

**SmoltVision –
A welfare indicator
and a genetic tool
for monitoring
smoltification**





**WE PROVIDE
DIAGNOSTIC
SERVICES**



**Knowledge based company:
23 employees
- 27% have a PhD
- 68% have a Master's degree**

- Complete range of diagnostic services
- Worked with smoltification since 2001
- Built up data from several hundred thousand smolt analyses
- Market leader in this segment



**Unique expertise in
marine molecular
biotechnology
combined with
bioinformatics**

What is SmoltVision?

- Three important genetic markers for smoltification – more detailed picture
- Distinguish between freshwater and seawater expression in contrast to traditional ATPase
- Co-factor



Freshwater marker



Seawater marker



Co-factor to seawater marker

How do we interpret the genetic markers?

Increase indicates an increase in seawater tolerance



Freshwater marker



Reduction indicates start of smoltification



Seawater marker



Cofactor to seawater marker



Freshwater and seawater chloride cells in gills during smoltification

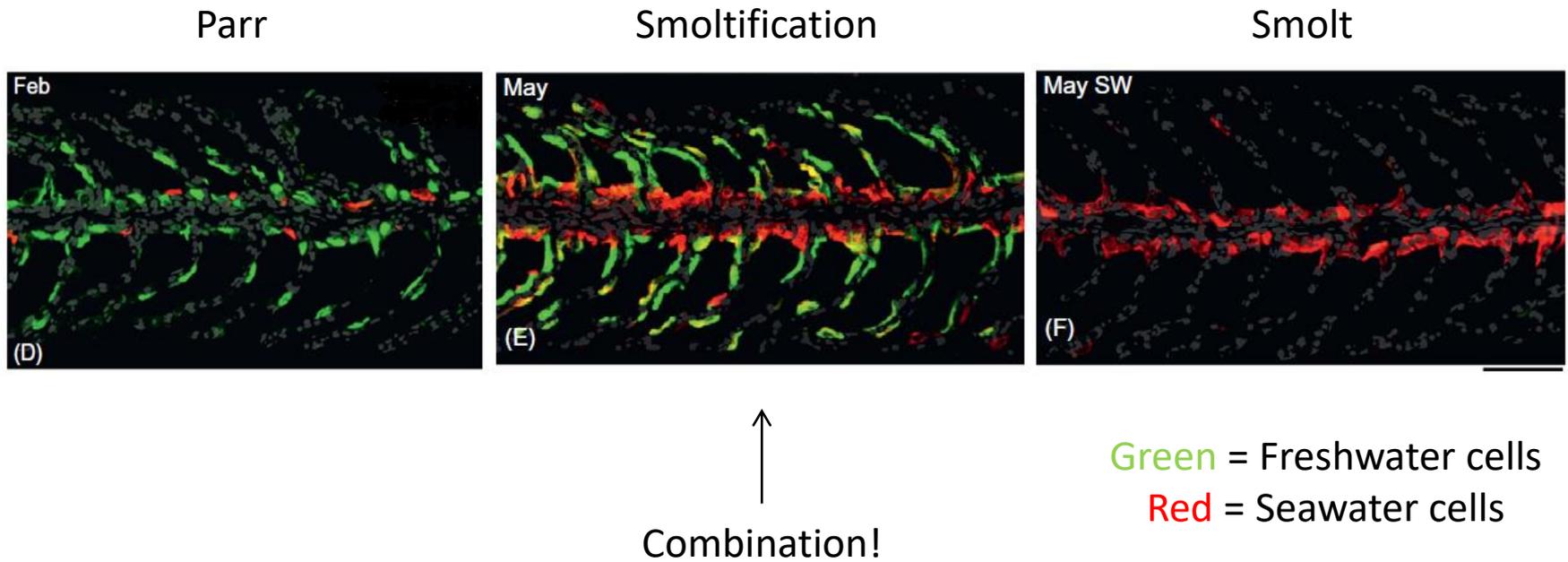
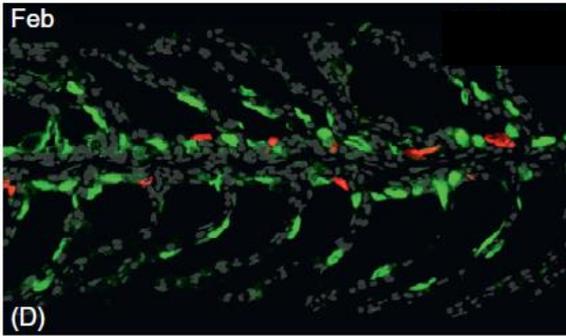
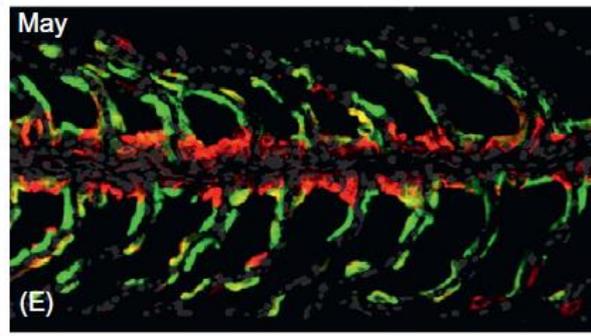


