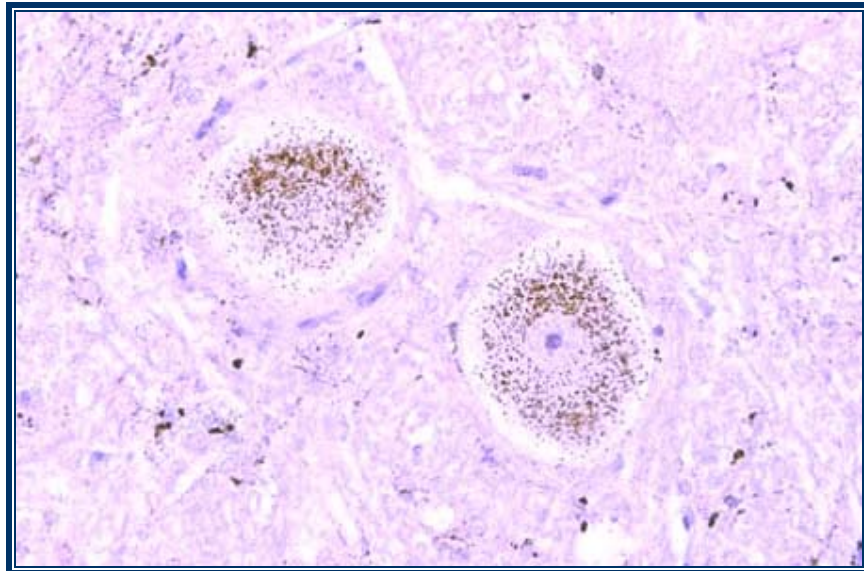


The following illustrations are based on Gonzalez et al, J Comp Path 2002 126 17-29.

Active profiling work is ongoing in several research groups at present, and it is intended that this document will be updated to include any further patterns identified through the analysis of PrP immunostaining.

Intracellular PrPd types

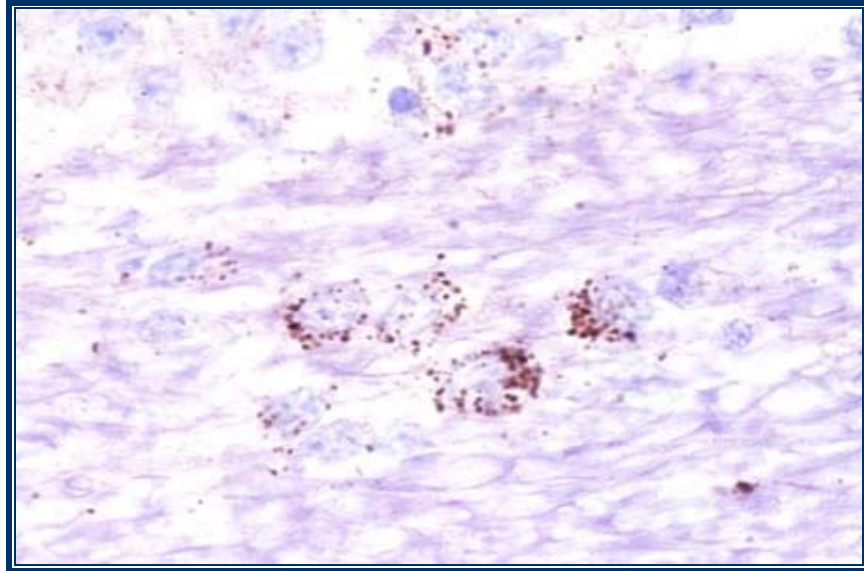
Intraneuronal PrPd



Multiple, finely granular deposits within the perikaryon of neurones, either widespread, around the nucleus or beneath the plasmalemma. Found in most brain regions, but generally less conspicuous in cerebral cortex neurones and Purkinje cells.

