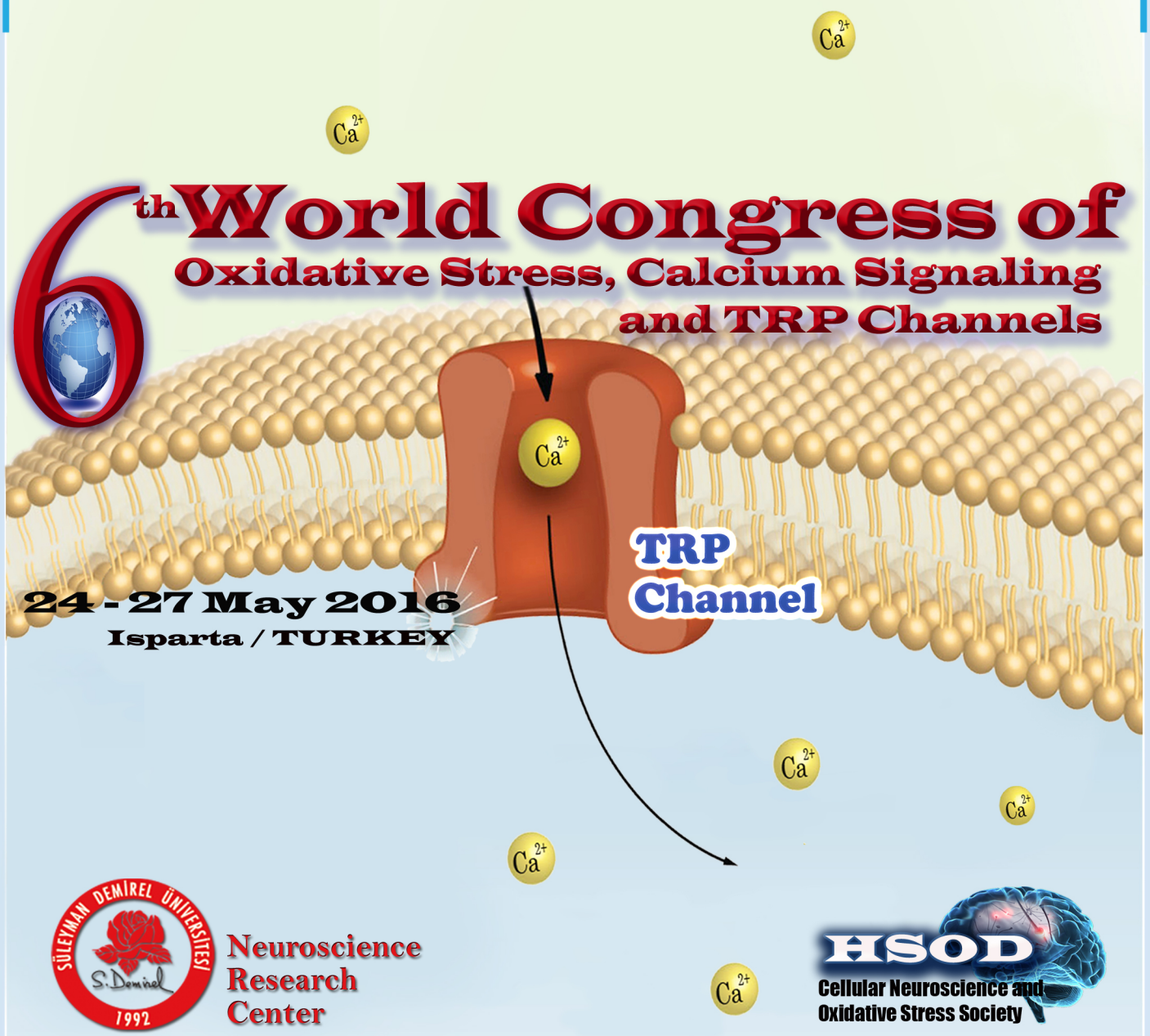
E-ISSN: 2149-7222 (Online)

