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Qualifications

Ph.D., University of Vigo
2004 → 2008
Award Date: 8 Jul 2008

Marine Biology and Aquaculture, M.Sc., University of Vigo
2002 → 2004
Award Date: 2 Sept 2004

Employment

Senior Researcher

National Institute of Aquatic Resources
Technical University of Denmark
Kgs. Lyngby, Denmark
21 Jan 2015 → present

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Technical University of Denmark
Hirtshals, Denmark
22 Jan 2015 → present

Research outputs

Monitoring welfare indicators of rainbow trout (*Oncorhynchus mykiss*) in a commercial organic farm: Effects of an innovative diet and accelerometer tag implantation

Toomey, L., Gesto, M., Alfonso, S., Lund, I., Jokumsen, A., Lembo, G. & Carbonara, P., 2024, In: *Aquaculture*. 582, 12 p., 740549.

Boldness and physiological variation in round goby populations along their Baltic Sea invasion front

Galli, A., Behrens, J. W., Gesto, M. & Moran, N. P., 2023, In: *Physiology and Behavior*. 269, 10 p., 114261.

Environmental Enrichment for Rainbow Trout Fingerlings: A Case Study Using Shelters in an Organic Trout Farm

Eidsmo, J., Madsen, L., Pedersen, L-F., Jokumsen, A. & Gesto, M., 2023, In: *Animals*. 13, 14 p., 268.

Use of vacuum-UV radiation in fresh -and seawater RAS: Effects on water quality and development of pike perch and seabass larvae

Lund, I., de Jesus Gregersen, K. J., Gesto, M. & Aalto, S., 2023, *6th NordicRAS workshop on Recirculating Aquaculture Systems, 3-4 October 2023, Tromsø, Norway: Book of Abstracts*. Dalsgaard, J. (ed.). DTU Aqua, p. 22-22 1 p. (DTU Aqua-rapport; No. 431-2023).

Characterization of the neuroendocrine stress status as part of the multiparametric assessment of welfare in fish

Gesto, M., 2022, *Cellular and Molecular Approaches in Fish Biology*. Monzón, I. F. & Fernandes, J. M. O. (eds.). Elsevier, p. 285-308 23 p.

Cohabitation With Atlantic Salmon (*Salmo salar*) Affects Brain Neuromodulators But Not Welfare Indicators in Lumpfish (*Cyclopterus lumpus*)

Staven, F. R., Gesto, M., Iversen, M. H., Andersen, P., Patel, D. M., Nordeide, J. T. & Kristensen, T., 2022, In: Frontiers in Physiology. 13, 13 p., 781519.

Effects of ozonation and foam fractionation on rainbow trout condition and physiology in a small-scale freshwater recirculation aquaculture system

Gesto, M., de Jesus Gregersen, K. J. & Pedersen, L-F., 2022, In: Aquaculture. 557, 11 p., 738312.

Effects of simple shelters on growth performance and welfare of rainbow trout juveniles

Gesto, M. & Jokumsen, A., 2022, In: Aquaculture. 551, 12 p., 737930.

Ontogenetic changes in digestive enzyme activity and biochemical indices of larval and postlarval European lobster (*Homarus gammarus*, L.)

Goncalves, R., Gesto, M., Rodríguez, C., Reis, D. B., Pérez, J. A. & Lund, I., 2022, In: Marine Biology. 169, 5, 14 p., 53.

Behavioural and physiological responses of lumpfish (*Cyclopterus lumpus*) exposed to Atlantic salmon (*Salmo salar*) sensory cues

Staven, F. R., Nordeide, J. T., Gesto, M., Andersen, P., Patel, D. M. & Kristensen, T., 2021, In: Aquaculture. 544, 9 p., 737066.

Early performance, stress- and disease-sensitivity in rainbow trout fry (*Oncorhynchus mykiss*) after total dietary replacement of fish oil with rapeseed oil. Effects of EPA and DHA supplementation

Gesto, M., Madsen, L., Andersen, N. R., El Kertaoui, N., Kestemont, P., Jokumsen, A. & Lund, I., 2021, In: Aquaculture. 536, 14 p., 736446.

Interactions of temperature and dietary composition on juvenile European lobster (*Homarus gammarus*, L.) energy metabolism and performance

Goncalves, R., Lund, I. & Gesto, M., 2021, In: Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology. 260, 7 p., 111019.

