

# DNA-markørar

- **skilja millum siljafiskar og rognafiskar**



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# DNA sekventering

1990-2000: **Smáar verkætlanir - lítil játtan - smá framstig**

2001-2005: **Stórar verkætlanir - stór framstig**

- *Norwegian Salmon Genome Project*
- *Canadian Genomics Research, Atlantic Salmon Project (GRASP)*

2005-2006: **Consortium for Genomic Research (cGRASP).**

- *there was a need for whole genome salmonid sequence*

2008-2009: **Arb. saman um Atlantic salmon genome**

- *umboð fyri GR í **British Columbia, Norway and Chile***

# Genom sekventering 2009

- 2009: **ICSASG** fingið játtað pening til sekventering
  - *Research Council of **Norway***
  - *the Norwegian Fishery and **Aquaculture Industry Research Fund***
  - *Genome **British Columbia***
  - *the **Chilean** Economic Development Agency*
  - *the **InnovaChile** Committee*



# Úrslit frá 2013

- Í 2013 varð “**male-specific master sex-determining gene sdY**” funnið (Yano et al. 2013)

TCCAAGCCCAGCACTCTTTTCTTGTCTCAGTGGAGTACTGCGAA  
GAGGAGGTGCTTAGTCATGAGGTTATGGGGAGTGATGTCAGAAT  
TGCCTACAAGCCCTTCTCCCTGATGATGGATGGGATCCCCGTCAT  
CTCTCTCCCAAAGCCCCCGACACCATTCCCATCTCCTCTGACCG  
TTCAATCCTCTCCAACCTGCTTTCCCTCATGGAGGGTGGAGTGGT  
TTAAGCTCTAAGGAGGAAGGCATCTATGCTGAACGGCATAGCC  
AAGCCATAGTCTCCTGGATGGGCGGCACGGGGGATGAGATGCAC  
GTGATGGAGCGTGATGTGGATCCTGTGATGCTCTTCAACAGGGA  
GACCTTCAGACAGGAGTTGGAACGCTTCAGCAGAGCAGATGGC  
TTCCAACCGCAAATTGGGTTTCAGCCTATGGTTCGGACAAGACTC  
ATCACTCAGTGCACCAATCTCTATATCGATTAAATTGCCATGGGCT  
CAGCAGCTATTCAAGCAAGCTCACGAC

- **Hevur ikki áður verið møguligt at skilja siljafisk frá rognafiski, fyrr enn fiskurin er vaksin**
- Eysturskarð (2014). **Rapid sex identification of Atlantic salmon** (*Salmo salar*) by real-time PCR.
- *Quéméré et al. (2014) recently published a method based on fluorescent labelled primers where the PCR products were run on an ABI Prism3130xl automated sequencer.*
- *D`Auriac et al. (2014) also recently proposed a method where the real-time duplex PCR was performed using a Bio-Rad CFX96. The melt curve analysis was used to score the presence of the amplification of the sdY male specific marker.*

# Fyrimunur

- Ger tað móguligt at **staðfesta, um laksayngul er silja- ella rognafiskur**
- **Siljafiskurin kann tískil skiljast frá rognafiskinum, meðan fiskurin enn er yngul**
- **Økja nøgdina av rognafiski**



