

18th Annual Meeting of the TSE EURL  
Torino, Italy  
*12th-13th September 2019*

**EURL for TSEs**  
**Work programme 2019-2020**

**Giuseppe Ru**



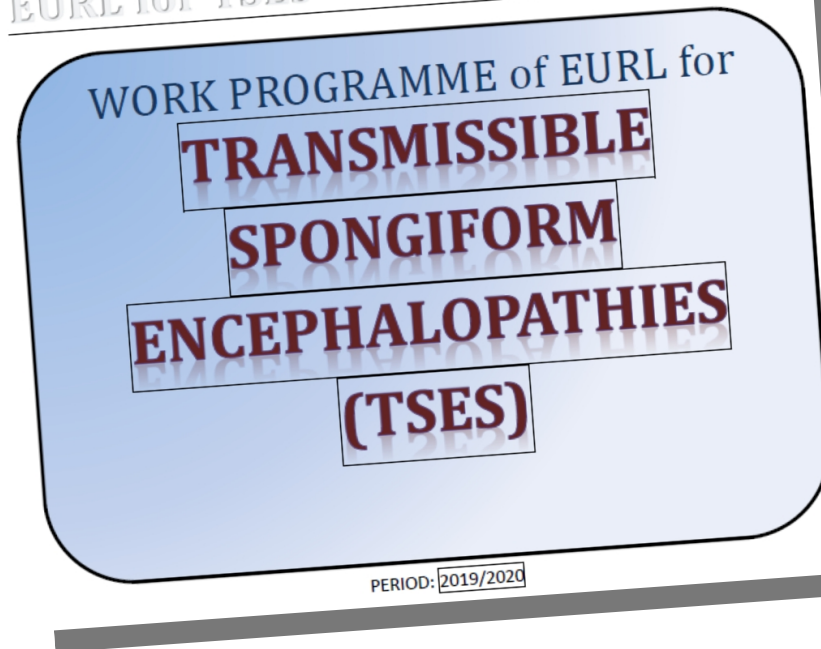
TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# 18th Annual Meeting of the TSE EURL Torino, Italy

*12th-13th September 2019*

EURL for TSEs



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# Where we are and what we have to do



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# Where we are

- BSE(s): 27 cases worldwide over the last five years

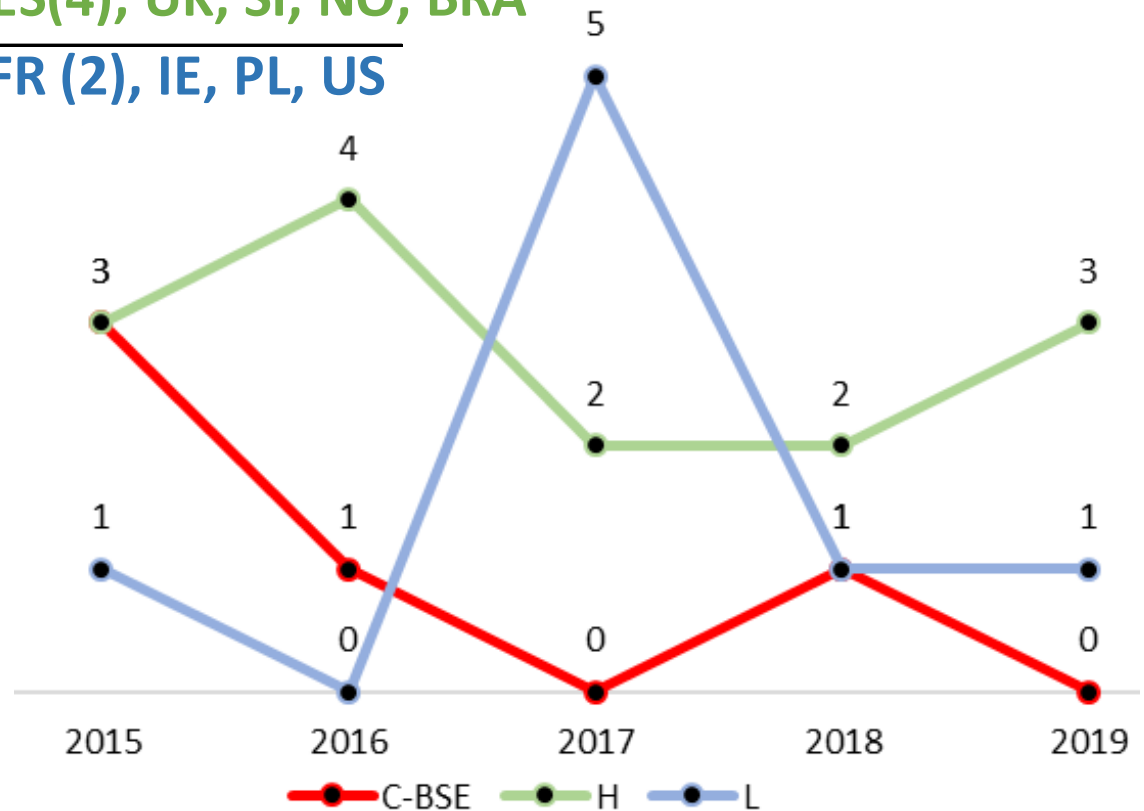
**C-BSE**     **5**     **UK(2), FR, IE, CA**