Parental selection for growth and early-life low stocking density increase the female-to-male ratio in European sea bass

Geffroy, B., Gesto, M., Clota, F., Aerts, J., Darias, M. J., Blanc, M-O., Ruelle, F., Allal, F. & Vandeputte, M., 2021, In: Scientific Reports. 11, 14 p., 13620.

Replacement of Antarctic krill (*Euphausia superba*) by extruded feeds with different proximate compositions: effects on growth, nutritional condition and digestive capacity of juvenile European lobsters (*Homarus gammarus*, L.)

Goncalves, R., Gesto, M., Teodósio, M. A., Baptista, V., Navarro-Guillén, C. & Lund, I., 2021, In: Journal of Nutritional Science. 10, 15 p., e36.

Temperature increase and its effects on fish stress physiology in the context of global warming

Alfonso, S., Gesto, M. & Sadoul, B., 2021, In: Journal of Fish Biology. 98, 6, p. 1496-1508 13 p.

Bedre velfærd i økologisk fiskeopdræt kræver flere indsatsområder

Jokumsen, A. & Gesto, M., 2020, 3 p. Internationalt Center for Forskning i Økologisk Jordbrug og Fødevarer (ICROFS).

Fish individuality, physiology and welfare

Gesto, M., Villarroel, M. & Tort, L., 2020, In: Physiology & Behavior. 219, 2 p., 112867.

Fiskevelfærd i økologisk ørred opdræt: Er der forskel på EU-regelsættet og RSPCA standarden?

Jokumsen, A. & Gesto, M., 2020, 3 p. Internationalt Center for Forskning i Økologisk Jordbrug og Fødevarer (ICROFS).

The effect of dietary protein, lipid, and carbohydrate levels on the performance, metabolic rate and nitrogen retention in juvenile European lobster (*Homarus gammarus*, L.)

Goncalves, R., Lund, I., Gesto, M. & Skov, P. V., 2020, In: Aquaculture. 525, 8 p., 735334.

Using acoustic telemetry to assess behavioral responses to acute hypoxia and ammonia exposure in farmed rainbow trout of different competitive ability

Gesto, M., Zupa, W., Alfonso, S., Spedicato, M. T., Lembo, G. & Carbonara, P., 2020, In: Applied Animal Behaviour Science. 230, 10 p., 105084.

Welfare and Health in Danish Organic Trout Farming

Gesto, M., 2020, 2 p. Internationalt Center for Forskning i Økologisk Jordbrug og Fødevarer (ICROFS).

Consistent individual competitive ability in rainbow trout as a proxy for coping style and its lack of correlation with cortisol responsiveness upon acute stress

Gesto, M., 2019, In: Physiology & Behavior. 208, 112576.

Coping styles in European sea bass: The link between boldness, stress response and neurogenesis

Alfonso, S., Sadoul, B., Gesto, M., Joassard, L., Chatain, B., Geffroy, B. & Bégout, M-L., 2019, In: Physiology & Behavior. 207, p. 76-85 35 p.

New Tools to Improve Fish Health and Environment in Organic Aquaculture

Jokumsen, A., Gesto, M., Buchmann, K., Lorenzen, N., Pedersen, L-F., Henriksen, N. H., Schmidt, J. G., Madsen, L., Kania, P. & Pedersen, P. B., 2019, p. 634-634.

Nutritional Requirements of European Lobster (*Homarus gammarus*, L.): Effect of Protein, Lipid and Carbohydrate Diet Content on Metabolic Postprandial Response

Goncalves, R., Lund, I., Gesto, M. & Skov, P. V., 2019, p. 499-500.

Physiological roles of tryptophan in teleosts: current knowledge and perspectives for future studies

Hoseini, S. M., Pérez-Jiménez, A., Costas, B., Azeredo, R. & Gesto, M., 2019, In: Reviews in Aquaculture (Print). 11, 1, p. 3-24

Proactive coping style in early emerging rainbow trout carries a metabolic cost with no apparent return

Skov, P. V., de Jesus Gregersen, K. J., Gesto, M. & Jokumsen, A., 2019, In: Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology. 231, p. 104-110

The effect of dietary n-3 LC-PUFA on the responses to acute and prolonged stress of meagre (*Argyrosomus regius*, Asso 1801) juveniles

