Nikos Papandroulakis (PhD)

Research Director, Institute of Marine Biology, Biotechnology and Aquaculture
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Education

- Ph.D., Marine Biology, University of Crete, Greece 2000
- M.Sc., Theoretical Physics, University of Crete, Greece1988
- B.Sc., Physics, University of Crete, Greece. 1986

Professional Profile

- 2018-current, Vice president of the Hellenic Technology and Innovation Platform, responsible of the Research Agenda.
- 2015-current Deputy Member of the National Aquaculture Council of the Ministry of Rural Development and Food
- 2014-current Member of the Sectorial Scientific Council of the General Secretariat for Research and Technology for Agricultural Production, Nutrition, Food, Agro-biotechnology and Aquaculture
- 2014-2016 Coordinator of the GSRT advisory group for the definition of Research priorities for the Greek aquaculture in the frame of RIS 2014-2020.
- 2012-current Research Director, Institute of Marine Biology Biotechnology and Aquaculture, Hellenic Center for Marine Research
- 2003-current Adjunct Researcher, Instituto Canario de Ciencias Marinas, Telde, Gran Canaria, Spain

Research Interests

Dr. Papandroulakis research was initially focused on the improvement of methodologies and technologies for intensive and semi-intensive larval rearing of fish studying more than 15 different species (since 1991), and the study of their feeding requirements. This study is extended with the development of mathematical models of food consumption and growth in order to understand and describe the implicated biological mechanisms aiming the improvement of husbandry practice and the development of automated management and feeding systems in hatcheries and cage farms. The study of fish behavior (since 2005) in rearing conditions and during stress is aiming to understand the physiological mechanisms involved and to develop methods - indicators for monitoring and management of farmed populations during the production process.

Since 2000 he is interested in the specific diversification of aquaculture production emphasizing on the fast growing species like the wreckfish (*Polyprion americanus*), for which for first time the successful control of its reproduction in captivity was achieved and the development of appropriate methodologies for the larval rearing of the blue fin tuna (*Thunnus thynnus*). The greater amberjack (*Seriola dumerili*) and the meagre (*Argyrosomus regius*) are the target species for the Mediterranean aquaculture for which successful methods for larval rearing and grow out are developed.

He is involved in the development of offshore aquaculture concepts for multipurpose oceanic platforms, developing the aquaculture module with emphasis on the synergies with other activities, modelling technologies and analyzing the economic characteristics of the activity. Recently he is interested in offshore aquaculture developing tools for new, monitoring, operation and decision making schemes, towards precision farming.

He has published 4 chapters in books and more than 100 original papers in scientific journals and papers in Journals of International Scientific Societies (1,168 citations, h-index 21).

He has been involved as coordinator or partner in 34 National and EU projects (such as. AquaExcel2020, TROPOS, COPEWELL, DIVERSIFY, TAPAS, CLIMEFISH, PERFORMFISH, iFishENCi and BlueMed SCA).

He has participated as lecturer at the “University Master Course in Aquaculture” and the “University PhD Course in Aquaculture” organized from the University of Las Palmas de Gran Canaria and since 2016 at the “Erasmus+ Joint Master Degree in Aquaculture Environment and Society” coordinated by the Scottish Association for Marine Science (SAMS), the University of the Highlands and Islands, the University of Crete, the University of Nantes.

PUBLICATIONS (selected)

Book Chapter

Mozes N., Papandroulakis N., Vergara J.M, Biswas A. K., Takii K., Ntatsopoulos A. 2011. Production systems. In Pavlides, M. and C.C. Mylonas (eds), Sparidae: Biology and Aquaculture. Wiley-Blackwell, Oxford, 390 pp

Papandroulakis N. and P. Divanach. 2014. Culture of marine fish other than sea bream and sea bass. In P. Angelidis (Ed), Aspects of Mediterranean Marine Aquaculture, Farming, Health, Processing. Blue Crab PC Publisher, Chalastra, Greece, 635 pp.

