



## Amino Acid Supplementation in Fish Nutrition and Welfare

Guest Editors:

**Dr. Cláudia Aragão**

CCMAR, Universidade do Algarve  
Campus de Gambelas, edf 7,  
8005-139 Faro, Portugal

**Dr. Sofia Engrola**

CCMAR, Universidade do Algarve-  
Campus de Gambelas, 8005-139  
Faro, Portugal

**Dr. Benjamín Costas**

Interdisciplinary Centre of Marine  
and Environmental Research  
(CIIMAR), University of Porto,  
4450-208 Matosinhos, Portugal

Deadline for manuscript  
submissions:

**1 August 2024**

### Message from the Guest Editors

Dear Colleagues,

Amino acids are the building blocks of protein synthesis, thus representing the foundations for growth. In recent years, their importance as regulators of key metabolic functions has been acknowledged. The aquaculture industry has grown exponentially, always facing several challenges toward more sustainable production. Nutrition is key for achieving this goal and amino acids play a fundamental role, as a strategy to balance the profile of alternative protein sources or as functional ingredients to increase fish robustness and resilience.

In this Special Issue, we invite contributions focusing on the use of amino acids for fish and shrimp nutrition, at all developmental stages, in the following research topics:

- Amino acid metabolism and requirements;
- Amino acids as promoters of fish/shrimp performance and robustness;
- Use of non-proteinogenic amino acids (such as taurine, ornithine, hydroxyproline, etc.) in fish nutrition;
- Impacts of amino acids on the stress response and immunological, antioxidant, and health status.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Clive J. C. Phillips

1. Institute of Veterinary Medicine  
and Animal Sciences, Estonian  
University of Life Sciences,  
Kreutzwaldi 1, 51014 Tartu,  
Estonia  
2. Curtin University Sustainability  
Policy (CUSP) Institute, Kent St.,  
Bentley 6102, Australia

## Message from the Editor-in-Chief

*Animals* is an on-line open access journal that was first published in 2011. *Animals* adheres to rigorous peerreview and editorial processes and publishes only high quality manuscripts that address important issues in the many varied disciplines that involve animals, with a focus on animal science, animal welfare and animal ethics. *Animals* is covered in the Science Citation Index Expanded (SCIE) in Web of Science, with the latest Impact Factor: 3.0 (2022, ranks 12 /62 (Q1) in ‘Agriculture, Dairy & Animal Science’; 13/143 (Q1) in ‘Veterinary Sciences’), 5-Year Impact Factor: 3.2.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, PubAg, AGRIS, Animal Science Database, CAB Abstracts, and other databases.

**Journal Rank:** JCR - Q1 (*Veterinary Sciences*) / CiteScore - Q1 (*General Veterinary*)

## Contact Us

*Animals* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/animals](http://mdpi.com/journal/animals)  
[animals@mdpi.com](mailto:animals@mdpi.com)  
[X@Animals\\_MDPI](https://twitter.com/Animals_MDPI)