

PRESS RELEASE

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ANSES, EnvA and INRAE renew two joint research units for animal diseases

ANSES, EnvA and INRAE have renewed their agreement on two joint research units (UMRs): the BIPAR unit (molecular biology and parasitic immunology) and the Virology unit. Both units work on animal diseases and the risk of transmission to humans: the first on parasitic diseases and diseases transmitted by arthropod vectors, the second on viral diseases.

The two units bring together staff from the French Agency for Food, Environmental and Occupational Health & Safety (ANSES), the Alfort National Veterinary School (EnvA) and the French National Research Institute for Agriculture, Food and the Environment (INRAE). They are housed at the ANSES Laboratory for Animal Health in Maisons-Alfort. Following an assessment by the French High Council for Evaluation of Research and Higher Education (HCERES) in 2018 and the positive opinions of the scientific boards of the supervisory authorities, the agreements have been renewed for both units. The unit teams, made up of over 90 technicians, scientific engineers, PhD and post-doctoral researchers, will thus be able to continue a collaboration that began some twenty years ago.

The BIPAR unit

Set up in 1999, the BIPAR unit studies the **interactions between hosts and pathogens**, modelled on **vectors** (ticks, mosquitoes) and the pathogens they transmit (bacteria, parasites and viruses), and also **parasites of animal origin transmitted through food**. Through fundamental and applied research, the unit seeks to develop a clearer understanding of these interactions, taking account of molecular, cellular and tissue aspects, as well as hosts and ecosystems, including the microbiota of vertebrate and invertebrate hosts. Research also focuses on the circulation of these pathogens, innovative control strategies for ticks, arthropod-borne pathogens and food-borne zoonotic parasites: improved detection and surveillance, "universal" vaccine strategies, "ecological" alternatives to antiparasitic and acaricide treatments, and other topics. This UMR hosts the International Collaborating Centre of the World Organization for Animal Health (OIE) and the national reference laboratory for food-borne zoonotic parasites. Between 2016 and 2020, the unit published 257 scientific papers.

The Virology unit

Set up in 2002, the Virology unit studies animal **viral diseases representing a risk of transmission to humans and/or an emerging risk**. The unit develops optimised diagnostic methods for epidemiological surveillance and studies the variability of viral strains, as well as conducting research on the pathophysiology of animal infections, some of which focuses on the risks of transmission between species, particularly from animals to humans. The unit also studies new approaches to the control and prevention of viral infections. It also conducts research on coronaviruses, including SARS-CoV-2, particularly in pets. At the same time, it hosts European and international reference laboratories on foot-and-mouth disease (reference laboratory for the European Union, the OIE and the FAO), haemorrhagic disease (reference laboratory for the OIE) and equine diseases (reference laboratory for the European Union). It also holds many national reference laboratory mandates (bluetongue, West Nile, African horse sickness, and other viruses). Between 2016 and 2020, the unit published 177 papers in international peer-reviewed journals.

The French Agency for Food, Environmental and Occupational Health & Safety (ANSES) provides public decision-makers with the scientific benchmarks needed to protect humans and the environment against health risks. It studies, assesses and monitors all the chemical, microbiological and physical risks to which humans, animals and plants are exposed, thereby helping the public authorities take the necessary measures, including in the event of a health crisis. A national agency working in the public interest, ANSES comes under the responsibility of the French Ministries of Health, the Environment, Agriculture, Labour and Consumer Affairs.

The Alfort National Veterinary School, a higher education and research institute of the French Ministry of Agriculture, is a reference in animal care. Its key areas of activity are: training future veterinarians, advancing scientific knowledge of animal diseases and caring for animals in four university veterinary hospital centres (for pets, horses, farm animals and wildlife). The school's research focuses on animal diseases, infectious and zoonotic risks, and the pathophysiology and treatment of muscular, locomotor and reproductive disorders. EnvA is the oldest veterinary school still on its original site; it has been in Alfort since 1766.

INRAE, the French National Research Institute for Agriculture, Food and the Environment, is a major player in research and innovation. It was created on 1 January 2020. A targeted research institute resulting from the merger between INRA and IRSTEA, INRAE brings together a community of 12,000 people, with 268 research, support and experimental units located in 18 centres throughout France. The institute is one of the world's leading research organisations in agricultural, food, plant and animal sciences, as well as in ecology and the environment. It is the world's leading research organisation specialising in the "agriculture-food-environment" complex. INRAE's ambition is to be a key player in the transitions needed to address society's greatest global challenges. In the face of population growth, climate change, resource scarcity and biodiversity decline, the institute is building solutions for versatile agriculture, quality food and sustainable management of resources and ecosystems.

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