Intracellular PrPd types

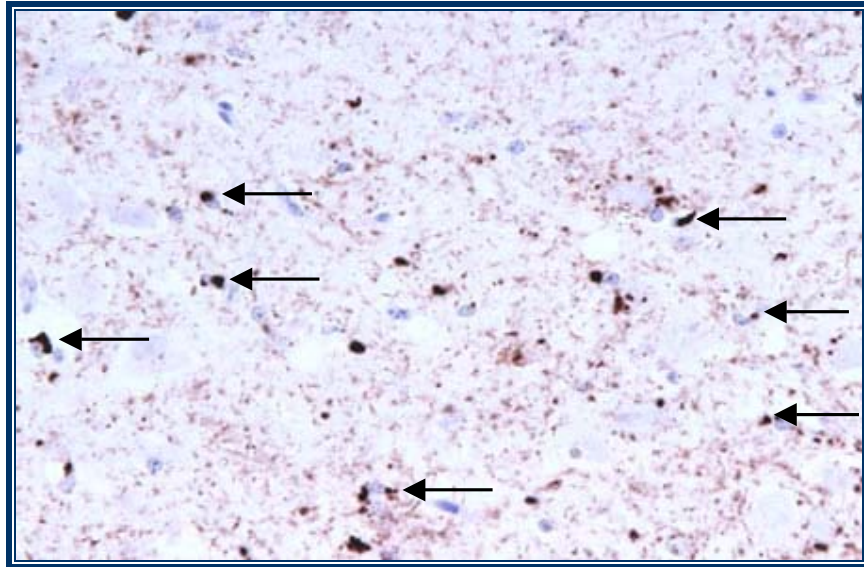
Intra-astrocytic PrPd



Multiple, abundant granular deposits close to astrocyte-looking nuclei. Can be widespread throughout the brain, but are particularly noticeable in the cerebellar white matter and in the spino-cerebellar tracts.

Intracellular PrPd types

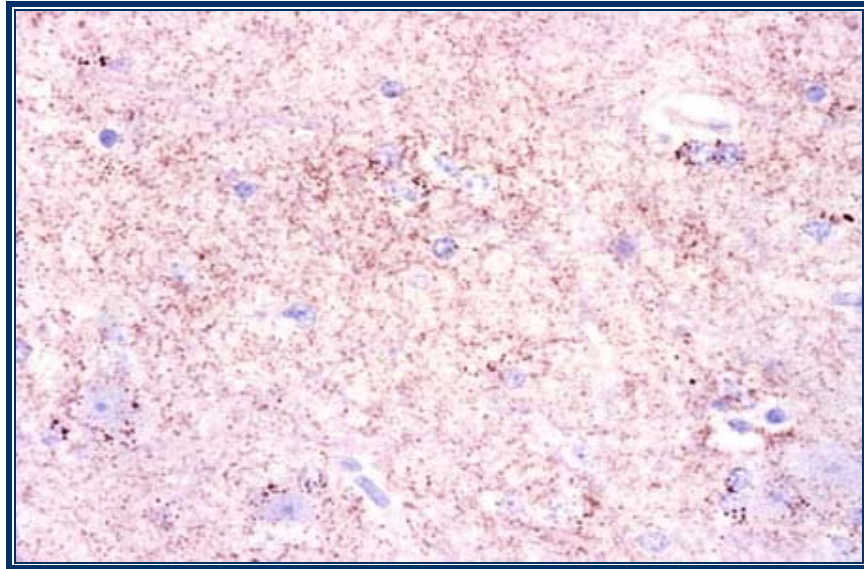
Intra-microglial PrPd



Few, mostly single, big granules close to microglia-looking nuclei. Particularly prominent in areas where other PrPd types are abundant.

