



IZSAM G.CAPORALE  
TERAMO

**Istituto Zooprofilattico Sperimentale  
dell'Abruzzo e Molise (IZSAM)**



# About us



- We are a scientific body, **founded in 1941**, belonging to the National Public Health Service. We support the Italian Ministry of Health and the Abruzzo and Molise Regions.
- Our mission is:
  - to ensure human health, providing appropriate response to public health needs, through scientific knowledge and expertise on food safety, animal health and welfare, control and prevention of transmittable animal diseases, including zoonoses, support to food production.***





# We are here



# Fields of activities



Animal Health and  
welfare




Food safety



Health and  
environment



Epidemiology  
& RA




Information systems  
and animal identification  
and registration



Knowledge  
management



# Main Tasks

- 
- **Research on etiology and pathogenesis** of animal infectious diseases
  - **Development of innovative diagnostic methods** for animal infectious diseases
  - **Production** of vaccines and diagnostic reagents
  - **Microbiological and chemical tests** for the diagnosis of animal diseases and in the framework of controls for safety of feed and food of animal origin and the safeguard of sea and terrestrial ecosystems



# Main Tasks

- 
- **Epidemiological surveillance and risk assessment** in animal health and food safety
  - **Training** of professionals in veterinary public health
  - **Development of information and data management systems**
  - **Support to the process of accreditation and certification** of laboratories and veterinary public health services
  - Research on **animal welfare**



# Our national expertise/1



 COVEPI  
Centro di Riferenza Nazionale



 PCDD/F e PCB  
Laboratorio Nazionale di Riferimento



 Brucellosi  
Centro di Riferenza Nazionale



 CESME  
Centro di Riferenza Nazionale




 *Listeria monocytogenes*  
Laboratorio Nazionale di Riferimento



 IUVENE  
Centro di Riferenza Nazionale



 *Campylobacter*  
Laboratorio Nazionale di Riferimento

- National Reference Laboratory for *Listeria monocytogenes*
- National Reference Laboratory for *Campylobacter*
- National Reference Laboratory for **Dioxins** (PCDDs/PCFFs) and **Polychlorobiphenyls** (PCBs)
- National Reference Centre for the study and verification of **Foreign Animal Diseases** (CESME)
- National Reference Centre for **Veterinary Epidemiology, Programming, Information and Risk Analysis** (COVEPI)
- National Reference Centre for **Brucellosis**
- National Reference Centre for **Urban Hygiene and Non-Epidemic Emergencies** (IUVENE)



# Our national expertise/2



 African Horse sickness  
National Reference Laboratory



 Capripox viruses  
National Reference Laboratory

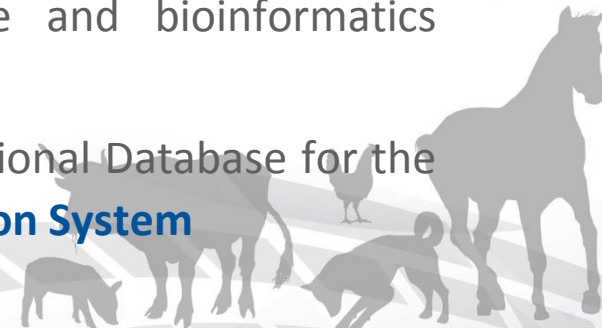


 Peste des Petits Ruminants  
National Reference Laboratory



 Sequenze Genomiche  
Bioinformatica  
Centro di Referenza Nazionale

- National Reference Laboratory for **African Horse sickness (AHS)**
- National Reference Laboratory for **Capripox viruses** (Sheep & Goat Pox and Lumpy Skin Dis-ease)
- National Reference Laboratory for **Peste des Petits Ruminants (PPR)**
- National Reference Centre for **Whole Genome Sequencing of microbial pathogens**: database and bioinformatics analysis
- National Services Centre for the National Database for the **Animal Identification and Registration System**





# The international setting



- Research, technical assistance and cooperation: our international experience is acknowledged by the international organisations such as OIE and FAO and is carried out in partnership with many other research centres at global level.





# Our international expertise



**Oie** Collaborating Centre  
for Veterinary Training, Epidemiology,  
Food Safety and Animal Welfare



**Oie** Reference Laboratory  
West Nile Disease



**Oie** Reference Laboratory  
Contagious Bovine Pleuropneumonia

- OIE Collaborating Centre for **Veterinary Training, Epidemiology, Food Safety and Animal Welfare**;
- OIE Reference Laboratory for **Brucellosis**;
- OIE Reference Laboratory for **Contagious Bovine Pleuropneumonia (CBPP)**;
- OIE Reference Laboratory for **Bluetongue**;
- OIE Reference Laboratory for **West Nile Disease**;
- FAO Reference Centre for **Veterinarian Epidemiology**.



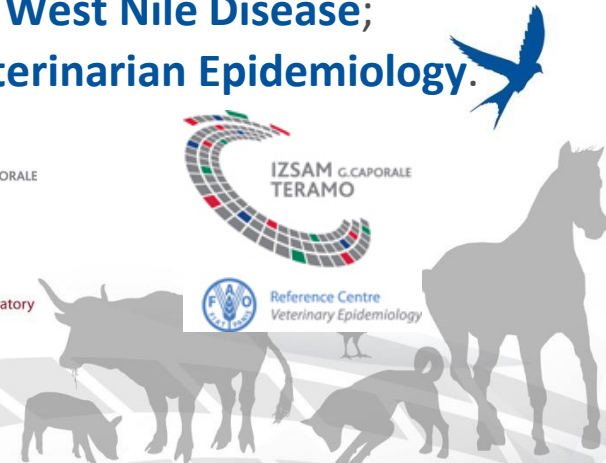
**Oie** Reference Laboratory  
Brucellosis




