

POSITION ANNOUNCEMENT: The Department of Medical and Biological Sciences of the University of Udine (Italy) offers a post-doctoral 2.5 years position on Fish Pathology/Immunology. The position will be financed within the INTERREG research project Cross-border Cooperation: programme Italy-Slovenia 2007-2013 N. 2/2009 - Innovaqua – Network for technological innovation in aquaculture.

FOCUS OF THE PROJECT: Exploring new approaches to prevent infectious diseases in farmed fish

The candidate must be able to carry out research in the field of immunology and pathology of fish species, focusing on the following topics...

- Expression and quantification studies of antimicrobial peptides (AMPs) in inflammatory cells and tissues of relevant farmed fish species by biomolecular techniques.
- Quantification of AMPs in fish mucus collected from gills/skin/intestine by ELISA sandwich/WB.
- Assessment of *in vitro* biological activity of selected AMPs on fish macrophage cell lines and freshly purified fish immune cells (activation, chemotaxis and/or induction of degranulation, cytokine induced profile).
- *In vitro* studies to assess the mechanisms of AMPs inhibitory action on bacterial pathogens relevant for fish species.
- *In vitro* studies on anti viral activity of fish AMPs on selected viruses pathogens to fish (e.g. Lymphocystis Virus)
- Investigations aimed at developing methods for the prevention of fish diseases

The research will be performed at the Laboratory of General Pathology, Dept. of Food Science of Udine University, under the supervision of Prof. Marco Galeotti.

Another task assigned to the candidate will be the participation to seminars and periodical meetings aimed to the dissemination of results to aquaculture farms, according to the main purposes of the research project supporting this contract, which is the “technological innovation in aquaculture”. Considering that in the field of aquaculture, fish AMPs can be proposed as stress early indicators or indicators of infection outbreaks, as well as “bio-molecules” that potentially could replace conventional drugs or antibiotics, further insights on their expression are needed especially in fish species farmed within the area covered by the INTERREG program. The species proposed as models for the study of AMPs expression will be rainbow trout, sea bass and gilthead sea bream.

ELIGIBILITY: The candidate should possibly hold a PhD/doctorate in the fields related to microbiology, immunology, biotechnology or veterinary medicine. He/she is also required to be enterprising and to possess good interpersonal skills. The successful applicant will be expected to develop a research program and coordinate relevant research activities. Preference will be given to candidates who have used relevant techniques to address the project activities (PCR, real time PCR, ISH, *in vitro* culture of cells, *in vitro* culture of virus and bacteria) and who can work well in a collaborative team.

SALARY: Salary will be about 18/19,000 EURO per year.

CONTACT: Candidates are required to send a letter of intent describing specific research interests, experience and career goals along with a detailed curriculum vitae, and a letter of reference.

For further information about the position please contact Professor Marco Galeotti, DIAL or Dr. Donatella Volpatti (DIAL), University of Udine, Italy.

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