Global Seafood Alliance Logo

- GOAL Events
- Advocate Magazine
- Aquademia Podcast
- Blog
- Contact

- Log In

- About
  - Who We Are
  - Our History
  - Our Team
  - Sustainable Development Goals
  - Careers
- Membership
  - Overview
  - Our Members
  - Corporate Membership
- Resources
- Certification
  - Best Aquaculture Practices
  - Best Seafood Practices

Search...

Log In

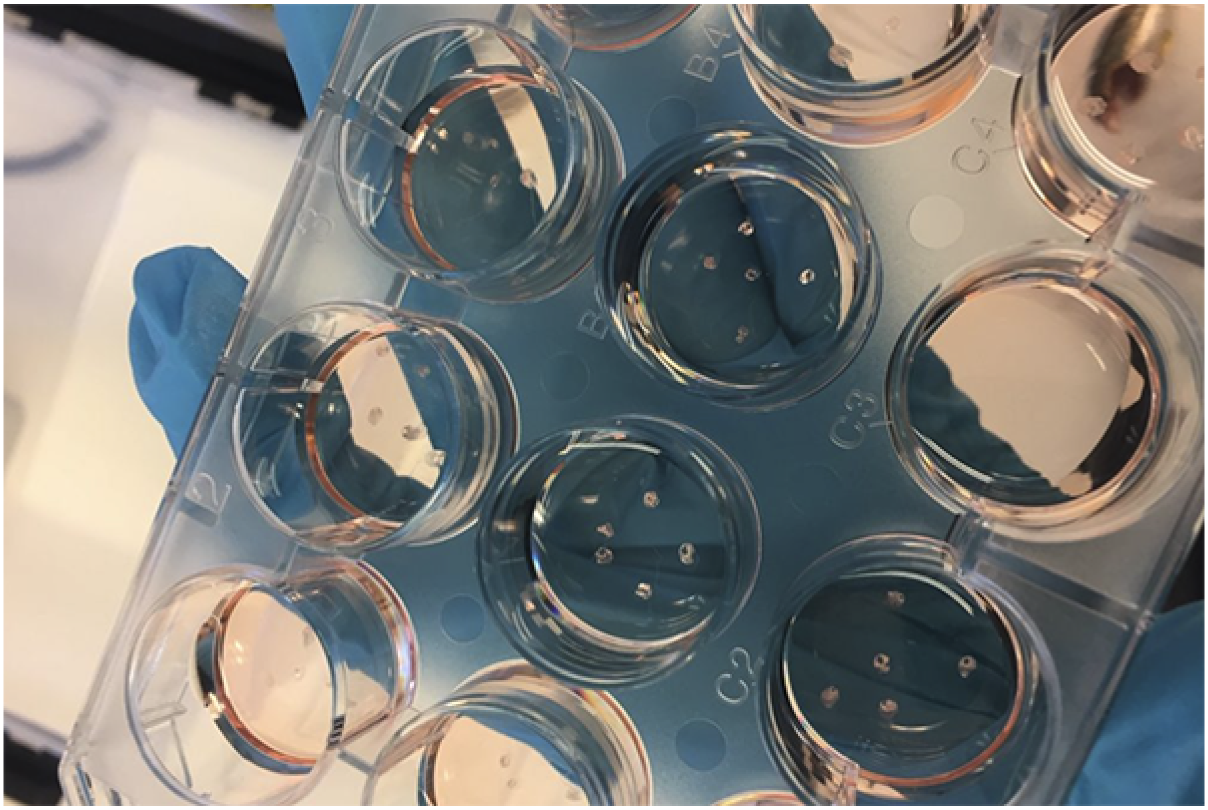
- About
  - Who We Are
  - Our History
  - Our Team
  - Sustainable Development Goals
  - Careers
- Membership
  - Overview
  - Our Members
  - Corporate Membership
- Resources
- Certification
  - Best Aquaculture Practices
  - Best Seafood Practices
- GOAL Events
- Advocate Magazine

Responsibility
Responsibility

Norwegian researchers addressing climate change-related stress

Responsible Seafood Advocate logo
5 January 2022 Responsible Seafood Advocate

Nofima aims to glean insights on how cod, salmon and lumpfish tackle challenges in their farm environments



Nofima is developing a methodology to help aquaculture understand climate-change-related stress for species like cod, salmon and lumpfish. Photo of cod cells by Elisabeth Ytteborg/Nofima.

