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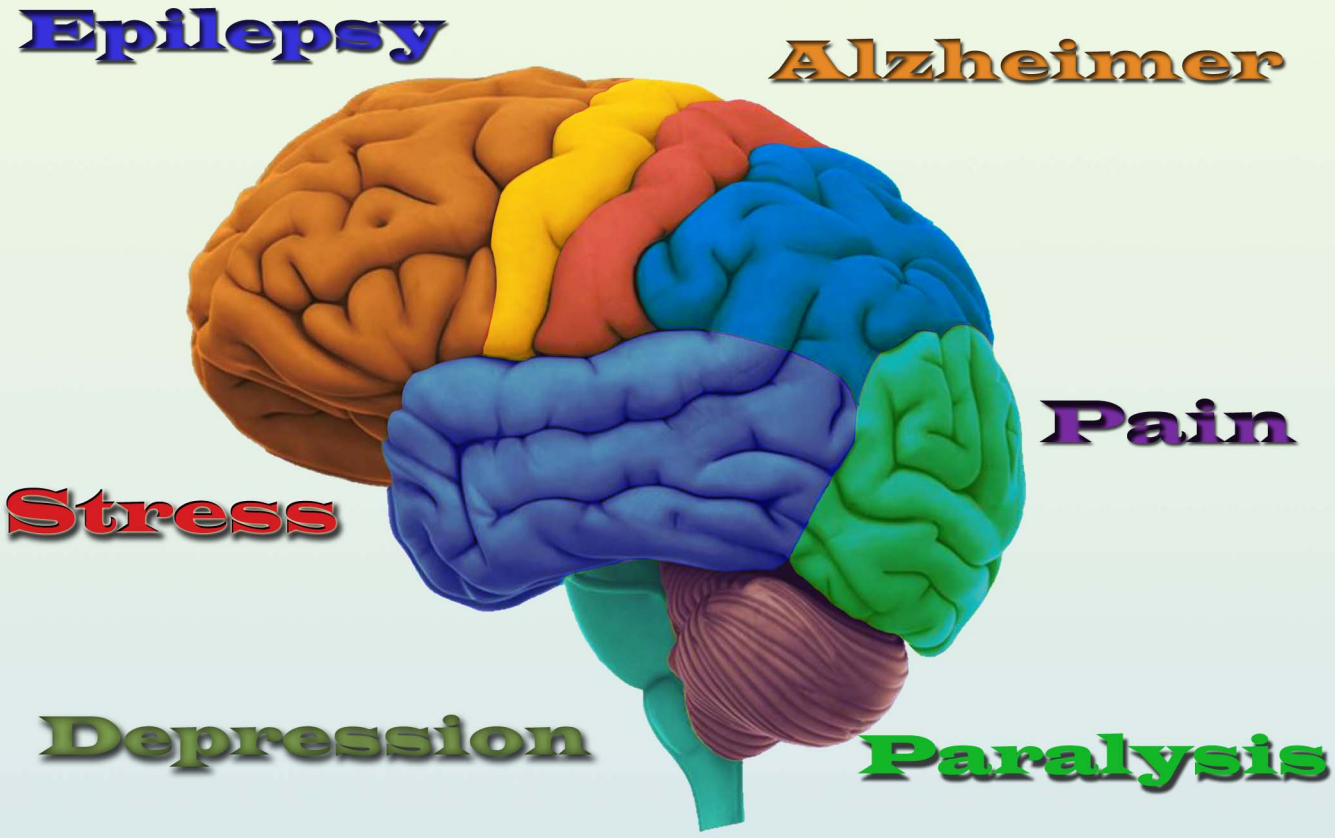

Brain Research School

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Journal of Cellular Neuroscience and Oxidative Stress

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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, 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 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.

4th International Brain Research School

Abstract Book

of

4th International Brain Research School

24-30 June 2019

Isparta, Turkey

with collaboration of

BSN Health Analyses, Innovation, Consultancy, Organization, Industry and Trade Limited Company

& Neuroscience Research Center, Süleyman Demirel University

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[CONTENTS]

Speakers

Speak No. 1. Calcium signaling, TRP channels and intracellular Ca2+ measurement in neurons
Mustafa NAZIROĞLU……**1**

Speak No. 2. Isolation of glia from mice
Sandra DEROUICHE……**2**

Speak No. 3. In vivo and ex vivo imaging of nociceptor expression and activity
Marie MULIER, Joris VRIENS, Thomas VOETS…..……**3**

Speak No. 4. Title Mouse models for retinal degeneration
Xinhua SHU……**4**

Speak No. 5. Intracellular zinc mobilization is required for nNOS (+) neuron loss.
Role of zinc in the excitotoxic cascade
Alberto GRANZOTTO……**5**

Speak No. 6. Alzheimer's disease, the road ahead
Stefano L. SENSI……**6**

Speak No. 7. Voltage gated sodium channels and epilepsy
Simon HEBEISEN……**7**

Speak No. 8. Aggregates of α-synuclein in brain tissue homogenates measured
by newly designed Multimer-PAGE techniques
Jumana SALEH……**8**

SPEAKERS

Speak No. 2

Isolation of glia from mice

Sandra DEROUICHE
Division of Cell Signaling, National Institute for Physiological Sciences, Thermal biology group, Exploratory Research Center on Life and Living Systems, Okazaki, Aichi, Japan

Glia constitutes a heterogeneous cell population that makes up half of the cells in the central nervous system (CNS). Glial cells include macroglia, astrocytes and oligodendrocytes, and microglia. Their roles are very diverse but overall they orchestrate CNS formation and function by providing neurons with essential support. Although glia-derived immortalized cell lines are now available, primary cultures of glial cells still constitute the most reliable method to study glial functions as the primary cultures retain important characteristics and markers of glia from their normal brain environment. Isolation and culturing of glia from postnatal rodent brain is well-characterized and give higher yield than from adult brain. Therefore, isolation of glial cells from postnatal mouse brains, with an emphasis on microglia, will be described. It will include a protocol describing the steps of isolation and necessary equipments and reagents, as well as the subsequent cell culture monitoring and potential applications.

Keywords: Central nervous system; Microglia; In vitro study.