**Oie** Reference Laboratory  
Bluetongue

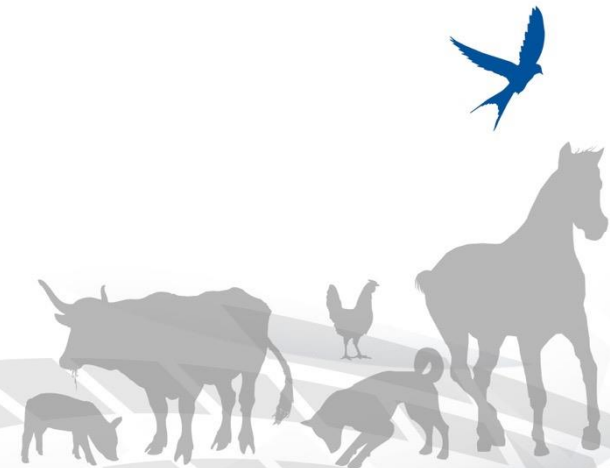


 Reference Centre  
Veterinary Epidemiology

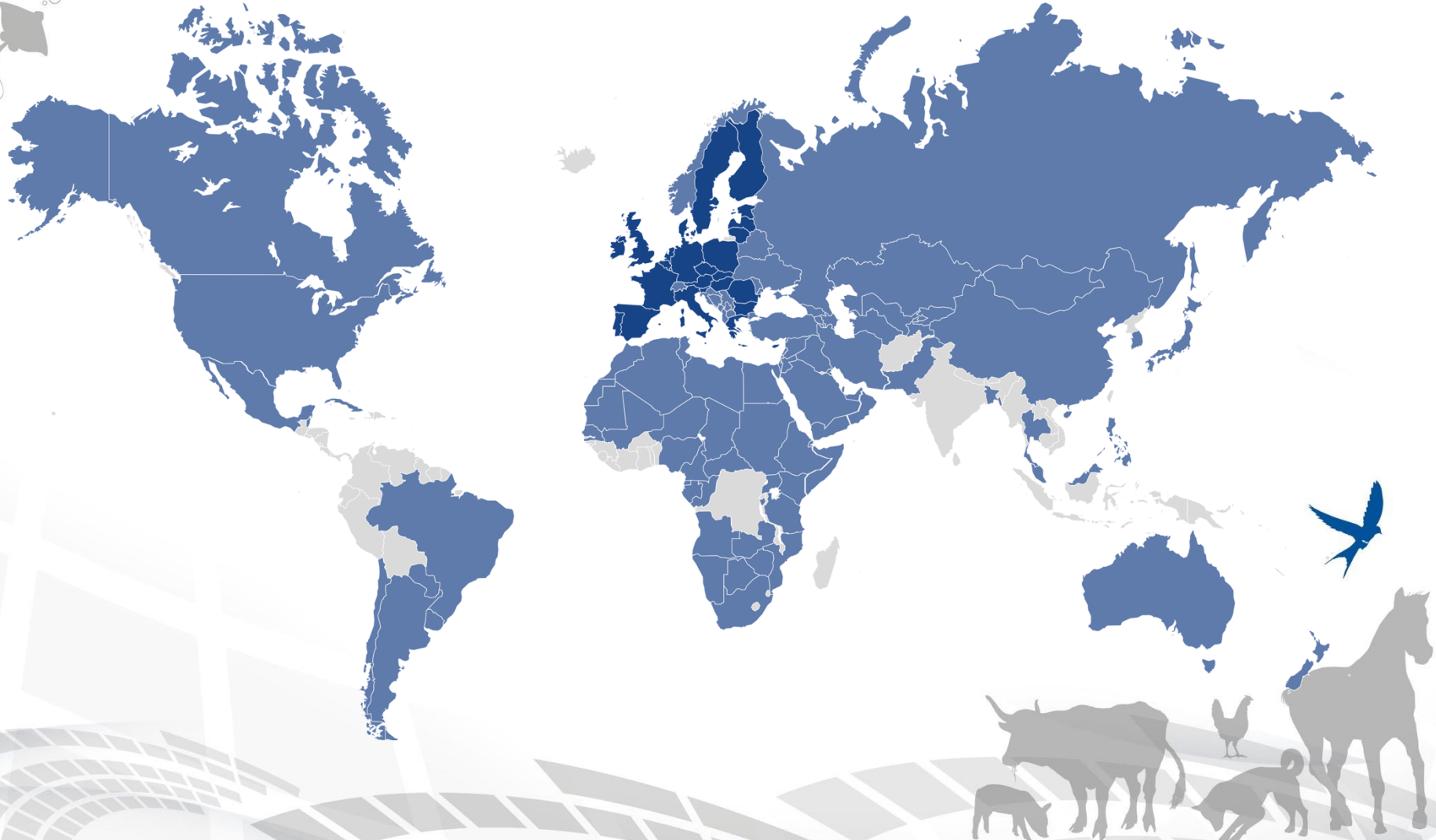


# International engagement


- 
- European funded projects (VII FP, H2020, DG SANCO, ANIHWA, etc.)
  - OIE twinning projects
  - Collaboration agreements with other Institutions
  - National Research Funds
  - Institute direct engagement

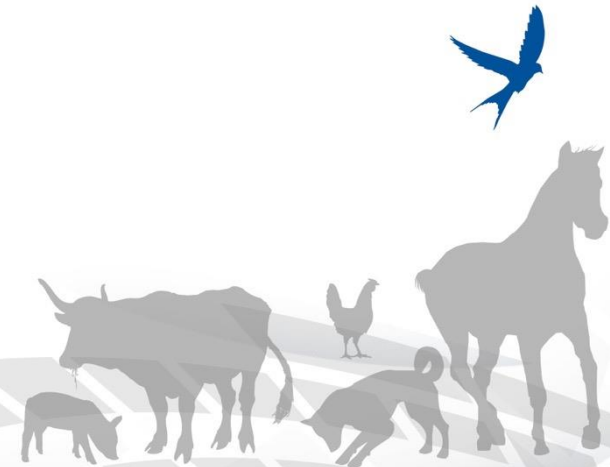


# International cooperation




# Quality management

- 
- Since 1995 the Institute is accredited according to EN 17025
  - Since 2016, the Training Services of the Institute are acknowledged to be conform to the ISO 9001:2015 norm




# Our research is focused on:

- 
- new **analytical** and **diagnostic methods** for emerging and reemerging animal diseases;
  - next generation sequencing;
  - geno-typing of emerging pathogens;
  - surveillance and **risk analysis** in **veterinary public health**;
  - production of **vaccines**, new generation **immune-stimulants** and **diagnostic kits**;
  - development of animal health and food safety **information systems**;
  - **animal welfare**.



