



# PHARMAQ – experiences Kjersti Gravningen

PHARMAQ

We make aquaculture progress

## PHARMAQ's business idea

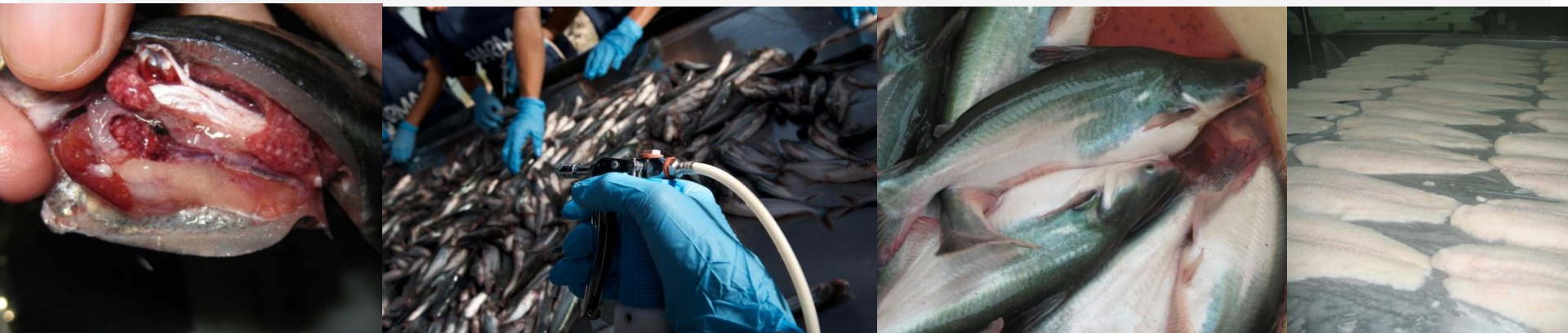
- We provide environmentally sound, safe and efficacious health products to the global aquaculture industry through targeted research and the commitment of dedicated people



# The PHARMAQ Pangasius project 2006-2013

## *Objective*

- Reduce the use of antibiotics and the mortality in *Pangasius* in the Mekong Delta by developing efficient vaccines