Carvalho, M., Montero, D., Gesto, M., Lencina, A., Lund, I. & Izquierdo, M., 2019, In: Aquaculture. 506, p. 112-118

Confirmation that pulse and continuous peracetic acid administration does not disrupt the acute stress response in rainbow trout

Gesto, M., Liu, D., Pedersen, L-F., Meinelt, T., Strauss, D. L. & Jokumsen, A., 2018, In: Aquaculture. 492, p. 190-194

Effect of different dietary N-3 long-chain polyunsaturated fatty acids levels on stress response of meagre (*Argyrosomus regius*, Asso 1801) juveniles

Carvalho, M., Montero, D., Gesto, M., Lencina, A., Lund, I. & Izquierdo, M., 2018.

Influence of vegetable diets on physiological and immune responses to thermal stress in Senegalese sole (*Solea senegalensis*)

Conde-Sieira, M., Gesto, M., Batista, S., Linares, F., Villanueva, J. . L. G., Míguez, J. M., Soengas, J. L. & Valente, L. M. P., 2018, In: P L o S One. 13, 3, 23 p., e0194353.

Interplay between daily rhythmic serum-mediated bacterial killing activity and immune defence factors in rainbow trout (*Oncorhynchus mykiss*)

Lazado, C. C., Gesto, M., Madsen, L. & Jokumsen, A., 2018, In: Fish and Shellfish Immunology. 72, p. 418-425

Peracetic acid – a greener solution for disinfecting aquaculture systems

Straus, D., Meinelt, T., Liu, D., Pedersen, L-F., Gesto, M., Davidson, J. & Good, C., 2018, p. 728-728.

Short-term exposure to repeated chasing stress does not induce habituation in Senegalese sole, *Solea senegalensis*

Conde-Sieira, M., Valente, L. M. P., Hernandez-Perez, J., Soengas, J. L., Míguez, J. M. & Gesto, M., 2018, In: Aquaculture. 487, p. 32-40

Stress and disease resilience differences related to emergence time for first feeding in farmed rainbow trout (*Oncorhynchus mykiss*)

Gesto, M., Madsen, L., Andersen, N. R. & Jokumsen, A., 2018, In: Journal of Experimental Biology. 221, 8, jeb.174623.

Stress coping style in European sea bass *Dicentrarchus labrax*: from genes to physiology and behaviour

Alfonso, S., Geffroy, B., Sadoul, B., Joassard, L., Gesto, M., Chatain, B. & Bégout, M-L., 2018.

Stress coping style in European sea bass *Dicentrarchus labrax*: from genes to physiology and behaviour

Alfonso, S., Geffroy, B., Sadoul, B., Joassard, L., Gesto, M., Chatain, B. & Bégout, M-L., 2018.

Crosstalk between innate immunity and circadian rhythm: Do fish immune defences have a sense of time?

Lazado, C. C., Lund, I., Skov, P. V., Jokumsen, A., Gesto, M., Huy, N. Q. & Pedersen, P. B., 2017.

Effects of repeated acute stress in Senegalese sole *Solea senegalensis*. Can this species habituate to reiterated handling stress?

Conde-Sieira, M., Gesto, M., Comesaña, S., Velasco, C., Hernandez-Perez, J., Valente, L. M. P. & Soengas, J. L., 2017.

Emergence time and skin melanin spot patterns do not correlate with growth performance, social competitive ability or stress response in farmed rainbow trout

Gesto, M., Skov, P. V. & Jokumsen, A., 2017, In: Frontiers in Neuroscience. 11, 319.

Neuroendocrine and immune responses undertake different fates following tryptophan or methionine dietary treatment: tales from a teleost model

Azeredo, R., Machado, M., Afonso, A., Fierro-Castro, C., Reyes-Lopez, F. E., Tort, L., Gesto, M., Conde-Sieira, M., Míguez, J. M., Soengas, J. L., Kreuz, E., Wuertz, S., Peres, H., Oliva-Teles, A. & Costas, B., 2017.

Neuroendocrine and immune responses undertake different fates following tryptophan or methionine dietary treatment: tales from a teleost model

Azeredo, R., Machado, M., Afonso, A., Fierro-Castro, C., Reyes-Lopez, F. E., Tort, L., Gesto, M., Conde-Sieira, M., Míguez, J. M., Soengas, J. L., Kreuz, E., Wuertz, S., Peres, H., Oliva-Teles, A. & Costas, B., 2017, In: Frontiers in Immunology. 8, 1226.