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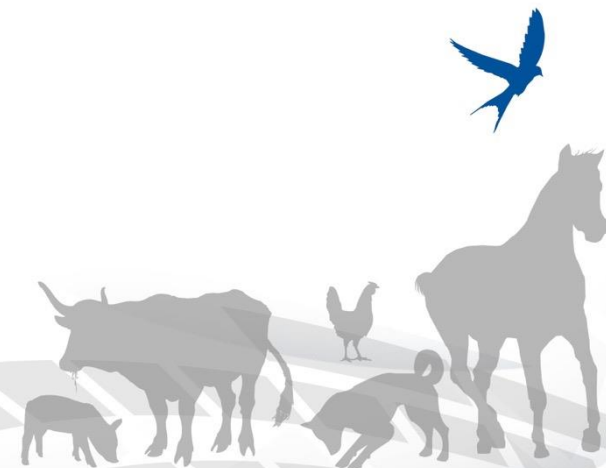
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  - development of animal health and food safety information systems;
  - animal welfare.



## Unique Portal of Veterinarian Information Systems


IZSAM has developed several Information Systems in the veterinary field for the Italian Ministry of Health. It is also involved with their management and extension.

They are available at the Unique Portal of Veterinarian Information Systems (VETINFO), which provides users with a single access point to the different applications as well as single point to manage the various roles and accounts





# The Italian Animal Identification and Registration System (BDN)



It manages the database for bovines, sheep and goats, swines, poultry, equines, aquaculture farms, circuses and animal exhibitions, farm inspections.

The **BDN** is operative since 2000 and collects, in accordance with Reg. EC 1720/2000, the data of all holdings and animals present on the national territory, starting from **bovines**.

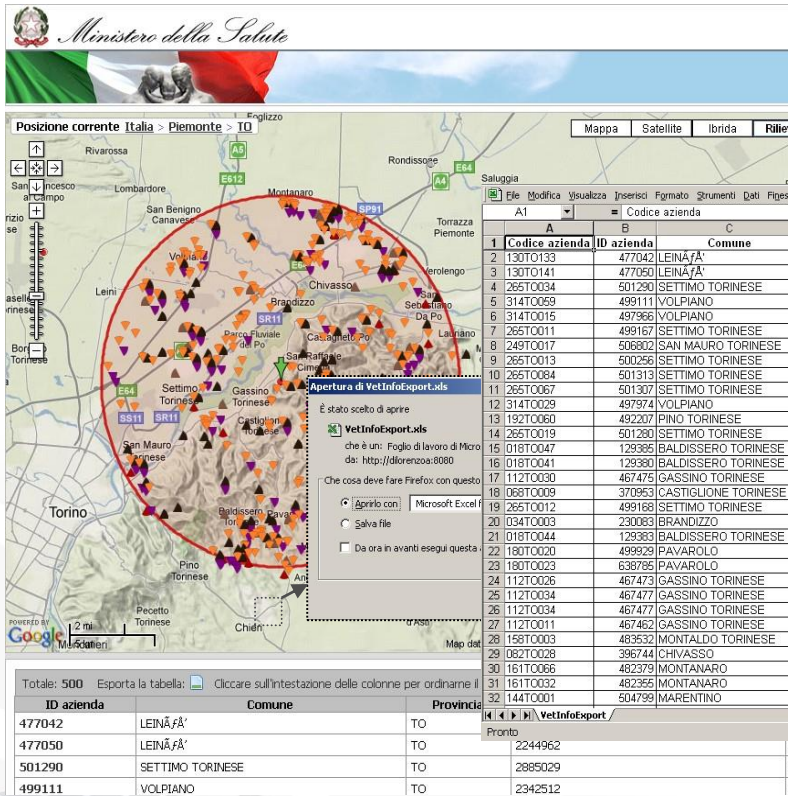
In following years BDN included at first small ruminants (Reg. EC 21/2004) and then porcine (Dir. 2008/71/EC), poultry, equines, bees and aquaculture establishments.

EC recognized the **fully operational** character of the Italian database for bovine animals with Decision of 13 February 2006.