Norwegian food research institute Nofima is developing a methodology to help aquaculture understand climate-change-related stress for species like cod, salmon and lumpfish.

Staff scientist Elisabeth Ytteborg and colleagues have created tools to compare how stressful environments affect various species' immune systems. New *in vitro* models involve the cultivation of cells from fish organs, like the skin and nose. The fish then indirectly inform the researchers how they address changing conditions in net-pen environments.

By using cell models, scientists can gain valuable information without using animals in trials.

"We need more knowledge about temperature and fish resilience. We can make real progress by using cell models," Ytteborg said in a recent company update.

Bacterial diseases may increase as water temperatures rise, and the three species under evaluation (salmon, cod, lumpfish) do not thrive at higher temperatures.

While Norway's cod-farming industry is not large, its national cod breeding program has been running for 20 years. That knowledge should be transferred to other relevant species, added Lill-Heidi Johansen, head of fish health in the national cod breeding program.

"Climate change brings along new challenges related to fish health. This is a field that has so far been given little priority," said Johansen. "We need to improve our toolbox so that we are prepared to meet health challenges that may arise, including species other than cod and salmon."

Nofima's models will be used in research for the industry and will be further developed. The institute received Norecopa's 3R animal research prize in 2021 for its work on developing alternatives to animals in experiments.

Follow the *Advocate* on Twitter @GSA_Advocate

Now that you've finished reading the article ...

… we hope you'll consider supporting our mission to document the evolution of the global aquaculture industry and share our vast network of contributors' expansive knowledge every week.

By becoming a Global Seafood Alliance member, you're ensuring that all of the pre-competitive work we do through member benefits, resources and events can continue. Individual membership costs just $50 a year.

Not a GSA member? Join us.

Support GSA and Become a Member

Author

- Responsible Seafood Advocate

  Responsible Seafood Advocate

  [103,114,111,46,100,111,111,102,97,101,115,108,97,98,111,108,103,64,114,111,116,105,100,101]

Share

- ✉ Share via Email
- Share on Twitter

- Share on Facebook
- Share on LinkedIn

Tagged With

salmon stress climate change lumpfish cod News Nofima

Related Posts

Aquafeeds

Bridging the omega-3 gap with methane, microalgae

Innovation is leading to new ingredient options for renewable sources of omega-3 fatty acids. But Replicating long chain fatty acids is a tall order, Advocate contributor Lisa Duchene discovered.

Intelligence

Effect of superchilling on Atlantic salmon quality through the value chain

Study assesses water holding properties and other quality attributes achieved through superchilling Atlantic salmon through the value chain until smoking.

Health & Welfare

Norwegian salmon smolt farms embracing RAS to raise production

Smolt production in Norwegian hatcheries will likely increase during the next decade to answer salmon grow-out needs. Farmers are converting existing flow-through systems to partially or fully incorporate recirculation technologies.

About The Advocate

The Responsible Seafood Advocate supports the Global Seafood Alliance’s (GSA) mission to advance responsible seafood practices through education, advocacy and third-party assurances.

Learn More

Search Responsible Seafood Advocate Search Search

Advertising Opportunities

2022 Media & Events Kit

Categories

Aquafeeds › Health & Welfare › From Our Sponsors › Innovation & Investment › Intelligence ›
Responsibility Responsibility › Fisheries › Artículos en Español ›

Don't Miss an Article

Featured

- Health & Welfare An update on vibriosis, the major bacterial disease shrimp farmers face
- Intelligence A seat at the table: Fed By Blue team says aquaculture needs a stronger voice
- Responsibility Quantifying habitat provisioning at macroalgae cultivation locations

Popular Tags

All Tags

Recent

- Fisheries Second Test: Another filler for the fisheries category
- Fisheries Test: This is filler for the fisheries Category
- Aquafeeds Test Article
- Responsibility Study: Climate change will shuffle marine ecosystems in unexpected ways as ocean temperature warms
- Health & Welfare Indian shrimp researchers earn a patent for WSSV diagnostic tool

- About
- Membership
- Resources
- Best Aquaculture Practices (BAP)
- Best Seafood Practices (BSP)
- GOAL Events
- Advocate Magazine
- Aquademia Podcast
- Blog
- Contact

Stay up to date with GSA

-
-
- 𝕏
-
-

[Privacy]
[Terms of Use]
[Glossary]