---

**H**     **14**     **FR(6), ES(4), UK, SI, NO, BRA**

---

**L**     **8**     **ES(3), FR (2), IE, PL, US**



# Where we are

- vCJD: 1995-2019 in total

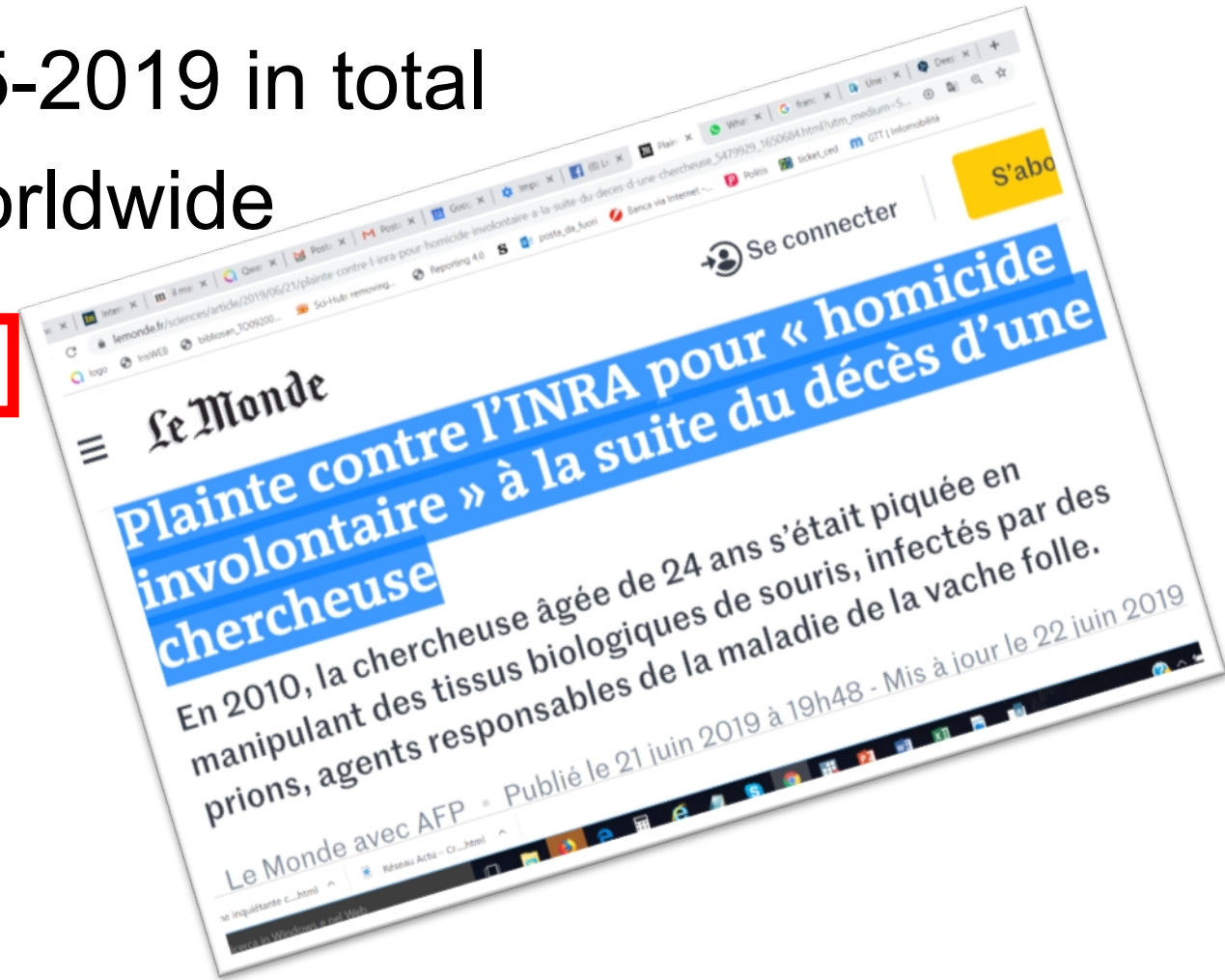
232 cases worldwide

UK	178
France	28
Spain	5
Ireland	4
USA	4
Italy	3
Netherlands	3
Canada	2
Portugal	2
Saudi Arabia	1
Japan	1
Taiwan	1

# Where we are

- vCJD: 1995-2019 in total  
232 cases worldwide

UK	178
France	28
Spain	5
Ireland	4
USA	4
Italy	3
Netherlands	3
Canada	2
Portugal	2
Saudi Arabia	1
Japan	1
Taiwan	1



# Where we are

- vCJD: 1995-2019 in total  
232 cases worldwide

**AFAS**  
ASSOCIATION FRANÇAISE POUR  
L'AVANCEMENT DES SCIENCES  
Fondée en 1872, reconnue d'utilité publique



L'AFAS   Agenda   Articles   Notes de lecture   Lett  
Fil d'actualités   Expos à voir   Soutenir l'AFAS

Une inquiétante contamination par un prion d'origine humaine dans un laboratoire Inra

Jeanne Brugère-Picoux   Articles, Santé & sciences du vivant

2 juillet 2019

lemonde.fr/sciences/article/2019/06/21/plainte-contre-l-inra-pour-homicide-involontaire-a-la-suite-du-deces-d-une-chercheuse\_5479929\_1650684.html?utm\_medium=...  
Se connecter   S'abo

**Le Monde**  
**Plainte contre l'INRA pour « homicide involontaire » à la suite du décès d'une chercheuse**

En 2010, la chercheuse âgée de 24 ans s'était piquée en manipulant des tissus biologiques de souris, infectés par des prions, agents responsables de la maladie de la vache folle.

Le Monde avec AFP • Publié le 21 juin 2019 à 19h48 - Mis à jour le 22 juin 2019

# Where we are

- vCJD: 1995-2019 in total  
232 cases worldwide