# BDN data on GIS

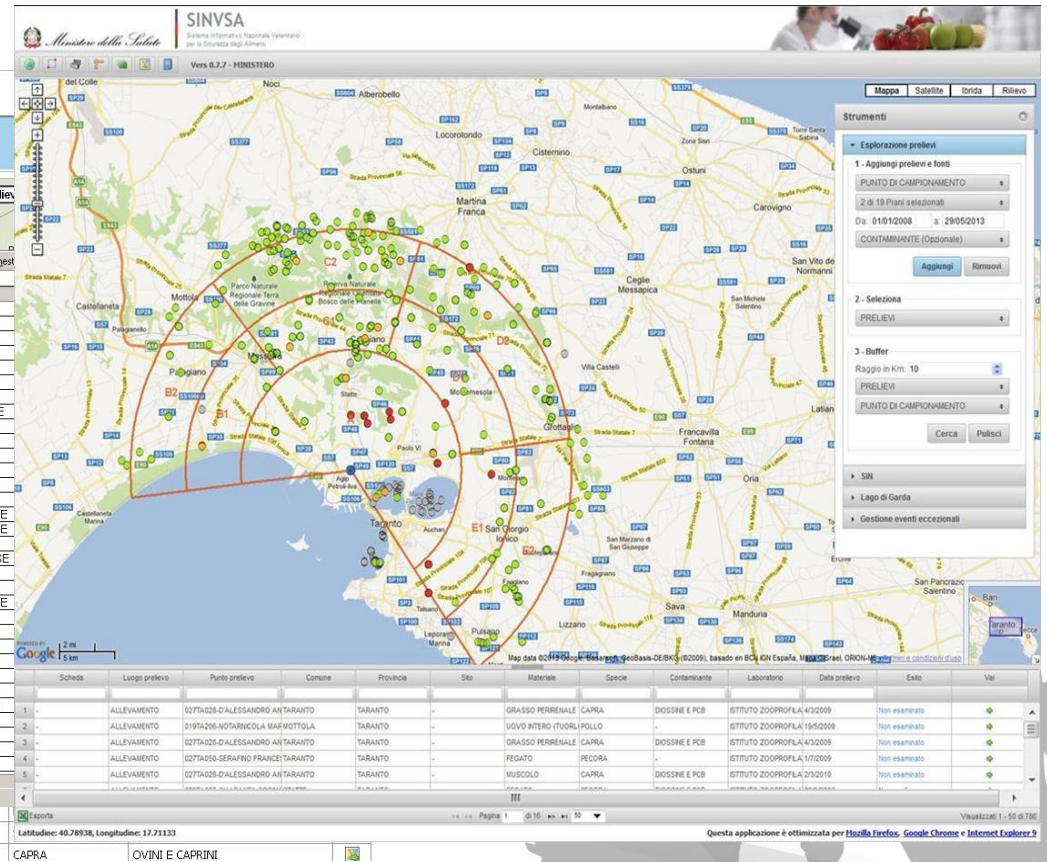
Data from BDN are basic for data analysis and statistics for epidemiological purpose; such information can be viewed and queried on maps and GIS.



Ministero della Salute

Posizione corrente Italia > Piemonte > TO

ID azienda	Comune	Provincia
477042	LEINAFÀ	TO
477050	LEINAFÀ	TO
501290	SETTIMO TORINESE	TO
499111	VOLPIANO	TO



SINVS  
Sistema Informativo Nazionale Veterinario per la Sicurezza degli Alimenti

Vers 0.7.7 - MINISTERO

Scheda	Luogo prelievo	Punto prelievo	Comune	Provincia	Sito	Materiale	Specie	Contaminante	Laboratorio	Data prelievo	Esito	Vali
1	ALLEVAMENTO	02784028-D'ALESSANDRO AN	TARANTO	TARANTO	-	GRASSO PERENNALE	CAPRA	DISSINE E PCB	ISTITUTO ZOOPROFILA/43/2009	19/05/2009	Non esaminato	
2	ALLEVAMENTO	01974206-AIOTARINCOLA MAF	TORRENOVA	TARANTO	-	VOVO INTERO (T)OROLI	POLLO	DISSINE E PCB	ISTITUTO ZOOPROFILA/43/2009	19/05/2009	Non esaminato	
3	ALLEVAMENTO	02784028-D'ALESSANDRO AN	TARANTO	TARANTO	-	GRASSO PERENNALE	CAPRA	DISSINE E PCB	ISTITUTO ZOOPROFILA/43/2009	19/05/2009	Non esaminato	
4	ALLEVAMENTO	02784055-SERAFINO FRANCES	TARANTO	TARANTO	-	PEGATO	RECORRA	DISSINE E PCB	ISTITUTO ZOOPROFILA/43/2009	19/05/2009	Non esaminato	
5	ALLEVAMENTO	02784028-D'ALESSANDRO AN	TARANTO	TARANTO	-	MUSCOLO	CAPRA	DISSINE E PCB	ISTITUTO ZOOPROFILA/20/2010	19/05/2010	Non esaminato	



# National Veterinary Information System for Food Safety (1)

The goal of SINVSA is to collect and process all the relevant data for national risk assessment and improve the prevention of food-borne infections and other diseases associated with consumption of contaminated products