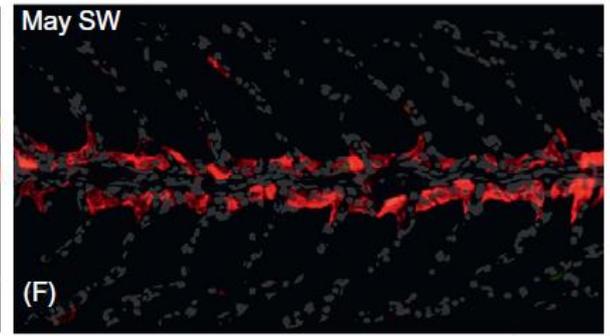
Photo: S.D.McCormick «Smolt physiology and endocrinology»



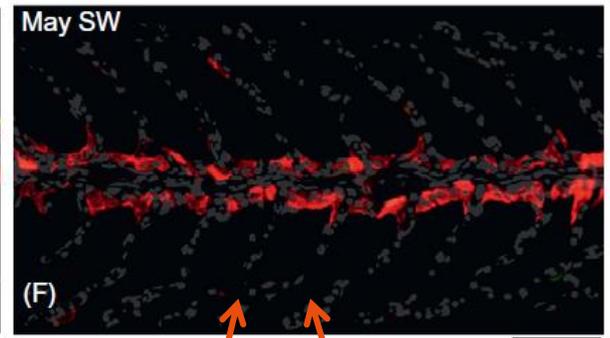
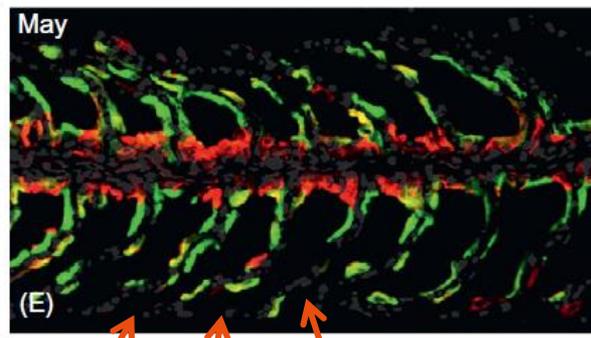
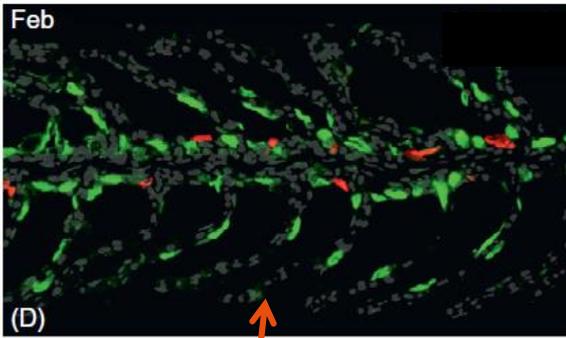
Parr