Un cas probable de variant de la maladie de Creutzfeldt Jakob a été diagnostiqué en 2019. Cette personne a été possiblement exposée dans son enfance par voie alimentaire à l'instar de la population générale, **et a également été possiblement exposée à des protéines prions d'origine humaine dans un contexte professionnel (laboratoire de recherche).**

<https://www.santepubliquefrance.fr/maladies-et-traumatismes/maladies-infectieuses-d-origine-alimentaire/maladie-de-creutzfeldt-jakob/donnees/#tabs>



# Where we are

- vCJD: 1995-2019 in total  
232 cases worldwide



In 2019, a likely case of variant Creutzfeldt Jakob disease was diagnosed. This person may have been exposed in childhood through food, as in the general population, and **may also have been exposed to prion proteins of human origin in a professional context (research laboratory).**

<https://www.santepubliquefrance.fr/maladies-et-traumatismes/maladies-infectieuses-d-origine-alimentaire/maladie-de-creutzfeldt-jakob/donnees/#tabs>

# Where we are

- vCJD: 1995-2019 in total 232 cases worldwide

*It is very likely that all patients have become infected in Italy through food. However, **the patient who died in 2017 worked in a prion research laboratory where he came into contact with human brain tissue infected with variant CJD and with bovine brain tissue infected with typical and atypical BSE.** It cannot therefore be excluded that the patient has become infected during laboratory activities, even if the epidemiological investigations have not established any laboratory accident.*

UK	178
France	28
Spain	5
Ireland	4
USA	4
Italy	3
Netherlands	3
Canada	2
Portugal	2
Saudi Arabia	1
Japan	1
Taiwan	1

# Where we are

Scrapie in EU in 2017 (EFSA report):

- Cases in **sheep**

- 839 CS (145 index) in 8 MSs

- 94 AS (89 index cases) in 13 MSs.

- Cases in **goats**

- 558 CS (42 index) in 7 MSs

- 9 AS (7 index) in 5 MSs.