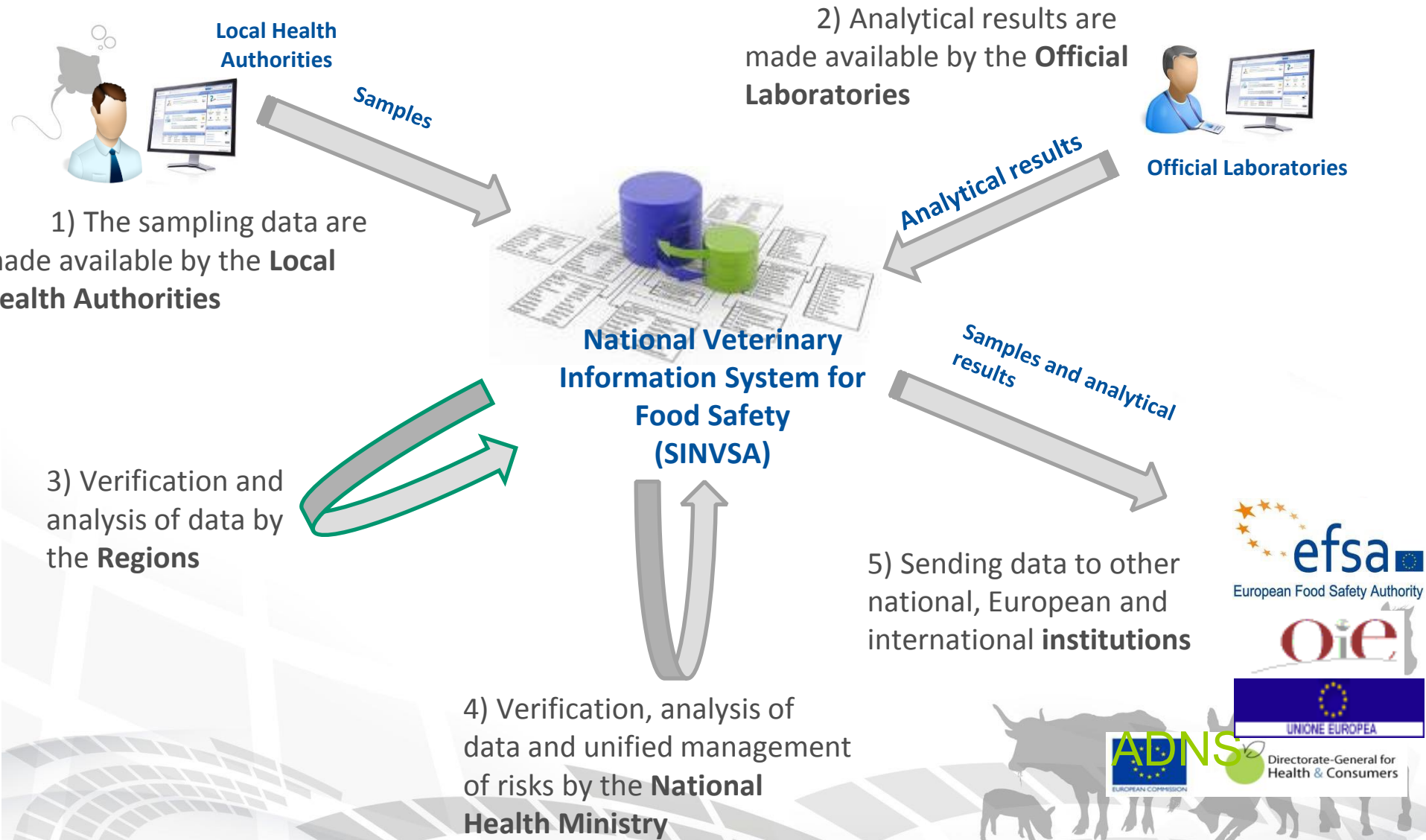
The screenshot shows the SINVSA web portal. At the top, it features the logo of the Ministero della Salute and the SINVSA title. Below the header, there is a navigation bar with 'MANUALI | CONTATTI | PORTALE'. The main content area includes a welcome message for 'SEBILIO GROSSO' and a grid of four main sections: 'Anagrafiche', 'Controlli', 'Esiti', and 'GIS'. Each section has a corresponding image: a warehouse for Anagrafiche, a person in a hard hat for Controlli, a person in a lab coat for Esiti, and a map for GIS.



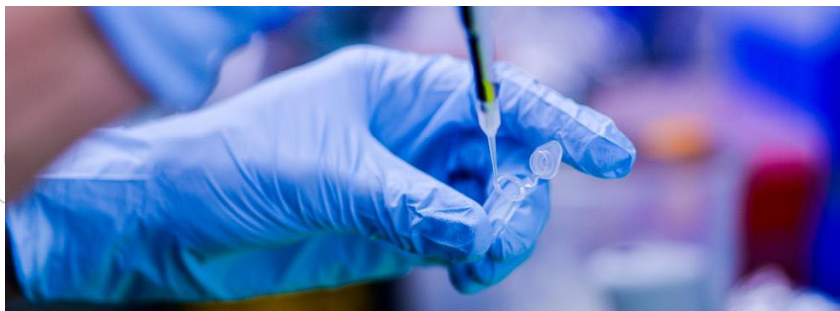
The screenshot shows the Ministero della Salute website. The header includes the Italian flag and the text 'Sistema Informativo Veterinario'. Below the header, there is a navigation bar with 'Benvenuto SEBILIO GROSSO' and a 'Modifica la password' link. The main content area is divided into several sections: 'Ricerca Pro/Desk', 'Applicativi', 'Anagrafe Zootechnica Nazionale', 'Zoonosi', 'Programmi di Educazione', 'Sistema di notifica dei controlli in allevamento', and 'Sistema Informativo Malattie Animali Nazionale'. There are also news items and a footer with the OIE logo.



# National Veterinary Information System for Food Safety (2)



# Molecular epidemiology lab

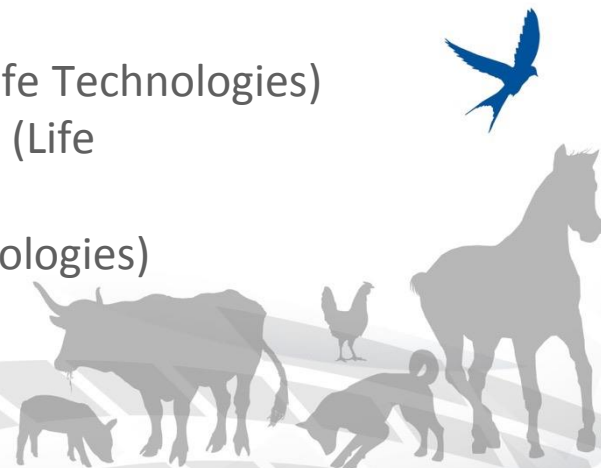


## Multidisciplinary staff

- molecular biologists
- research technicians
- bioinformatics
- vet epidemiologists
- Microbiologists and virologists

## Equipments

- 1 16-Capillary Sequencer 3130xl Genetic Analyzer (Life Technologies)
- 1 Microarray Scanner Gx PLUS (Perkin Elmer)
- 2 Liquid Handling Workstations Microlab STARLet (Hamilton)
- 1 Bioanalyzer 2100 (Agilent)
- 1 NGS Library preparation System AB Library Builder (Life Technologies)
- 1 NGS Template preparation System Ion OneTouch™ 2 (Life Technologies)
- 1 NGS Semiconductor Sequencer ION PGM (Life Technologies)