A simple melatonin treatment protocol attenuates the response to acute stress in the sole *Solea senegalensis*

Gesto, M., Álvarez-Otero, R., Conde-Sieira, M., Otero-Rodiño, C., Usandizaga, S., Soengas, J. L., Míguez, J. M. & López-Patiño, M. A., 2016, In: Aquaculture. 452, p. 272-282

Characterization of melatonin synthesis in the gastrointestinal tract of rainbow trout (*Oncorhynchus mykiss*): distribution, relation with serotonin, daily rhythms and photoperiod regulation

Muñoz-Pérez, J. L., López-Patiño, M. A., Álvarez-Otero, R., Gesto, M., Soengas, J. L. & Míguez, J. M., 2016, In: Journal of Comparative Physiology B: Biochemical, Systems, and Environmental Physiology. 186, 4, p. 471-484

First feeding behavior: A potential tool to select robust trout for organic aquaculture

Gesto, M., 2016, In: ICROFS news.

Stress-resilience differences related to emergence time in farmed rainbow trout

Gesto, M. & Jokumsen, A., 2016.

Stress-resilience differences related to emergence time in rainbow trout

Gesto, M. & Jokumsen, A., 2016.

Welfare, Health and Individuality in Farmed FISH: The WINFISH project

Winberg, S., Bégout, M-L., Roque, A., Manfrin, A., Villarroel, M. & Gesto, M., 2016.

Chronic effects of clofibric acid in zebrafish (Danio rerio): A multigenerational study

Coimbra, A. M., Peixoto, M. J., Coelho, I., Lacerda, R., Carvalho, A. P., Gesto, M., Lyssimachou, A., Lima, D., Soares, J., Andre, A., Capita, A., Castro, L. F. C. & Santos, M. M., 2015, In: Aquatic Toxicology. 160, p. 76-86 11 p.

Effects of tributyltin and other retinoid receptor agonists in reproductive-related endpoints in the Zebrafish (Danio rerio)

Lima, D., Castro, L. F. C., Coelho, I., Lacerda, R., Gesto, M., Soares, J., Andre, A., Capela, R., Torres, T., Carvalho, A. P. & Santos, M. M., 2015, In: Journal of Toxicology and Environmental Health. Part A: Current Issues. 78, 12, p. 747-760 14 p.

Estrés en peces: respuesta fisiológica y sus implicaciones en el cultivo de salmónidos

Munoz, J. L. P., Mardones, O., Chacoff, L. & Gesto, M., 2015, In: Salmonexpert. 5, p. 55-57

Gradation of the Stress Response in Rainbow Trout Exposed to Stressors of Different Severity: The Role of Brain Serotonergic and Dopaminergic Systems

Gesto, M., Lopez-Patino, M. A., Hernandez, J., Soengas, J. L. & Míguez, J. M., 2015, In: Journal of Neuroendocrinology. 27, 2, p. 131-141 11 p.

Is gill cortisol concentration a good acute stress indicator in fish? A study in rainbow trout and zebrafish

Gesto, M., Hernandez, J., Lopez-Patino, M. A., Soengas, J. L. & Míguez, J. M., 2015, In: Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology. 188, p. 65-69

Retinoid level dynamics during gonad recycling in the limpet Patella vulgata

Gesto, M., Ruivo, R., Páscoa, I., André, A., Castro, L. F. C. & Santos, M. M., 2015, (Accepted/In press) In: General and Comparative Endocrinology.

Arginine vasotocin treatment induces a stress response and exerts a potent anorexigenic effect in rainbow trout, Oncorhynchus mykiss

Gesto, M., Soengas, J. L., Rodríguez-Illamola, A. & Míguez, J. M., 2014, In: Journal of Neuroendocrinology. 26, 2, p. 89-99

Environmental levels of the antidepressant venlafaxine impact the metabolic capacity of rainbow trout

Best, C., Melnyk-Lamont, N., Gesto, M. & Vijayan, M. M., 2014, In: Aquatic Toxicology. 155, 7, p. 190-198

Gradation of the acute stress response in rainbow trout exposed to stressors of different intensity

Gesto, M., Otero-Rodino, C., Hernández, J., Naderi, F., Velasco, C., Libran-Perez, M., López-Patiño, M. A., Soengas, J. L. & Míguez, J. M., 2014.

