

Panoramica della attività su laboratorio di riferimento dell'Unione europea (EURL) per *Listeria monocytogenes*

I Laboratori Nazionali di Riferimento
per *Listeria monocytogenes* e *Campylobacter* Seminario
Istituto G. Caporale, Teramo 12/12/2012

Adrien ASSERE

Deputy manager of EU reference Laboratories for
Listeria monocytogenes, Staphylococci, and Milk & Milk Products

Adrien.ASSERE@anses.fr



Agenzia Francese per la sicurezza sanitaria su alimentazione, lavoro e ambiente



EURL CPS, Lm, MMP
European Union Reference Laboratory for
Coagulase Positive Staphylococci, *Listeria*
monocytogenes and Milk and Milk Products



Rapporti con il governo e il parlamento

Ministry for **ecology**
and **sustainable**
development

Ministry for
labour

Ministry for
health

Ministry for
food, agriculture
and **fisheries**

Ministry for
consumer
affairs

5 supervisory ministries
State Goals & Resources
Contract

anses
French agency for food, environmental
and occupational health & safety



Vote of the annual grant,
annual report

Parliament



EURL CPS, Lm, MMP
European Union Reference Laboratory for
Coagulase Positive Staphylococci, *Listeria*
monocytogenes and Milk and Milk Products

Missioni

Assess nutritional and health risks and benefits

Recommend public health measures

Monitor health safety

Provide laboratory reference missions

Conduct, coordinate and initiate research projects

Provide training and information and contribute to public debate

Coordinate the R 31 network of scientific organisations

Authorise marketing of veterinary medicinal products



ANSES in breve

- ✓ **1350 staff**
- ✓ **800 external experts solicited (20 Expert Committees, working groups)**
- ✓ **Annual budget: 140 million Euros**
- ✓ **More than 8000 Opinions issued since 1999**
- ✓ **51 National Reference Laboratory mandates, 8 EURL mandates**
- ✓ **250 scientific publications per year**
- ✓ **More than 100 doctorate and post-doctorate students**



Laboratory for Food Safety

- Specialised in biological (raw or process) and chemical (environment or process) hazards which have an effect on food safety for humans;
- Activities:
 - Reference
 - Research
 - Surveillance/epidemiology
 - Scientific and technical expertise



Dove Siamo ?

here Crea itinerario Collezioni Map Creator Guida Preferenze Accedi / Registra

Crea itinerario

Teramo, Italia

Aggiungi una tappa intermedia

Maisons-Alfort

Calcola itinerario

Opzioni Cancella itinerario

Durata Totale

14:11 h 1391 km

Collezione

Proseguire in direzione Nord su **Via Tom di Paoloantonio**. Proseguire per **27 metri**.

- ↑ Il nome della strada cambia in Viale Giuseppe Mazzini. Proseguire per **57 metri**.
- ♀ Alla rotonda prendere la seconda uscita su Viale Giuseppe Mazzini. Proseguire per **166 metri**.
- ↑ Il nome della strada cambia in Via Armando Diaz. Proseguire per **278 metri**.
- ↶ Svoltare **a sinistra** su Strada Statale Piceno Aprutina. Proseguire per **166 metri**.
- ↶ Svoltare **a sinistra** su Via Conte Contin. Proseguire per **114 metri**.
- ↑ Montepulciano, strada Proseguire per **298 metri**.

