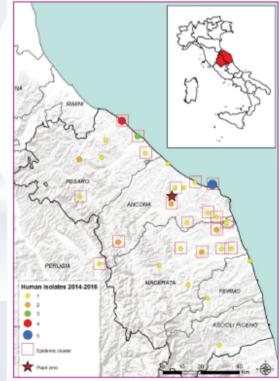# Foodborne outbreak investigation by IT NRL *for L. monocytogenes* and *Campylobacter*

IZSAM
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"Training on FoodChain-Lab"
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Data collection from strains

- IZSAM as NRL for *L. monocytogenes* and *Campylobacter* spp. developed and use SEAP

- Collection of strain information and metadata needed for foodborne outbreak investigation and surveillance

IZSAM G.CAPORALE
TERAMO

Listeria monocytogenes
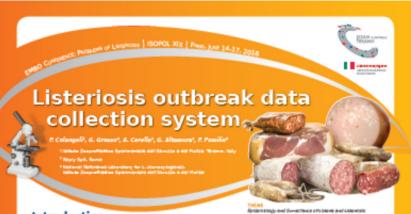Laboratorio Nazionale di Riferimento

SEAP

https://sorveglianza.izs.it/seap/index.jsp

SEAP is a system for data collection of the strains sent for characterisation to the IT NRL Lm

Sending labs fill in the metadata usefull to identify food producing plants or retail or consumer houses

Results from strain characterization allow to obtain the data needed for fooborne outbreak investigation

Tracing and Tracking

A second web based data collection tool was developed (focolaio Listeria - tracciabilità) to collect data about economic transactions, purchases from suppliers and sales to customers.

All the data from all the producing plants are also collected.

Results: molecular characterization

L. monocytogenes epidemic cluster (Marche):
- serogroup: IIA flaA+
- serotype: 1/2a
- PFGE *Apa* I: GX6A12.0063
- PFGE <u>Asc</u> I: GX6A16.0183

		Environmental samples(2 pig farms)		Food samples; «coppa di testa»		Food samples: other meat products		Other	
		Strains analised	P cluster	Strains analised	P cluster	Strains analised	P cluster	Strains analised	P cluster
1	S_0	49	13	58	21	168	18	2	0
2	Fc_1	116	5			110	8		
3	Fc_2	63	0			12	0		
4	Fc_3	17	0			4	0		
5	Fc_4	50	0						
6	Fc_5	26	0						
7	Fc_6	40	0						
	Total	361	18	58	21	294	26	2	0

Different pulsotype in different colours

Outbreak cluster

PFGE profile (AscI0183; ApaI0063)
PFGE profile (AscI0060; ApaI0063)
PFGE profile (AscI0103; ApaI0248)
PFGE profile (AscI0222; ApaI0285)
PFGE profile (AscI0041; ApaI0130)

Food strains outbreak unrelated