Extracellular, neuropil-associated PrPd types

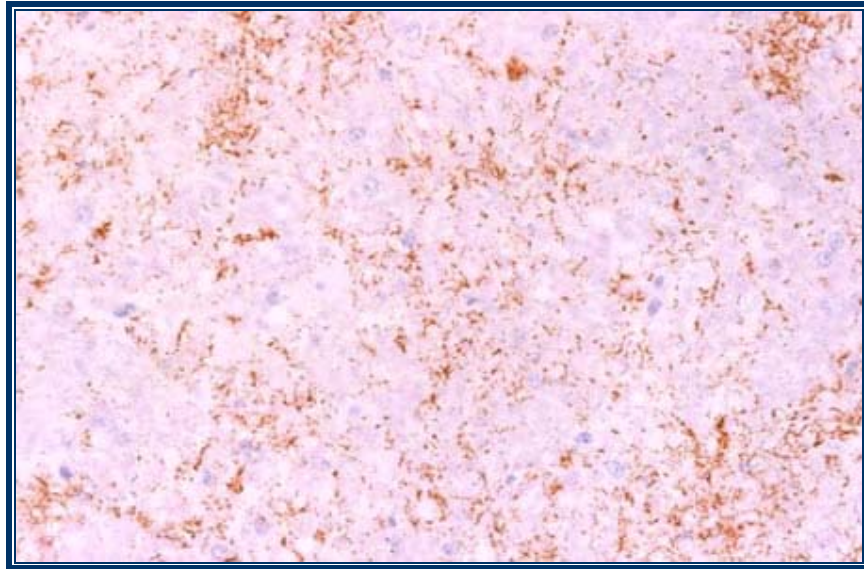
Fine punctate PrPd



Numerous and very fine granular (powdery) deposits in the neuropil. Generally most conspicuous in thalamus, hypothalamus and brain stem.

Extracellular, neuropil-associated PrPd types

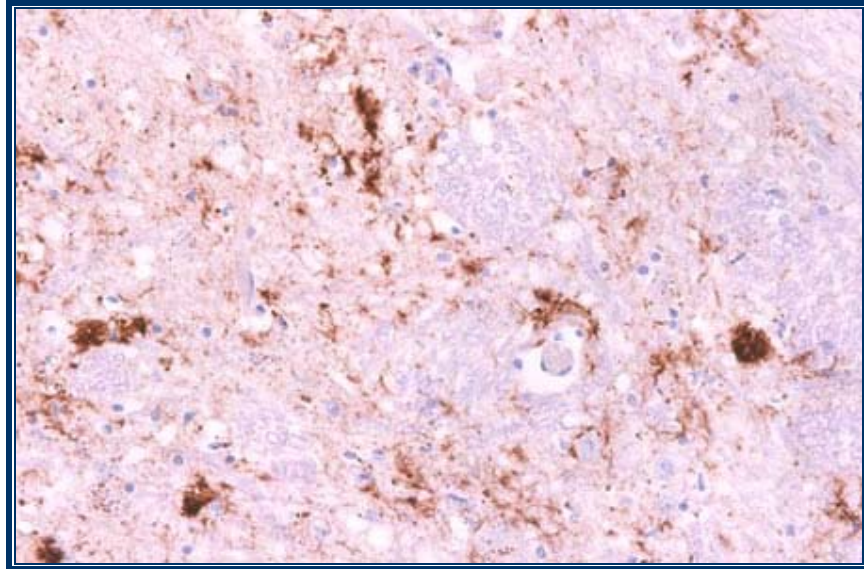
Coarse granular PrPd



Granular or particulate deposits of irregular shape in the neuropil. Often associated with fine punctate accumulations in thalamus, hypothalamus and brain stem.

Extracellular, neuropil-associated PrPd types

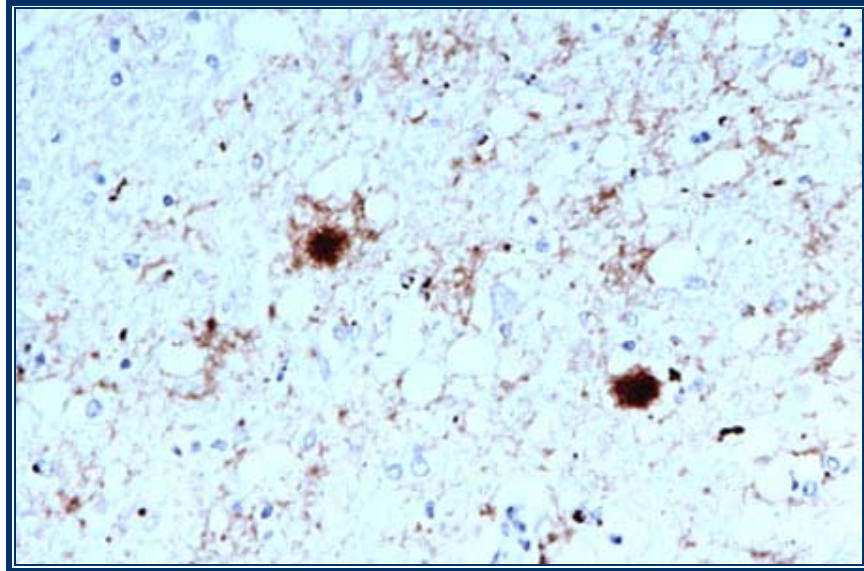
Coalescing PrPd



Amorphous, large and strongly labelled accumulations in the neuropil. Often occurring in areas where fine punctate or coarse granular deposits are also present.

