CURRICULUM VITAE

Emmanouil Malandrakis

Assistant Professor Agricultural University of Athens

PERSONAL DETAILS

Emmanouil E. Malandrakis Assistant Professor Department of Animal Science Agricultural University of Athens

Address: Iera Odos 75, Athens PC 11855 Mobile no.: (+30) 697 2292380 E-mail: <u>emalandrak@aua.gr</u> Date of birth: 28.2.1980 Place of origin: Chania, Crete, Greece

EDUCATION

2014: PhD in Agricultural Sciences, University of Thessaly, Department of Ichthyology and Aquatic Environment, Greece.

2006: M.Sc. in Sustainable Management of Aquatic Environment, University of Thessaly, Department of Agriculture Animal Production and Aquatic Environment, Greece.

2004: Integrated Master, University of Thessaly, Department of Agriculture Animal Production and Aquatic Environment, Greece.

SHORT COURSES

2019: Institute of Marine Research, Bergen, Norway. Training course: Laboratory animal science for aquatic research facilities. 17 – 21 June 2019. Funded by AQUAEXCEL2020.

2013: European Molecular Biology Laboratory (EMBL), Heidelberg, Germany. Advanced course: Towards Next-Generation Sequencing data integration. 23 – 25 September 2013. Funded by MANTOLES – Thales project.

2008: European Molecular Biology Laboratory (EMBL), Heidelberg, Germany. Network of Excellence Marine Genomics Europe joint EMBL/Sigma qPCR practical course. 23 – 27 June 2008. Funded by NoE-MGE

TEACHING EXPERIENCE

Undergraduate Courses

Management of Aquaculture Enterprises

Biochemistry

Aquaculture I

Production of Aquatic Organisms

Postgraduate Course

Sustainable aquaculture

RESEARCH INTERESTS

Functional genomics in marine species: gene expression and epigenetic modifications Molecular endocrinology: function of antioxidant mechanisms and glucocorticoid receptor Selective breeding assisted with molecular markers Developmental biology and evolution Population molecular genetics and ecophysiology Broodstock management

PROFESSIONAL EXPERIENCE

November 2019-now

Assistant Professor, Department of Animal Production Science, Agricultural University of Athens, Votanikos, Athens, Greece

March 2016-November 2019

Production Manager, Roussas Dairy SA, Almiros, Greece

April 2014 – September 2019

Post-doctoral scholar. University of Thessaly - Department of Ichthyology and Aquatic Environment

January 2015 – October 2015

Post-doctoral fellow. Agricultural University of Athens. Faculty of Animal Science and Aquaculture

January 2005 – March 2014

Research associate in research projects (analyzed below in Research projects session)

November 2004 – February 2005

Sea Farm Ionian SA (Nireus Aquaculture Group), Fthiotida

Intern (Rearing of seabass, gilthead seabream, sharpsnout seabream, red porgy)

August 2001

Institute of Aquaculture, Hellenic Center for Marine Research, Crete

Intern (Spawning and weaning of common dentex and grouper)

July 2001

Department of Fisheries, Magnesia Prefecture Intern (Fisheries and aquaculture legislation)

RESEARCH PROJECTS

January 2020 – February 2021

Agricultural University of Athens. European University for Smart Urban Coastal Sustainability (Erasmus+ Programme). Funded by EU-CONEXUS.

August 2019 – October 2019

Wageningen University and Research. Compensatory growth and single nucleotide variation in European sea bass (*Dicentrarchus labrax*). Lead applicant of the project. Funded by TNA - AQUAEXCEL 2020.

January 2015 – October 2015

Agricultural University of Athens. Use of *discarded fish* species in aquafeeds for experimental rearing of sea bream and sea bass.

October 2014 - October 2015

University of Thessaly. Utilization of processed animal proteins (PAP) in fish feed of gilthead sea bream (*Sparus aurata*)

March 2014 – October 2015

University of Thessaly. Application of contemporary practices towards minimization of aquaculture environmental impact on the substrate: Sea cucumber *Holothuria tubulosa* as a case study

March 2014 – October 2015

University of Thessaly. Growth compensation: a novel & friendly to the environment practice towards cost reduction in Hellenic aquaculture

August 2012 – December 2014

University of Thessaly. THALES - Marine angiosperm tolerance on environmental stress: physiological - cellular - biochemical - molecular mechanisms related to species and habitat diversity.