Insulin treatment modulates the response of hypothalamic fatty acid sensors in rainbow trout

Libran-Perez, M., Otero-Rodino, C., Velasco, C., Gesto, M., Álvarez, R., López-Patiño, M. A., Míguez, J. M. & Soengas, J. L., 2014.

Is plasma cortisol response to stress in rainbow trout regulated by catecholamine-induced hyperglycemia?

Gesto, M., Otero-Rodino, C., Lopez-Patino, M. A., Miguez, J. M., Soengas, J. L. & Conde-Sieira, M., 2014, In: Molecular and Cellular Probes. 205, Sp. Iss. SI, p. 207-217

Metabolic response of rainbow trout Brockmann bodies to decreased circulating fatty acid levels

Velasco, C., Libran-Perez, M., Otero-Rodino, C., López-Patiño, M. A., Naderi, F., Gesto, M., Hernandez-Perez, J. & Soengas, J. L., 2014.

Methionine and tryptophan differentially regulate the European seabass *Dicentrarchus labrax* inflammatory response

Azeredo, R., Machado, M., Díaz-Rosales, P., Afonso, A., Fierro-Castro, C., Reyes-Lopez, F., Tort, L., Gesto, M., Conde-Sieira, M., Míguez, J. M., Soengas, J. L., Peres, H., Oliva-Teles, A. & Costas, B., 2014. 3 p.

Oral administration of melatonin counteracts several of the effects of chronic stress in rainbow trout

Conde-Sieira, M., Munoz, J. L. P., Lopez-Patino, M. A., Gesto, M., Soengas, J. L. & Miguez, J. M., 2014, In: Domestic Animal Endocrinology. 46, 1, p. 26-36

Preliminary evidence on the presence and functioning of alternative glucosensor systems in rainbow trout hypothalamus

Otero-Rodino, C., Libran-Perez, M., Velasco, C., Gesto, M., Naderi, F., Hernandez-Perez, J., Míguez, J. M. & Soengas, J. L., 2014.

Retinoid metabolism in invertebrates: When evolution meets endocrine disruption

Andre, A., Ruivo, R., Gesto, M., Castro, L. F. C. & Santos, M. M., 2014, In: Molecular and Cellular Probes. 208, 8, p. 134-145

Short-term time course of liver metabolic response to acute handling stress in rainbow trout, *Oncorhynchus mykiss*

Lopez-Patino, M. A., Hernandez-Perez, J., Gesto, M., Libran-Perez, M., Miguez, J. M. & Soengas, J. L., 2014, In: Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology. 168A, p. 40-49

Stress affects the daily pattern of central neuropeptides involved in food intake regulation of rainbow trout

Naderi, F., Míguez, J. M., Hernandez-Perez, J., Velasco, C., Álvarez-Otero, R., Libran-Perez, M., Gesto, M. & López-Patiño, M. A., 2014.

Stress inhibition of melatonin synthesis in the pineal organ of rainbow trout (*Oncorhynchus mykiss*) is mediated by cortisol

López-Patiño, M. A., Gesto, M., Conde-Sieira, M., Soengas, J. L. & Míguez, J. M., 2014, In: Journal of Experimental Biology. 217, 8, p. 1407-1416

Stress response and changes of liver metabolism in rainbow trout depend on the stress duration

Hernandez-Perez, J., López-Patiño, M. A., Naderi, F., Conde-Sieira, M., Gesto, M., Otero-Rodino, C., Soengas, J. L. & Míguez, J. M., 2014. 3 p.

The antidepressant venlafaxine disrupts brain monoamine levels and neuroendocrine responses to stress in rainbow trout

Melnyk-Lamont, N., Best, C., Gesto, M. & Vijayan, M. M., 2014, In: Environmental Science and Technology. 48, 22, p. 13434-13442

Differences in retinoid levels and metabolism among gastropod lineages: Imposex-susceptible gastropods lack the ability to store retinoids in the form of retinyl esters.

Gesto, M., Castro, L. F. C. & Santos, M. M., 2013, In: Aquatic Toxicology. 142-143, p. 96-103

Melatonin partially minimizes the adverse stress effects in Senegalese sole (*Solea senegalensis*).

