



# ECVP/ESVP Summer School in Veterinary Pathology



## Marie Curie Training Courses

Summer School 2005 – Fish R01/751

Slide No. R01/751: Tissue from a trout

### Description of histological findings

Kidney, multifocally in the hematopoietic tissue there is a marked infiltration with epithelioid macrophages, few lymphocytes and multinucleated giant cells of foreign body and Langhans types and an thin outer layer of fibroblasts (granulomas). Within these lesions there are numerous, variously sized, up to 160  $\mu\text{m}$  in diameter measuring, organisms with a basophilic granulated cytoplasm, multiple round basophilic small nuclei (1-2 $\mu\text{m}$  in diameter) and a thick (5 $\mu\text{m}$ ) basophilic laminated cell membrane (spores of *Ichthyophonus hoferi*). Many spores show signs of degeneration indicated by loss of integrity of spore wall, vacuolation and fragmentation of the cytoplasm. In a few spores germination through the outer wall is visible with formation of thick pseudohyphae which occasionally bifurcate in short distance from the original outer wall.

Few tubular epithelial cells contain intracytoplasmic eosinophilic hyaline droplets (hyaline degeneration).

### Morphological diagnoses

Kidney, granulomatous nephritis with intralesional parasite spores, multifocal, severe

### Etiology

*Ichthyophonus hoferi*

Scoring system	Points
<u>General:</u>	
Design	1
Tissue	1
<u>Descriptive features:</u>	
Hematopoietic tissue	1
Parasite spores	1
Size	1
Cytoplasm	1
Multiple nuclei	1
Cell membrane	1
Epithelioid macrophages, lymphocytes	1
Giant cells	1
Fibrous layer	1
Spore degeneration	2
Germination of spores, pseudohyphae	1
Hyaline degeneration of tubuli	1
<u>Morphological Diagnoses:</u>	3
<u>Etiology:</u>	2