Extracellular, neuropil-associated PrPd types

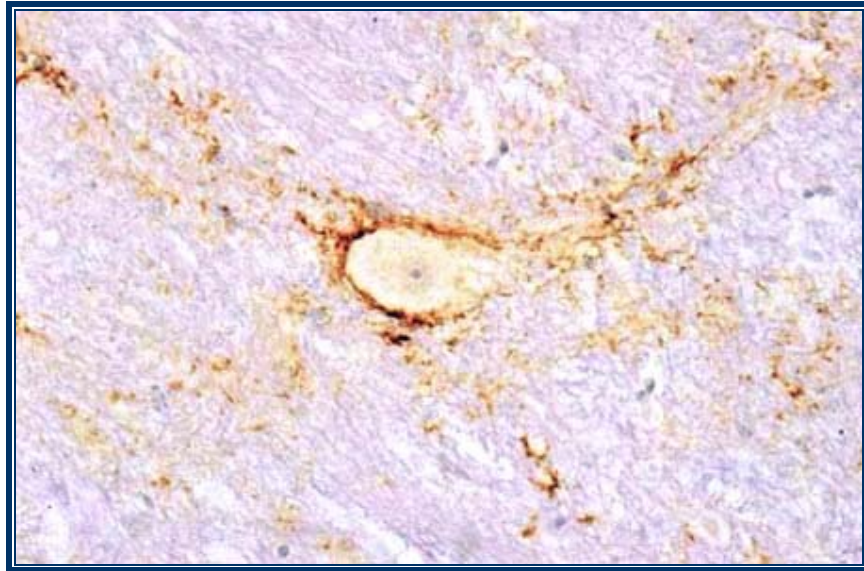
PrPd pseudo-plaques



Round, relatively large and strongly labelled accumulations, sometimes with a radiated appearance, but devoid of an homogeneous central core. Generally in the neuropil, not necessarily associated to coarse granular deposits, but sometimes in white matter.

Extracellular, neuropil-associated PrPd types

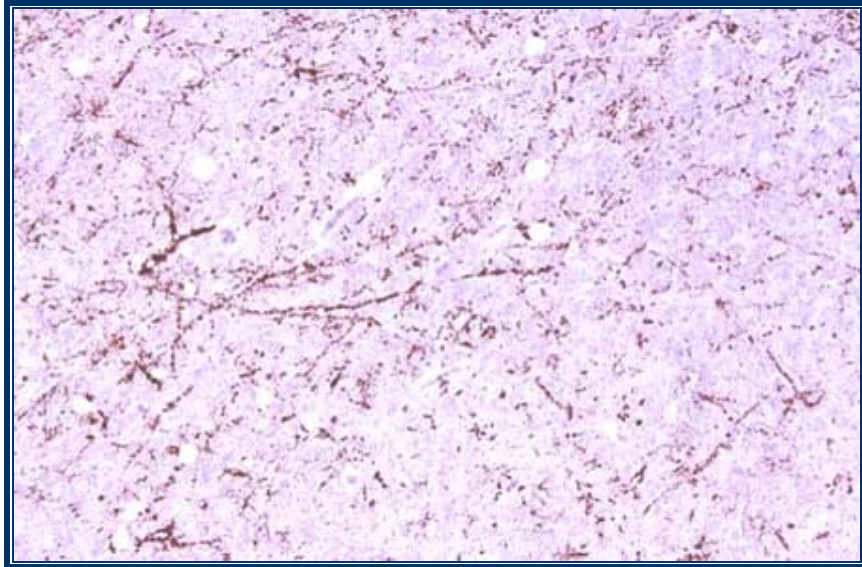
Peri-neuronal PrPd



Continuous or more particulate immunolabelling around neuronal perikarya and sometimes their processes. On occasions associated with intracellular deposits in the same neurons, but often not. When present, it tends to be conspicuous in the ventral border of the DMNV and the deep cerebellar nuclei.

