

## Research project IZS VE 13/11

***Aeromonas spp* and *Flavobacterium spp* isolates in diseased farmed trouts: molecular and phenotypic approach to species identification and to antibiotic resistance study (oxytetracycline and florfenicol)**

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Intensive trout farming represents one of the main aquaculture activities in Italy. Many bacterial diseases can affect trout causing economic losses; among them *Aeromonas spp* and *Flavobacterium spp* are responsible of massive mortality above all in fingerlings.

Several typing methods have been used for phenotypic and genotypic characterization of the isolates, varying in their reproducibility and discriminatory power. In addition, little is known about presence and diffusion of drug resistance for some molecules.

A combination of different techniques for a correct assignation of species level and a standardization of tests provide an exact knowledge of implicated pathogens. Moreover, when diagnoses are not accurately made, reflects a use of broad-spectrum antibiotics, i.e. antibiotics that kill a large proportion of various bacteria and not only the bacteria responsible for the disease. This can promote the selection and the spreading of resistant microorganism, that could disseminate antibiotic resistance to others microorganism. Aims of this project is to provide data about bacterial species involved (disease prevalence) and data about antibiotic resistance diffusion. These data could also aid in controlling the routes by which the resistant bacteria and their genes can enter in the food chain.