# NEXT GENERATION SEQUENCING



**Ion Proton™ System**

**Accurate, affordable  
high-throughput  
sequencing**



**Ion Torrent™ Personal  
Genome Machine® (PGM)**

**The n.1 selling benchtop  
sequencing solution**

## Workflow



DNA / RNA



Sample  
Preparation



DNA  
Sequencing



Data  
Analysis

**NRL Campylobacter  
Listeria/Brucella  
BT/ WNV / other viruses**

**Genotypes data  
PGFE/MLVA**

**Epidemiological  
data**

**Epidemiological  
data**

**Isolates**

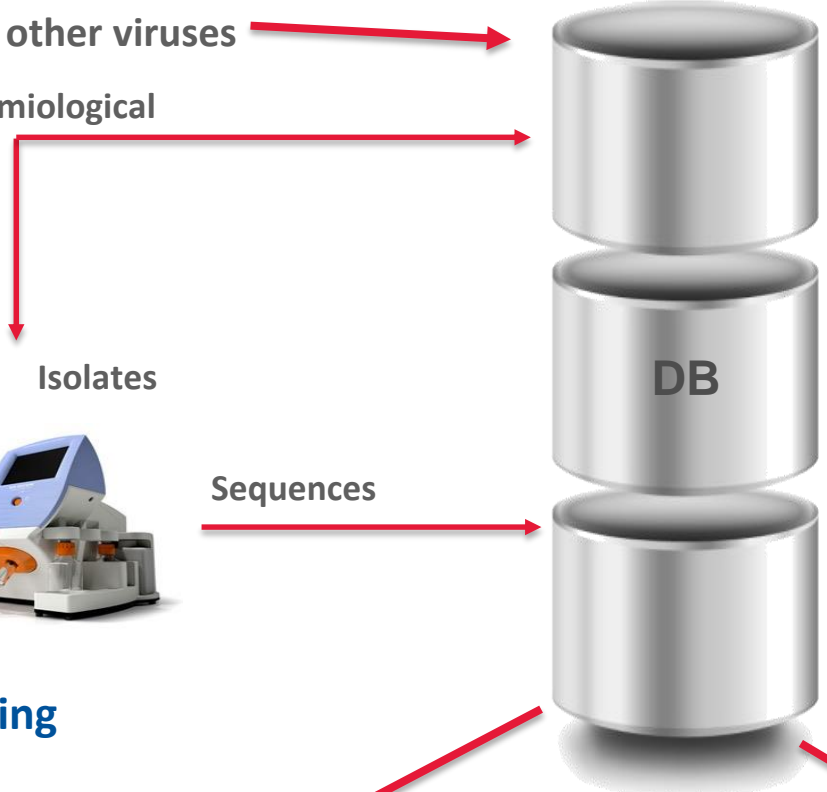
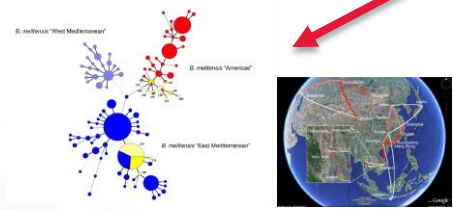
**Sequences**

**DB**

**Sequencing**

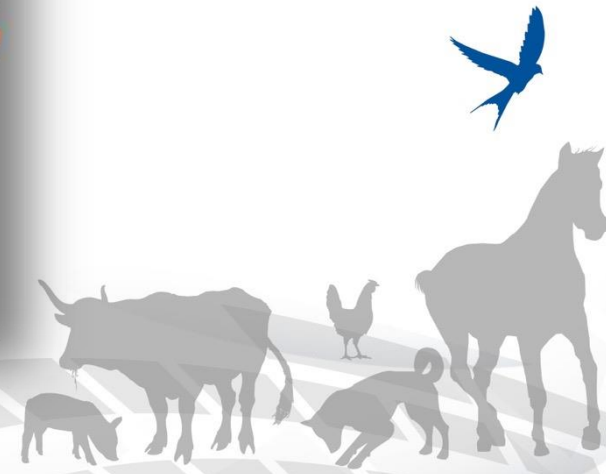
**Data analysis**

**Web systems**



# Molecular surveillance

- National collection of strains isolated from environment, animals and foodstuffs and epidemiological data
- Information system to facilitate collection of data and PFGE gel image and share epidemiological information





# Mobile laboratories

**BSL-2** and **BSL-4** mobile laboratories installed in June 2010

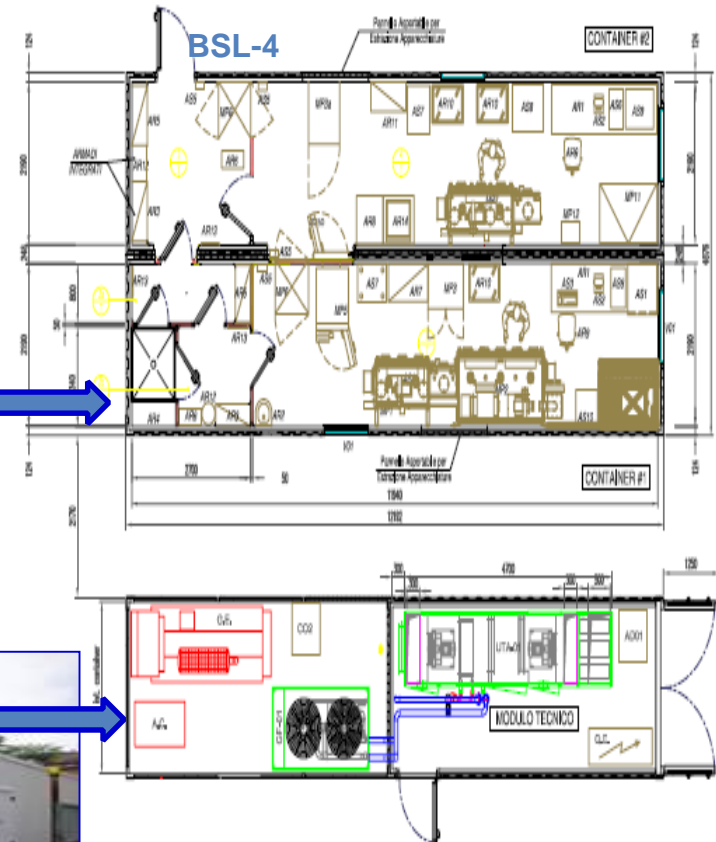
## BSL-2:

