## Creation of innovative food production technologies responding to future changes in climate and social demands

## Development of new generation aquafeeds for the future animal protein demand

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## **Summary:**

- Aquaculture has been the fastest sector of animal protein production due to the world population growth.
- ◆ Choice of alternative protein and lipid sources for aquafeeds must be expanded to satisfy the future demand for the feed production.
- ◆ In particular, the current supply of DHA and EPA, essential nutrients for many marine fish, almost entirely relies on fish oil produced from captured fish, and thus is limited.
- ◆ In the present project, we aim to utilise aquatic small invertebrates such as polychaetes and amphipods as novel sustainable feed ingredients for the aquaculture by maximising their DHA and EPA contents.
- ◆ More specifically, our missions of the project are (1) selection of candidate species for accumulation and production of high-level DHA and EPA (2) development of technology to maximise their DHA and EPA contents for satisfying expanding demand for aquaculture.