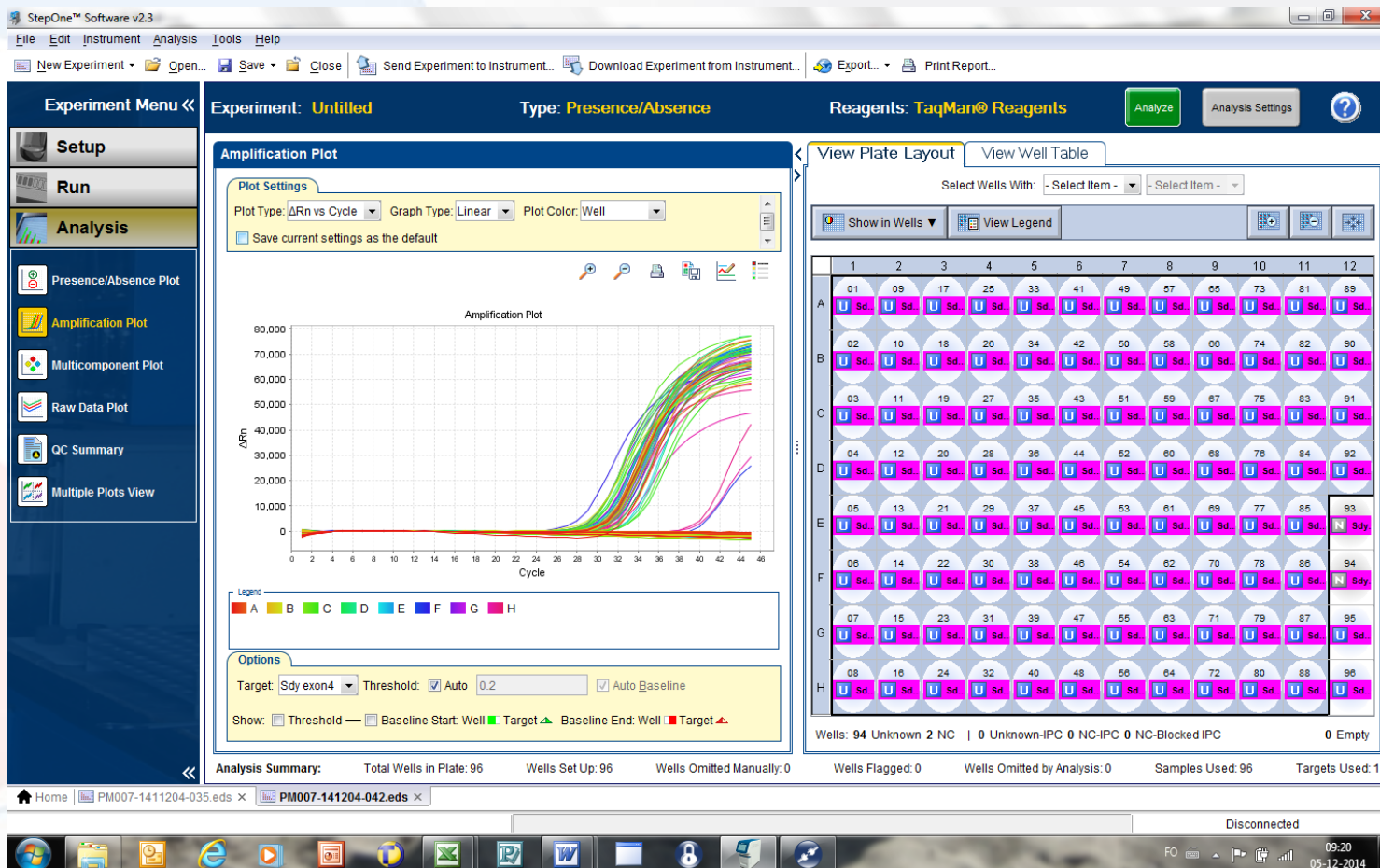
# Sýnistøka

- **Sýnið varð tikið av stertinum**
- Fiskurin varð **doyvdur** og **merktur** (PITtags, Biomark, USA).
- **RT-PCR** kanningin fór fram **á iNOVA** (Tórshavn)



# RT-PCR kanning

- Siljafiskurin er *sdY* positivur og rognafiskurin er *sdY* negativur





# Eftirmeta kanningarhátin

- 2.583 vórðu kannaðir
- **48,7% vóru *sdY* positívir** (siljafiskur)
- **Bert ein rognafiskur**



# Niðurstøða

- **Skjótur, lættur og eftirfarandi kanningarháttur**
- **Minka um nøgdina av siljafiski**
- **Økja um nøgdina av rognafiski**
- **Takk fyri at tit lýddu á**