- control of pharmaceutical products for veterinary use

BSL-2



SERVICE MODULE



**BSL-2** and **BSL-4** mobile laboratories installed in June 2010

## BSL-4:

- Diagnosis of Rift valley fever and vaccine production
- Diagnosis of Crimean Congo Haemorrhagic fever

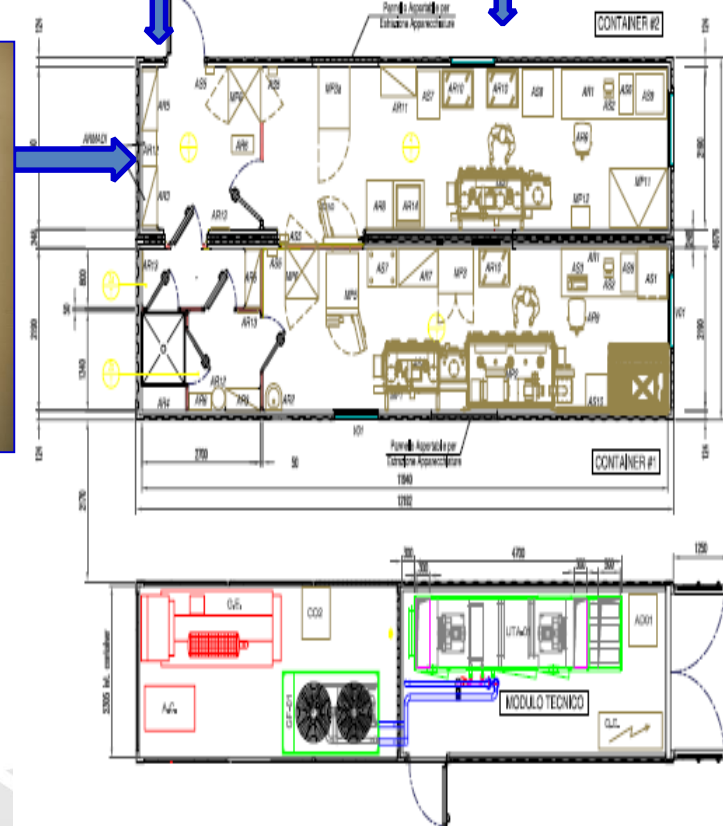
BSL-4



BSL-4



BSL-4



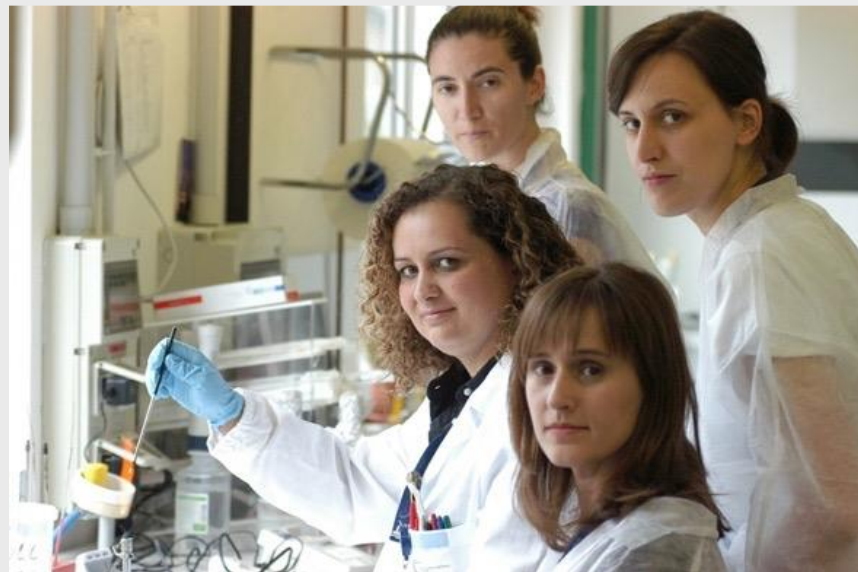
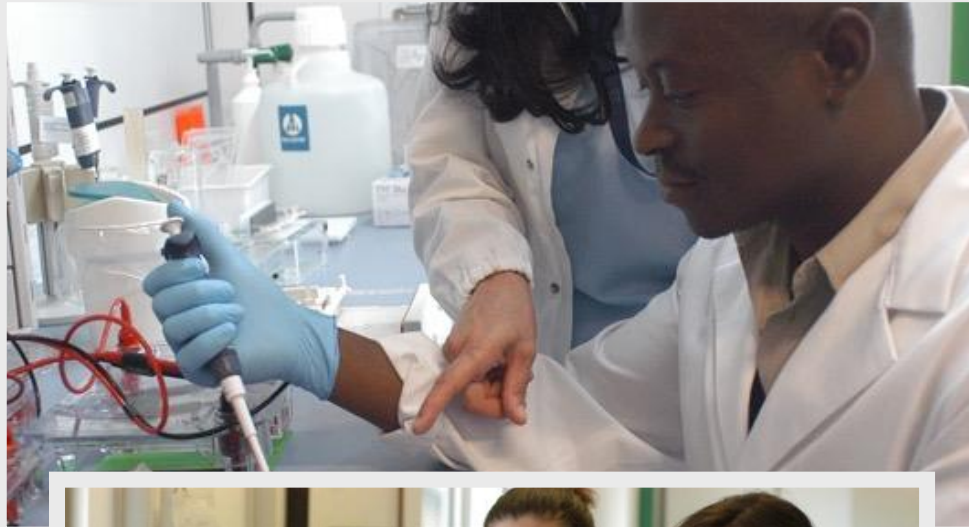
# International Centre for Veterinary Training and Information (CIFIV)