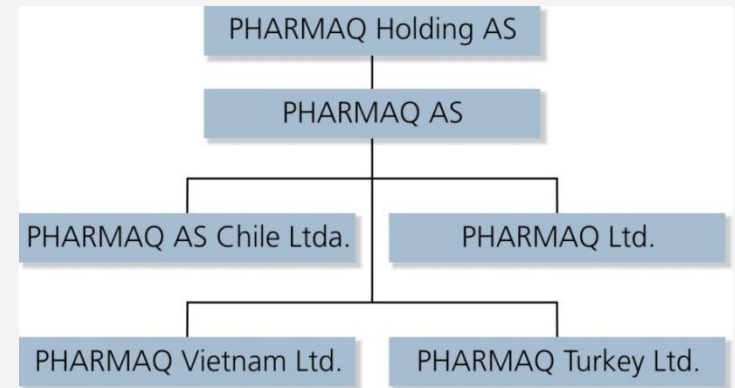


# PHARMAQ Vietnam Ltd

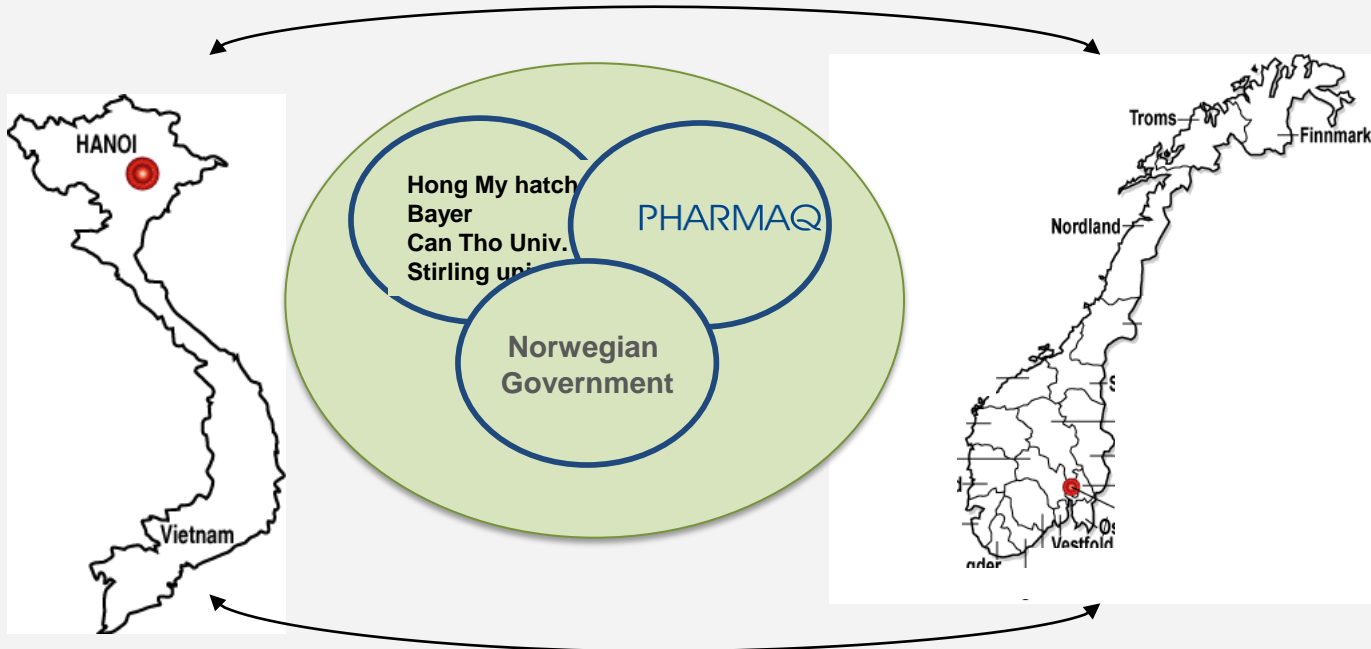
- Owned by 100% PHARMAQ AS
- 16 employees
- Wet lab for clinical testing
- Diagnostic lab

