



## Lab news

### One-day event reference laboratory event: more than 100 participants

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ANSES recently organised a one-day forum bringing together heads of laboratories involved in the surveillance and control plans implemented by the health authorities in the fields of animal and plant health, and food safety. The event was co-organised with the Joint Laboratories Service Unit of the Ministries of the Economy and the Budget. The aim was to better address the needs of accredited laboratories and thereby to consolidate the surveillance networks.

Our food supply is often the result of a complex chain of activities, including crop and livestock production, as well as processing, storage and distribution processes. As a result, various types of microorganisms and chemical substances may be found in food and must therefore be monitored.

Food safety is based on the accountability of all the players involved in the food chain, from "farm to fork". Each player must implement a risk management plan aimed at preventing microbiological and chemical contamination. This plan includes self-monitoring, which involves regular analyses carried out by manufacturers and distributors themselves on samples taken from raw materials and finished products, enabling early warnings to be given in the event of contamination.

Recent incidents have highlighted the need for this regulatory system to include surveillance and controls performed by the public authorities themselves, in a completely independent manner. Moreover, the systems in place constantly need to be updated to take into account new knowledge and to tackle new emerging contaminants, with the help of the latest technologies such as high throughput sequencing, genomic and proteomic techniques, and mass spectrometry.

#### A targeted surveillance system

For some pathogens, like viruses, bacteria and parasites, or major chemical contaminants, the health authorities have set up a surveillance system, supported by a network of reliable laboratories that can perform official analyses. For each of these regulated pathogens or contaminants, the health authorities designate approved laboratories that are authorised to perform analytical testing.

The surveillance programmes primarily concern the main foodborne microorganisms such as *Salmonella*, *Listeria*, or *Campylobacter* bacteria, and certain toxic substances that can be found in food, including marine biotoxins, mycotoxins and heavy metals. Control and surveillance plans are also implemented to monitor agents that cause the most common animal diseases (rabies, foot and mouth disease, and avian influenza) and agents that affect plant health (GMOs prohibited in Europe, invasive plant species, etc.).

A "reference" laboratory is appointed for each regulated target hazard. This laboratory guarantees the reliability of analyses carried out by all the accredited laboratories. In this area, ANSES has 68 national reference mandates, nine European mandates, and about 20 international mandates.

#### How do reference laboratories work?

Reference laboratories may have a national mandate, as National Reference Laboratory (NRL), coordinating a network of departmental laboratories in France, a European mandate, as European Reference Laboratory (EURL), coordinating a network of NRLs, or an international reference mandate as a WHO, OIE or FAO<sup>1</sup> Collaborating Centre. Depending on the specific pathogen or contaminant and its level of circulation, the number of accredited laboratories to coordinate can vary from just a few to nearly a hundred. To guarantee the reliability of analyses performed by the network of laboratories, the reference laboratory proposes training sessions on the new analytical methods it develops, and organises inter-laboratory proficiency tests (ILPTs) to verify the accuracy of official analyses.

#### Valuable discussions

Along with the Joint Laboratories Service Unit, a scientific department within the Directorates General for Competition, Consumer Affairs and Fraud Control (DGCCRF) and Customs, ANSES recently organised a one-day forum bringing together heads of French National Reference Laboratories (NRLs) working in the Agency's areas of expertise, and the representatives of the accredited laboratories designated by them.

The purpose of the event was to identify ways in which reference laboratories can better address the needs of accredited laboratories. More than 100 participants attended the meeting in Maisons-Alfort on 27 March. The presentations and discussions focused on four areas:

- From development to transfer of methods;
- Reference materials, control of reagents;
- Inter-laboratory proficiency testing;
- Scientific and technical discussions between accredited laboratories and National Reference Laboratories.

These exchanges helped to develop a consensus on the challenges in this area, and to better define the issues facing accredited laboratories and their expectations. This will enable optimisation of working procedures, thereby consolidating surveillance networks.

The Agency is planning to make this a recurrent event, held every two years.

This meeting was part of the Agency's priority objective of reinforcing the control and detection resources made available to the public authorities by the reference laboratories. It follows on from the creation of a Reference Board in 2011, bringing together heads of the Agency's NRLs, a body that was extended to all French NRLs in 2012.

1. Respectively World Health Organization, World Organization for Animal Health, and Food and Agriculture Organization of the United Nations