Esplora vicino alla tua posizione



anses

French agency for food, environmental and occupational health & safety

Maisons-Alfort Laboratory for Food Safety



Foodborne diseases

Food allergy

Intolerances

Food poisoning

Infections

Toxins

Poisons

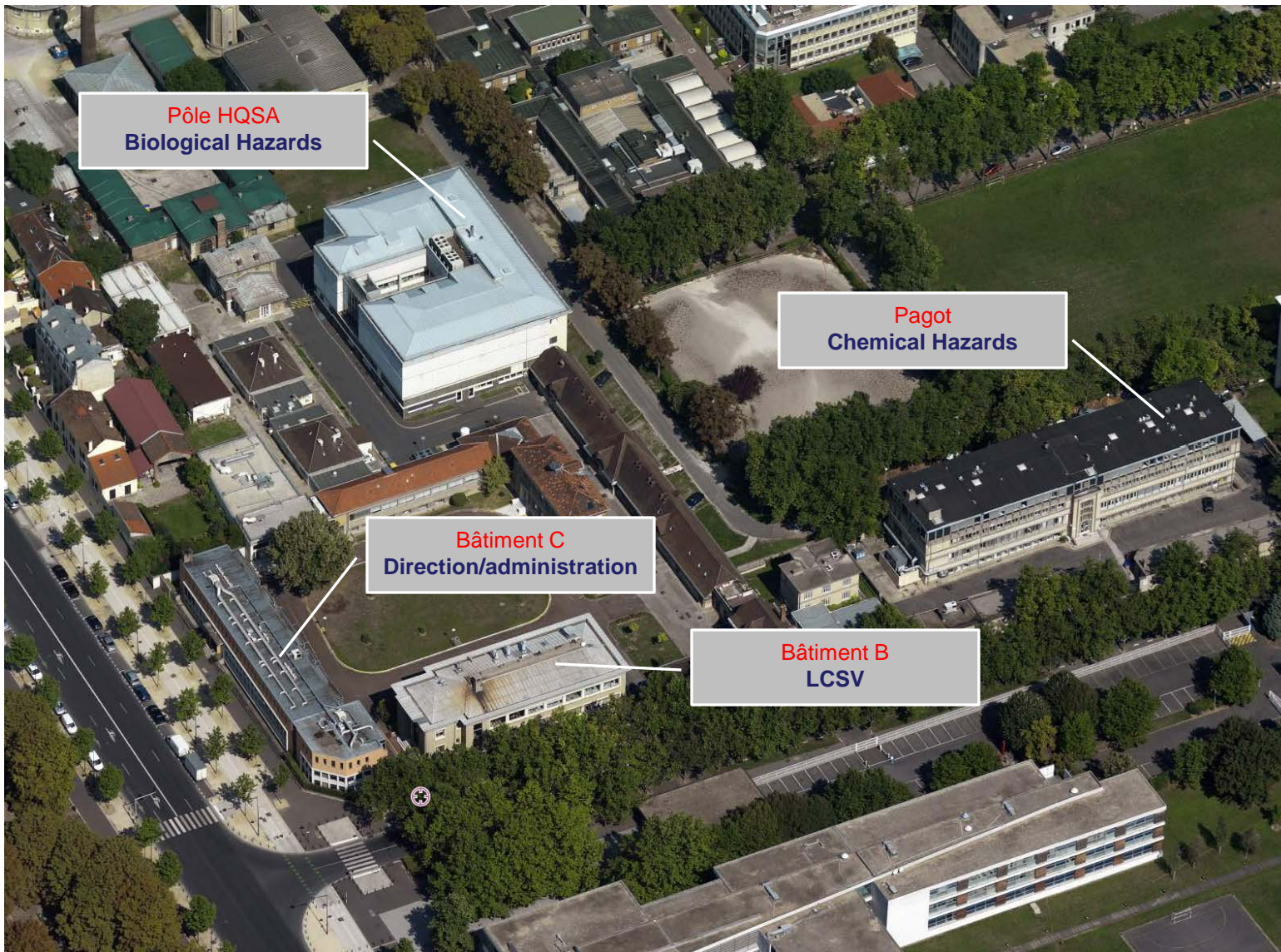
Invasive

Non invasive

HAZARDS

EURL CPS, Lm, MMP
European Reference Laboratory for
Campylobacter, Pseudo-Sphingobacterium
Listeria monocytogenes

- Bacterial toxins
- Mycotoxins
- Phycotoxins
- Animal poisons
- Vegetal poisons
- Chemical pollutants
- Bacteria
- Parasites
- Viruses
- Bacteria
- Parasites