Journal of Cellular Neuroscience and Oxidative Stress

Former name; Cell Membranes and Free Radical Research



Neuroscience Research Center

HSOD
Cellular Neuroscience and Oxidative Stress Society

Volume 8, Number 1, 2016

6th World Congress of Oxidative Stress, Calcium Signaling and TRP Channels

24 - 27 May 2016 Isparta / TURKEY

www.cmos.org.tr

Volume 8, Number 1, 2016
E-ISSN Number: 2149-7222 (Online)
Indexing: Google Scholar, Index Copernicus, Chemical Abstracts, Scopus (Elsevier), EBSCOhost Research Database

AIM AND SCOPES

Journal of Cellular Neuroscience and Oxidative Stress is an online journal that publishes original research articles, reviews and short reviews on the molecular basis of biophysical, physiological and pharmacological processes that regulate cellular function, and the control or alteration of these processes by the action of receptors, neurotransmitters, second messengers, cation, anions, drugs or disease.

Areas of particular interest are four topics. They are;

A- Ion Channels (Na^+- K^+ Channels, Cl^- channels, Ca^{2+} channels, ADP-Ribose and metabolism of NAD^+, Patch- Clamp applications)

B- Oxidative Stress (Antioxidant vitamins, antioxidant enzymes, metabolism of nitric oxide, oxidative stress, biophysics, biochemistry and physiology of free oxygen radicals)

C- Interaction Between Oxidative Stress and Ion Channels in Neuroscience
(Effects of the oxidative stress on the activation of the voltage sensitive cation channels, effect of ADP-Ribose and NAD^+ on activation of the cation channels which are sensitive to voltage, effect of the oxidative stress on activation of the TRP channels, role of TRPM2 channels in neurodegenerative diseases such Parkinson's and Alzheimer's diseases)

D- Gene and Oxidative Stress
(Gene abnormalities. Interaction between gene and free radicals. Gene anomalies and iron. Role of radiation and cancer on gene polymorphism)

READERSHIP

Biophysics	Biochemistry
Biology	Biomedical Engineering
Pharmacology	PhysiologyGenetics
Cardiology	Neurology
Oncology	Psychiatry
Neuroscience	Neuropharmacology

Keywords
Ion channels, cell biochemistry, biophysics, calcium signaling, cellular function, cellular physiology, metabolism, apoptosis, lipid peroxidation, nitric oxide synthase, ageing, antioxidants, neuropathy, traumatic brain injury, spinal cord injury, Alzheimer' s Disease, Parkinson's Disease.

The abstract of the congress is published in this issue.

6th World Congress of Oxidative Stress, Calcium Signaling and TRP Channels

was supported by

The Scientific and Technological Resarch Council of Turkey

6th World Congress of Oxidative Stress, Calcium Signaling and TRP Channels

The congress organization committee wishes thanks to the sponsors below

Abstract Book

of

6th World Congress of Oxidative Stress,
Calcium Signaling and TRP Channels

24 - 27 May 2016

Isparta, Turkey

with collaboration of

Cellular Neuroscience
and Oxidative Stress Society
and Department of Biophysics,
School of Medicine,
Süleyman Demirel University

6th World Congress of Oxidative Stress, Calcium Signaling and TRP Channels

_____ [Organization Committee] _____

Congress Honour Committee
Prof. Dr. İlker Hüseyin ÇARIKÇI
Rector
Suleyman Demirel University, Isparta, Turkey

Prof. Dr. Alim KOŞAR
Dean School of Medicine
Suleyman Demirel University, Isparta, Turkey

Organization Committee
Chairman
Prof. Dr. Mustafa NAZIROĞLU
Department of Biophysics, School of Medicine
Suleyman Demirel University, Isparta, Turkey

Prof. Dr. James W. Jr. PUTNEY
1st International Vice Chairman
NIEHS Calcium Regulation Group Leader

Prof. Dr. Mohamed TREBAK
Pennstate University Medical Faculty
2nd International Vice Chairman

Organization Local Chairmans
Assist Prof. Dr. A. Cihangir UĞUZ
Department of Biophysics, School of Medicine
Suleyman Demirel University, Isparta, Turkey

Assist Prof. Dr. Ömer ÇELİK
Department of Biophysics, School of Medicine
Suleyman Demirel University, Isparta, Turkey

Prof. Dr. Fatih GÜLTEKİN
Dean of Faculty of Medicine
Alanya Alaaddin Keykubat University