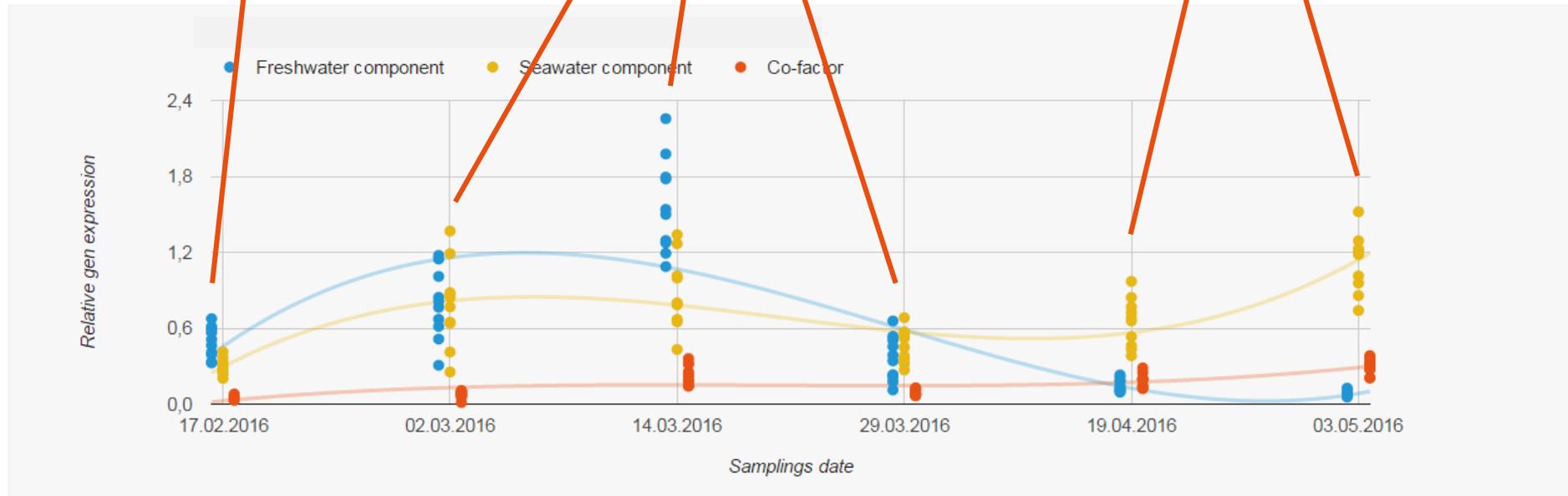
Smoltification



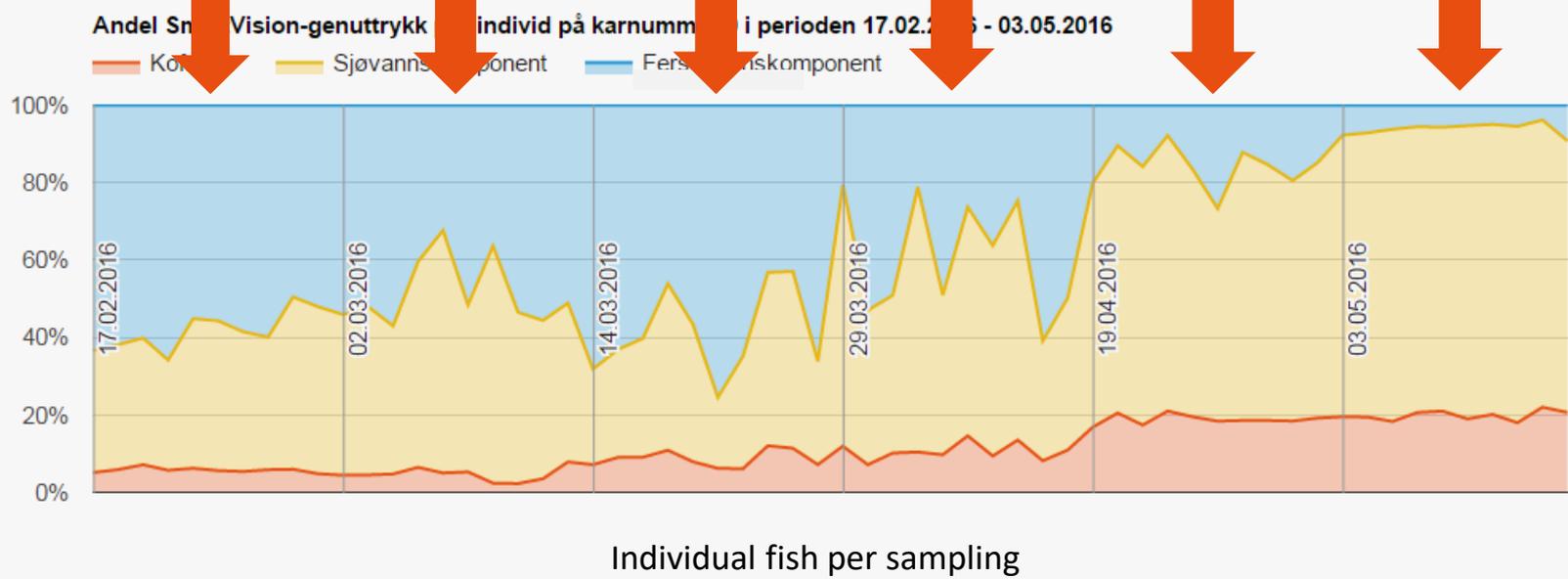
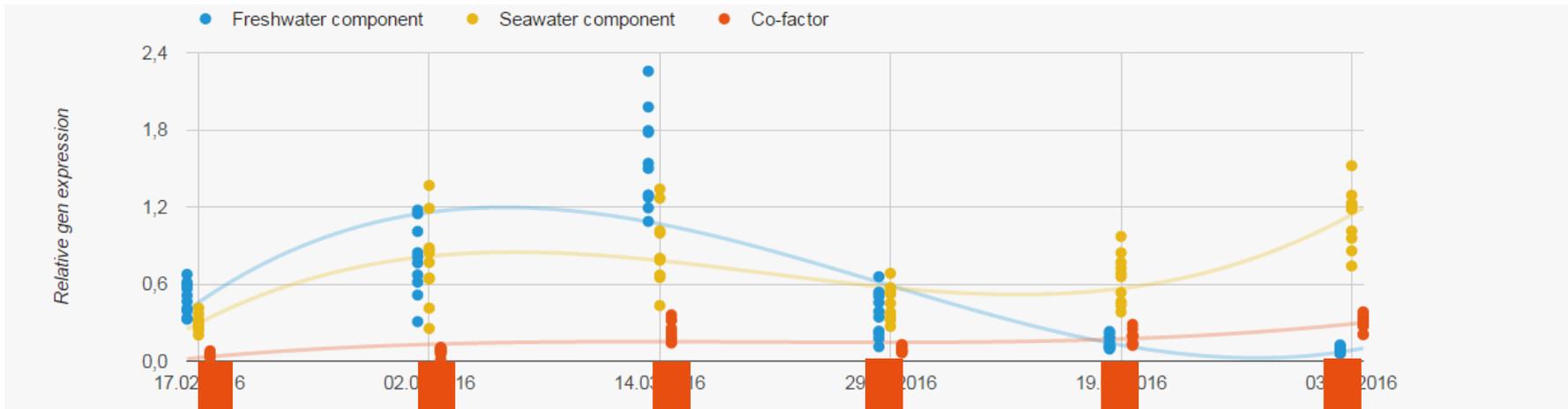
Smolt



SmoltVision



