Proficiency Testing for the detection of anti-*Trichinella* IgG in swine serum samples

TWENTY-FIRST ANNUAL EURLP WORKSHOP

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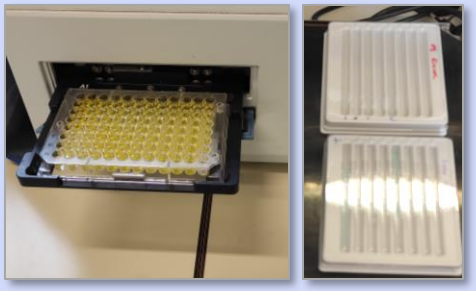
Aims of the proficiency testing (PT)

1



To evaluate the **competence** of laboratories

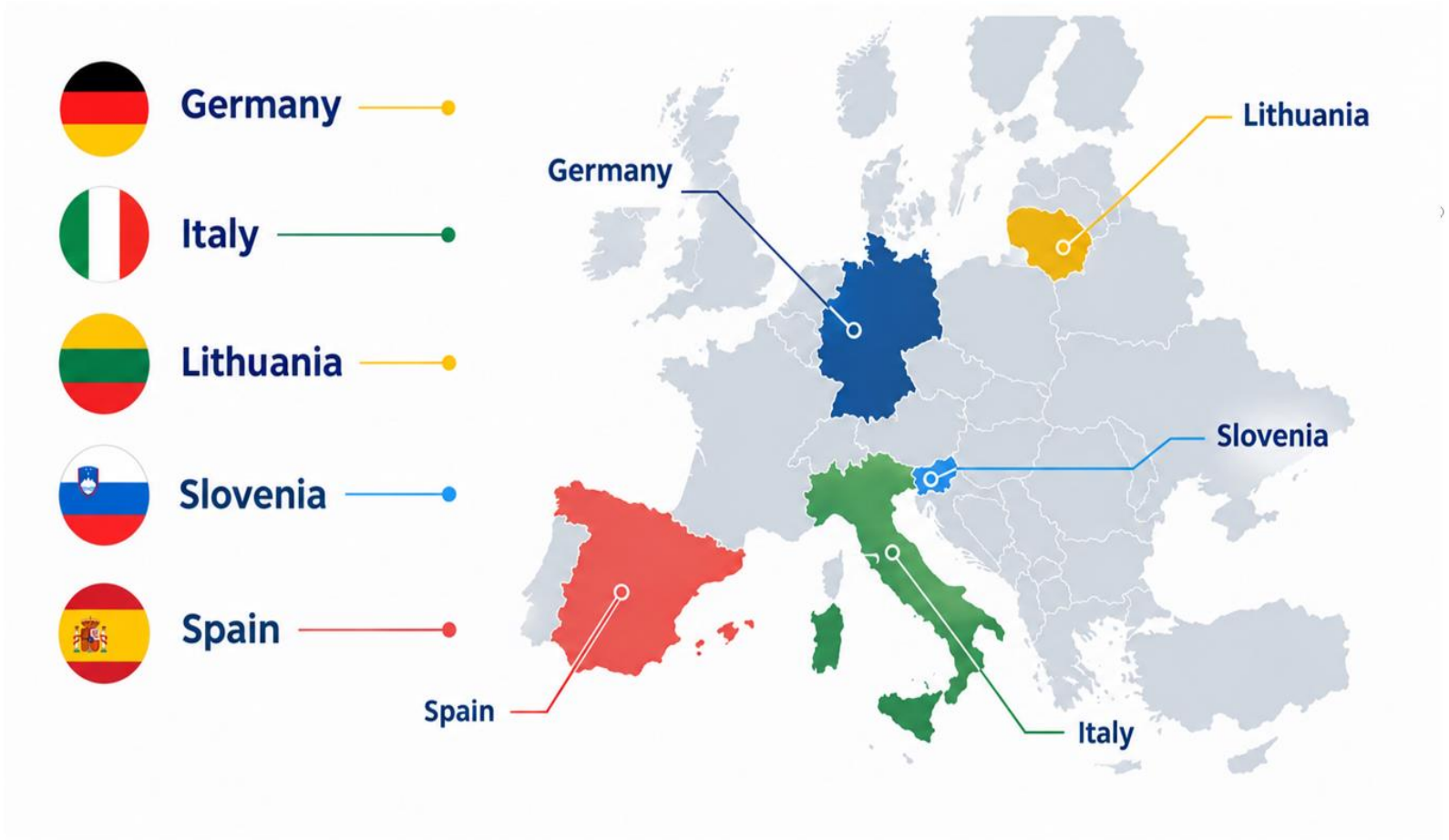
2



To assess the **performance** of commercial kits

in detecting **anti-*Trichinella* IgG** in swine serum samples

Participating laboratories



Material and methods 1/2

Serological tests

Any serological test based on the detection of anti-*Trichinella* IgG could be used. Each laboratory should choose the test/s **routinely used.**