February 2012 – April 2012

University of Thessaly. Research project: Applying new techniques in intensive rearing of seabream (*Sparus aurata*). Funded by INVE Hellas SA.

May 2011 – December 2011

University of Thessaly. Lab of Ichthyology and Hydrobiology. Funded by the aquaculture private sector.

Research assistant (Current flow measurements in aquaculture farms according to the Greek legislation L.3010/2002 and European Directives).

June 2010 – December 2010

University of Thessaly. Lab of Ichthyology and Hydrobiology. Funded by the aquaculture private sector.

Research assistant (Current flow measurements in aquaculture farms according to the Greek legislation L.3010/2002 and European Directives).

June 2010

Hellenic Center for Marine Research - University of Thessaly. Joint research project: Enhancement of high-quality fish populations along the coasts of Lasithi Prefecture: *Mullus surmuletus* as a case study. Funded by Region of Crete.

August 2009 – September 2009

University of Thessaly. Lab of Ichthyology and Hydrobiology. Funded by the aquaculture private sector.

Research assistant (Current flow measurements in aquaculture farms according to the Greek legislation L.3010/2002 and European Directives).

July 2008 – December 2008

University of Thessaly. Research project: Evaluation of genetic stock towards improvement of fisheries stock in the area of Vistonida Lake. Co-funded by the European Union and the Greek State

April 2007 – August 2008

University of Thessaly. Research project: Stocking of Dover sole (*Solea solea*) juveniles towards restoration and conservation of fisheries stock in Pagasitikos Gulf. Co-funded by the European Union and the Greek State

April 2007 – December 2007

University of Thessaly. Research project: Support structure establishment of fisheries and economic activities in Pagasitikos Gulf. Co-funded by the European Union and the Greek State

January 2005 – December 2006

University of Thessaly. Research project: Evaluation of quality characteristics of reared edible snail *Helix aspersa*. Pythagoras II project. Co-funded by the European Union and the Greek State

SKILLS

Language

Greek (native), English (TOEIC 935/990, IELTS 7.5/9.0), Spanish (B2 National Foreign Language Exam System, Dele A2 Instituto Cervantes)

IT skills

MS Windows, Linux Ubuntu, MS Office, Image processing (Adobe Photoshop, Adobe Illustrator), Data bases (MS Access), Internet and LAN (Internet Explorer, Mozilla Firefox), statistical analysis (PASW, SPSS, SAS JMP), population genetics analysis (Strand, GenAlex, Arlequin, Bottleneck, BioEdit), DNA sequence and primer design (Beacon Designer, Allele ID, Array Designer, Primer3, ClustalW, BLAST), SNP and microsatellite genotyping, RT-qPCR, RAPD and RFLP analyses, Next-generation sequencing analysis (FASTX toolkit, SEECER, Trinity, Oases, SOAPdenovoTrans, Tophat, Bowtie, Cufflinks, CORSET, DESeq)

Technical skills

DNA – RNA extraction, PCR and RT-qPCR, molecular cloning, HRM genotyping, microsatellite genotyping, RAPDs, RFLPs, SCGE, ELISA, electrophoresis, genomic library construction, RACE.

