

Online material

To derive the dose/incubation relationship to be used to convert the incubation periods from the RIII mouse bioassay into titres of infectivity, data were analysed from titrations in RIII mice of several different pools of brain material (whole brain or brain stem) from clinical field cases of BSE. Titration results were used from seven inocula each comprising pools of BSE affected brain material. Five of these were sourced at the Veterinary Laboratories Agency (inoculum codes SE1736:BBP1, SE1821:BBP, SE1901 BBP12/91, SE1909:BBP1, SE 1918 BBP1/92) and two from the Institute of Animal Health's former Neuropathogenesis Unit (inoculum codes DMT rendering sample A and DMT

1991 BSE pool). The seven titrations had a combined sample size of 221 incubation periods from inoculated mice and a range of titres between $10^{2.9}$ and $10^{4.2}$ mouse i.c./i.p. ID_{50}/g (obtained by the Karber method [22]).

For C57bl mice, there was one set of titration data from which to produce a dose-response curve. The probability of infection for a given dose was not significantly different from that of the RIII mice, and so a single probability of infection relationship was used for both RIII and C57bl mice, derived from the pooled C57bl and RIII data, but different IP distributions between the two strains of mice were found.

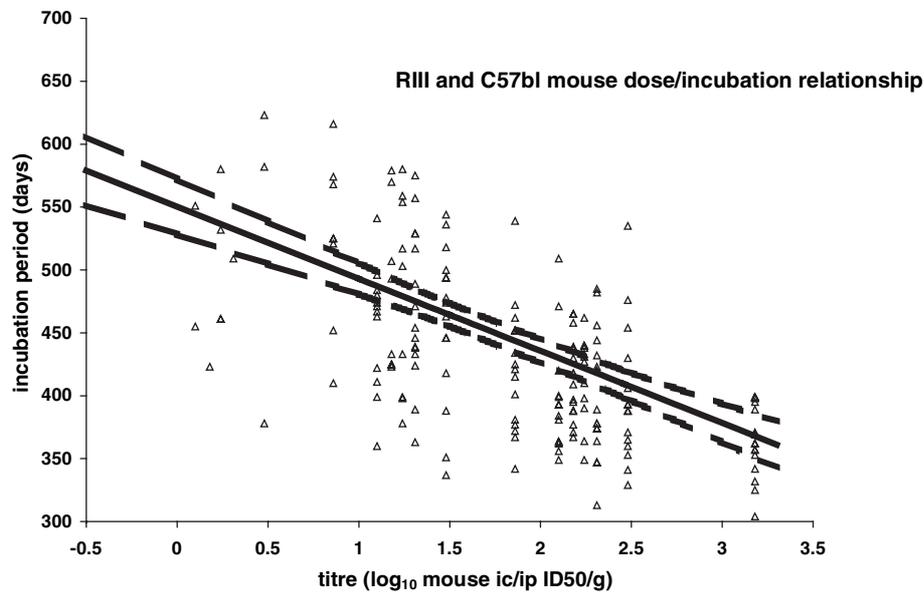


Figure 1S. Linear regression results, with 95% confidence intervals, from the combined data from 6 pools of brain material titrated in RIII mice.

Table IS. Tissues sampled fresh for mouse bioassay of infectivity.

Neuro-muscular	Lymphoreticular
Brain: Frontal cortex	Spleen
Caudal medulla	Thymus (cervical)
Pituitary	Tonsil (palatine)
CSF	Submandibular lymph node
Dura ¹	Retropharyngeal lymph node
Spinal cord: C ₂ -C ₃ , T ₁₀ -T ₁₁ , L ₃ -L ₄	Bronchial-mediastinal lymph node
Dorsal root ganglia: C ₃ -C ₆ , T ₅ -T ₈	Hepatic lymph node
Trigeminal ganglia	Mesenteric lymph node
Cranial cervical ganglion	Superficial cervical lymph node Popliteal lymph node
Stellate ganglia	
Facial nerve	Other
Phrenic nerve	Kidney
Radial nerve ¹	Urine ³
Sciatic nerve	Adrenal ¹
Masseter muscle ¹	Lung (left caudal lobe)
Sternocephalicus muscle	Nasal mucosa (mid-turbinate)
Triceps muscle	Pericardium ²
Diaphragmatic muscle ¹	Heart (left ventricle) ⁴
Longissimus dorsi muscle	Mitral valve ⁵
Semitendinosus muscle ¹	Aorta ²
Alimentary	Blood (buffy coat)
Tongue (dorsum, to include mucosa)	Blood (serum) ¹
Submandibular salivary gland	Blood (clot) ¹
Parotid salivary gland	Bone marrow (sternum)
Cranial oesophagus ¹	Collagen (Achilles tendon) ²
Rumen	Skin ²
Omasum ¹	Bone (femoral diaphysis) ²
Abomasum (pyloric)	
Duodenum	
Distal ileum (including Peyer's patches)	
Spiral colon	
Faeces ²	
Pancreas	
Liver	

¹Tissues sampled and stored but not bioassayed.

²Assays conducted in RIII mice only at time points 18 and 32 months post-exposure.

³ Assay conducted in RIII mice only at 18 months post-exposure.

⁴ Assays conducted in C57Bl mice at time points 22–40 months post-exposure.

⁵Assays conducted in RIII mice at time points 2–18 months post-exposure.