Extracellular, neuropil-associated PrPd types

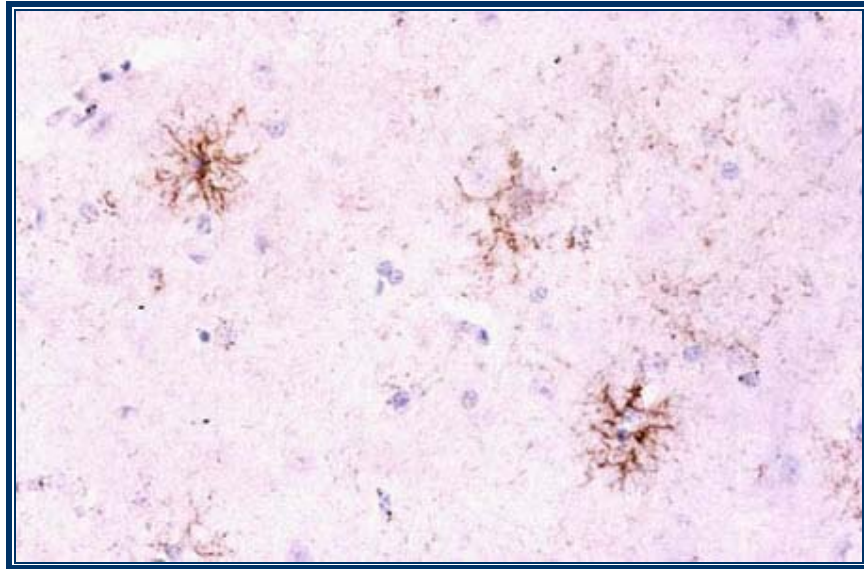
Linear PrPd



Thread-like, more or less continuous or interrupted deposits along what appear to be neuronal processes. Often at sites where coarse granular accumulations are also present (hypothalamus and brain stem). It occasionally coexists with perineuronal deposits in the same cells.

Extracellular, glia-associated PrPd types

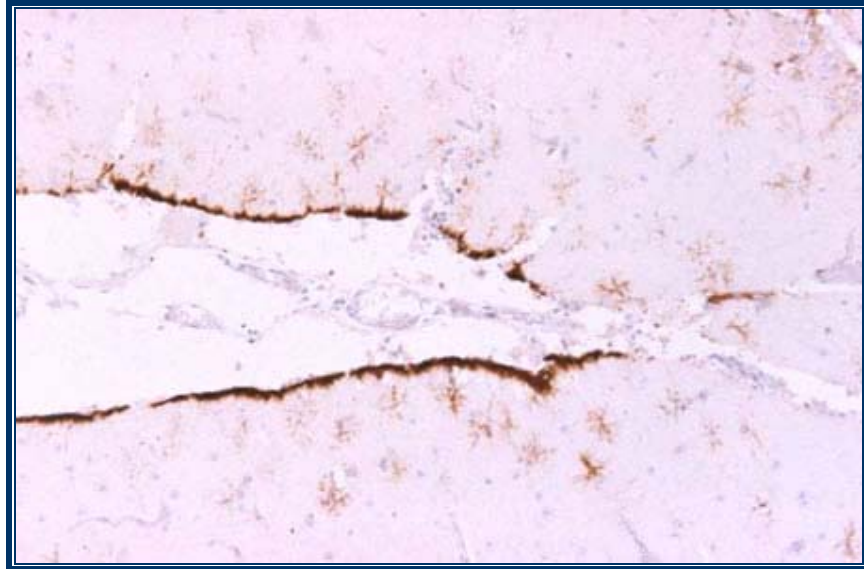
Stellate PrPd



Radiating, branching deposits often centred on glial nuclei of diverse morphologies and occasionally around neurones. Can be found throughout the grey matter of most brain areas, including the cerebral and cerebellar cortices.

