

## Retinal Imaging of Misfolded Proteins in Alzheimer's

**Umur Kayabasi**

Uskudar University, Turkey

**Introduction:** Tau protein plays a crucial role in many neurodegenerative diseases including Alzheimer's disease (AD). Tau inclusions and amyloid beta (AB) depositions have been described in the post-mortem retina exams of AD patients. Cryo-electron microscopy (Cryo-EM) was recently used to detect the detailed structure of Tau filaments.

**Methods and Result:** We examined the retinas of PET-proven live AD patients by spectral domain optical scanning tomography (SD-OCT) and fundus autofluorescence (FAF). The hyper or hypo-fluorescent lesions in the retina were scanned by OCT and images that completely corresponded with the histopathological and Cryo-EM shapes of Tau filaments were observed.

**Conclusion:** Retinal Tau is a very promising target to detect early changes in AD and retinal imaging may be an exciting and trustworthy technique to predict and monitor the disease.

### Biography:

Umur Kayabasi is a graduate of Istanbul Medical Faculty. After working as a resident in Ophthalmology, he completed his clinical fellowship program of Neuroophthalmology and Electrophysiology at Michigan State University in 1995. After working as a consultant neuro-ophthalmologist in Istanbul, he worked at Wills Eye Hospital for 3 months as an observer. He has been working at World Eye Hospital since 2000. He has chapters in different neuro-ophthalmology books, arranged international symposiums, attended TV programs to advertise the neuro-ophthalmology subspecialty. He has also given lectures at local and international meetings, plus published many papers in neuro-ophthalmology. He became an Assistant Professor at Uskudar University/Istanbul in 2016.