# Residential training



# Laboratory training



# In-country training





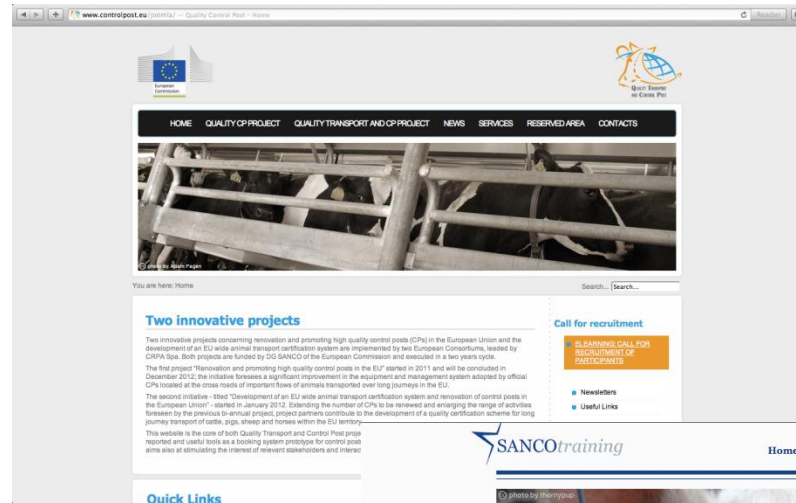
# eLearning



# Web based knowledge management



# CALLISTO



www.controlpost.eu

HOME QUALITY OF PROJECT QUALITY TRANSPORT AND CP PROJECT NEWS SERVICES RESERVED AREA CONTACTS

You are here: Home

### Two innovative projects

Two innovative projects concerning renovation and promoting high quality control posts (CPs) in the European Union and the development of an EU wide animal transport certification systems are implemented by two European Consortia, led by CRPA SpA. Both projects are funded by DG SANCO of the European Commission and executed in a two years cycle.

The first project "Renovation and promoting high quality control posts in the EU" started in 2011 and will be concluded in December 2012; the initiative foresees a significant improvement in the equipment and management system adopted by official CPs located at the cross roads of important flows of animals transported over long journeys in the EU.

The second initiative - titled "Development of an EU wide animal transport certification system and renovation of control posts in the European Union" - started in January 2012. Extending the number of CPs to be renewed and enlarging the range of activities foreseen by the previous bi-annual project, project partners contribute to the development of a quality certification scheme for long journey transport of cattle, pigs, sheep and horses within the EU territory.

This website is the core of both Quality Transport and Control Post project reported and useful tools as a booking system prototype for control post aims also at stimulating the interest of relevant stakeholders and interest

Call for recruitment

● **CLEANING CALL FOR SUBMITTERS OR PARTICIPANTS**

● Newsletters

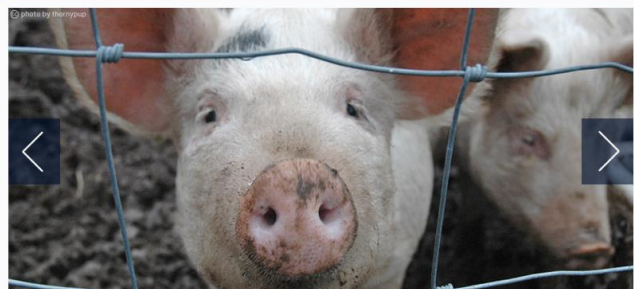
● Useful Links

Quick Links



SANCOtraining

Home Training 2011/12 Application Form Previous courses News



Animal welfare concerning the farming of pigs  
September 2012, Italy

## Training Strategies

"Better Training for Safer Food" (BTSF) is a Commission initiative aimed at organising a Community (EU) training strategy in the areas of Food Law, Feed Law, Animal Health, Animal Welfare and Plant Health.

The main objectives of the initiative are to:

- Ensure and maintain a high level of consumer protection and of Animal Health, Animal Welfare and Plant Health;
- Promote a harmonised approach to the operation of Community and national control systems;
- Create an equal level playing field for all food businesses;
- Enhance trade of safe food;
- Ensure fair trade with third countries and in particular developing countries.

## Search

Keywords

## Latest News

**New website**  
 June 25, 2012 Online the new website dedicate...  
[Read More...](#)



### Indexed


- National Library of Medicine's MEDLINE/PubMed system
- Thomson Reuters Science Journal Citation Reports® database
- Thomson Reuters Science Citation Index Expanded™
- CABI's Full-Text Repository



Quarterly open access journal  
printed (ISSN 0505-401X)  
electronic (ISSN 1828-1427)

Editor-in-Chief Giovanni Savini  
[http://www.izs.it/vet\\_italiana/index.htm](http://www.izs.it/vet_italiana/index.htm)

### Listed

- Directory of Open Access Journals (DOAJ). 
- DOI (Digital Object Identifier)
- Impact factor 0.667 (2011)



# Our Phylosophy



**TRANSLATION BENEFIT TO THE FIELD IS OUR MAIN GOAL**

**Hard Work**

**Continuous Training of Our Team**

**Collaboration with International Partners**



# Thank you for your attention...