Extracellular, glia-associated PrPd types

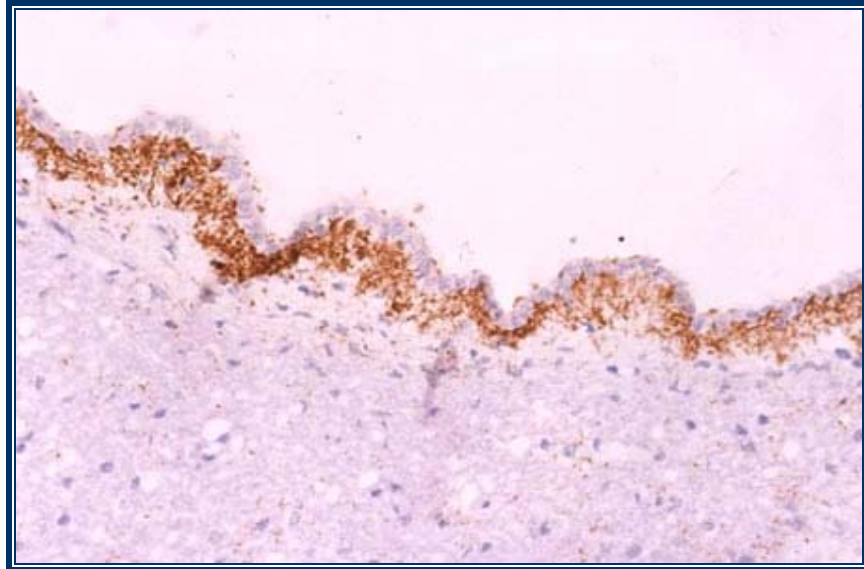
Subpial PrPd



Amorphous aggregates of variable thickness, continuous or multifocal, underneath the pia mater. Most prominent in the cerebral and cerebellar cortices, often coexisting with the stellate type.

Extracellular, glia-associated PrPd types

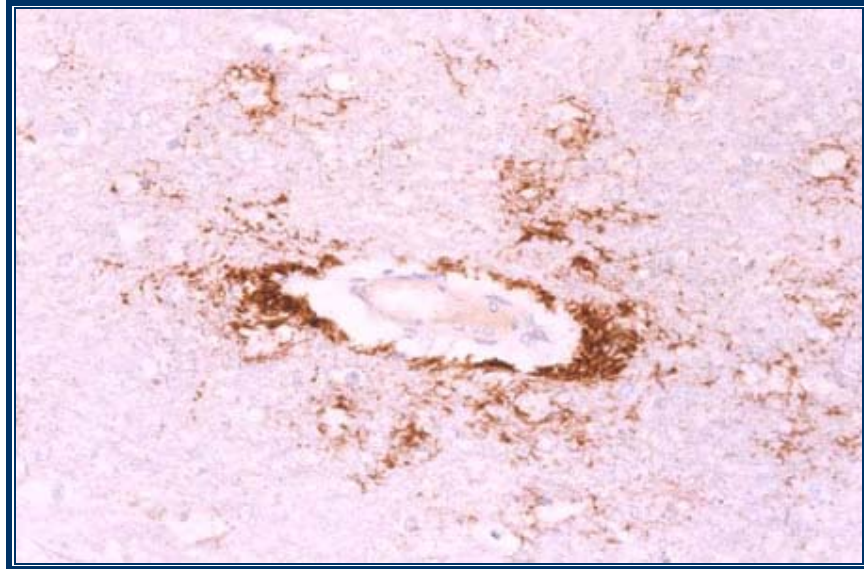
Sub-ependymal PrPd



Same appearance as sub-pial, but located underneath the ependymal lining. Sometimes coexisting with supra-ependymal deposits, and is most conspicuous around lateral ventricles.

