

EXPERIMENTAL STATION OF THE PLOUFRAGAN-PLOUZANE-NIORT LABORATORY



The experimental station of the ANSES Laboratory of Ploufragan-Plouzané-Niort (SE-PPN) is dedicated to *in vivo* exploration of pathologies of animal species of agronomic interest.

The SE-PPN accommodates **experimental infections requiring biological safety level 2 or 3** in a wide variety of animals of defined health status (poultry, rabbits, pigs, fresh and seawater fish).

The poultry, rabbit and pig facilities are located on the Saint Briec Armor Technopole site (Ploufragan, Côte d'Armor) and those dedicated to freshwater and seawater fish within the Brest Iroise Technopôle (Plouzané, Finistère).

SE-PPN supports the work of **8 research units** in epidemiology, animal welfare, microbiology and infectiology, holding **17 national** and **5 international** (World Organization for Animal Health - OIE, European Union) **reference laboratory mandates**.

SE-PPN is **certified to carry out analyses** (ISO 17025) and organize inter-laboratory proficiency tests (ISO 17043).

To national and international partners from public and private sectors, SE-PPN provides the know-how of its experienced and well-trained staff and access to its pathogen collection as well as strong expertise in obtaining approval from the French Ministry of Research to carry out animal experiments.

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Site of Plouzané :
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Multi-species facilities for your R&D activities in animal health



In vivo study of farm animal pathologies:

- 🔬 **Infectious challenges** (viruses, bacteria and parasites) on farm animals (fish, rabbits, poultry, pigs, etc.) with appropriate inoculation methods (injection, bath, etc.)
- 🔬 **Testing of preventive / curative strategies** (vaccines, probiotics, genetic selection, etc.)
- 🔬 **Exposure of fish to stress**, chemical or physical pollutants, environmental variations (climate change), combinations of stress factors
- 🔬 **Pathology and food safety** in poultry and pig productions

Models of interest in animal health and food safety:

Avian or porcine influenza; African swine fever; Porcine reproductive and respiratory syndrome; Avian salmonellosis; *Clostridium spp.* in poultry; *E. coli* ; colonization of pig and poultry by *Salmonella*, *Campylobacter* and *Yersinia*; viral and bacterial diseases of freshwater/marine fish; dissemination of genes encoding resistance to antimicrobials.



Breeding capacities...:

- 🔬 **Fish farming**: 8 ponds of 15 m³ coupled with a nursery room (SPF⁺ rainbow trout)
- 🔬 **SPF pig house**: 485 m² of confined rooms to produce 350-400 SPF⁺ pigs per year
- 🔬 **Poultry**: 1700 m² to produce eggs and SPF⁺ animals (chickens, barbara ducks, turkeys), 45,000 embryonated eggs produced per year

Coupled with experimental facilities:

- 🔬 **Fish**: **6 experimental rooms** supplied with fresh or seawater (open circuit, optional thermoregulation). Testing possible from 10-litre aquariums up to 300-litre tanks on various species (rainbow trout, sea bass, sea bream, turbot, meagre, common carp or koi, perch, pike, medaka, etc.)
- 🔬 **Pig**: **18 BSL2 and BSL3** animal houses with a total area of 750 m² to address research questions relating to all physiological stages
- 🔬 **Poultry farming**: more than **1000 m² of confined rooms** (800 m² in BSL2 and 250 m² in BSL3) adapted to **multi-species** (chicken, hen, duck, turkey, rabbit) and about fifteen insulators for poultry
- 🔬 **Environmental safety** through sterilization / ozonation of all liquid effluents



* Specific Pathogen Free

Know-how coupled with a wide range of resources:

- 🔬 **Viral and bacterial production** (strain collections)
- 🔬 **Infection monitoring** (cultures, PCR, sequencing, etc.)
- 🔬 **Innate and specific immune responses** (hematology, RNAseq, cytometry, etc.)
- 🔬 **Microbiotes**