# Where we are

- **Cervids CWD**: 27 cases since 2016, 3 countries (Norway +++, Finland, Sweden), 3 species
- **Camels CPD** in Northern Africa...an update will be provided during this meeting

...and what we  
have to do



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# A two-year programme

- It is based on the EURL's responsibilities and tasks as listed within Art. 94 of Regulation (EU) 625/2017
- It accounts also for the functions and duties of the EURL for TSEs as listed in Regulation (EC) 999/2001 (Annex X, Chapter B)



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

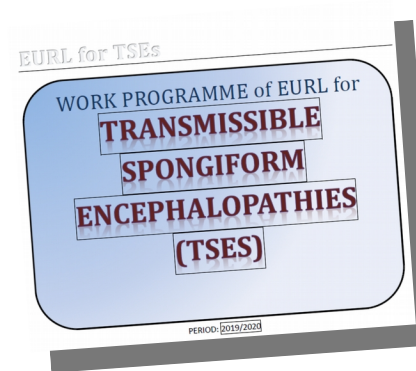
# Translate tasks into activities

- All the EURLs are requested to translate their tasks into sub-groups of activities
- These sub-groups form the five chapters of the biannual programme.



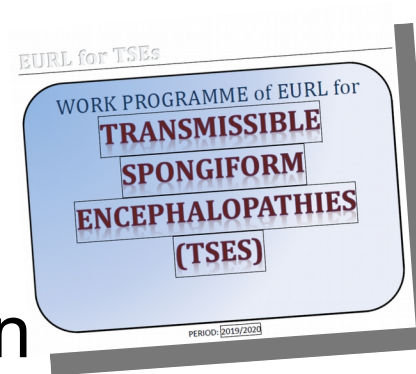
TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome



# The activities

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs
2. to provide scientific and technical assistance to NRLs
3. to provide scientific and technical assistance to the European commission and other organisations
4. reagents and reference collections
5. requirements related to other legislation



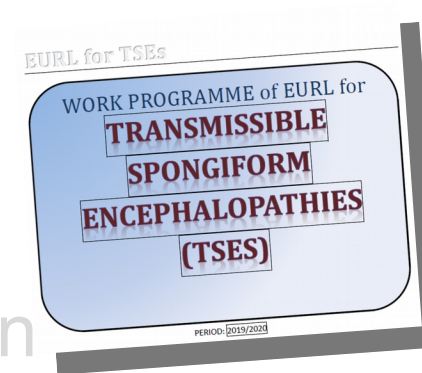
TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome



# The activities

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs
2. to provide scientific and technical assistance to NRLs
3. to provide scientific and technical assistance to the European commission and other organisations
4. reagents and reference collections
5. requirements related to other legislation



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# 1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs: sub-activities:

- 1.1 Revision and development of guidelines on the methods of laboratory analysis, testing or diagnosis
- 1.2 Development of methods of analysis, testing or diagnosis and EURL expertise maintenance
- 1.3 Interlaboratory comparative testing / proficiency testing, EQA
- 1.4 Transition activities



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs: sub-activities:

- **1.1 Revision and development of guidelines on the methods of laboratory analysis, testing or diagnosis**
- For the purpose the existing guidelines have been reviewed, updated and made available
- A survey of the methods in use within the NRL has been carried out



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs: sub-activities:

- **1.2 Development of methods of analysis, testing or diagnosis and EURL expertise maintenance**
- The focus is in establishing at the EURL discriminatory western blot methods for bovine and small ruminants and validating a characterization method for cervid TSEs



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs: sub-activities:

- **1.3 Interlaboratory comparative testing / proficiency testing, EQA**
- One of our main task! The ongoing activities of organization of the annual rounds of EQAs will be described in the following presentations today



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs: sub-activities:

- **1.4 Transition activities**

- We do not start from scratch but...

