció la clasificación anual de enfermedades de alto riesgo, en conformidad a lo prescrito en el artículo 3° del D.S. N° 319 de 2001, del Ministerio de Economía, Fomento y Reconstrucción, que estableció el Reglamento de Medidas de Protección, Control y Erradicación de Enfermedades de Alto Riesgo para las Especies Hidrobiológicas, en el sentido de incorporar en la Lista 1 de Peces la siguiente enfermedad y su respectivo agente causal:

Enfermedad	Agente Causal
Enfermedad del Páncreas	<i>Virus de la enfermedad del páncreas, de la familia Togaviridae</i>

# Salmon Alphavirus / PD

- **Sernapesca official study:**

- Executor: UACH (Ricardo Enríquez)
- Year: 2008 – 2009
- Species: *Salmo salar* and *Oncorhynchus mykiss*
- Samples: blood and organs ( Hattcheries, Lake sites, Sea sites, Processing plants)
- Regions: IX, X, XI, XII y XIV
- Diagnostic test: Cell culture: CHSE-214; Real time RT-PCR : Hodneland & Endresen (2006)

- **Results:**

**There is no presence of Alphavirus in farmed salmonids in Chile**

# Pancreas Disease

- 2009 Pancreas Disease was included in the Official Active Surveillance Program for High Risk Disease
  - 2 annual samplings in every site stocked with susceptible species.
  - Official testing: Real time RT-PCR Hodneland & Endresen (2006)
- Since 2003 cell culture on CHSE-214 y BF-2 o EPC lines are used in the Active Surveillance Program
- 2003 – 2008; **516.626 fish where analyzed**
- 2009- 2012 (first half); **108.861 fish where analyzed**
- **2003- 2012: 625.487 fish were analyzed and all have been negative.**

# Pancreas Disease / PD

- November, 2010, Chile requested OIE to include PD on the list of notifiable disease.
- This is under evaluation in ad hoc Group on the OIE List of aquatic animal disease.

# Heart and Skeletal Muscle Inflammation - HSMI

## Cardiomyopathy syndrome (CMS)

### Study – 2011 (ADL Diagnostic Chile)

Preventive surveillance : Sernapesca runs a study to determine the presence or absence of Piscinereovirus in aquaculture.

#### Methods:

- Sampling of 12 sea sites located in X region
- Sites selection criteria: species (*Salmo salar*)
- Weighth: 1026 – 5104 gr
- Post transfer period: 5 – 17 month
- Sampling: 10 fish per site.
- Analysis: RT-PCR (heart and muscle) Methods: Løvoll et al (2010 CMS) and Palacios, (2010 HSMI). Histology: muscle, heart, piloric caeca, gill, liver, spleen and kidney.

# HSMI / CMS Study- 2011

## Results:

- 10 of 12 sites were positive to PRV (RT-PCR)
- All samples were negative to Totivirus
- Histopathology: non-specific findings consistent to HSMI
- Positive samples were sent to NVI for confirmation; one positive sample to PRV was sequenced showing high homology with norwegian PRV

## Follow up of positive :

- Sampling 1 to 2 month post positive findings
- Histopatological findings: non-specific lesions
- Sanitary conditions of the positive sites: good

# HSMI / CMS Study - 2012

Nex steps:

- Determine the distribution of PRV in Chile
- Continue investigation to gather more information
- Include PRV in the list of pathogens of passive surveillance



# National Fisheries and Aquaculture Service Chile



**SERNAPESCA**  
Ministerio de  
Economía, Fomento  
y Turismo

## Thank you

September 2012