López-Patiño, M. A., Conde-Sieira, M. & Gesto, M., 2013, In: Aquaculture. 388-391, p. 165-172

Physiological responses during thermal shock in pre-slaughter procedures in turbot

Hernández, J., Gesto, M., Conde-Sieira, M., López-Patiño, M. A., Libran-Perez, M., Cabaleiro, S. & Míguez, J. M., 2013.

The dynamics of the response of brain serotonergic and dopaminergic systems to an acute stressor in rainbow trout
Gesto, M., Libran-Perez, M., López-Patiño, M. A., Hernández, J. & Míguez, J. M., 2013.

The response of brain serotonergic and dopaminergic systems to an acute stressor in rainbow trout: a time course study
Gesto, M., Lopez-Patino, M. A., Hernandez, J., Soengas, J. L. & Míguez, J. M., 2013, In: Journal of Experimental Biology. 216, 23, p. 4435-4442

Arginine vasotocin is a potent anorexigenic factor in the trout
Gesto, M., Conde-Sieira, M., Libran-Perez, M., López-Patiño, M. A. & Míguez, J. M., 2012, In: Acta Physiologica. 206, Supplement 693, p. 148

Glucose concentration influences ACTH-stimulated cortisol release by head kidney of rainbow trout
Conde-Sieira, M., Libran-Perez, M., Gesto, M., Míguez, J. M. & Soengas, J. L., 2012, In: Acta Physiologica. 206, Supplement 693, p. 150

Mechanistic insight into the effect of Venlafaxine on cortisol stress axis activity in rainbow trout
Vijayan, M., Melnyk-Lamont, N., Best, C. & Gesto, M., 2012.

Melatonin synthesis in trout pineal organ is influenced by stress
López-Patiño, M. A., Munoz, J. L. P., Gesto, M., Soengas, J. L. & Míguez, J. M., 2012, In: Acta Physiologica. 206, Supplement 693, p. 157

Region-specific effects of Venlafaxine on monoaminergic and stress-related systems in rainbow trout brain
Melnyk-Lamont, N., Gesto, M. & Vijayan, M. M., 2012.

Retinol metabolism in the mollusk *Osilinus lineatus* indicates an ancient origin for retinyl ester storage capacity
Gesto, M., Castro, L. F. C. & Reis-Henriques, M. A., 2012, In: PLOS ONE. 7, 4, e35138.

Tissue-specific distribution patterns of retinoids and didehydroretinoids in rainbow trout *Oncorhynchus mykiss*
Gesto, M., Castro, L. F. C., Reis-Henriques, M. A. & Santos, M. M., 2012, In: Comparative Biochemistry and Physiology - Part B: Biochemistry & Molecular Biology. 161, 1, p. 69-78

Changes in plasma melatonin levels and pineal organ melatonin synthesis following acclimation of rainbow trout (*Oncorhynchus mykiss*) to different water salinities
Lopez-Patino, M. A., Rodriguez-Illamola, A., Gesto, M., Soengas, J. L. & Miguez, J. M., 2011, In: Journal of Experimental Biology. 214, 6, p. 928-936

Alterations in the brain monoaminergic neurotransmitters of rainbow trout related to naphthalene exposure at the beginning of vitellogenesis
Gesto, M., Tintos, A., Alvarez, R., Soengas, J. L. & Miguez, J. M., 2009, In: Fish Physiology & Biochemistry. 35, 3, p. 453-465

beta-Naphthoflavone and benzo(a)pyrene alter dopaminergic, noradrenergic, and serotonergic systems in brain and pituitary of rainbow trout (*Oncorhynchus mykiss*)
Gesto, M., Tintos, A., Soengas, J. L. & Miguez, J. M., 2009, In: Ecotoxicology and Environmental Safety. 72, 1, p. 191-198

Effects of naphthalene, beta-naphthoflavone and benzo(a)pyrene on the diurnal and nocturnal indoleamine metabolism and melatonin content in the pineal organ of rainbow trout, *Oncorhynchus mykiss*
Gesto, M., Tintos, A., Rodriguez-Illamola, A., Soengas, J. L. & Miguez, J. M., 2009, In: Aquatic Toxicology. 92, 1, p. 1-8

Acute and prolonged stress responses of brain monoaminergic activity and plasma cortisol levels in rainbow trout are modified by PAHs (naphthalene, beta-naphthoflavone and benzo(a)pyrene) treatment
Gesto, M., Soengas, J. L. & Miguez, J. M., 2008, In: Aquatic Toxicology. 86, 3, p. 341-351

beta-naphthoflavone and benzo(a)pyrene treatment affect liver intermediary metabolism and plasma cortisol levels in rainbow trout *Oncorhynchus mykiss*

Tintos, A., Gesto, M., Míguez, J. M. & Soengas, J. L., 2008, In: *Ecotoxicology and Environmental Safety*. 69, 2, p. 180-186
7 p.