Two ways of showing SmoltVision results – normal smoltification process

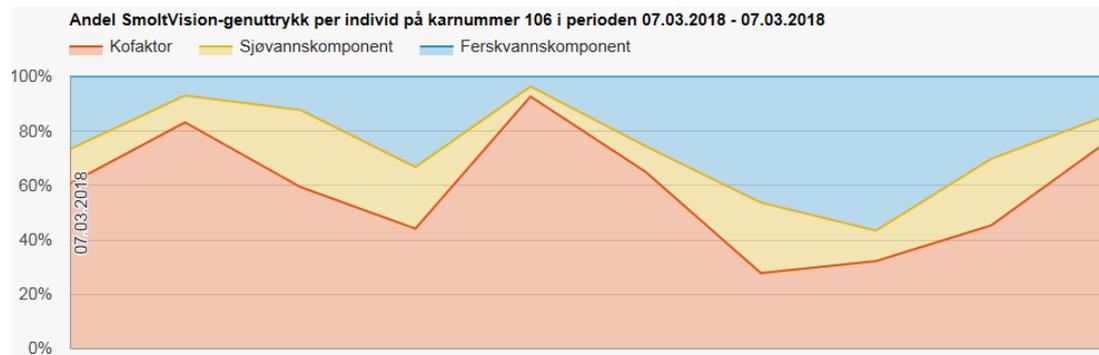
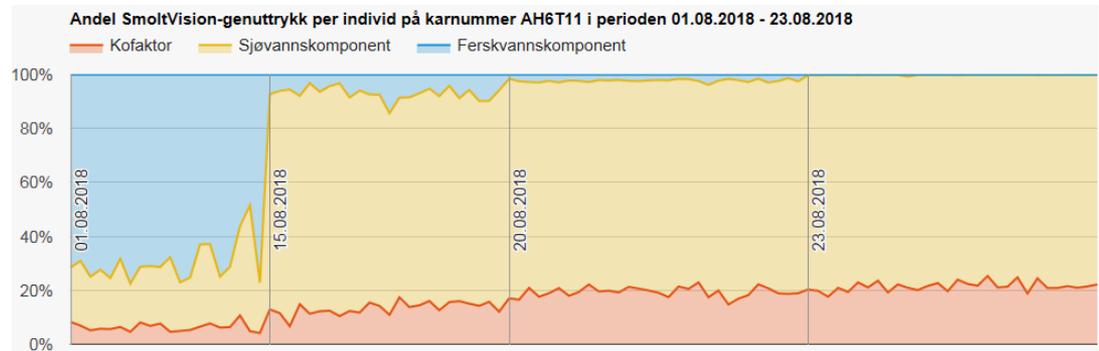