Scuba Diving

PADI Open Water Diver

PUBLICATIONS

PhD dissertation

1. Malandrakis, E.E., (2014) Stress and welfare of intensively reared fish. University of Thessaly. pp 153

Peer-reviewed journal papers

- 2. Ntantali, O., **Malandrakis, E.E.,** Abbink, W., Golomazou, E., Karapanagiotidis, I.T., Miliou, H., and Panagiotaki, P., Whole brain transcriptomics of intermittently fed individuals of the marine teleost *Sparus aurata Comparative Biochemistry and Physiology Part D: Genomics and Proteomics*. (under review).
- 3. Psofakis, P., Karapanagiotidis, I.T., **Malandrakis, E.E.,** Golomazou, E., Exadactylos, E., and E. Mente (2020) Effect of fishmeal replacement by hydrolyzed feather meal on growth performance, proximate composition, digestive enzyme activity, haematological parameters and growth-related gene expression of gilthead seabream (*Sparus aurata*). *Aquaculture* (in press)
- Kavouras, M., Malandrakis, E.E., Danis, T., Blom, E., Anstassiadis, K., Panagiotaki, P., and A. Exadactylos (2019) Hox genes polymorphism depicts developmental disruption of common sole eggs. Open Life Sciences. 14: 549–563
- Gkafas G.A., Hatziioannou M., Malandrakis E. E., Tsigenopoulos C.S., Karapanagiotidis I.T., Mente E., Vafidis, D., and A. Exadactylos (2019) Heterozygosity fitness correlations and generation interval of the Norway lobster in the Aegean Sea, eastern Mediterranean. Journal of Biological Research-Thessaloniki 26:14.

- Kavouras, M., Malandrakis, E.E., Golomazou E., Konstantinidis, I., Blom, E., Arjan P. Palstra, AP, Anastassiadis K., Panagiotaki, and A. Exadactylos (2019) Hox gene expression profiles during embryonic development of common sole. *Animal Biology*. 69 (2): pp. 183–198
- Karapanagiotidis, I.T., Psofakis, P., Mente, E., Malandrakis, E.E. and E. Golomazou (2018) Effect of fishmeal replacement by poultry by-product meal on growth performance, proximate composition, digestive enzyme activity, haematological parameters and gene expression of gilthead seabream (*Sparus aurata*). *Aquaculture Nutrition*. 25(1): pp. 3-14
- 8. **Malandrakis E.E.,** Dadali O., Kavouras M., Danis T., Panagiotaki P., Miliou H., Kuepper F. and Exadactylos A. (2017) Identification of the abiotic stress-related transcription in little Neptune grass *Cymodocea nodosa* with RNA-seq. *Marine Genomics.* 34: pp. 47-56
- 9. Golomazou E., **Malandrakis E.E.**, Kavouras M., Karatzinos T., Miliou H., Exadactylos A. and Panagiotaki P. (2016) Anaesthetic and genotoxic effect of medicinal plant extracts in gilthead seabream (*Sparus aurata* L.). *Aquaculture*. 464: pp. 673-682
- Malandrakis E.E., Dadali O., Golomazou E., Kavouras M., Dailianis S., Chadio S., Exadactylos A. and Panagiotaki P. (2016) Effects of physical stress on DNA integrity, gene expression and blood cortisol in gilthead seabream (*Sparus aurata*). *General and Comparative Endocrinology*. 236: pp. 98-104.
- 11. Chatzidimopoulos M., Psomopoulos F., **Malandrakis E.E.**, Ganopoulos I., Madesis P., Vellios E.K. and Drogoudi P. (2016) Comparative genomics of *Botrytis cinerea* strains with differential multidrug resistance. *Frontiers in Plant Science*. 7.
- Golomazou E., Exadactylos A., Malandrakis E.E, Karatzinos T., Gkafas G., Dadali O., Panagiotaki O. (2014). Early diagnosis of enteromyxosis in intensively reared sharpsnout seabream, *Diplodus puntazzo*. Aquatic Living Resources. 27: pp. 99–106
- Malandrakis E.E., Exadactylos A., Dadali O., Golomazou E., Klaoudatos S. Panagiotaki P. (2014). Molecular cloning of four glutathione peroxidase (*GPx*) homologs and their expression during stress exposure of the marine teleost *Sparus aurata*. *Comparative Biochemistry and Physiology* - *Part B: Biochemistry & Molecular Biology*. 168: pp. 53-61.
- 14. Exadactylos A., **Malandrakis E. E**., Panagiotaki P., Geffen⁻ A. J. (2013). The development of size variation in Dover sole, *Solea solea* and turbot, *Scophthalmus maximus*: genetic variability between different geographic and among year class farmed strains. *Aquaculture Research*. 44: 1912–1925.
- 15. Dimopoulos D., Panagiotaki P., Golomazou E., **Malandrakis E**., Dadali O., Martsikalis P., Exadactylos A., Klaoudatos S., Neofitou C. (2010). Partial replacement of fresh algae with dry, in intensive sea bream larval production. *International Aquatic Research*. 2(3): pp. 163-166.
- Mente E., Karapanagiotidis I.T., Logothetis P., Vafidis, D. Malandrakis E.E., Neofitou N., Exadactylos A., and Stratakos A. (2009). The reproductive cycle of Norway lobster (*Nephrops norvegicus*). *Journal of Zoology*. 278(4): pp. 324 – 332
- 17. Georgoulakis I.E., Alexopoulos K., Miliotis C., **Malandrakis E.E.**, Kyriakis S.C. (2004). Evaluation of Toyocerin[®], a probiotic containing *Bacillus toyoi* spores, on the health status and performance of sows and their litters. *Journal of the Hellenic Veterinary Medical Society.* 55(1): pp. 34-45

