
Scientific Articles produced from the DIVERSIFY project (GA 6021302)

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(Alexi et al., 2018a; Alexi et al., 2018b; Andree et al., 2015; Aurore et al., 2019; Baekelandt et al., 2018; Baekelandt et al., 2019a; Baekelandt et al., 2019b; Banović et al., 2016; Banović et al., 2019; Campoverde and Estevez, 2017; Campoverde et al., 2017a; Campoverde et al., 2017b; Campoverde et al., 2018; Carvalho et al., 2018; Carvalho et al., 2019a; Carvalho et al., 2019b; Colchen et al., 2017; Duncan et al., 2018; El Kertaoui et al., 2019; Fakriadis et al., 2018; Fernández-Montero et al., 2017; Fernández-Montero et al., 2019; Gisbert et al., 2016; Grigorakis, 2017; Jerez et al., 2018; Kotzamanis et al., 2018; Koven et al., 2019; Lazo et al., 2016a; Lazo et al., 2016b; Lazo et al., 2017; Lund et al., 2018; Lund et al., 2019; Manousaki et al., 2018; Milne et al., 2017; Milne et al., 2018; Mylonas et al., 2017; Mylonas et al., 2019; Nijssen et al., 2019; Papadaki et al., 2018; Pousis et al., 2018; Reinders et al., 2016a; Reinders et al., 2016b; Roo et al., 2019; Ruiz García et al., 2018; Ruiz García et al., 2019; Ruiz et al., 2019a; Ruiz et al., 2019b; Sarih et al., 2019; Tsertou et al., 2018; Valero et al., 2018; Zupa et al., 2017a; Zupa et al., 2017b)

List of Articles

- Alexi, N., Byrne, D.V., Nanou, E., Grigorakis, K., 2018a. Investigation of sensory profiles and hedonic drivers of emerging aquaculture fish species. *Journal of the Science of Food and Agriculture* 98, 10.1002/jsfa.8571.
- Alexi, N., Nanou, E., Lazo, O., Guerrero, L., Grigorakis, K., Byrne, D.V., 2018b. Check-All-That-Apply (CATA) with semi-trained assessors: Sensory profiles closer to descriptive analysis or consumer elicited data? *Food Quality and Preference* 64, 11-20.
- Andree, K.B., Roque, A., Duncan, N., Gisbert, E., Estevez, A., Tsertou, M.I., Katharios, P., 2015. *Diplectanum sciaenae* (Van Beneden & Hesse, 1863) (Monogenea) infecting meagre, *Argyrosomus regius* (Asso, 1801) broodstock in Catalonia, Spain. A case report. *Veterinary Parasitology: Regional Studies and Reports* 1-2, 75-79.
- Aurore, C., Colchen, T., Fontaine, P., Pasquet, A., 2019. Does adding heterospecific fish prey affect growth, development and cannibalism rate of pikeperch larvae? *Fishes* 4 (1), 21-33.
- Baekelandt, S., Redivo, B., Mandiki, S.N.M., Bournonville, T., Houndji, A., Bernard, B., El Kertaoui, N., Schmitz, M., Fontaine, P., Gardeur, J.N., Ledore, Y., Kestemont, P., 2018. Multifactorial analyses revealed optimal aquaculture modalities improving husbandry fitness without clear effect on stress and immune status of pikeperch *Sander lucioperca*. *Gen Comp Endocrinol* 258, 194-204.
- Baekelandt, S., Mandiki, S.N.M., Kestemont, P., 2019a. Are cortisol and melatonin involved in the immune modulation by the light environment in pikeperch *Sander lucioperca*? *J Pineal Res* e12573, 1-12.

