

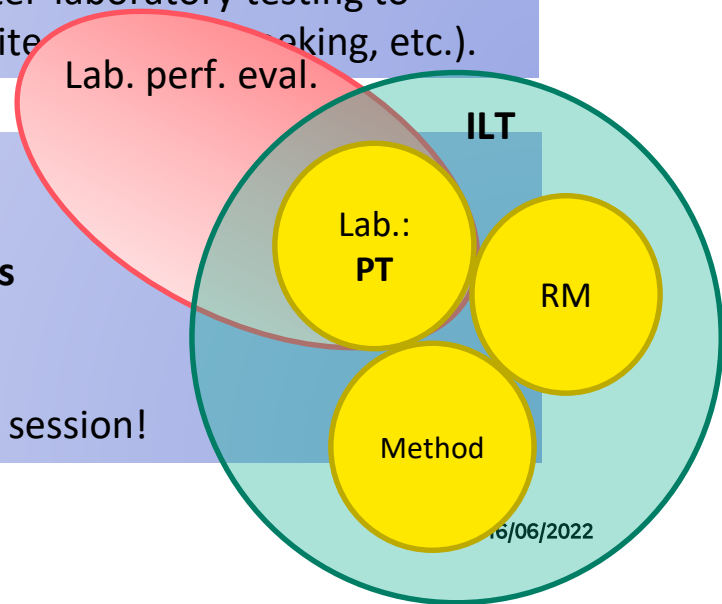
# **PROFICIENCY TEST ON RABIES DIAGNOSIS: 2021 SESSION RESULTS**

# 1 — General aspect of PT

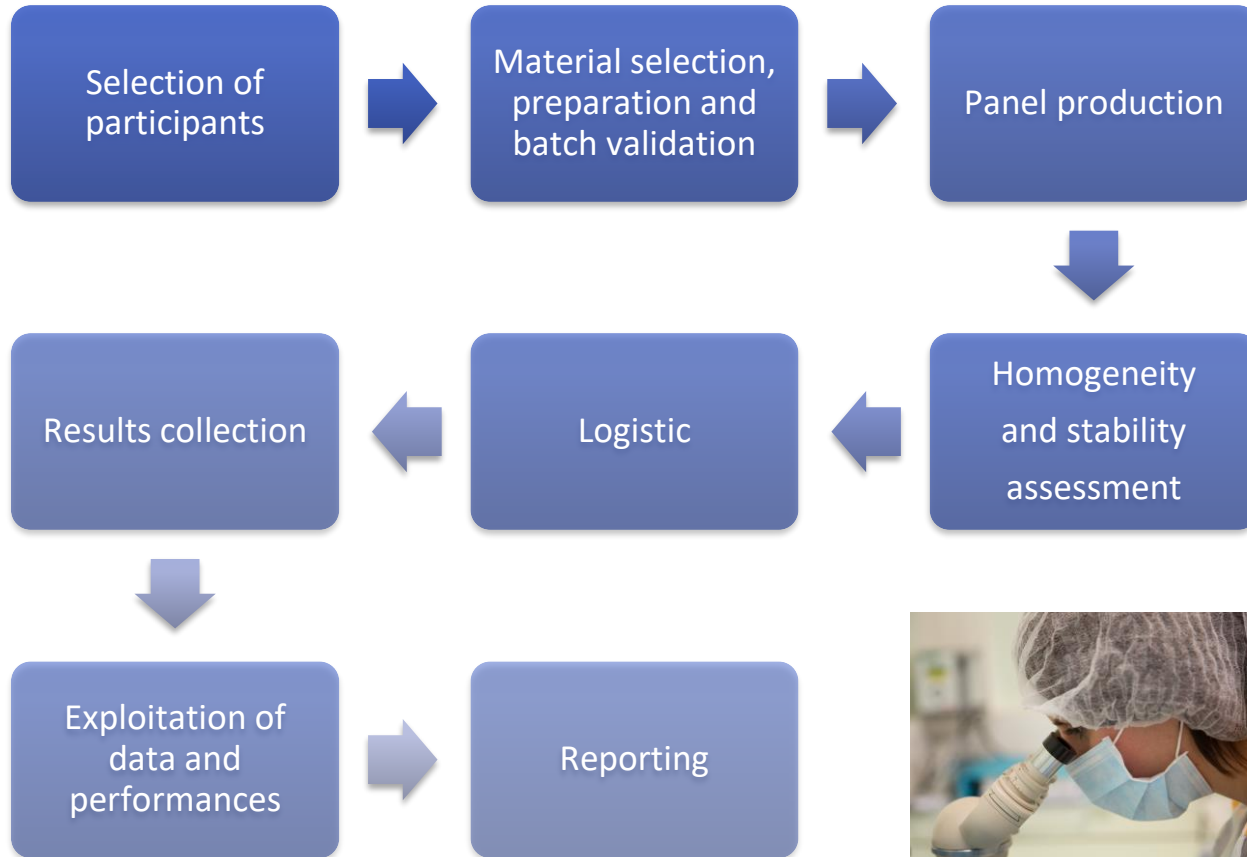
# INTER-LABORATORY TESTS – PROFICIENCY TEST – WHAT FOR?

