

## ECVP/ESVP SUMMER SCHOOL IN VETERINARY PATHOLOGY 2015

### Case 5

#### Tissue from a dog

- Globe
- Within the subretinal space, infiltrating the retina, coating the ciliary body and free in the vitreous, are large numbers of extracellular algae
- Algae are mixed with low to moderate numbers of neutrophils
- Algae are as follows: are round to oval, range from 12-20 microns in diameter with a 2-3 micron thick refractile wall and a basophilic nucleus
- Some algae contain multiple wedge-shaped daughter cells (endospores)
- Low to moderate numbers of plasma cells and fewer lymphocytes infiltrate the choroid and minimally infiltrate the iris stroma
- At the drainage angle, the ciliary cleft and trabecular meshwork are collapsed
- The iris is anteriorly displaced and bowed (iris bombe)
- Fibrovascular membrane material mixed with inflammation is attached to the pupillary margin of the iris (disrupted posterior synechia)
- The retina is detached and there is hypertrophy of the retinal pigmented epithelium (RPE)
- There is inner retinal atrophy characterised by loss of the inner nerve fibre layer and ganglion cells

#### Morphologic diagnosis(es):

##### Eye:

- Endophthalmitis (or chorioretinitis and hyalitis), neutrophilic and lymphoplasmacytic with numerous algae
- Retinal detachment
- Posterior synechiae
- Glaucoma

#### Aetiologic diagnosis:

Protothecal endophthalmitis or protothecal chorioretinitis and hyalitis

#### Cause:

*Prototheca zopfii*