Reference serum panel provided by EURLP

The test material forwarded to each laboratory consisted of a panel of **3 serum samples**, which are reference sera from the EURLP

Sample 1	Sample 2	Sample 3
Positive	**Positive**	**Negative**
(SCp+136)	(SCp+135)	(SCp-213)
Origin	**Origin**	**Origin**
T. spiralis experimentally infected animal	*T. spiralis* experimentally infected animal	*Trichinella*-free animal

These serum samples were individually analyzed at the EURLP for detecting anti-*Trichinella* IgG using **accredited serological methods (ISO 17025:2015)**

- **Indirect ELISA**
- **Western Blot**

Material and methods 2/2

Reference serum panel

Serum sample code	Optical density O.D.	Expected result
Sample 1	0,9	**Positive**
Sample 2	0,7	**Positive**
Sample 3	0,26	**Negative**

Serum samples were:

1. **Distributed** in 100 µL aliquots
2. **Preserved** with 1% merthiolate solution
3. **Labelled** with a code

Each laboratory received a **link** to the **online survey** platform Microsoft Forms, through which **PT results** and other relevant information could be submitted

Tests used by the participants:

Test used by the **participants**: all participating laboratories used **in-house** or **commercial** ELISA methods for *Trichinella* antibody detection.

ELISA Tests			
In house ELISA	Id VetScreen® *Trichinella* Indirect Multi-species	INDICAL's pigtype *Trichinella* Ab	INDIRECT ELISA: Priocheck Porcine *Trichinella* Ab
Participating laboratories	Participating laboratories	Participating laboratories	Participating laboratories
C	A B	E	D

Criteria for the final PT evaluation

Result evaluation

Qualitative:
The participating laboratory had to indicate the positivity or negativity of each sample

The result of the analysis of each serum sample was reported as:
correctly classified or **incorrectly classified**

Results

Sample Code	Expect. results	Labs code				
		A	B	C	D	E
1	+	+	+	+	+	+
2	+	+	+	+	+	+
3	-	-	-	-	-	-

- **5/5 NRLs** correctly classified all serum samples as positive

Criteria for the final PT evaluation

Final evaluation

✓ “**Positive**” if all samples are **correctly classified**

✗ “**Negative**” in all the other cases

PT evaluation

All participating laboratories **correctly classified all samples**, achieving 100% agreement with the assigned results.

Sample code	N° of samples correctly classified	N° of samples NOT correctly classified	Final Evaluation
A	3/3	0/3	Positive
B	3/3	0/3	Positive
C	3/3	0/3	Positive
D	3/3	0/3	Positive
E	3/3	0/3	Positive

Conclusions

1

Accurate Sample Classification

All laboratories **correctly classified** all serum samples

2

Consistent Diagnostic Approach

The diagnostic kits used both in-house and commercial were **immunoenzymatic assays**

3

Proven Assay Reliability

The consistently reliable laboratory results demonstrate both the **robustness** of the assays and the **high level of staff expertise**

Overtime comparison of results

Laboratory code 2026	2025	2026
A	NP	POS
B	NP	POS
C	POS	POS
D	POS	POS
E	POS	POS

NP No Participants POS Positive NEG Negative

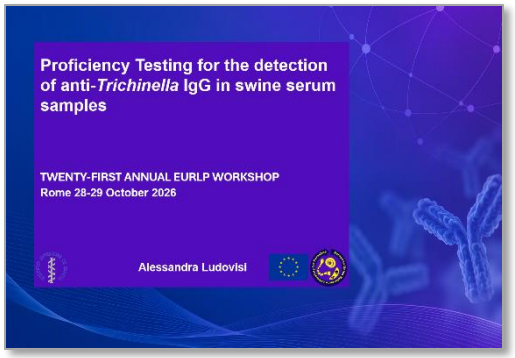
Three laboratories maintained positive results across both years, while **two additional laboratories** participated in the 2026 PT and reported positive results.

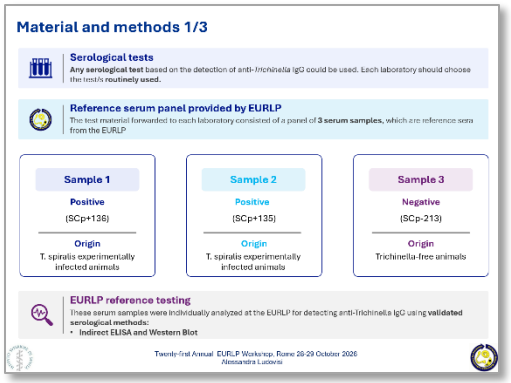
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in organizing the *Trichinella* PT





Thanks for your attention!