- Proficiency testing (PT) is an inter-laboratory test (ILT) with the objective to **evaluate laboratories performances**.
- There is several other ways (in case of lack of materials, number of participants not sufficient for proper statistical evaluation, etc.) then inter-laboratory testing to evaluate performances of laboratories (evaluation on site, **evaluation on site**, etc.).  
Lab. perf. eval.
- Inter-laboratory comparisons can allow to:
  - Evaluate **Laboratories (PT)**
  - Evaluate and characterize **Methods of analysis**
  - Characterize **Reference Materials (RM)**

Only one of these objectives can be assessed during an ILT session!



# ORGANISATION OF ILT



# RABIES DIAGNOSIS PROFICIENCY TEST

- **FREQUENCY:**

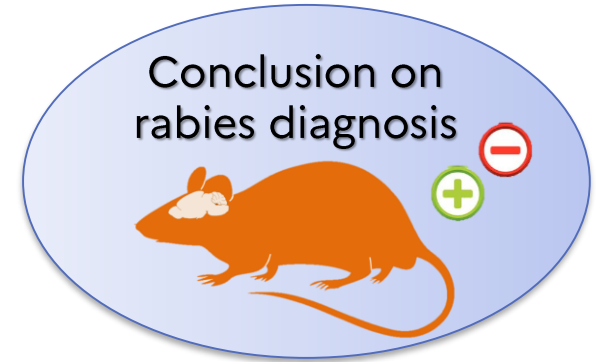
Every two years since 2017

- **PANEL CHARACTERIZED FOR THE FOLLOWING TESTS:**

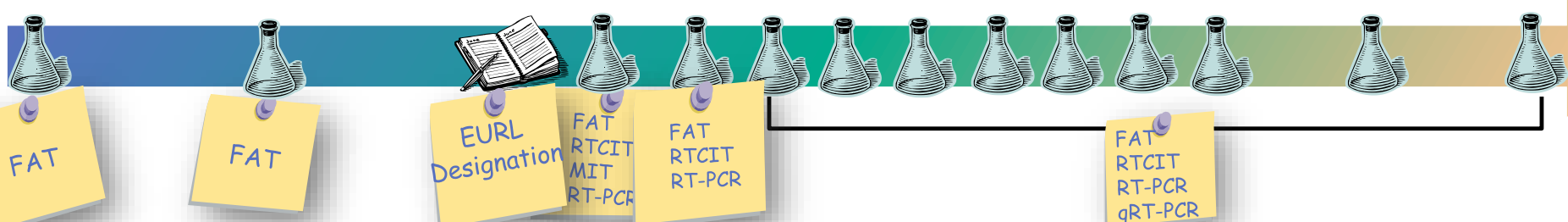
FAT; RTCIT; conventional RT-PCR; real-time RT-PCR

- **BENEFICIARIES:**

National Reference Laboratories from EU and bordering countries (commission regulations No 737/2008 and No 415/2013) and some laboratories from third countries (OIE, WHO, etc.).



2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021



# 2 — 2021 test session



# RABIES DIAGNOSIS PT: SOMES CHANGES IN THE 2021 SESSION

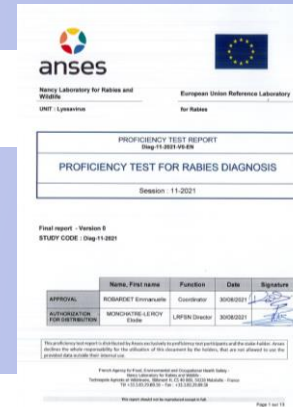
To be in close line with the ISO 17043 conditions we implemented:





Creation of the Rabies diagnosis PT consultation group:  
Coordinator, validator, quality manager, technical managers, technicians, secretary, etc.