Extracellular, glia-associated PrPd types

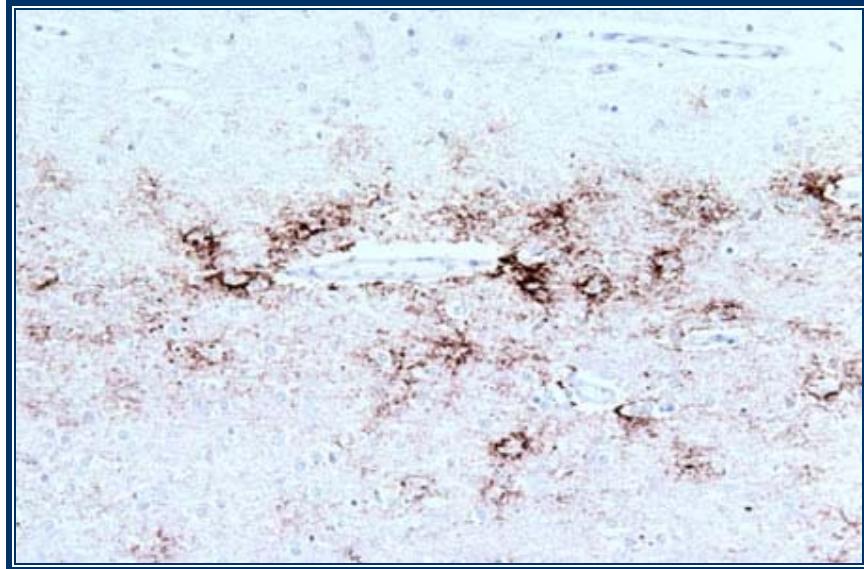
Perivascular PrPd



Amorphous or irregular accumulations, of variable thickness, continuous or multifocal, around blood vessels. Most prominent in cerebral white matter, often coexisting with the perivacuolar type, but also in white matter bundles at other sites (but very rare in cerebellum).

Extracellular, glia-associated PrPd types

Peri-vacuolar PrPd



Irregularly round or slightly branching, generally discontinuous deposits around empty spaces in the white matter, often next to blood vessels. Occasional glial cell-looking nuclei can be found within those spaces. Most prominent in cerebral and cerebellar white matter.

Extracellular and/or intracellular vascular PrPd types

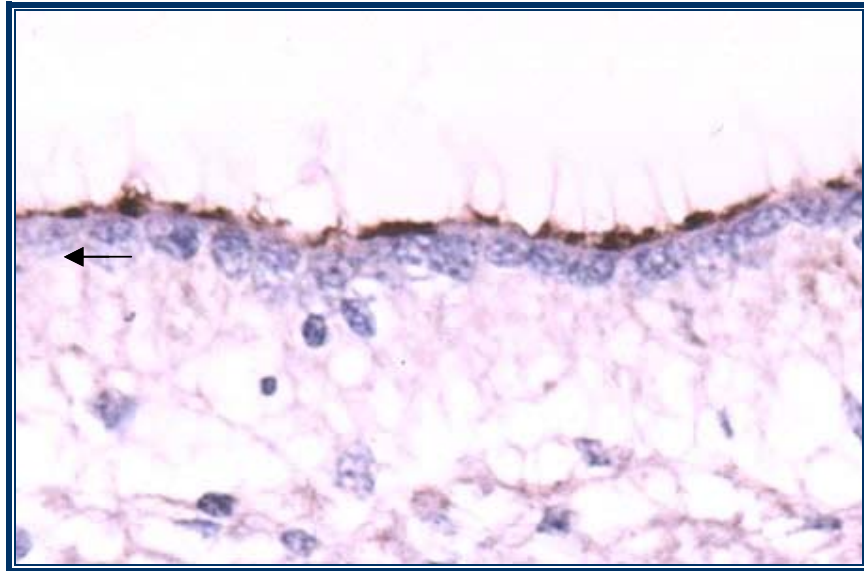
Vascular PrPd plaques



Fibrillar accumulations radiating from an intensely labelled core, around blood vessels. Also, strongly labelled, homogeneous deposits involving the vessel wall itself. When present, they tend to be most evident in cerebral and cerebellar cortices, but also frequent in thalamus. In the meninges, intramural, but not perivascular deposits can be found.

Extracellular and/or intracellular ependymal PrPd types

Ependymal PrPd



Amorphous, continuous or multifocal, thin accumulations on the luminal side of ependymal cells and sometimes granular deposits in their cytoplasm. Either associated with the sub-ependymal type or not.