

Cell immortalization for cultivated seafood

[The Good Food Institute](#) is researching the use of various immortalization techniques for cells intended to be used in cultivated seafood products. This survey is intended to capture information regarding successes and challenges faced by cultivated seafood companies and academic researchers when immortalizing cells, using immortalized cells, or performing long-term primary cultures. We also plan to approach a subset of contributors to participate in optional follow-up interviews to gain additional insights into their answers.

How will the data be used or reported?

The results of the survey and interviews will be summarized in an open-access report that we will aim to publish in late 2025, in a similar format to previous reports such as:

- [Cultivated meat media and growth factor trends](#) (2021)
- [Trends in cultivated meat scale-up and bioprocessing](#) (2024)
- [Omega-3 ingredient use in alternative meat and seafood products](#) (2024)

Please note: this project can only proceed if GFI receives at least 5 usable survey responses, to ensure the contributed data can be meaningfully aggregated/extrapolated and fully anonymized.

Raw data from the survey responses will only be accessible by the GFI staff directly involved in the project.

The answers to these survey and interview questions will provide valuable insights into the needs of cultivated seafood when it comes to immortalized cells, the main challenges faced by companies and researchers, and which specific methods are likely to be successful or unsuccessful when applied to specific aquatic species. We may include direct quotes from survey responses or interviews, though we will avoid using any quotes that reveal the identity of the company and will respect any requests to avoid using direct quotes.

The level of detail of these insights and the final contents of the report will depend on the amount and quality of data collected. In the best case scenario, the report will contain a first draft of a generalized protocol or set of best practices for generating immortalized cell lines, with tips for adapting the described methods to specific species or cell types. A less ideal, though still useful, version of this deliverable would be a summary of the current state of science when it comes to immortalization of cultivated seafood-relevant cells.

Who should fill out the survey?

We are seeking responses from companies and academic researchers who develop or use immortalized cell lines from fish or shellfish (including crustaceans and mollusks) or those who

conduct long-term primary cultures (at least 10 passages) from fish or shellfish. This questionnaire is best suited to be answered by **personnel familiar with your company's work on developing or using cell lines from fish or shellfish**. For example, this may be the CSO or scientists within your cell line development teams. While the main focus of this survey is cell lines for cultivated seafood, we welcome responses from those in other sectors (e.g., aquaculture, toxicology, virology and immunology) who develop or use aquatic animal cell lines as part of their work.

If you're not the correct person, please feel free to forward this information to the relevant person in your company or fill out the survey collaboratively.

We would appreciate your responses to the [survey questionnaire](#) by 11:59 PM PT on March 14, 2025.

This survey may take 10-30 minutes (for cell line developers) or 5-10 minutes (for cell line users) to complete. Some survey sections will be shown or hidden based on your responses, so this is only a rough estimate. We thank you for your time in advance!

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Confidentiality:

All survey questions are optional. You are free to refrain from answering any questions in the survey. **Raw data are stored in databases maintained by GFI and password-protected for accessibility only by the specific GFI staff involved in this project. Other survey participants will not have access to raw data. Published results will be based on aggregated and/or extrapolated data, fully anonymized and untraceable to any respondent. Your company or institution will not be named in the report unless you expressly state you would like to be acknowledged as a contributor, and then only if GFI has received a sufficient number of survey responses to ensure no results can be traced back to any one contributor.** To the extent possible, aggregated results can be shared with data contributors before reports are made public by opting in during the survey.

If you have any concerns or wishes for greater confidentiality, please contact GFI at the emails above.