Pôle HQSA
Biological Hazards

Pagot
Chemical Hazards

Bâtiment C
Direction/administration

Bâtiment B
LCSV



Laboratorio de sicurezza alimentare in breve

- ✓ **150 staff**
- ✓ **Between 55000 and 85000 analytical controls each year**
- ✓ **Annual budget: 12,6 million Euros**
- ✓ **10 NRL mandates, 3 EURL mandates**
- ✓ **50 scientific publications per year**
- ✓ **30 technical expertise reports per year**
- ✓ **Around 10 doctorate and post-doctorate students**



Pericolo chimique et biologique

Origine

- in food
- generated by processing or preparation

Missioni

- To improve knowledge on the **identification of hazards**
- To develop **methods for detecting, characterizing and measuring** these hazards
- To investigate **why** these hazards appear and what causes their **development**
- To contribute to the implementation of **control tools** (FBO, OCB)
- To assess the **risks** associated to these hazards
- To perform **molecular epidemiosurveillance**



Reference activities

EU Reference Laboratory for

- Milk and milk products
- Staphylococci and staphylococcal enterotoxins
- *Listeria monocytogenes*

National Reference Laboratory for

- Milk and milk products
- Staphylococci and staphylococcal enterotoxins
- *Listeria monocytogenes*
- *Salmonella* (with Anses-Ploufragan)
- Antimicrobial resistance (with Anses-Fougères)

- Marine biotoxins
- Pesticides residues
 - In food of animal origin
 - Single residue methods
- Heavy metals in food of animal origin
- Mycotoxins in food of animal origin



European Union Reference Laboratory

- Prescriber European Commission/Health of consumer Directorate
- COMMISSION REGULATION (EC) No 776/2006 of 23 May 2006 - amending Annex VII to Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards Community reference laboratories
- EC Regulation 2073/2005 on microbiological criteria for foodstuffs



EURL requirements

- suitably qualified staff with adequate training;
- equipment and products needed;
- appropriate administrative infrastructure;
- ensure confidentiality;
- sufficient knowledge of international standards and practices;
- take account of research activities at national and EU level;
- trained personnel available for emergency situations occurring within the Community.



Role of EURL (1)

- deal with analytical aspects related to the corresponding legislation
 - Reg. EC 2073/2005 on Microbiological criteria
- Criteria for *Lm* checked by *Official Reference EN ISO methods*



Food safety criteria from Annex I (Reg EC 2073/2005)

Chapter 1. Food safety criteria

Food category	Micro-organisms/their toxins, metabolites	Sampling plan ⁽¹⁾		Limits ⁽²⁾		Analytical reference method ⁽³⁾	Stage where the criterion applies
		n	c	m	M		
1.1 Ready-to-eat foods intended for infants and ready-to-eat foods for special medical purposes ⁽⁴⁾	<i>Listeria monocytogenes</i>	10	0	Absence in 25 g		EN/ISO 11290-1	Products placed on the market during their shelf-life
1.2 Ready-to-eat foods able to support the growth of <i>L. monocytogenes</i> , other than those intended for infants and for special medical purposes	<i>Listeria monocytogenes</i>	5	0	100 cfu/g ⁽⁵⁾		EN/ISO 11290-2 ⁽⁶⁾	Products placed on the market during their shelf-life
		5	0	Absence in 25 g ⁽⁷⁾		EN/ISO 11290-1	Before the food has left the immediate control of the food business operator, who has produced it
1.3 Ready-to-eat foods unable to support the growth of <i>L. monocytogenes</i> , other than those intended for infants and for special medical purposes ⁽⁴⁾ ⁽⁸⁾	<i>Listeria monocytogenes</i>	5	0	100 cfu/g		EN/ISO 11290-2 ⁽⁶⁾	Products placed on the market during their shelf-life



Role of EURL (2)

Coordinating application by National Reference Laboratories (NRLs) of the methods

- 35 NRLs: 1/member state
- Annual workshops
- Training sessions
- PT inter-laboratory studies
- Queries



Role of EURL (3)

