



# Maisons-Alfort Laboratory for Animal Health

*The Maisons-Alfort Laboratory for Animal Health, created in 1901, was the first research laboratory in France and the world set up to combat infectious animal diseases. It employs 140 people and has strong links with the National Veterinary School of Alfort.*

*It is primarily a reference laboratory (NRL, NCR, EU-RL, OIE, WHO, etc.) but also carries out research activities on behalf of other bodies (INRA, ENVA, universities) and with accreditation from the French Ministry of Research (by participating in joint research units, or as contract units).*

*Its work focuses on:*

- (i) major animal epidemics (foot and mouth disease, bluetongue, etc.);*
- (ii) bacterial, viral and parasitic zoonoses;*
- (iii) emerging multi-species animal diseases (epizootics) and particularly vector-borne diseases and opportunistic mycoses.*



*The laboratory relies on every one of its skills to aid health authorities with decision-making:*

- *it develops tools for the detection and characterisation of pathogens affecting domestic and wild animals;*
- *it studies host-pathogen relationships for new vaccination strategies;*
- *it monitors the emergence and spread of epidemics in the animal diseases for which it is responsible (with an innovative warning system);*
- *it is a reference laboratory for most multi-species epizootic/zoonotic animal diseases on the national, European and international levels.*

## Research units and teams

- *Bacterial zoonoses*
- *Epidemiology (with the contract unit for Epidemiology of Infectious Animal Diseases – EpiMAI)*
- *Virology (joint ANSES-INRA-ENVA research unit [UMR])*
- *Molecular biology and fungal and parasitic immunology (joint ANSES-INRA-ENVA-University of Paris XII research unit (UMR), INRA contract unit [USC])*
- *Wildlife vectors and parasites unit (University of Reims contract unit)*

## Reference activities

- **Agriculture (animal health/food hygiene):**
  - *Reference laboratory for the World Organisation for Animal Health (OIE) and the Food and Agriculture Organization of the United Nations (FAO): brucellosis and bovine tuberculosis;*
  - *European Union Reference Laboratory: brucellosis, infectious equine diseases (mandate shared with the Dozulé Laboratory for Equine Diseases including glanders and encephalopathies);*
  - *National Reference Laboratory (NRL): brucellosis, anthrax, avian chlamydiosis, glanders, tuberculosis, tularaemia, foot and mouth disease, swine vesicular disease, African horse sickness, parasites transmitted via feed, West-Nile virus, etc. Certified by the French Accreditation Committee (COFRAC).*
- **Human health:**
  - *National Centre of Reference: brucellosis.*

# Main research programmes

- **Virology:**

- *new diagnostic and preventive methods for major viral animal diseases;*
- *virus/host interactions, interspecies transmission;*
- *development of new vaccine vectors for domestic and wild animals.*

- **Parasitic zoonoses:**

- *new prophylactic and diagnostic tools for combating different parasitic zoonoses transmitted by food and feed in humans and animals.*

- **Bacterial zoonoses and vector-borne bacteria:**

- *Brucella spp., Chlamydia, Mycobacterium spp., Francisella tularensis, Bacillus anthracis, Burkholderia mallei and B. pseudomallei, Bartonella and Anaplasma;*
- *tools for phenotype or molecular differentiation of bacterial strains;*
- *development of generic systems for bacteria vectorised by hematophagous arthropods (ticks).*

- **Mycology:**

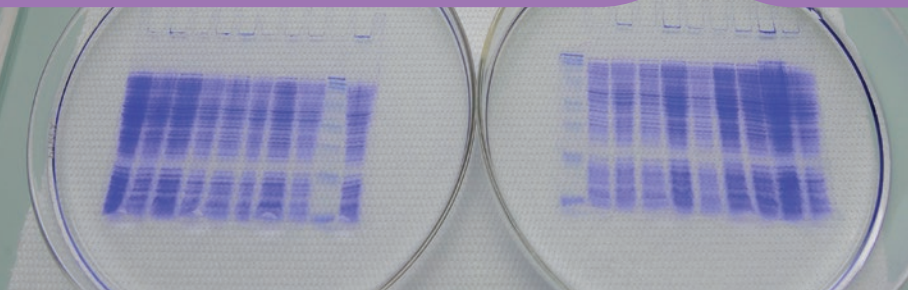
- *characterisation of the circulation of fungal agents in target species (especially birds).*

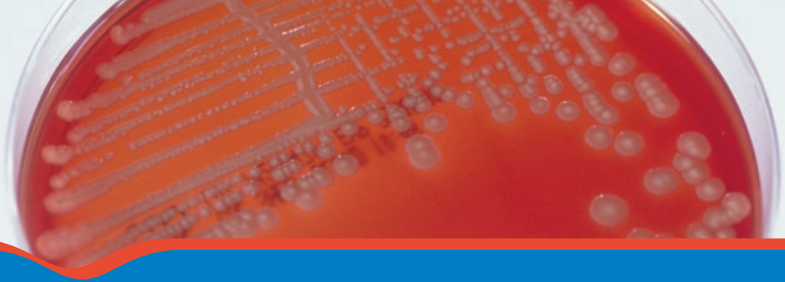
- **Vectors:**

- *interaction between ticks and bacteria, tick breeding;*
- *sandfly diversity.*

- **Epidemiology:**

- *modelling, decision-support and bio-statistical tools applied to different models of animal pathogens;*
- *systems for intervention in the event of animal health emergencies.*





## Main partners

### In France

- **Institutional partners:**

*ANSES Laboratories, OIE, Directorate General for Food, InVS (French Institute for Public Health Surveillance), INRA (French National Institute for Agricultural Research), CIRAD (French Agricultural Research Centre for International Development), CNES (French Space Agency), the National Veterinary Schools, Instituts Pasteur of Paris and Lille, ADILVA (French Association of Directors and Managers of Public Analysis Veterinary Laboratories), ACERSA (French Certification Association for Animal Health), FNGDS (Federation of Health Protection Associations), National Hunting and Wildlife Agency, the Le Bouchet Study Centre, Begin Joint Military Hospital, France's Military Health Service Research Centre, Central Laboratory of the Paris Préfecture de Police, University of Paris-Sud Orsay, University of Paris-Est Créteil, University of Paris VI, Regional Council of Île-de-France, etc.*

- **Private partners:**

*Meriel, Seppic, ID-VET, CEVA, Institut Pourquier, Bio-Rad, Microvision*

### International

*Lanzhou Agricultural University (China), Jilin University (China), Guangxi University (China), CINVESTAV, Mexico City (Mexico), CITA, Zaragoza (Spain), VAR (Belgium), Ministry of Agriculture (Brazil) Northern Arizona University (Flagstaff, USA), University of California – Davis (USA), University of Zagreb (Croatia), all the European National Reference Laboratories, EUFMD of the FAO (Rome), a large number of European research institutes (all EU countries represented)*



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