-
- Baekelandt, S., Mandiki, S.N.M., Schmitz, M., Kestemont, P., 2019b. Influence of the light spectrum on the daily rhythms of stress and humoral innate immune markers in pikeperch *Sander lucioperca*. *Aquaculture* 499, 358-363.
- Banović, M., Krystallis, A., Guerrero, L., Reinders, M.J., 2016. Consumers as co-creators of new product ideas: An application of projective and creative research techniques. *Food Research International* 87, 211-223.
- Banović, M., Reinders, M.J., Claret, A., Guerrero, L., Krystallis, A., 2019. A cross-cultural perspective on impact of health and nutrition claims, country-of-origin and eco-label on consumer choice of new aquaculture products. *Food Research International* 000, 000-000 (in press).
- Campoverde, C., Estevez, A., 2017. The effect of live food enrichment with docosahexaenoic acid (22:6n-3) rich emulsions on growth, survival and fatty acid composition of meagre (*Argyrosomus regius*) larvae. *Aquaculture* 478, 16-24.
- Campoverde, C., Milne, D.J., Estévez, A., Duncan, N., Secombes, C.J., Andree, K.B., 2017a. Ontogeny and modulation after PAMPs stimulation of β -defensin, hepcidin, and piscidin antimicrobial peptides in meagre (*Argyrosomus regius*). *Fish & Shellfish Immunology* 69, 200-210.
- Campoverde, C., Rodriguez, C., Perez, J., Gisbert, E., Estevez, A., 2017b. Early weaning in meagre *Argyrosomus regius*: Effects on growth, survival, digestion and skeletal deformities. *Aquaculture Research* 48, 5289-5299.
- Campoverde, C., Andree, K.B., Milne, D.J., Estevez, A., Gisbert, E., Carella, F., 2018. Ontogeny of lymphoid organs and mucosal associated lymphoid tissues in meagre (*Argyrosomus regius*). *Fish Shellfish Immunol* 84, 509-520.
- Carvalho, M., Peres, H., Saleh, R., Fontanillas, R., Rosenlund, G., Oliva-Teles, A., Izquierdo, M., 2018. Dietary requirement for n-3 long-chain polyunsaturated fatty acids for fast growth of meagre (*Argyrosomus regius*, Asso 1801) fingerlings. *Aquaculture* 488, 105-113.
- Carvalho, M., Castro, P., Montero, D., Peres, H., Acosta, F., Fontanillas, R., Rosenlund, G., Robaina, L., Izquierdo, M., 2019a. Essential fatty acid deficiency increases hepatic non-infectious granulomatosis incidence in meagre (*Argyrosomus regius*, Asso 1801) fingerlings. *Aquaculture* 505, 393-404.
- Carvalho, M., Montero, D., Gesto, M., Lencina, A., Lund, I., Izquierdo, M., 2019b. The effect of dietary n-3 LC-PUFA on the responses to acute and prolonged stress of meagre (*Argyrosomus regius*, Asso 1801) juveniles. *Aquaculture* 506, 112-118.
- Colchen, T., Faux, E., Teletchea, F., Pasquet, A., 2017. Is personality of young fish consistent through different behavioural tests? *Applied Animal Behaviour Science* 194, 127-134.
- Duncan, N.J., Mylonas, C.C., Milton Sullon, E., Karamanlidis, D., França Nogueira, M.C., Ibarra-Zatarain, Z., Chiumento, M., Aviles Carrillo, R.O., 2018. Paired spawning with male rotation of meagre *Argyrosomus regius* using GnRH α injections, as a method for producing multiple families for breeding selection programs. *Aquaculture* 495, 506-512.
- El Kertaoui, N., Lund, I., Assogba, H., Domínguez, D., Izquierdo, M.S., Baekelandt, S., Cornet, V., Mandiki, S.N.M., Montero, D., Kestemont, P., 2019. Key

-
- nutritional factors and interactions during larval development of pikeperch (*Sander lucioperca*). Scientific Reports 9, 7074.
- Fakriadis, I., Lisi, F., Sigelaki, I., Papadaki, M., Mylonas, C.C., 2018. Spawning kinetics and egg/larval quality of greater amberjack (*Seriola dumerili*) in response to multiple GnRH α injections or implants. Gen Comp Endocrinol 000:000-000 (in press).
- Fernández-Montero, A., Caballero, M.J., Torrecillas, S., Tuset, V.M., Lombarte, A., Ginés, R.R., Izquierdo, M., Robaina, L., Montero, D., 2017. Effect of temperature on growth performance of greater amberjack *SERIOLA DUMERILI* Risso 1810) Juveniles. Aquaculture Research 49, 908-918.
- Fernández-Montero, Á., Torrecillas, S., Izquierdo, M., Caballero, M.J., Milne, D.J., Secombes, C.J., Sweetman, J., Da Silva, P., Acosta, F., Montero, D., 2019. Increased parasite resistance of greater amberjack (*Seriola dumerili* Risso 1810) juveniles fed a cMOS supplemented diet is associated with upregulation of a discrete set of immune genes in mucosal tissues. Fish & Shellfish Immunology 86, 35-45.
- Gisbert, E., Mozanzadeh, M.T., Kotzamanis, Y., Estévez, A., 2016. Weaning wild flathead grey mullet (*Mugil cephalus*) fry with diets with different levels of fish meal substitution. Aquaculture 462, 92-100.
- Grigorakis, K., 2017. Fillet proximate composition, lipid quality, yields, and organoleptic quality of Mediterranean-farmed marine fish: A review with emphasis on new species. Crit Rev Food Sci Nutr 57, 2956-2969.
- Jerez, S., Fakriadis, I., Papadaki, M., Martín, M., Cejas, J., Mylonas, C.C., 2018. Spawning induction of first-generation (F1) greater amberjack *Seriola dumerili* in the Canary Islands, Spain using GnRH α delivery systems. Fishes 3, 1-22.
- Kotzamanis, Y., Kouroupakis, E., Iliá, V., Haralabous, J., Papaioannou, N., Papanna, K., Richards, R., Gisbert, E., 2018. Effects of high-level fishmeal replacement by plant proteins supplemented with different levels of lysine on growth performance and incidence of systemic noninfectious granulomatosis in meagre (*Argyrosomus regius*). Aquaculture Nutrition 24, 1738-1751.
- Koven, W., Gisbert, E., Nixon, O., Solovyev, M.M., Gaon, A., Allon, G., Meiri-Ashkenazi, I., Tandler, A., Rosenfeld, H., 2019. The effect of algal turbidity on larval performance and the ontogeny of digestive enzymes in the grey mullet (*Mugil cephalus*). Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology 228, 71-80.
- Lazo, O., Claret, A., Guerrero, L., 2016a. A comparison of two methods for generating describing attributes with trained assessors: check-all-that-apply (CATA) vs. free choice. Journal of Sensory Studies 31, 163-176.
- Lazo, O., Claret, A., Guerrero, L., 2016b. A Comparison of Two Methods for Generating Descriptive Attributes with Trained Assessors: Check-All-That-Apply (CATA) vs. Free Choice Profiling (FCP). Journal of Sensory Studies 31, 163-176.
- Lazo, O., Guerrero, L., Alexi, N., Grigorakis, K., Claret, A., Perez, J.A., Bou, R., 2017. Sensory characterization, physico-chemical properties and somatic yields of five emerging fish species. Food Res Int 100, 396-406.