To conduct analytical development

- Internal lab work
- To develop/to improve reference methods for official control

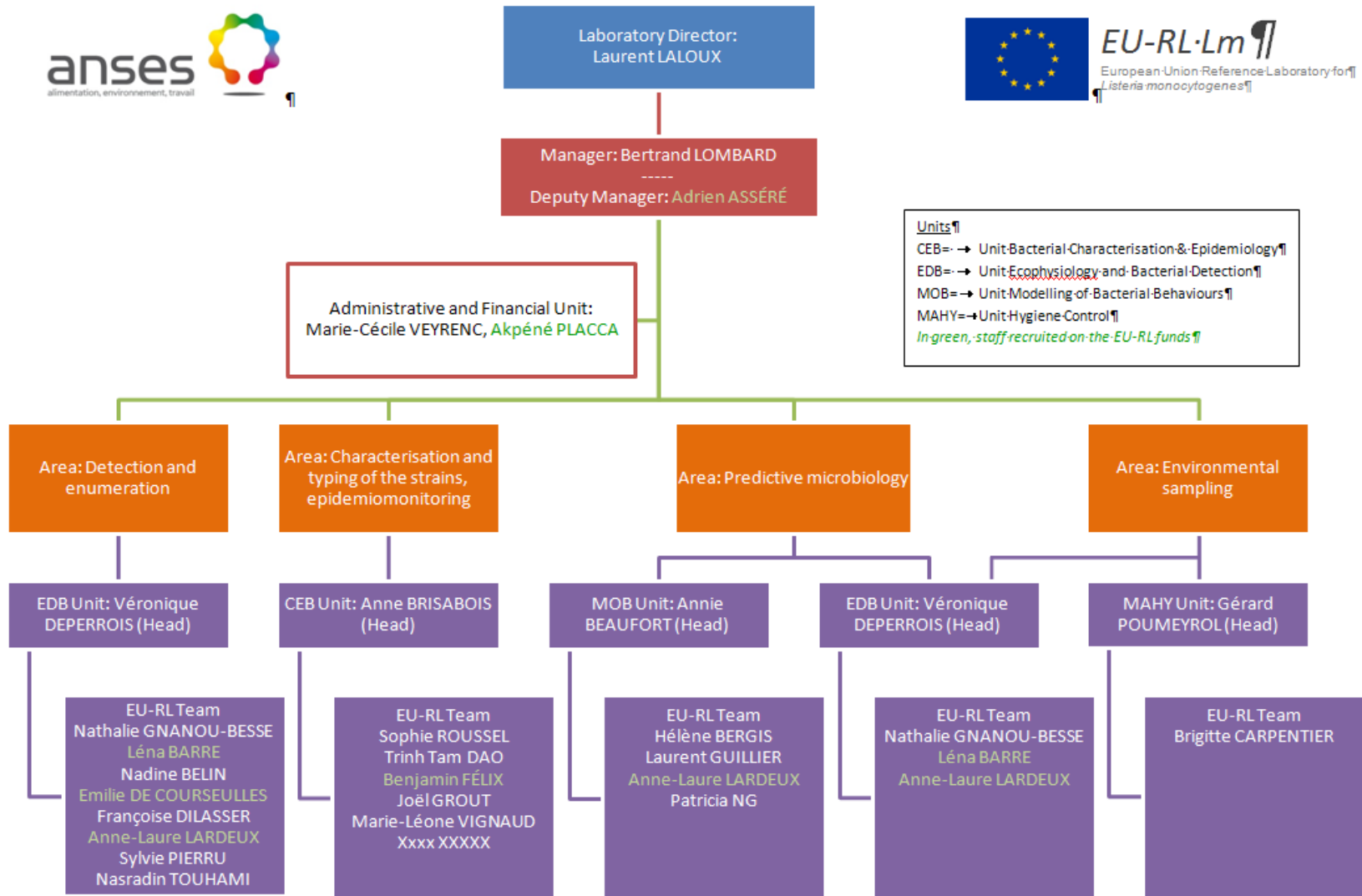


Role of EURL (4)