Book chapters

- Malandrakis, E.E., Golomazou, E. and P. Panagiotaki (2019). Fish and Genes: From Marine Ecology to Applied Hydrobiology and Beyond. In: Nriagu, J. (Ed.), Encyclopedia of Environmental Health. Elsevier, pp. 1–7.
- 19. Panagiotaki P. and **E.E. Malandrakis** (2018) Aquatic environment and fish welfare in aquaculture. In: Nriagu, J. (Ed.), Encyclopedia of Environmental Health. Elsevier, pp. 143-146
- 20. Malandrakis E.E. and O. Dadali (2018) Genome guided transcriptomics, DNA-protein interactions and variant calling in Abdurakhmonov I. Bioinformatics in the Era of Post Genomics and Big Data. Intech
- **21. Malandrakis E.E.**, Danis T., Iona A. and A. Exadactylos. (2017) Abiotic stress of seagrasses: Recent advances in transcriptomics, genomics and systems biology in Sablok G, Kumar M and Ralph P. (Eds) **System Biology in Marine Ecosystem.** Molecular Ecology Series. Springer

Reviewed conference papers

- 22. Koutalianou M, **Malandrakis EE**, Tsioli S, Papathanasiou V, Exadactylos A, Dadali O, Katsaros C, Orfanidis S, Küpper FC (2017) Stress response of the Mediterranean seagrass, Cymodocea nodosa at the ionomic, transcriptomic, ultrastructural and physiological levels. 15th Pan-Hellenic Scientific Conference, Hellenic Botanical Society, Mediterranean Agronomic Institute of Chania (MAICh). Chania, Greece
- 23. Sagris V., Koutrolikou A., **Malandrakis EE**, Karatzinos T, Dadali O, Dedeloudis D, Panagiotaki P, Golomazou E (2017) Experimental transmission of Lymphocystis disease virus (LCDV) in gilthead seabream (Sparus aurata L.): Preliminary results. H.S.B.S. Scientific Conference, Lamia, Greece.
- 24. Papanikolaou G, Miliou E, Golomazou E, Malandrakis EE, Dadali O, Matouzi A, Exadactylos A, Panagiotaki P (2016) Study of growth compensation after implementation of starvation subsequent refeeding feeding protocol in intensively reared seabream. 2nd International Congress on Applied Ichthyology and Aquatic Environment - HydroMediT 2016: pp. 103-107, Messolonghi, Greece
- 25. Kavouras M., **Malandrakis E.E.**, Gkafas G., Blonk R.J.W., Anastassiadis K., Panagiotaki P. and Exadactylos A. (2014) *Hox* genes polymorphism in early life history of *Solea solea*. 9th International Flatfish Symposium, Washington, USA
- Pappas, N., Panagiotaki, P., Matsiori, S., Golomazou, E., Malandrakis E., Martsikalis P., Dadali, O., Exadactylos, A. and Neofytou, N. (2011) Cost evaluation of seabream and sea bass larval production in Greek hatcheries. Aquaculture Europe 11, October 18-21, Rhodes, Greece.
- 27. Martsikalis, P., Palouki, V., Kavouras, M., Malandrakis E., Zambounis, A., Golomazou., E., Apostolidis, A., Moutou A., Boziaris, I., Panagiotaki, P., Exadactylos., A. (2011) Isolation and quantification of free aminoacids in rainbow trout *Oncorhynchus mykiss* (Walbaum 1792). 4th International Congress of Hydrobiology and Fisheries, Volos, Greece.
- Chasan E., Malandrakis, E., Martsikalis, P., Golomazou E., Exadactylos, A., Neofitou C., and Panagiotaki P. (2011) The influence of sedetion in stress response of seabream (*Sparus aurata* L. 1758). 4th International Congress of Hydrobiology and Fisheries, Volos, Greece.
- 29. Saitis A., Panagiotaki P., Exadactylos A., Golomazou E., **Malandrakis E.,** Dadali O., Klaoudatos S., and Neofitou C. (2011). Intensive rearing of genetically selected fish: Preliminary results. 4th International Congress of Hydrobiology and Fisheries, Volos, Greece.

