



# ECVP/ESVP Summer School in Veterinary Pathology



## Marie Curie Training Courses

Summer School 2008 – CNS Case 21

### Case 21) E 1445/97 D: Tissue from a BOVINE

Brainstem: In the parenchyma, there are diffuse accumulations of lymphocytes, plasma cells, macrophages and occasional neutrophils around small- to medium-sized blood vessels. Additionally, there are multifocal, randomly distributed, variable sized microabscesses, characterized by multifocal unencapsulated accumulations of neutrophils, cellular debris and occasional macrophages. Additionally, multiple granulomas and focal microgliosis are present. There is an extensive area of necrosis (malacia), characterized by massive accumulation of neutrophils and macrophages. Additionally, there is moderate infiltration of activated microglia and gitter cells. Also degenerated neutrophils with a hypereosinophilic cytoplasm with basophilic, fragmented (pyknotic) nuclei can be found. Some axons are hypereosinophilic and swollen (spheroids) with markedly swollen myelin sheaths. Few neurons are swollen and hypereosinophilic with central chromatolysis (neuronal degeneration) or shrunken, hypereosinophilic with pyknotic nuclei (neuronal necrosis). Occasionally, neuronophagia can be found. The intima of multiple vessels is enlarged and hypereosinophilic with infiltration of neutrophils (fibrinoid necrosis), associated with fibrin and microthrombi. Meningeal vessels show a mild perivascular infiltration of macrophages, lymphocytes and plasma cells.

#### **Morphologic diagnosis:**

Brainstem:

- 1) Encephalitis, multifocal, suppurative, severe, subacute
- 2) Meningitis, diffuse, lympho-histiocytic, moderate, subacute

#### **Etiology:**

*Listeria monocytogenes*