To provide scientific & technical support to EC/DG SANCO

- Upon the needs
- Confirmatory analyses
- Development/implementation of European legislation
 - Ex 1: preparation of Reg. 2073/2005
 - Ex 2: Implementation of Annex II of Reg. 2073/2005
 - Guidelines on challenge tests, durability studies
 - Food classification
- Participation for DG SANCO to European/international technical meetings/activities
 - Ex: CEN/ISO standardization





Units

- CEB → Unit Bacterial Characterisation & Epidemiology
- EDB → Unit Ecophysiology and Bacterial Detection
- MOB → Unit Modelling of Bacterial Behaviours
- MAHY → Unit Hygiene Control

In green, staff recruited on the EU-RL funds

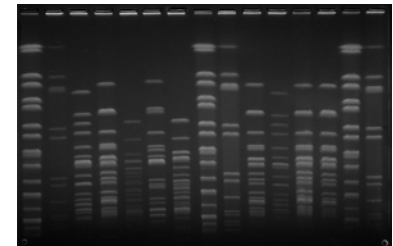
Focus on some activities

- Methods:
 - Enhancement of Lm enumeration method
 - CEN mandate to validate the update 11290-1/2
 - filtration
 - reduction of the enrichment step
 - PFGE protocole for *Lm*
 - EURL Lm DB – PFGE profile database



2010-11 EU baseline study in RTE: opportunity for Typing database

- Taken part to EFSA plans
- Opportunity for subtyping the strains
- NRLs in charge of collecting the strains
- Collaboration of the NRLs to type the strains
- 1st use of the EURL database
- Work to be transferred to EFSA



Guidance documents

- Some aspects of the Reg on microbiological needed to be precised:
 - Shelf-life studies
 - Surfaces sampling



Article 3

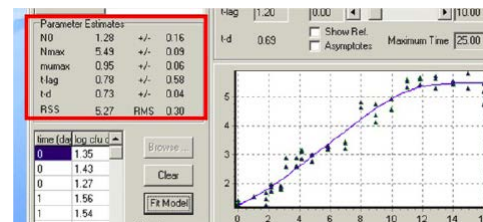
General requirements

- 2. As necessary, the food business operators responsible for the manufacture of the product shall conduct studies in accordance with Annex II in order to investigate compliance with the criteria throughout the shelf-life. In particular, this applies to ready-to-eat foods that are able to support the growth of *Listeria monocytogenes* and that may pose a *Listeria monocytogenes* risk for public health.
- Food businesses may collaborate in conducting those studies.
- Guidelines for conducting those studies may be included in the guides to good practice referred to in Article 7 of Regulation (EC) No 852/2004.



Guideline document on shelf-life studies for *Listeria monocytogenes* in RTE foods

- On demand of DG SANCO
- Written in collaboration with representatives of 7 National Reference Laboratories for *Listeria monocytogenes* (BE, NL, IE, NO, RO, SE, UK) – version 2 (Nov 2008)
- Revising after 4 years of practices – new members (SK, PT)
- Available on www.ansespro.fr/eurl-listeria



Article 5

Specific rules for testing and sampling

- Food business operators manufacturing ready-to-eat foods, which may pose a *Listeria monocytogenes* risk for public health, shall sample the processing areas and equipment for *Listeria monocytogenes* as part of their sampling scheme.

Guidelines on sampling the food processing area and equipment for the detection of *Listeria monocytogenes*

- Enquiry
- Document drafted by a WG
- 137 respondents from 15 EU MSs
- Presented after by my colleague Léna BARRE
- Available on our website homepage



Role of NRL

- Very similar to EURL, but at National level
1. To manage the network of laboratories approved by the Competent Authority in to perform official control analyses
 2. To perform analytical development
 3. Ensure dissemination of information
 4. Provide scientific and technical assistance to the competent authority



Grazie per la vostra attenzione

- Informazioni su www.ansespro.fr/eurl-listeria