Elaboration of plan of campaign

Evaluation of the laboratories performance  
on the rabies diagnosis conclusion  
and not on the performance technique by technique:  
Two reports




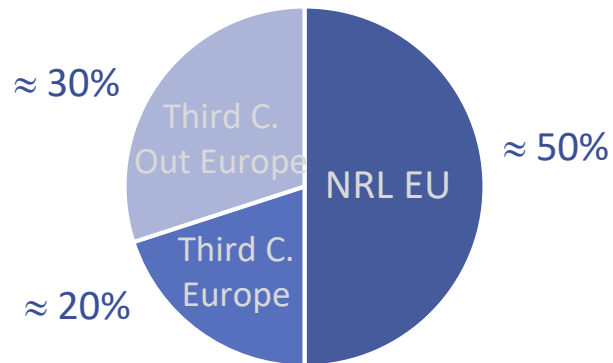
	Name, First name	Function	Date	Signature
APPROVAL	ROBERT ET Emmanuelle	Coordinator	30/08/2021	
AUTHORIZATION FOR DISTRIBUTION	MICHAËLE LEROY Emile	LAFIN Director	30/08/2021	



	Name, First name	Function	Date	Signature
APPROVAL	ROBERT ET Emmanuelle	Coordinator	30/08/2021	
AUTHORIZATION FOR DISTRIBUTION	MICHAËLE LEROY Emile	LAFIN Director	30/08/2021	

# LABORATORIES REGISTERED AS PARTICIPANTS

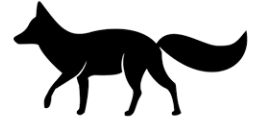
	European Union NRLs 	Third country laboratories participating under EC fundings	Third country laboratories participating not under EC fundings	Total
FAT	24 (42%)	11 (19%)	22 (39%)	57 (100%)
RTCIT	15 (48%)	6 (19%)	10 (32%)	31 (100%)
Conventional RT-PCR	16 (50%)	4 (13%)	12 (38%)	32 (100%)
Real Time RT- PCR	22 (61%)	2 (6%)	12 (33%)	36 (100%)
<b>Total Laboratories</b>	<b>25 (43%)</b>	<b>11 (19%)</b>	<b>22 (38%)</b>	<b>58 (100%)</b>





The strains involved in the inter-laboratory test were produced on mice:

- **CVS 27**: a RABV fixed strain.
- **RABV Greece**: a classical rabies virus (RABV) fox strain isolated in Greece in 2012.
- **RABV dog Es**: a RABV dog strain isolated in Spain in 2010.
- **BBLV**: a Bokeloh bat lyssavirus strain isolated in France in 2012.
- **EBLV-1b**: an European bat lyssavirus type 1 isolated in France in 2002.
- **DUVV**: a Duvenhage strain isolated in South Africa in 1971.
- **Vaccinal Strain**: a strain of vaccine induced case isolated in Latvia in 2014.
- **Negative samples (2)**: negative brains of carnivores from French wild origin



**Homogeneity validated**  
**Stability assessed at 20 days at RT, several years (up to 5) at +4°C**

# LABORATORY PERFORMANCE EVALUATION

Lab code	Score	Evaluation
L02	1	Satisfactory
L03	1	Satisfactory
L05	1	Satisfactory
L06	1	Satisfactory
L07	1	Satisfactory
L08	1	Satisfactory
L09	-1	Unsatisfactory
L10	1	Satisfactory
L11	1	Satisfactory
L12	NA	Not evaluated
L13	1	Satisfactory
L14	1	Satisfactory
L15	1	Satisfactory
L16	1	Satisfactory
L17	1	Satisfactory
L18	1	Satisfactory
L20	1	Satisfactory
L21	1	Satisfactory
L22	1	Satisfactory
L23	1	Satisfactory
L24	1	Satisfactory
L25	1	Satisfactory
L26	NA	Not evaluated
L27	1	Satisfactory
L28	1	Satisfactory
L29	1	Satisfactory
L30	1	Satisfactory
L31	-2	Unsatisfactory
L32	1	Satisfactory
L33	1	Satisfactory
L34	1	Satisfactory
L35	1	Satisfactory
L36	1	Satisfactory
L37	1	Satisfactory
L38	1	Satisfactory
L40	1	Satisfactory

Lab code	Score	Evaluation
L41	NA	Not evaluated
L42	1	Satisfactory
L44	NA	Not evaluated
L46	1	Satisfactory
L48	1	Satisfactory
L49	1	Satisfactory
L50	NA	Not evaluated
L51	1	Satisfactory
L52	1	Satisfactory
L54	1	Satisfactory
L55	1	Satisfactory
L56	NA	Not evaluated
L57	1	Satisfactory
L58	1	Satisfactory