Post-transfer problems

Field data 2018

S1

- Sea site 24,5 ppt salinity
- 154 grams
- Natural light

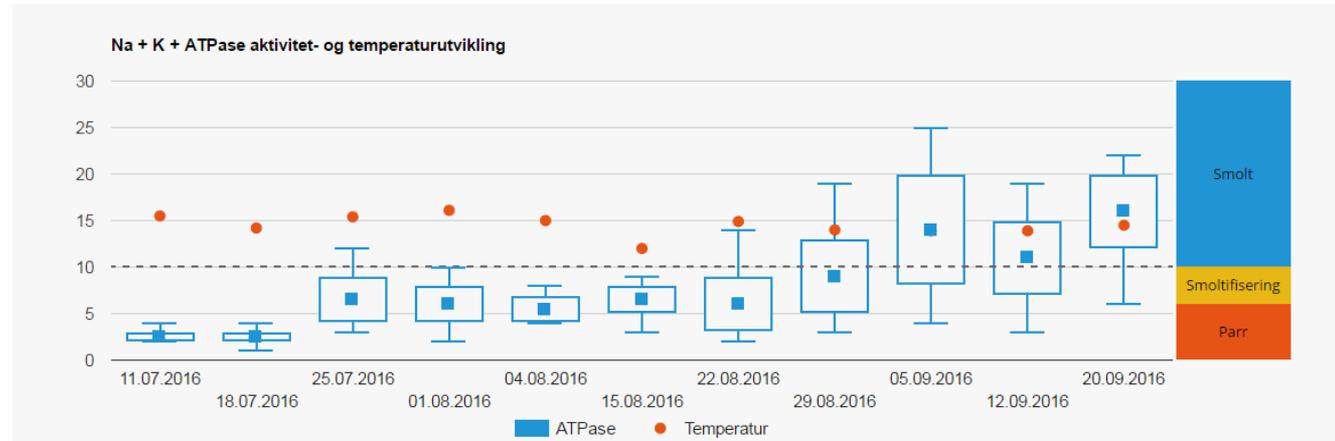


Smoltification with disease

Field data 2016

S0

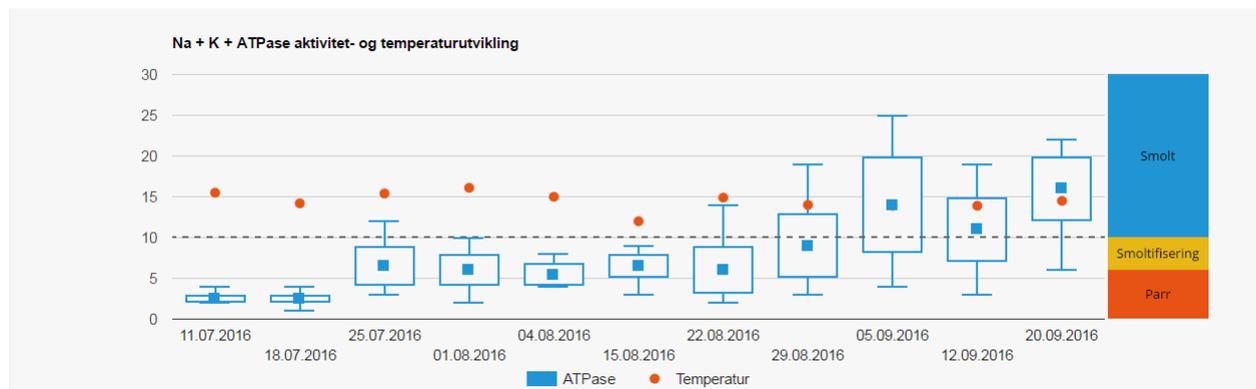
- Flow through
- 119 grams
- 12:12/24:0 start 11.07