Nikos Papandroulakis, Claudia Thomsen, Katja Mintenbeck, Pedro Mayorga, José Joaquín Hernández-Brito. 2016. TROPOS EU-Project. In "Aquaculture Perspective of Multi-Use Sites in the Open Ocean. The Untapped Potential for Marine Resources in the Anthropocene; Buck, B.H., Langan, R., Eds.; Springer: Berlin, Germany; Heidelberg, Germany

Alicia Estévez, Nikos Papandroulakis, Mathieu Wille, Patrick Sorgeloos. Chapter 6. Early Life Stages and Weaning. in "Organic Aquaculture, Impacts and Future Developments", Elena Mente, Giuseppe Lembo Eds, Springer Nature Switzerland AG 2019. Online ISBN 978-3-030-05603-2. https://doi.org/10.1007/978-3-030-05603-2

Journals

Jose Pérez Pérez Ioannis Papadakis, Nikos Papandroulakis, Lorenzo Cruces, Efthimia Cotou, Enric Gisbert, Antonio Lorenzo, Constantinos Mylonas, Covadonga Rodriguez. 2019. Ontogeny of greater amberjack digestive system under different rearing conditions: a histological and enzymatic approach. Aquaculture Nutrition, Accepted

Aikaterini Kandyliari, Sotirios Karavoltsos, Aikaterini Sakellari, Panagiotis Anastasiadis, Michalis Asderis, Nikos Papandroulakis, Maria Kapsokefalou · 2020 ·Trace metals in six fish by-products of two farmed fishes, the gilthead sea bream (*Sparus aurata*) and the meagre (*Argyrosomus regius*): interactions with the environment and feed. Human and Ecological Risk Assessment: An International Journal. https://doi.org/10.1080/10807039.2020.1799188

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Aikaterini Kandyliari, Athanasios Mallouchos, Nikos Papandroulakis, Jaya P. Golla, Aikaterini Sakellari, Sotirios Karavoltsos, Vasilis Vasiliou, Maria Kapsokefalou, 2020. Nutrient composition, fatty acid and protein profile of selected fish by-products. Foods, 2020, 9, 190; doi:10.3390/foods9020190

I. Fakriadis, I. Sigelaki, M. Papadaki,. N. Papandroulakis, A. Raftopoulos, K. Tsakoniti, C. Mylonas 2019, Control of reproduction of greater amberjack Seriola dumerili reared in aquaculture facilities. Aquaculture, https://doi.org/10.1016/j.aquaculture.2019.734880

George Livanos, Michalis Zervakis, Vaggelis Chalkiadakis, Konstantia Moirogiorgou, George Giakos, Nikos Papandroulakis, 2018 Intelligent Navigation and Control of a Prototype Autonomous Underwater Vehicle for Automated Inspection of Aquaculture net pen cages. 2018 IEEE International Conference on Imaging Systems and Techniques (IST)

E. Sarropoulou, E. Kaitetzidou, N. Papandroulakis, A. Tsalafouta, M. Pavlidis, 2019. Inventory of European sea bass (*Dicentrarchus labrax*) sncRNAs vital during early teleost development. Frontiers in Genetics. https://doi.org/10.3389/fgene.2019.00657

E. Pérez, F. Linares, J. L. Rodríguez Villanueva, A. Vilar, C. C. Mylonas, I. Fakriadis, M. Papadaki, N. Papandroulakis, I. Papadakis, R. Robles, C. Fauvel, J. Roo, J. B. Peleteiro, N. Lluch, G. Pazos, B. Méndez, I. Sigelaki, C. Gómez, M. Pérez, B. Álvarez-Blázquez. 2019. Wreckfish (*Polyprion americanus*). New knowledge about reproduction, larval husbandry and nutrition. Promise as a new species for aquaculture. *Fishes*, *4*(1), 14; https://doi.org/10.3390/fishes4010014

T. Samaras, N. Papandroulakis, K. Lika, M. Pavlidis, 2018. Water temperature modifies the acute stress response of European sea bass, *Dicentrarchus labrax* L. Journal of Thermal Biology 78 (2018) 84–91. https://doi.org/10.1016/j.jtherbio.2018.09.006

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A. Samaras, N. Papandroulakis, M. Costari, M. Pavlidis. 2015. Stress and metabolic indicators in a relatively high (European sea bass, *Dicentrarchus labrax*) and a low (meagre, *Argyrosomus regius*) cortisol responsive species, in different water temperatures. Aquaculture Research. 1-15 doi:10.1111/are.12800

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S. Lu and J. Yu, J. Wesnigk, E. Delory, E. Quevedo, J. Hernández, O. Llinás, L. Golmen, N. Papandroulakis, P. Anastasiadis, 2014. Environmental Aspects of Designing Multi-Purpose Offshore Platforms in the scope of the FP7 TROPOS Project. In OCEANS 14 MTS/IEEE.

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