- Kavouras M., Malandrakis E.E., Dailianis S., Dadali O., Chatzipli K., Golomazou E., Panagiotaki P., Kaloyianni M., Exadactylos A. (2010). DNA damage and repair efficiency (comet assay) in intensively reared sea bream (*Sparus aurata*), exposed to heavy metals. CIESM, Venice, Italy.
- 31. Dadali O., Malandrakis E.E., Palaiokostas C., Tsigenopoulos C., Magoulas A., Karapanagiotidis I.T., Neofitou N., Zampounis A., Mente E., Panagiotaki P., Vafidis D., Exadactylos A. (2009). Temporal and spatial genetic diversity of the edible decapod crustacean, *Nephrops norvegicus* (Linnaeus, 1758). 11th International Congress on the Zoogeography and Ecology of Greece and Adjacent Regions (I.C.Z.E.G.A.R.), Heraklion, Crete, Greece.
- Malandrakis E.E., Gogas A., Chatzipli A., Dadali O., Tsigenopoulos C., Magoulas A., Panagiotaki P., Lazaridou-Dimitriadou M., Neofitou C., Exadactylos A. (2008). Genetic diversity of edible snail (*Helix aspersa* M.) populations in southern Hellas and Cyprus. Congress of the European Malacological Societies, 2 8 September, Azores, Portugal.
- Karapanagiotidis I.T., Mente E., Loghothetis P.N., Vafidis D., Malandrakis E.E., Exadactylos A., Neofitou N. (2008). Research on *Nephrops norvegicus* reproduction in Pagasitikos gulf in Greece. Aquaculture Europe 08, 16-18 September, Krakow, Poland.
- 34. **Malandrakis E.E.,** Gogas A., Hatziioannou M., Panagiotaki P., Lazaridou-Dimitriadou M., Neofitou C., Exadactylos A. (2007). Morphological and shell quality natural population diversity of the edible snail (*Helix aspersa* M.), in southern Hellas. 16th World Congress of Malacology, 15-20 July, Antwerp, Belgium.
- 35. **Malandrakis E.E.,** Golomazou E.N. and Georgoulakis I.E. (2006). Parasitic interactions between cultured and wild marine species. 3rd International Congress on Aquaculture, Fisheries Technology and Environmental Management, 3–4 November, Athens, Greece.

Abstracts conference papers

- 36. Matsiori S, Matouzi A, Golomazou E, **Malandrakis EE**, Dadali O, Karamitros G, Gkafas GA, Kavouras M, Fleris G, Exadactylos A, Panagiotaki P (2015) Modern sustainable fish farming: growth compensation as a tool for aquaculture development. 3rd Hellenic Conference on Natural Resources Environmental Economics, Abstract, Volos, Hellas
- Arabatzi-Ziamou D, Golomazou E, Gkafas G, Malandrakis EE, Panagiotaki P, Exadactylos A. (2013) Early molecular tracing of Lymphocystis Disease Virus (LCDV) in intensively reared gilthead sea bream (*Sparus aurata*). 15th Hellenic Conference of Ichthyologists, Thessaloniki (in Greek)
- Pikoulas T., Panagiotaki, P., Exadactylos, A., Malandrakis, E., Martsikalis, P., Dadali, O., Klaoudatos, S. and Neofitou C. (2012). Comparison of four slaughtering methods in stress profile of seabream (*Sparus aurata*). 10th Symposium of Oceanography and Fisheries, Athens (in Greek).
- Evangelidis, P., Panagiotaki P., Malandrakis, E., Exadactylos., A., Klaoudatos S., and Neofitou C. (2010) The effect of cyclic feeding on growth and behaviour in goldfish (Carassius auratus, Linnaeus 1758). 14th Panhellenic Conference of Ichthyologists., Pireus. (in Greek).
- 40. Kavouras, M., Kassimatis, D., Dadali, O., Chatzipli K., Malandrakis E.E., Golomazou E., Exadactylos., A., Panagiotaki, P. (2009). DNA damage detection utilizing comet assay in intensively reared fish under stressful conditions. 9th Symposium of Oceangraphy and Fisheries, Patras. (in Greek).

