



IMPLICATIONS OF THE FINDINGS OF HEIKENWALDER *ET AL.* (2005)

ISSUE

1. FSA has asked SEAC to consider the implications of the findings of a study by Heikenwalder *et al.* (2005)¹.

BACKGROUND

2. Heikenwalder *et al.* (2005) report that in mouse models of inflammatory disease, the tissue distribution of prions is altered by chronic inflammation (Annex 1). In the study, five different mouse models were generated by genetic modification to induce chronic inflammation of the liver, kidney or pancreas (chronic inflammation of both the liver and pancreas was induced in two models). All the models expressed the murine prion protein gene. Following parenteral challenge with the scrapie agent (source unspecified) to each type of model, infectivity and abnormal prions were detected in the liver, kidney and/or pancreas in animals with chronic inflammation of these organs. In contrast, no or borderline infectivity and no abnormal prions were detected in these organs when wild-type mice were challenged with the scrapie agent.
3. The authors suggest that tissue inflammation may modify the tissue distribution of the infectious agent in prion diseases.

ADVICE SOUGHT FROM THE COMMITTEE

4. The committee is asked to comment on the implications of the findings on the risk from the consumption of beef, or sheep and goat meat, in the light of current specified risk material controls.

¹ Heikenwalder M, Zeller N, Seeger H, Prinz M, Klohn PC, Schwarz P, Ruddle NH, Weissmann C, Aguzzi A. Chronic Lymphocytic Inflammation Specifies the Organ Tropism of Prions. *Science*. 2005 Jan 20; [Epub ahead of print]



Heikenwalder *et al.* (2005) Chronic Lymphocytic Inflammation Specifies the Organ Tropism of Prions. *Science*.