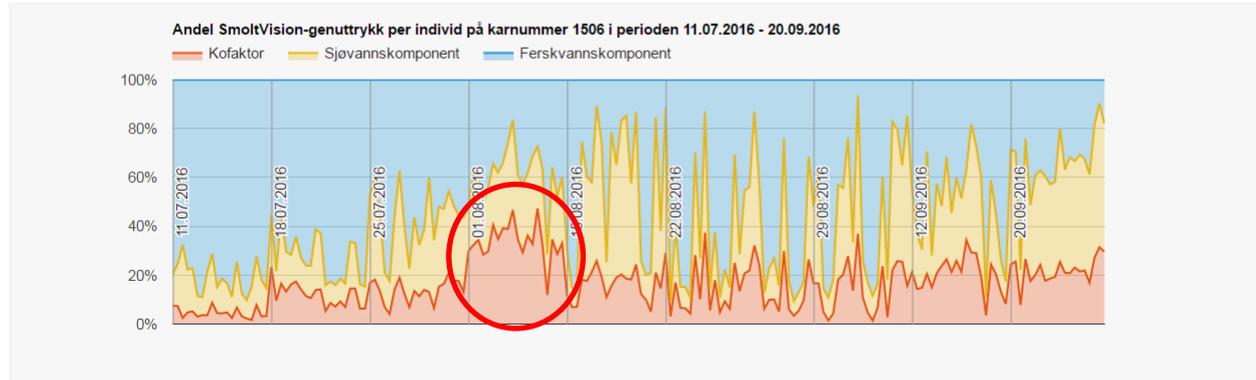
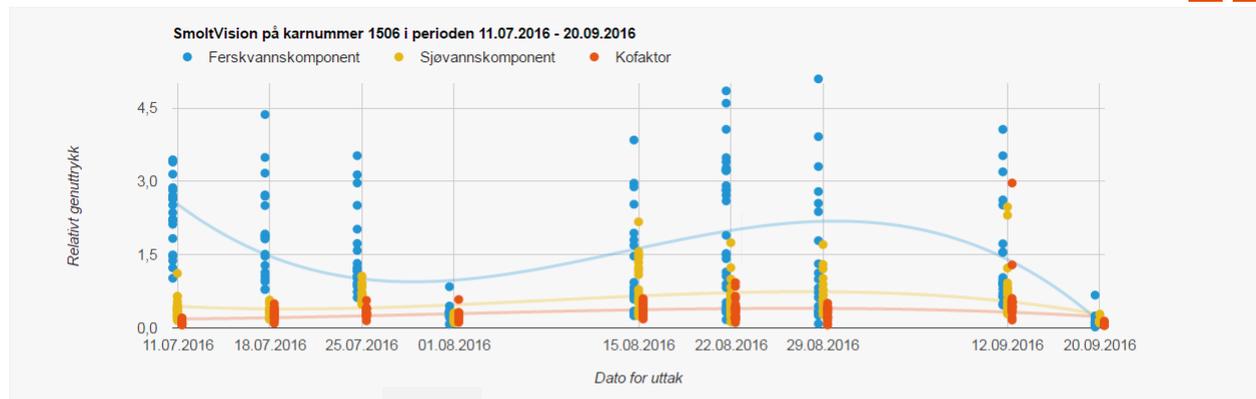
Field data 2016 S0