Posters

- 41. Papadopoulou A., Natoudi S., Vousoureli P., Malandrakis E., Karatzinos T., Dadali O., Panagiotaki P., Golomazou E. 2017. Behavioural response of gilthead sea bream (*Sparus aurata* L.) towards herbal aquafeeds. Aquaculture Europe 2017, Dubrovnik, Croatia.
- 42. T Gerontis, E Golomazou, A Vergidou, **EE Malandrakis**, T Karatzinos, G Fleris, A Exadactylos, P Panagiotaki (2015) Efficacy of antihelminthic drugs at treatment of European eels infected by monogenean trematodes: preliminary results. 37th Scientific Conference of the Hellenic Society of Biological Sciences, Volos, Hellas.
- 43. V Papaioannou, A Bakalou, E Golomazou, EE Malandrakis, O Dadali, GA Gkafas, G Karamitros, M Kavouras, E Psochiou, A Exadactylos, P Panagiotaki: Growth compensation following restricted feeding in sea bream: preliminary results. 37th Scientific Conference of the Hellenic Society of Biological Sciences, Volos, Greece.
- 44. **Malandrakis, E.** (2011) Heavy metal genotoxicity in aquatic organisms 4th International Congress of Hydrobiology and Fisheries, Volos, Greece.
- 45. Panagou A., Golomazou, E., **Malandrakis, E.**, Martsikalis, P., Kavouras, M., Klaoudatos S., and Panagiotai P. (2010) Evaluation of oxytetracycline intake, related with fish feed consumption time. 14th Panhellenic Conference of Ichthyologists., Pireus. (in Greek).
- 46. Ekonomou, G., Zambounis, A., Megalofonou, P., Batzakas, I., Gkafas, G., Malandrakis, E., Kavouras, M., Martsikalis, P., Dadali, O., Panagiotaki, P., Vafidis, D., and Exadactylos, A (2010) Molecular phylogenetic species-specific interrelations of the Elasmobranchii subclass in Hellas.14th Panhellenic Conference of Ichthyologists., Pireus. (in Greek).
- 47. Papadopoulou A., Golomazou E., **Malandrakis, E.E.** and Panagiotaki P. (2008). Use of natural immunomodulators in aquaculture. 3rd International Congress of Hydrobiology and Fisheries, Arta, Greece.
- Malandrakis E.E., Kavouras M., Kassimatis D., Dadali O., Chatzipli C., Golomazou E., Exadactylos A. and Panagiotaki P. (2008). Fish welfare: stress evaluation using alkaline comet assay. 3rd International Congress of Hydrobiology and Fisheries, Arta, Greece.

Invited Speaker

Geotechnical Chamber of Greece (Thrace Division) Workshop: Sustainable management of fish and shellfish aquaculture. Lecture: Infectious diseases of reared fish; control and prevention. Fanari, Komotini, Greece. 29th of September 2006. (in Greek)

MEMBERSHIPS

Geotechnical Chamber of Greece European Aquaculture Society (EAS) Hellenic Society of Animal Production

REVIEWER FOR THE JOURNALS

Gene Agrigene Comparative Biochemistry and Physiology Part B Hydrobiologia SpringerPlus Journal of Marine Science: Research and Development Environmental Engineering and Management Journal Scientific Reports Frontiers in Physiology Marine Biotechnology BMC Plant Biology Aquaculture International

EDITORIAL BOARD MEMBER

Annals of Aquaculture and Research, JSciMed Central Journal of Marine Biology and Aquatic Research, Annex Publishers Open Access Journal of Veterinary Science and Medicine, Medcave Publications

ADDITIONAL INFORMATION

Member of the organizing committee of the 4th International Congress of Hydrobiology and Fisheries held at Volos in 2011.