Prof. Dr. Süleyman KUTLUHAN
Department of Neurology
Suleyman Demirel University School of Medicine

Organization Secretariat
Bilal CİĞ & Mehmet AYKUR & Vahid GHAZIZADEH & Yener YAZĞAN
Department of Biophysics, School of Medicine
Suleyman Demirel University, Isparta, Turkey

Accountants
Ahmi ÖZ & İshak Suat ÖVEY & Ramazan ÇINAR & Ercan SOZBİR (Webmaster)
Department of Biophysics, School of Medicine
Suleyman Demirel University, Isparta, Turkey

Technical Supports
Yener YAZĞAN *(Graphic Designer)*
Department of Biophysics, School of Medicine
Suleyman Demirel University, Isparta, Turkey

6th World Congress of Oxidative Stress, Calcium Signaling and TRP Channels

[Scientific Committee]

immunostaining had a negative result in the control group. A big number of necrotic cells were observed in CS+ALA group. TNF-α immunopositive cells in CS group were found at medium level (+2), in CS+ALA group-at extensive level (+3).

In conclusion, it was observed that cigarette smoking caused sporadic structural changes in liver tissues. The administered of ALA (100mg/kg) has no protective effect against cigarette toxication on liver tissue. Future studies which will applied different doses of ALA can bring clarity to this issue.

Key words: Cigarette smoking, liver, alpha lipoic acid

References

1. Park EM, Park YM, Gwak YS. Oxidative damage in tissues of rats exposed to cigarette smoke. Free Radic Biol Med 1998;25:79-86.

2. El-Zayadi AR. Heavy smoking and liver. World J Gastroenterol 2006;12(38):6098-6101.

Poster No. 106

Effects of treadmill and swimming exercises on oxidative stress parameters in cerebellum of rats

Recep Soslu[1], Fazile Nur Ekinci Akdemir[2]. Ali Özkan[1], Mutlu Türkmen[1], Murat Kul[1], Taner Bozkuş[1]

[1]Physical Education and Sport School, Bartin University, Bartın, Turkey
[2]Department of Nutrition and Dietetics, Health School, Agri İbrahim Çeçen University, Agri, Turkey

There are many benefits of regular physical activity on health. However, the different types of exercise increases free radical production in a few ways. In addition to the control of muscle activating muscle contractions stimulate the cerebral cortex and cerebellum area as well as play an important role in the basal ganglia. The purpose of this study was to find out the effects of both treadmill and swimming exercises on oxidative parameters of cerebellum of rats.

Fifty six male rats were divided into two groups and one of the groups was applied 15, 30 and 60 minutes daily swimming exercises for 7 days during 12 weeks, and the second group was applied treadmill exercises for 5 days during the same period of 12 weeks. At the end of the application, the cerebellar tissue of the rats was removed. Tissues were stored in at -70°C until analysis and homogenized on the day analysis. In the cerebellar tissue samples were measured malondialdehyde (MDA) level, superoxide dismutase (SOD), and reduced glutathione peroxidase (GSH-Px) activities.

According to the results obtained, there was a statistically significant decrease in MDA levels and significant increase in SOD levels of rats which were applied swimming exercise.

In conclusion, it was found out that the exercises applied in different periods and volumes have oxidative stress levels of cerebellar tissue. Through application of different exercise programs, different parts of brain would be affected and special training programs can be developed in order to increase physical performance related to brain's functions.

Keyword: Cerebellum, Swimming Exercise, Treadmill, Oxidative Stress.

Poster No. 107

The radioprotective effects of propolis and caffeic acid phenethyl ester on radiation-induced oxidative/nitrosative stress in brain tissue.

Seyithan Taysı[1], Elif Demir[2], Kadir Çınar[3]

[1]Department of Medical Biochemistry, Medical Faculty, Gaziantep University, Gaziantep, Turkey.
[2]Division of Biochemistry, College of Health, Harran University, , Şanlıurfa, Turkey
[3]Department of Neurosurgery, Sehitkamil State Hospital, Gaziantep, Turkey.

Head and neck cancer patients treated with radiotherapy suffer severe side effects during and following their treatment. Efforts to decrease toxicity of irradiation to normal tissue, organs and cells have led to searching for cytoprotective agent. Investigations for effective and non-toxic compounds with radioprotective capability