**57 registered**  
**50 sent back the results**  
**44 evaluated**  
**42 succeeded**

Laboratory code 2021	2017	2019	2021
L02		S	S
L03	S	S	S
L05	S	S	S
L06	S	S	S
L07			S
L08	S	S	S
L09			UNS
L10		S	S
L11	S	S	S
L13	S	S	S
L14	S	S	S
L15	S	S	S
L16	S	S	S
L17	S	S	S
L18	S	S	S
L20	S	S	S
L21	S	S	S
L22	S	S	S
L23	S	S	S
L24	S		S
L25			S
L27	S	S	S
L28	S	S	S
L29	S	S	S
L30	S	S	S
L31			UNS
L32	S	S	S
L33	S	S	S
L34			S
L35	S	S	S

Laboratory code 2021	2017	2019	2021
L36	S	S	S
L37	S	S	S
L38	S		S
L40	S	S	S
L42	S		S
L46	S		S
L48	S	S	S
L49	S	S	S
L51	S	S	S
L52	S	S	S
L54	S	S	S
L55	S	S	S
L57	S	S	S
L58	S	S	S

**Performances over time:**  
**Failure was linked with new participant**

# ADDITIONAL RESULTS

	N of analysis with discrepant results/ total analysis				Laboratories under-performances (PTL)
	FAT	RTCIT	RT-PCR	RT-qPCR	Overall Conclusion
Total	5/390 (1.3)	14/205 (6.8)	5/265 (1.9)	6/226 (2.7)	2/44 (4.5)
Negative samples	2/88 (2.3)	0/46 (0)	0/60	1/56 (1.8)	2/44 (4.5)
Positive samples	3/302 (1.0)	14/159 (8.8)	5/205 (2.4)	5/170 (2.9)	1/44 (2.3)
RABV samples	1/176 (0.6)	8/92 (8.7)	4/120 (3.3)	4/108 (3.7)	1/44 (2.3)
CVS 27	1/44 (2.3)	0/23	2/30 (6.7)	3/27 (11.1)	1/44 (2.3)
RABV Greece	0/44	4/23 (17.4)	0/30	0/27	0/44
RABV Dog Es	0/44	2/23 (8.7)	1/30 (3.3)	1/27 (3.7)	0/44
Vaccinal strain	0/44	2/23 (8.7)	1/30 (3.3)	0/27	0/44
EBLV-1	0/42	2/22 (9.1)	1/29 (3.4)	1/24 (4.2)	0/43
BBLV	2/41 (4.9)	1/22 (4.5)	0/28	0/20	0/42
DUVV	0/43	3/23 (13.0)	0/28	0/18	0/43

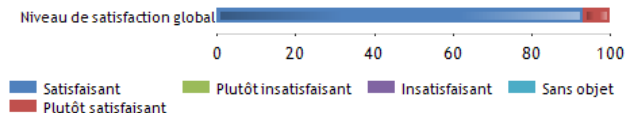
- FAT  $\approx$  RT-PCR  $\approx$  RT-qPCR
- RTCIT less sensitive technique (significant result)

>5%

<5%

## 4. La qualité globale de la prestation

	Satisfaisant		Plutôt satisfaisant		Plutôt insatisfaisant		Insatisfaisant		Sans objet		Total	
	Eff.	% Obs.	Eff.	% Obs.	Eff.	% Obs.	Eff.	% Obs.	Eff.	% Obs.	Eff.	% Obs.
<b>Niveau de satisfaction global</b>	40	93%	3	7%	0	0%	0	0%	0	0%	<b>43</b>	<b>100%</b>
<b>Total</b>	<b>40</b>	<b>93%</b>	<b>3</b>	<b>7%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>0%</b>	<b>43</b>	<b>100%</b>



**93% satisfied**  
**7% rather satisfied**

### Comments on:

- Request of individual reporting.
- Problem of questionnaire results parametrization with order of samples changing when opening a new page of questionnaire (for a another technique)
- Instructions should mention that panels need to be reconstituted in 1ml of distilled water.
- Improve the speed of sample delivery and packaging (UN3373 at +4°C are requested by the EURL to the carrier).



Only EU NRL laboratories or European NRL Laboratories with prior agreement from EC to be included in the report will take part (Laboratories will receive invitation to participate in December 2022).

For out of EU laboratories, not invited to take part, performance evaluation will still be possible out of EURL report and done:

- at demand,
- on supernumeraries panels,
- Participants will have to organise the picking up of samples and to pay directly a specialised carrier,
- will receive individual result only.

Results submission: acknowledgment form and only one online result form for all the techniques

Reporting: Global report and Individual letter

**Thank you for your attention!**

**Questions?**