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Former name; Cell Membranes and Free Radical Research

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Alzheimer



Pain

Stress

Depression

Paralysis

Brain Research School

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EDITOR IN CHIEF

Prof. Dr. Mustafa Naziroğlu,
Department of Biophysics and Neurosciences,
Medical Faculty, Suleyman Demirel University,
Isparta, Turkey.
Phone: +90 246 211 36 41, Fax:+90 246 237 11 65
E-mail: mustafanaziroglu@sdu.edu.tr

Managing Editors

Kenan Yıldızhan and Yener Yazgan
Department of Biophysics, Medical Faculty,
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E-mail: biophysics@sdu.edu.tr

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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, Ca²⁺ 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 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, ageing, antioxidants, neuropathy, traumatic brain injury, pain, spinal cord injury, Alzheimer's Disease, Parkinson's Disease.

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Abstract Book

of

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*Department of Physiology, Neuroimmunophysiology
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SPEAKERS

▶ Speak No. 8

Aggregates of α -synuclein in brain tissue homogenates measured by newly designed Multimer-PAGE techniques.

Jumana SALEH

Biochemistry at College of Medicine, Sultan Qaboos University, Muscat, Oman

Atypical aggregation of α -synuclein in the brain is linked to Parkinson's disease (PD) progression. Multimers of α -synuclein may be important for the biological function of α -synuclein. Currently, reliable methods to compare α -synuclein multimer abundance in biological samples are limited and sophisticated. A new technique termed "multimer-PAGE," was designed by Killinger and Moszczynska, which combines in-gel chemical cross-linking with several common electrophoretic techniques to measure the multimerization of α -synuclein in complex biological samples of brain tissue lysates. Using this technique, it was possible to compare the ratio of α -synuclein multimers between brain tissue samples without the need for specialized equipment.

Keywords: Brain; Multimer-PAGE techniques; Parkinson's disease; α -synuclein.