- first of all we need to set up a collection of reference material: for the purpose a number of NRLs have been contacted, in particular to source H- & L- BSE
- A new EURL website will be develop and maintained: in the meanwhile a freely accessible electronic repository for documentation (e.g. revised guidelines or batch testing outputs) has been made available to NRL representatives

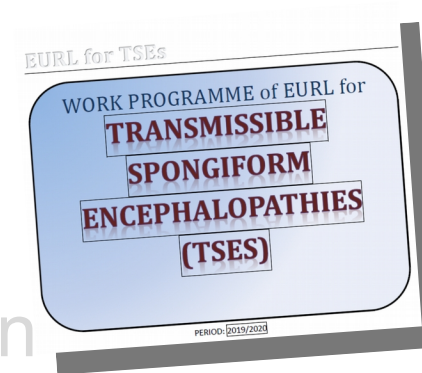


TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# The activities

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs
2. to provide scientific and technical assistance to NRLs
3. to provide scientific and technical assistance to the European commission and other organisations
4. reagents and reference collections
5. requirements related to other legislation



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

## 2. to provide scientific and technical assistance to NRLs

- 2.1 Scientific and technical assistance to NRLs
- 2.1 TSE Workshop and meetings
- 2.3 Conducting training courses for staff from NRLs, official laboratories or experts from third countries
- 2.4 Providing information on relevant national Union or international research activities to national reference laboratories



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome



## 2. to provide scientific and technical assistance to NRLs

- **2.1 Scientific and technical assistance to NRLs**
- Since last January our experts are available in case assistance is needed: technical problems in lab, clinical or epidemiological advices, neuropathological differential diagnoses.
- **2.2 TSE Workshop and meetings**
- Today's annual meeting!



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

## 2. to provide scientific and technical assistance to NRLs

- **2.3 Conducting training courses for staff from NRLs, official laboratories or experts from third countries**
- Training on request at the EURL
- **2.4 Providing information on relevant national Union or international research activities to national reference laboratories**
- Networking, in particular through the website when available

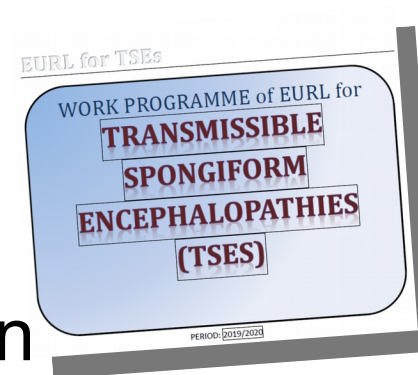


TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# The activities

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs
2. to provide scientific and technical assistance to NRLs
3. to provide scientific and technical assistance to the European commission and other organisations
4. reagents and reference collections
5. requirements related to other legislation



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

### 3. to provide scientific and technical assistance to the European commission and other organisations

- 3.1 Providing scientific and technical assistance to the Commission
- 3.2 Collaborating with laboratories in third countries and with the EFSA, EMA, ECDC
- 3.3 Assisting actively in the diagnosis of outbreaks
- 3.4 Strain typing expert group (STEG)



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

3. to provide scientific and technical assistance to the European commission and other organisations

- **3.1 Providing scientific and technical assistance to the Commission (or national CAs)**
- Assistance or investigations in case discriminatory testing or genotyping for referral cases needed
- **3.2 Collaborating with laboratories in third countries and with the EFSA, EMA, ECDC**
- Availability of our experts for full collaboration



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

3. to provide scientific and technical assistance to the European commission and other organisations

- **3.3 Assisting actively in the diagnosis of outbreaks**
- On demand:
  - Confirmation/characterization of TSE cases referred by NRLs.
  - Assistance to the EURL\_STEG for the final assessment of suspected BSE cases (BSE/non-BSE, further strain identification).
  - Reference data and bioassay strategy for BSE identification.
  - Strain characterization of CWD isolates referred by NRLs.



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

### 3. to provide scientific and technical assistance to the European commission and other organisations

- **3.4 Strain typing expert group (STEG)**
- Organization of one STEG meeting to discuss validation/interpretation of the increasing range of Tg bioassay methodologies, and how to interpret complex data
- A potential activity will deal with the validation of any new potential discriminatory method needing further assessment.

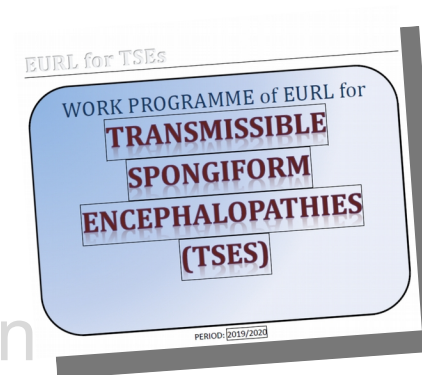


TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# The activities

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs
2. to provide scientific and technical assistance to NRLs
3. to provide scientific and technical assistance to the European commission and other organisations
4. reagents and reference collections
5. requirements related to other legislation