Effect of salinity changes on AVT and melatonin plasma levels and AVT receptor expression in different tissues of rainbow trout

Rodríguez-Illamola, A., Muñoz, J. L., Gesto, M., Soengas, J. L. & Míguez, J. M., 2008.

Immunolocalization of glucokinase in glucosensing tissues of rainbow trout

Polakof, S., Aguilar, A., Gesto, M., Míguez, J. M. & Soengas, J. L., 2008.

Naphthalene treatment alters liver intermediary metabolism and levels of steroid hormones in plasma of rainbow trout (*Oncorhynchus mykiss*)

Tintos, A., Gesto, M., Míguez, J. M. & Soengas, J. L., 2007, In: *Ecotoxicology and Environmental Safety*. 66, 2, p. 139-147

Changes in V1-type receptor expression in several tissues of rainbow trout acclimated to different salinities

Míguez, J. M., Rodríguez-Illamola, A., Ceinos, R., Gesto, M., Polakof, S. & Soengas, J. L., 2006.

Differential effects of naphthalene on brain neurotransmitters of rainbow trout at two different stages of vitellogenesis

Gesto, M., Tintos, A., Ceinos, R., Rodríguez-Illamola, A., Soengas, J. L. & Míguez, J. M., 2006.

Effects of acute and prolonged naphthalene exposure on brain monoaminergic neurotransmitters in rainbow trout (*Oncorhynchus mykiss*)

Gesto, M., Tintos, A., Soengas, J. L. & Míguez, J. M., 2006, In: *Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology*. 144, 2, p. 173-183

Interactive effects of naphthalene treatment and the onset of vitellogenesis on energy metabolism in liver and gonad, and plasma steroid hormones of rainbow trout *Oncorhynchus mykiss*

Tintos, A., Gesto, M., Alvarez, R., Míguez, J. M. & Soengas, J. L., 2006, In: *Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology*. 144, 2, p. 155-165

Interactive effects of naphthalene treatment and vitellogenesis on energy metabolism and steroid hormones in rainbow trout

Tintos, A., Gesto, M., Fernández-Duran, B., Polakof, S., Míguez, J. M. & Soengas, J. L., 2006.

Arginine vasotocin stimulates melatonin release from trout pineal organs in culture: Possible action mediated by V1-type receptor

Rodríguez-Illamola, A., Gesto, M., Ceinos, R., Soengas, J. L. & Míguez, J. M., 2005.

Effect of season on daily rhythms of several indoles and 5-methoxyindoles in the pineal organ of trouts exposed to natural conditions

Ceinos, R., Rodríguez-Illamola, A., Gesto, M., Grádin, A., Soengas, J. L. & Míguez, J. M., 2005.

Effects of naphthalene exposure on melatonin production and indole metabolism in trout pineal gland

Míguez, J. M., Gesto, M., Tintos, A., Ceinos, R., Rodríguez-Illamola, A. & Soengas, J. L., 2005.

Arginine vasotocin modulates the secretion of melatonin and other 5-methoxyindoles in the pineal organ of the rainbow trout: an in vitro study

Gesto, M., Rodríguez-Illamola, A., Ceinos, R., Soengas, J. L. & Míguez, J. M., 2004.

Effect of in vivo administration of arginine vasotocin on indoleamines and 5-methoxyindoles in the pineal organ of rainbow trout

Rodriguez-Illamola, A., Gesto, M., Alvarelllos, S. S., Tintos, A., Soengas, J. L. & Míguez, J. M., 2004.

Growth hormone actions on carbohydrate metabolism and osmoregulatory capacity of rainbow trout
Alvarelllos, S. S., Tintos, A., Gesto, M., Rodriguez-Illamola, A., Míguez, J. M. & Soengas, J. L., 2004.