- Flow through
- 119 grams
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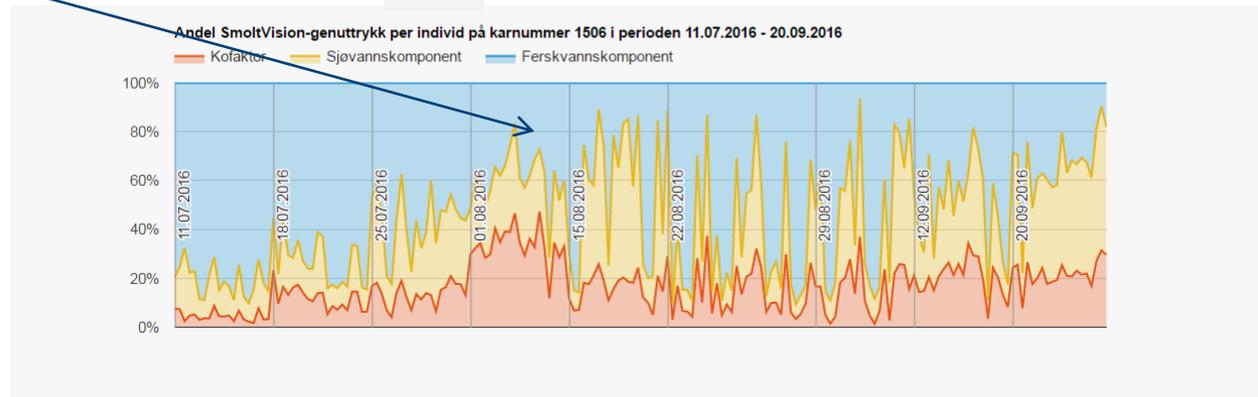
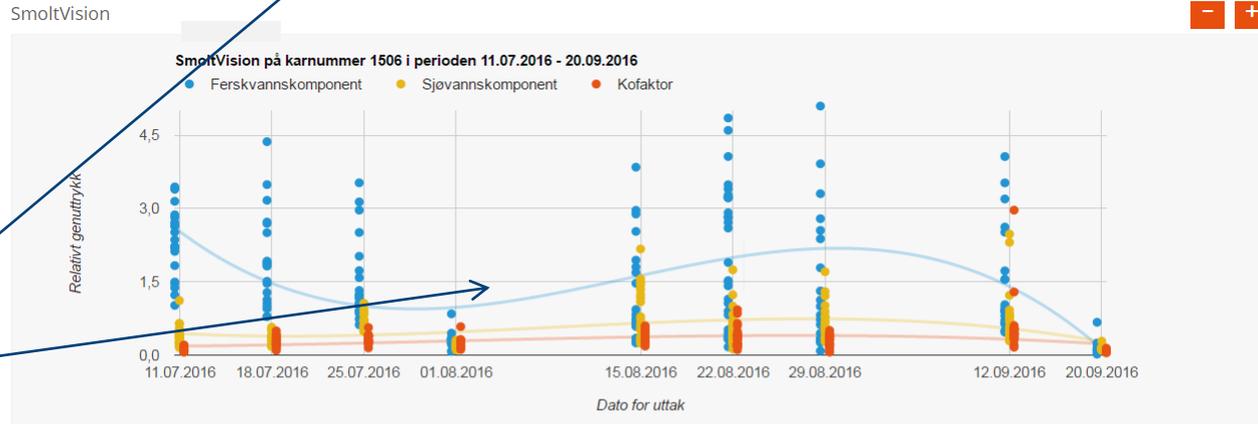
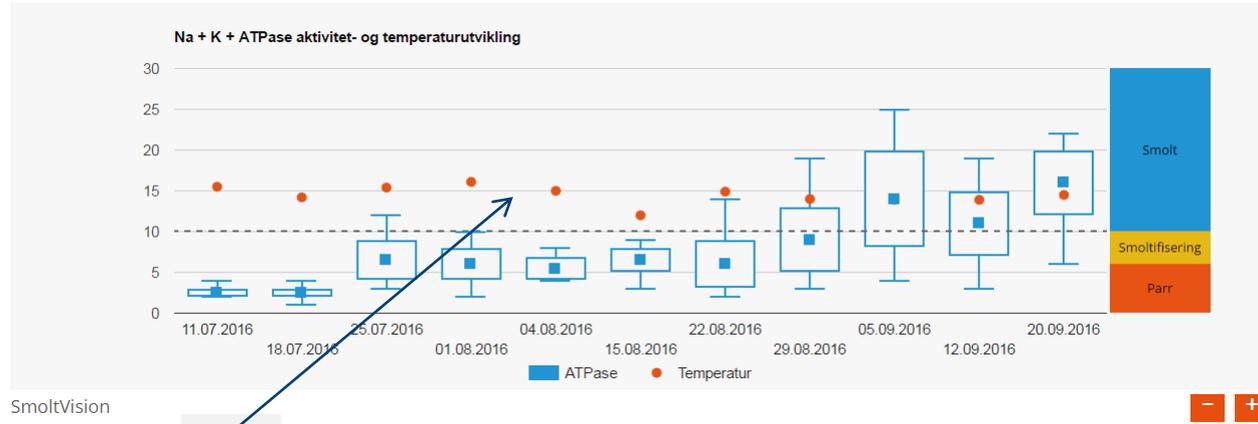
Smoltification with disease



