

IZSVE, IZSVE EXPERIMENTAL AQUARIUM

(IT)

Research topics:	The Aquatic Animal Virology laboratory is the National Reference Laboratory for Fish Diseases and the OIE Reference Laboratory for Viral Encephalopathy and Retinopathy (VER) and is leading within research and diagnostics on viral diseases in fish. The laboratory also covers to some extent bacterial diseases and fish pathology. Research in vaccinology of fish is also performed.
Activities and services currently offered by the infrastructure/its installations:	IZSVE carries out diagnostic and applied research aiming to control and prevent viral fish diseases. The laboratory is equipped to perform viral isolation on different cell lines as well other cell based techniques: viral replication and titration, immunofluorescence, serumneutralization. A range of PCR based protocols for the main viral disease of trout, marine species (sea bass and sea bream) and cyprinid species is already available. Furthermore, the laboratory holds a large virus collection of isolates from rainbow trout, sea bass and sea bream as well as specific sera. The experimental aquarium is authorized by the Italian Ministry of Health for working with fish pathogens (virus, bacteria and fungi). The aquarium has the possibility to rear both salt and freshwater species, with a RAS system with artificial salt for saltwater and with open flow system for freshwater. Wastewater are sterilized by ozone. The facility is comprised of 3 rooms with different kind of tanks: the first has 3 tanks of 2500 L each, the second has 12 tanks of 300 L each, and the last has 8 tanks of 300 l each, 2 of 500 L each and 16 of 80 L each. Every tank is equipped with its own biological filter (for saltwater only), aerator, refrigerator and heater, so every tank is completely independent from the others.
Description of the access to be provided under VetBioNet TNA call:	The IZSVE, Aquatic Animal Virology laboratory, offers access to carry out <i>in vivo</i> fish trials (fish < ½ kg) with infectious pathogens in various infection models e.g. IP injection, bath challenge

	<p>and co-habitation. Up to 1.000-2.000 fish can be included in a trial depending on fish size and number of experimental groups. The trials can be conducted at various conditions such as various temperatures, tank types, fresh- and saltwater. Although trials can be performed on several species, rainbow trout, sea bass and sea bream are those for which the laboratory has outstanding experience and which are more easily to arrange. Considering fish spawning season and the delay for requesting authorization for the envisaged experiments, the user request for TNA should be planned with 6 month of notice.</p> <p>The access will include the use of tanks including maintenance, water supply, daily feeding and husbandry, manipulation and sampling of fish, access to dry laboratory facilities and other technical and scientific infrastructural support including access to cell culture facilities, pathogen isolation and identification by immunochemical and molecular techniques, histopathology, and basic bacteriology. The duration of the experimental trial is estimated for 3-4 weeks but may be extended for a total of 5-8 weeks.</p> <p>Number of access to provide: 100 graduated staff entrances. Avery graduated staff entrance corresponds about to a half workday. One week of experimental work therefore requires 10-12 entrances.</p>
<p>Animal species/pathogens that can be worked on in this infrastructure/installation:</p>	<p>Marine species: Viral Encephalopathy and Retinopathy (VER) Salmonids (rainbow trout or other Salmo Spp fish): viral haemorrhagic septicaemia (VHS), infectious haematopoietic necrosis (IHN).</p>
<p>Travel and subsistence costs:</p>	<p>For each TNA project we welcome and cover all expenses for one participant.</p>
<p>Infrastructure/installation ethical rules:</p>	<p>The Istituto Zooprofilattico Sperimentale delle Venezie is a public health body belonging to the National Health System, authorized as user by the Ministry of Health (Decree n. 78/2012-A of 13/03/2012).</p> <p>According with Decree n. 26 of 4 March 2014, the Institute established its own animal-welfare body</p>

with General Director Order n. 218 of 5 May 2014.

An authorization will have to be requested for the work related to the access, this could have a lead in time of 5 to 6 months and will be written by IZSVe staff in conjunction with the party requiring access. The animal experiments will be carried out according with Decree n. 26 of 4 March 2014 implementing Directive 2010/63/UE on the protection of animals used for scientific purposes (OJ General Series n.61 of 14 March 2014).