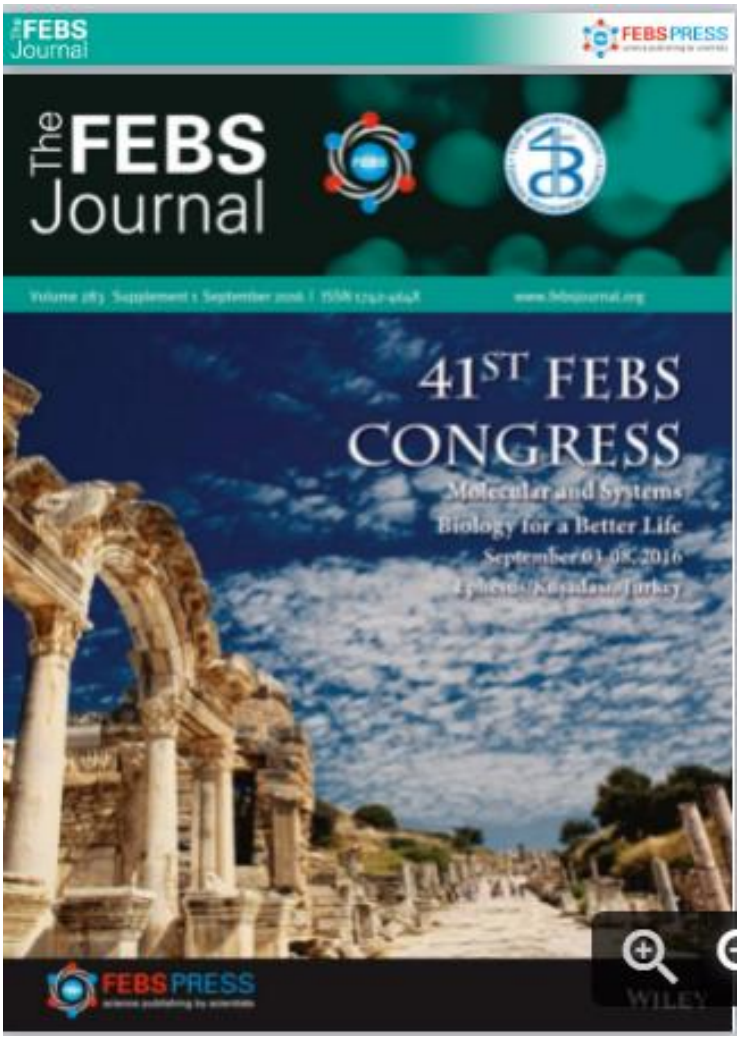
The FEBS Journal
FEBS PRESS
41ST FEBS CONGRESS
Molecular and Systems Biology for a Better Life
September 03-08, 2016
Izmir, Aydınlar/Turkey
FEBS PRESS
WILEY

daughter fibrils.

By means of transmission electron microscopy, we visualized differences in the morphology of FL (ribbon-like), K18 (rod-shaped) and ΔK280 (helical) fibrils. Thioflavin T fluorescence assay demonstrated that the fibrilization rate of FL seeded by FL (FL/FL) was similar to FL/ΔK280. Further, FL/ΔK280 exhibited indistinguishable proteolytic patterns from FL/FL, whereas FL/K18 produced unique fragment sizes. Fourier transform infrared spectroscopy revealed that β-sheet-rich amyloid cores of obtained fibrils, in particular FL/K18, were protease-resistant. α-helix and/or random coil components were readily digested. We also observed increased fidelity of the conformational heritage from daughter to granddaughter fibrils, suggesting that strain adaptation may occur over subsequent generations. We are currently studying neurotoxic effects of the obtained strains in rat hippocampal neurons.

Our findings provide molecular insights into the complex biology of Tau amyloid strains and suggest molecular events that likely happen in tauopathies.

ST-09.02.2-007

Serum nitric oxide, lipid hydroperoxide levels, nitric oxide synthase activity and total serum antioxidant capacity in patients with Parkinson's disease

H. C. Çubukçu[1], M. Yurtdas[2], Z. E. Durak[3], B. Aytaç[4], H. N. Günes[2], B. G. Çokal[2], T. K. Yoldas[2], I. Durak[1]
[1]Department of Medical Biochemistry, Faculty of Medicine, Ankara University, Ankara, Turkey, [2]Department of Neurology, Ankara Education and Research Hospital, Ankara, Turkey, [3]Institution of Public Health, Turkish Ministry of Health, Ankara, Turkey, [4]Directorate of Health Services, Turkish Ministry of Health, Ankara, Turkey

Parkinson's disease (PD) is one of the common neurodegenerative disorders. Oxidative stress is considered as a contributing factor to the development of PD. Present study aims to investigate serum oxidative stress status in patients with PD.

Miscellaneous

ST-Mis-009

An investigation of the effect of tamoxifen on potassium channel gene expression in breast cancer

P. Eroglu, S. Yalin, Ü. Çömelekoglu, F. Sögüt, S. N. Yilmaz, D. Yetkin, A. E. Yalin
Mersin University, Mersin, Turkey

Ion channels play a vital role in basic physiological functions such as generation of electrical activity in nerves and muscle, intracellular signaling, hormone secretion, cell proliferation, cell volume regulation. K^+ channels are a most diverse class of ion channels in the plasma membrane. It is shown that voltage dependent K^+ channels are associated with tumor cell proliferation in particular if they are epithelium originated. One of the voltage activated K^+ channels is HERG1 that plays important roles in regulating tumor cell proliferation and cell cycle progression. K^+ channel blockers inhibit cell proliferation. Tamoxifen being used for the treatment of breast cancer significantly inhibits K^+ current and cell proliferation. We investigate the effect of tamoxifen on HERG1 K^+ channel gene expression in MCF-7 breast cancer cell. Cytotoxic effect of tamoxifen at different concentrations was evaluated for MCF-7 breast cancer cell line using MTT assay. Cells were incubated 24 h and 48 h. IC_{50} value is measured as 31.9 for 48 h and 20 μM concentration. For electrophysiological analysis patch-clamp experiments were conducted. The maximum reduction in K^+ channel current was observed at 5 μM concentration of tamoxifen. The levels of HERG1 K^+ channel gene expression are analyzed by using Real-Time PCR method. While the gene expression levels observed to be decreased with 5 μM tamoxifen concentration, depending on its increasing concentrations the levels of gene expressions increased. Although, decreased activity and gene expression of K^+ channel at low concentration (5 μM) of tamoxifen give insight into tamoxifen's inhibitory effect on HERG1 K^+ channels, this inhibitory effect of low

The FEBS Journal 283 (Suppl. 1) (2016) 58–123 DOI: 10.1111/febs.13807