SmoltVision

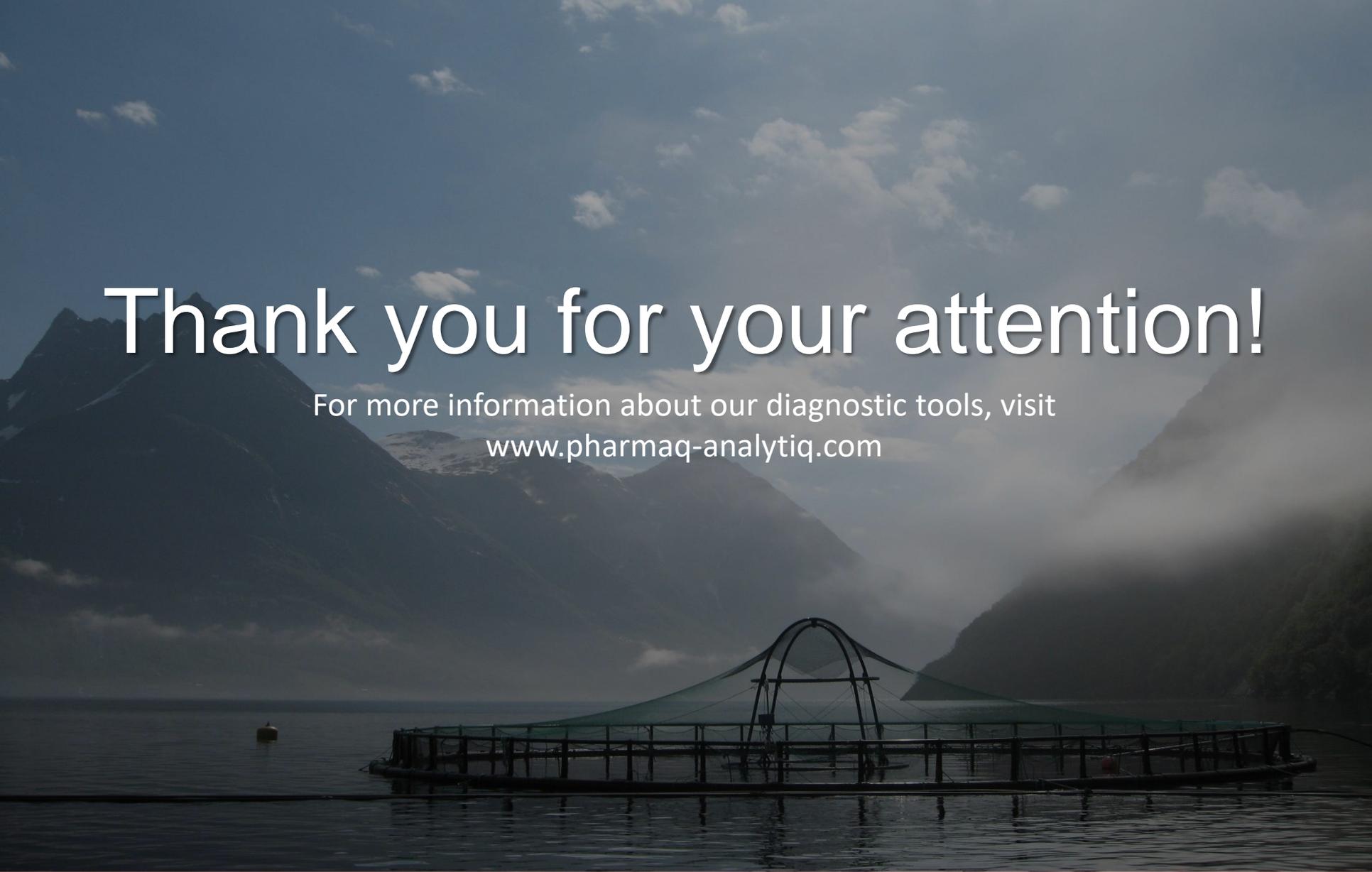


- Flow through
- 119 grams
- 12:12/24:0 start 11.07





SmoltVision is a new welfare indicator which gives earlier and more detailed information about the smoltification process



Thank you for your attention!

For more information about our diagnostic tools, visit
www.pharmaq-analytiq.com