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome



## 4. reagents and reference collections

- 4.1 Verification of reagents/lots quality (BT) and approval of minor testing kit changes.
- 4.2 Collection and maintaining a biobank of reference material depending upon availability from DEFRA
- 4.3 Production of reference panels for EQA/Batch testing



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

## 4. reagents and reference collections

- **4.1 Verification of reagents/lots quality (BT) and approval of minor testing kit changes.**
- Currently an intensive activity is ongoing with manufacturers interacting with our experts for both batch testing and approval of kit changes
- The documentation associated to these activities has been made available



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

## 4. reagents and reference collections

- **4.2 Collection and maintaining a biobank of reference material depending upon availability from DEFRA**
- Material has been made available by APHA and now is stored. The collection will be further expanded thanks to NRLs kindly sharing further materials. Both TSE infected tissues, blood for genotyping and reference strains will be stored.
- **4.3 Production of reference panels for EQA/Batch testing: now ongoing**

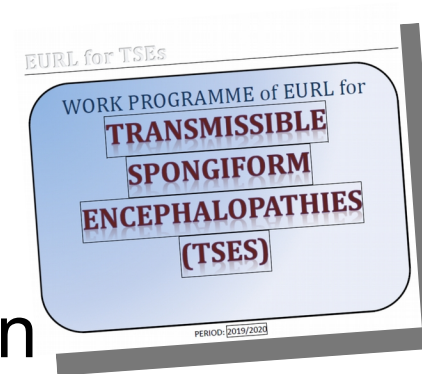


TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

# The activities

1. to ensure availability and use of high quality methods and to ensure high quality performance by NRLs
2. to provide scientific and technical assistance to NRLs
3. to provide scientific and technical assistance to the European commission and other organisations
4. reagents and reference collections
5. requirements related to other legislation



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

## 5. requirements related to other legislation

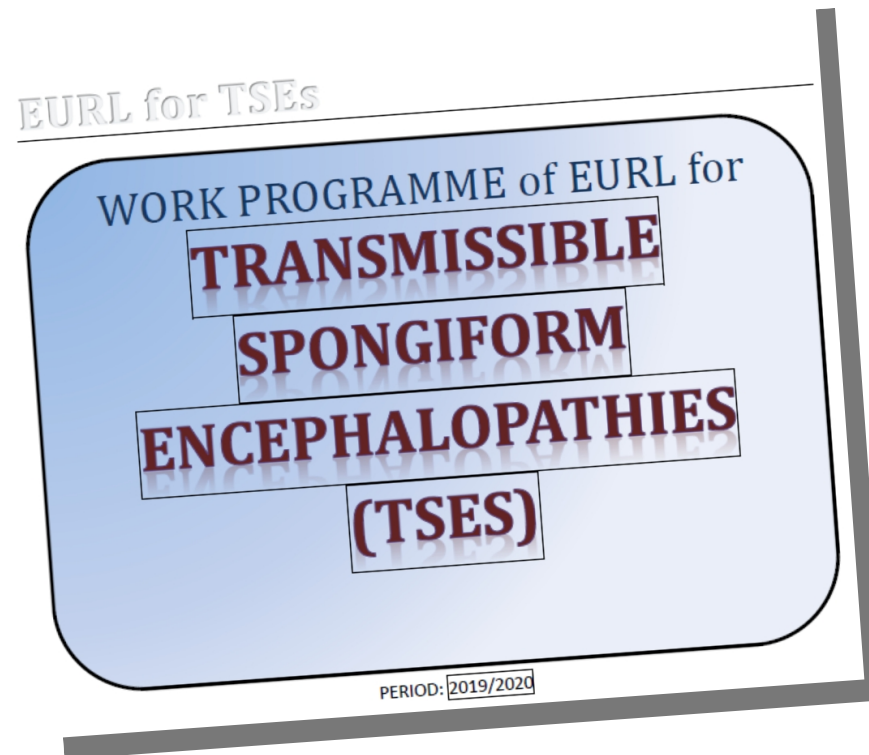
- **5.1 Production of thematic best practices through dialogue with NRLs (outside the scope of R999/2001)**
- The idea is to develop agreed documentation on specific relevant issues: e.g. laboratory decommissioning, effective risk management of biological risks
- To be discussed in the dedicated session tomorrow: volunteering for working groups membership?



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome

Thanks and enjoy our meeting!



Thanks to our outstanding EURL staff!!



TSE EURL

Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta – Turin  
Istituto Superiore di Sanità - Rome