

THE TSE COMMUNITY REFERENCE LABORATORY STRAIN TYPING EXPERT GROUP (STEG)

Summary of the STEG opinion on three UK cases referred to the group following the identification of unusual molecular profiles on discriminatory Western blot (two ovine isolates) or BSE-like discriminatory IHC (the caprine isolate).

Report drafted by MMS summarising the STEG 12 meeting, 6-7th May 2009.

Executive Summary

Two ovine cases from the same UK flock (PG 1862/02; PG 175/04) were referred to the STEG following the identification, in each case, of a low molecular weight unglycosylated band in discriminatory Western blot (Stack et al, 2004). These animals died in 2002 and 2004 respectively.

One caprine case (V459/90), which died in 1990, was referred to STEG following its identification in a retrospective study using discriminatory IHC (Jeffrey et al, 2006).

Absence of appropriate material to enable a full panel of test results from the ring trial means that even if there had been total conformity of interpretation, unequivocal categorization of the isolates would not be possible at this stage. Bioassay was recommended in all cases.

Results

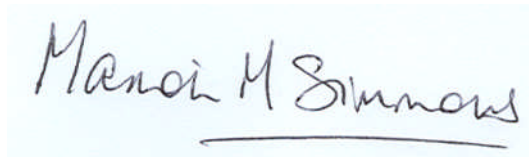
Case no	PG 1862/02	PG 175/04	V459/90
Species	Ovine	Ovine	Caprine
Discriminatory WB	BSE-like	BSE-like	Not done
Discriminatory ELISA	Not done	Not done	Note done
Discriminatory IHC	Sharing features of BSE and scrapie	Sharing features of BSE and scrapie	BSE-like
Bioassay	Not BSE	Not BSE	BSE-like*

** Only wax blocks were available from this case, and fixed material was melted out and rehydrated to prepare inoculum. A panel of fixed/fresh scrapie and BSE controls were also inoculated within a Defra research project to enable confident interpretation of this bioassay.*

Conclusions

The two sheep isolates present a complex picture, and although some (but not all) mice showed a lower molecular weight on WB, the biological characteristics exhibited by all mice were indicative of scrapie.

The bioassay results for the goat isolate are indistinguishable from BSE.

A handwritten signature in black ink on a light blue background. The signature reads "Marion M Simmons" in a cursive script. A horizontal line is drawn underneath the signature.

Dr Marion M Simmons

On behalf of the EU CRL for TSE (STEG)

20th May 2009

References

Jeffrey M, Martin S, González L, Foster J, Langeveld JP, van Zijderveld FG, Grassi J, Hunter N (2006) Immunohistochemical features of PrP(d) accumulation in natural and experimental goat transmissible spongiform encephalopathies. *J Comp Pathol.*134:171-81.

Stack M, Jeffrey M, Gubbins S, Grimmer S, González L, Martin S, Chaplin M, Webb P, Simmons M, Spencer Y, Bellerby P, Hope J, Wilesmith J, Matthews D (2006) Monitoring for bovine spongiform encephalopathy in sheep in Great Britain, 1998-2004. *J Gen Virol.* 87:2099-107