

IRTA IS SEEKING A PhD STUDENT GRANTED BY THE SPANISH STATE RESEARCH AGENCY (AIE)

IRTA is interested in contracting a PhD student for its Aquaculture Program in the Center of Sant Carles de la Rapita which is going to be granted by Spanish State Research Agency.

Title of the project in which the PhD student will be involved

Dietary and gut microbiota interventions as tools for regulating fish adiposity (ADIPOQUIZ)

Concept and approach of the project

The starting hypothesis of ADIPOQUIZ is that it is possible to improve the health and quality of farmed fish by modulating their body adipose content. This strategy may be achieved by means of either the use of selected dietary feed additives such as bile salts and essential oils and/or by means of modulating gut microbiota (faecal transplants). In this sense, this proposal also seeks to validate the hypothesis that gut microbiota may modulate feed intake, energy metabolism, fat storage and systemic and local health in fish, as it has been reported in humans and mice. Thus, the general objectives of ADIPOQUIZ are: i) provide reliable nutritional strategies for regulating body adiposity in farmed fish, and ii) decipher the potential role of gut microbiota in body fat deposition, as well as in fish condition and health.

This research will have an important impact on deciphering the impact of gut microbiota on body condition, health and adiposity in fish. In this sense, recent studies in humans and mammalian models have indicated that the gut microbiota plays a role in regulating host energy metabolism and may contribute towards the development of obesity and associated metabolic diseases. Thus, providing insight into the role of gut microbiome on fish body adiposity, health and welfare will have a deep impact on microbiome studies and fish nutrition, as well as in applied fish sciences like aquaculture. As far as we are concerned, this is the first time that such experimental approach is conducted in non-mammalian models; thus, ADIPOQUIZ is conceived to be conducted under a holistic approach, not only from the microbial community perspective, but also considering the health and condition of the host.

The IRTA is a pioneering agriculture and food research institute in Catalonia, founded on 1985, with a team of over 700 people performing its activities with the clear vocation of a public service. It has 10 work centres of its own on locations.

General objectives of the project.

Objective 1: Evaluate how different nutritional strategies based on the use selected feed additives are able to modulate body adiposity, energy metabolism, feed intake, local and systemic immunity, and gut microbiota (WP1).

- Objective 2: Elucidate the effect of gut microbiota on body adiposity and health condition in fish in order to validate recent information gathered from human and mammalian biological models that establishes a direct link between these variables (WP2).

PhD thesis project

PhD student will be mainly involved in the objectives 1 and 2

Duration

The duration of the PhD student contract will be for four (4) years.

Remuneration

The financial remuneration will be of €1,185.47/gross per month (€20,582.04/gross per annum) for the first and second year. For the third year the remuneration will be of €1,270.15/gross per month (€ 21,901.44/gross per annum) and for the last year will be of €1,587.69/gross per month (€27,375.60/gross per annum).

Requirements:

Candidate profile:

Degree in Biochemistry, Biotechnology, Biology, Agricultural Veterinary or similar; and Master in Biotechnology, Nutrition, Aquaculture, Microbiology or similar.

Very good academic record (expediente académico ≥ 8)

Any prior experience in research, laboratory work, microbiology, molecular biology will be viewed positively.

Other requirements: High English level.

Persons interested, please, contact by email to Dr Enric Gisbert (enric.gisbert@irta.cat), sending her the CV together with a letter of presentation and including the medium note of his/her academic record. **Deadline: September 15, 2019.**