

2nd International Symposium: Frontiers in Anatomy and Physiology Research and Education

Angela Siner, Marina Kapitonova, Sergey Dydykin, Igor Zadnipyany, Vladimir Nikolenko, Larisa Udochkina, Siti Nurma Hanim Hadie, Koh Rhun Yian, Wan Zuhainis Saad, Muhammad Hamdi Mahmood, Alexey Smirnov, Olga Fedorova and Fadhilah Ahmad Pahmi*

*Correspondence: apfadhilah@unimas.my

Received: 7 January 2025; Revised: 15 June 2025; Accepted: 15 June 2025; Published: 22 June 2025
DOI <https://doi.org/10.28916/lsm.9.1.2025.205>

ABSTRACT

The aim of the special issue is to expand knowledge on the recent achievements in Anatomy, Physiology and related basic, preclinical, and clinical sciences of the participants of the 2nd International Symposium: Frontiers in Anatomy and Physiology Research and Education, conducted by the Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, in collaboration with the international partners on December 13-14, 2023, to strengthen international collaboration between Malaysian and overseas universities and to help all the readers of the journal to identify their own niche in research and international partnership. It is also aimed at motivation of young researchers to participate in the research competitions and win, to upgrade their own research and participate in the scientific networking. The scope of the publications in the Special Issue covers but is not limited to the scientific data obtained from research in clinical anatomy, histology, embryology, systemic physiology and pathophysiology, molecular medicine, physiology of cell membrane and single cells, histophysiology, animal studies, drug discovery, immunology and infectious diseases, inflammation and cancer, neurosciences and medical education. The keynote and the invited speakers are world-renowned scientists and physicians known for cutting-edge research and clinical practice. The papers and abstracts were peer-reviewed and selected for publication by the scientific committee of the Symposium formed by Malaysian and international researchers.

Keywords: *Anatomy; physiology; education; research and conference*

ORGANIZED BY:

Department of Basic Medical Sciences, Faculty of Medicine and Health Sciences, Universiti Malaysia, Sarawak.
Volgograd State Medical University, Russian Federation
Astrakhan State Medical University, Russian Federation

LEAD GUEST EDITORS

Dr Angela Siner

Department of Basic Medical Sciences, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Kota Samarahan, 94300 Sarawak, Malaysia.

Email: sangela@unimas.my

Professor Dr Alexey Smirnov

Department of Pathology, Volgograd State Medical University; 1, Pavshykh Bortsov Square, Volgograd 400066, Russian Federation.

Email: alexey-smirnov@rambler.ru

Professor Dr Larisa Udochkina

Department of Anatomy, Astrakhan State Medical University; 121, .Bakinskaya Street, Astrakhan 414000, Russian Federation.

Email: udochkin-lk@mail.ru

GUEST EDITORS

Dr Fadhilah Ahmad Pahmi

Department of Basic Medical Sciences, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Kota Samarahan, 94300, Sarawak, Malaysia.

E-mail: apfadhilah@unimas.my

Professor Dr Marina Kapitonova

Department of Basic Medical Sciences, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Kota Samarahan, 94300 Sarawak, Malaysia.

Email: kmarina@unimas.my

Prof or Dr. Igor Zadnipyany

Department of Topographic Anatomy and Operative Surgery, Vernadsky Federal University, 5/7 Lenina Boulevard, Simferopol 295006, Russian Federation.

Email: zadnipyany@gmail.com

Associate Professor Dr Siti Nurma Hanim Hadie

Department of Anatomy, Faculty of Medicine, Universiti Sains Malaysia, Health Campus, Kubang Kerian 16150, Kelantan, Malaysia.

Email: snurma@usm.my

Dr. Koh Rhun Yian

Department of Applied Biomedical Science and Biotechnology, International Medical University, No. 126, Jalan Jalil Perkasa 19, Bukit Jalil, 57000 Kuala Lumpur, Malaysia.

Email: rhunyian_koh@imu.edu.my

Associate Professor Dr Wan Zuhainis Saad

Department of Microbiology, Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, Serdang 43400, Selangor Darul Ehsan, Malaysia.

Email: zuhainis@upm.edu.my

Professor Dr Sergey Dydykin

Department of Topographical Anatomy and Operative Surgery, Sechenov University; Bolshaya Pirogovskaya Street 2/4, Moscow 119435, Russian Federation.

Email: dydykin_ss@mail.ru

Dr Muhammad Hamdi Mahmood

Department of Basic Medical Sciences, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Kota Samarahan, 94300 Sarawak, Malaysia.

Email: mmhamdi@unimas.my

Associate Professor Dr Olga Fedorova
Department of Histology, Cytology, Embryology, Volgograd State Medical University; 1, Pavshykh Bortsov
Square, Volgograd 400066, Russian Federation.
Email: ovfedorova@yandex.ru

Professor Dr Vladimir Nikolenko,
Department of Anatomy and Histology, Sechnov University, Bolshaya Pirogovskaya Street 2/4, Moscow 119435,
Russian Federation.
Email: nikolenko_v_n@staff.sechenov.ru

ABSTRACTS

All presented abstracts are listed from Page 4 to 89.

Characteristics of bioelectrical brain activity in people recovering from COVID-19

Sergei Kozhevnikov* and Karina Abdullina

Department of Physiology, Cell Biology and Biotechnology, Udmurt State University; 1/1, Universitetskaya Street, Izhevsk 426034, Udmurt Republic, Russian Federation.

***Correspondence:**

Department of Physiology, Cell Biology and Biotechnology, Udmurt State University; 1/1, Universitetskaya Street, Izhevsk 426034, Udmurt Republic, Russian Federation.

Email: ksp55@yandex.ru

Abstract

In COVID-19, two thirds of hospitalised patients have neurological complications. Therefore, the aim of the study was to evaluate EEG parameters in COVID-19 survivors who were not hospitalised. Fifteen critically ill and 20 conditionally healthy subjects were studied. The EEG was recorded on 21 leads, with an analysis epoch of 20 seconds. Electrodes were placed in a 10-20% pattern. Multivariate analysis of variance (MANOVA) was used for comparisons. Visual analysis of the EEG activity in the group of overtreated patients showed no gross disturbances in the neurophysiological activity of the brain. However, an increased amplitude of the θ rhythm was found in the group of overtreated patients, indicating a high level of activity in subcortical structures. There is also an increased amplitude of α_1 and α_2 rhythms, most pronounced in the parieto-occipital regions. The increased amplitude of the β_1 rhythm compared to the control is of particular interest, which may indicate an increased level of functional activity in the cerebral cortex. The localisation of the changes in the right hemisphere gives reason to consider them as a sign of increased unproductive emotional tension. Such changes may create conditions for the development of a specific syndrome in the form of stress and anxiety.

Keywords: EEG and COVID-19

Citation:

Siner, A., Kapitonova, M., Dydykin, S., Zadnipyany, I., Nikolenko, V., Udochkina, L., ... Ahmad Pahmi, F. (2025). 2nd International Symposium: Frontiers in Anatomy and Physiology Research and Education. *Life Sciences, Medicine and Biomedicine*, 9(1).
<https://doi.org/10.28916/lmb.9.1.2025.205>



Life Sciences, Medicine and Biomedicine
ISSN: 2600-7207

Copyright © 2025 by the Author(s). Life Sciences, Medicine and Biomedicine (ISSN: 2600-7207) Published by Biome Journals - Biome Scientia Sdn Bhd. Attribution 4.0 International (CC BY 4.0). This open access article is distributed based on the terms and conditions of the Creative Commons Attribution license
<https://creativecommons.org/licenses/by/4.0/>