-
- Lund, I., El Kertaoui, N., Izquierdo, M.S., Dominguez, D., Hansen, B.W., Kestemont, P., 2018. The importance of phospholipids combined with long-chain PUFA in formulated diets for pikeperch (*Sander lucioperca*) larvae. *British Journal of Nutrition* 120, 628-644.
- Lund, I., Rodríguez, C., Izquierdo, M.S., El Kertaoui, N., Kestemont, P., Reis, D.B., Dominguez, D., Pérez, J.A., 2019. Influence of salinity and linoleic or α -linolenic acid based diets on ontogenetic development and metabolism of unsaturated fatty acids in pike perch larvae (*Sander lucioperca*). *Aquaculture* 500, 550-561.
- Manousaki, T., Tsakogiannis, A., Lagnel, J., Kyriakis, D., Duncan, N., Estevez, A., Tsigenopoulos, C.S., 2018. Muscle and liver transcriptome characterization and genetic marker discovery in the farmed meagre, *Argyrosomus regius*. *Mar Genomics* 39, 39-44.
- Milne, D.J., Campoverde, C., Andree, K.B., Zou, J., Secombes, C.J., 2017. Two types of TNF α in meagre (*Argyrosomus regius*): Discovery, distribution and expression modulation. *Mol Immunol* 92, 136-145.
- Milne, D.J., Campoverde, C., Andree, K.B., Chen, X., Zou, J., Secombes, C.J., 2018. The discovery and comparative expression analysis of three distinct type I interferons in the perciform fish, meagre (*Argyrosomus regius*). *Dev Comp Immunol* 84, 123-132.
- Mylonas, C.C., Duncan, N.J., Asturiano, J.F., 2017. Hormonal manipulations for the enhancement of sperm production in cultured fish and evaluation of sperm quality. *Aquaculture* 472, 21-44.
- Mylonas, C.C., Robles, R., others, 2019. Rearing of greater amberjack (*Seriola dumerili*), results from the DIVERSIFY project, *Aquaculture Europe*. *European Aquaculture Society*, pp. 18-25.
- Nijssen, E.J., Reinders, M.J., Krystallis, A., Tacke, G., 2019. Developing an Internationalization Strategy Using Diffusion Modeling: The Case of Greater Amberjack %M doi:10.3390/fishes4010012 %U <http://www.mdpi.com/2410-3888/4/1/12>. *Fishes* %@ 2410-3888 4, 12.
- Papadaki, M., Peleteiro, J.B., Alvarez-Blázquez, B., Villanueva, J.L.R., Linares, F., Vilar, A., Rial, E.P., Lluch, N., Fakriadis, I., Sigelaki, I., Mylonas, C.C., 2018. Description of the Annual Reproductive Cycle of Wreckfish *Polyprion americanus* in Captivity. *Fishes* 3, 1-20.
- Pousis, C., Mylonas, C.C., De Virgilio, C., Gadaleta, G., Santamaria, N., Passantino, L., Zupa, R., Papadaki, M., Fakriadis, I., Ferreri, R., Corriero, A., 2018. The observed oogenesis impairment in greater amberjack *Seriola dumerili* (Risso, 1810) reared in captivity is not related to an insufficient liver transcription or oocyte uptake of vitellogenin. *Aquaculture Research* 49, 243-252.
- Reinders, M.J., Banović, M., Guerrero, L., Krystallis, A., 2016a. Consumer perceptions of farmed fish: A cross-national segmentation in five European countries. *British Food Journal* 118, 2581-2597.
- Reinders, M.J., Banović, M., Guerrero, L., Krystallis, A., 2016b. Consumer perceptions of farmed fish: A cross-national segmentation in five European countries. *British Food Journal* 118, 2581-2597.