## Products

- Vaccines, ALPHA JECT Panga 1 under licensing



# Vaccine development for Vietnam



# PHARMAQ in Vietnam

2006 Vaccine development project for pangasius initiated - IFU

Wet lab established for clinical testing of vaccines

2008 Rep office established in Vietnam

2009 Field trial for ALPHA JECT Panga 1

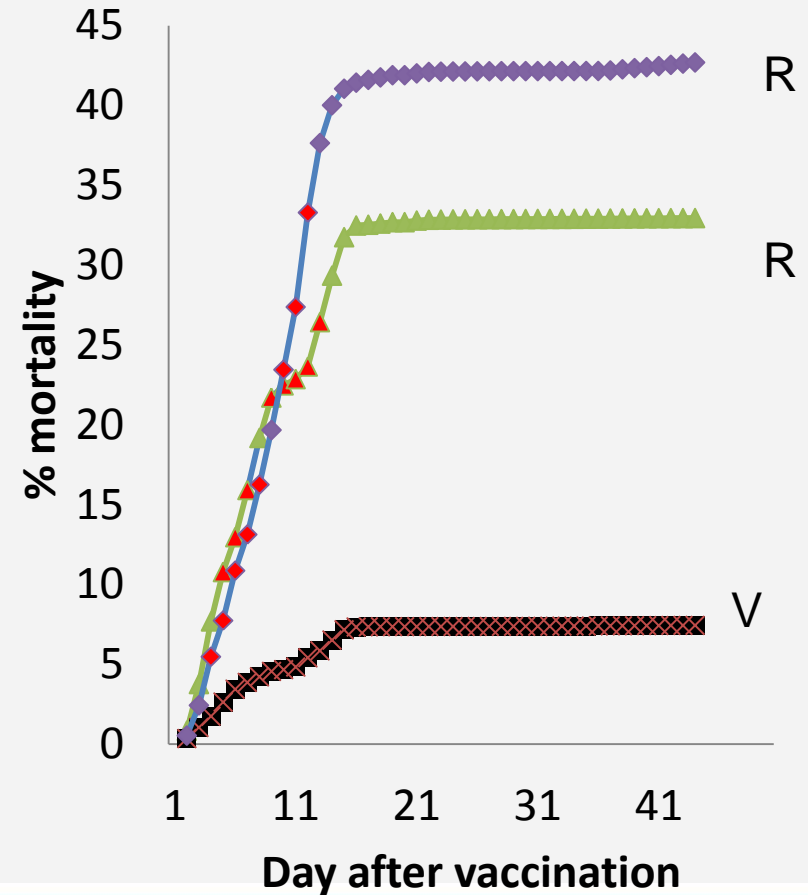
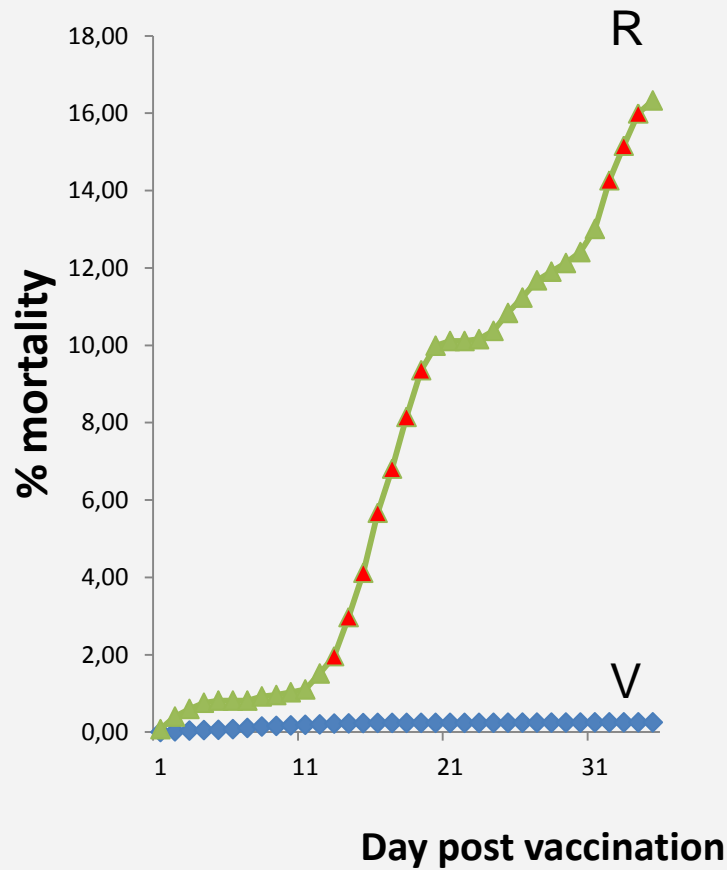
2010 Diagnostic laboratory, training funded by Norad

2011 Established PHARMAQ Vietnam Co. Ltd.

2013 Awaiting response for final license



# Results– after vaccination of pangasius against *E. Ictaluri* - field observation period



# Licensing of products (vaccines)

- Unclear regulation, enforcement / implementation
- No predictable timelines
- Anchoring of projects start important
- Communication



# PHARMAQademy®

## TRAINING

- **PHARMAQ staff**
  - Diagnostics
  - Fish health management
  - Farm management
- **Internships**
- **Universities**
- **Students**
- **Authorities**
- **Farmers**
- **Exporters**
- **Courses and training programs**



# Forward

- **Competence building**
  - Fish health personnel - certification
  - Skilled workers
- **Larger projects – collaboration across disciplines**
  - Bio security (trade, fish health management..)
  - Value chain, profitability
    - Industrial scale, industrial partners
    - Long term
    - Regulations



# Thank you for your attention