-
- Roo, J., Hernández-Cruz, C.M., Mesa-Rodriguez, A., Fernández-Palacios, H., Izquierdo, M.S., 2019. Effect of increasing n-3 HUFA content in enriched *Artemia* on growth, survival and skeleton anomalies occurrence of greater amberjack *Seriola dumerili* larvae. *Aquaculture* 500, 651-659.
- Ruiz García, M.Á., Hernández - Cruz, C.M., Caballero, M.J., Fernández - Palacios, H., Saleh, R., Izquierdo, M., Betancor Quintana, M.B., 2018. Incidence of systemic granulomatosis is modulated by the feeding sequence and type of enrichment in meagre (*Argyrosomus regius*) larvae. *Aquaculture Research* 50, 284-295.
- Ruiz García, M.Á., Hernández-Cruz, C.M., Caballero, M.J., Fernández-Palacios, H., Saleh, R., Izquierdo, M., Betancor Quintana, M.B., 2019. Incidence of systemic granulomatosis is modulated by the feeding sequence and type of enrichment in meagre (*Argyrosomus regius*) larvae. *Aquaculture Research* 50, 284-295.
- Ruiz, M.A., Betancor, M.B., Robaina, L., Montero, D., Hernández-Cruz, C.M., Izquierdo, M.S., Rosenlund, G., Fontanillas, R., Caballero, M.J., 2019a. Dietary combination of vitamin E, C and K affects growth, antioxidant activity, and the incidence of systemic granulomatosis in meagre (*Argyrosomus regius*). *Aquaculture* 498, 606-620.
- Ruiz, M.A., Hernández-Cruz, C.M., Caballero, M.J., Fernández-Palacios, H., Saleh, R., Izquierdo, M.S., Betancor, M.B., 2019b. Appearance of systemic granulomatosis is modulated by the dietary supplementation of vitamin E and C in meagre (*Argyrosomus regius*) larvae fed inert microdiets. *Aquaculture* 506, 139-147.
- Sarih, S., Djellata, A., Roo, J., Hernández-Cruz, C.M., Fontanillas, R., Rosenlund, G., Izquierdo, M., Fernández-Palacios, H., 2019. Effects of increased protein, histidine and taurine dietary levels on egg quality of greater amberjack (*Seriola dumerili*, Risso, 1810). *Aquaculture* 499, 72-79.
- Tsertou, M.I., Smyrli, M., Kokkari, C., Antonopoulou, E., Katharios, P., 2018. The aetiology of systemic granulomatosis in meagre (*Argyrosomus regius*): The “*Nocardia*” hypothesis. *Aquaculture Reports* 12, 5-11.
- Valero, Y., Boughlala, B., Arizcun, M., Patel, S., Fiksdal, I.U., Esteban, M.A., De Juan, J., Meseguer, J., Chaves-Pozo, E., Cuesta, A., 2018. Genes related to cell-mediated cytotoxicity and interferon response are induced in the retina of European sea bass upon intravitreal infection with nodavirus. *Fish Shellfish Immunol* 74, 627-636.
- Zupa, P., Fauvel, C., Mylonas, C.C., Pousis, C., Santamaría, C.A., Papadaki, M., Fakriadis, I., V., C., 2017a. Rearing in captivity affects spermatogenesis and sperm quality in greater amberjack, *Seriola dumerili* (Risso, 1810). *Journal of Animal Science* 95, 4085-4100.
- Zupa, R., Rodríguez, C., Mylonas, C.C., Rosenfeld, H., Fakriadis, I., Papadaki, M., Pérez, J.A., Pousis, C., Basilone, G., Corriero, A., 2017b. Comparative study of reproductive development in wild and captive-reared greater amberjack *Seriola dumerili* (Risso, 1810). *PLoS ONE* 12, e0169645.