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| Book Name: | [Medical Science: Trends and Innovations](https://www.bookpi.org/bookstore/product/medical-science-trends-and-innovations-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4296** |
| Title of the Manuscript:  | **Real Time In Vivo Evaluation of Mitochondrial Activity and Brain Functions during Ischemic Stroke** |
| Type of the Article | **BOOK CHAPTER** |

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| PART 1: Comments |
|  | Reviewer’s comment | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This study reveals essential insights into the mechanisms underlying ischemic depolarization and cortical spreading depression caused by unilateral and bilateral carotid artery occlusion, highlighting their significance for understanding related neurological conditions. This study also investigates the effects of varying partial or complete brain ischemia durations on the mitochondrial NADH redox state and real-time brain functions. |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | The title is suitable as it summarizes the evaluation of mitochondrial activity and brain functions in ischemic stroke using real-time methods. |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | The article's abstract is quite comprehensive as it outlines the main focus of the research, the context of ischemic conditions, and the study's specific aims. It effectively summarizes the mechanisms being investigated, the methodology (using Mongolian gerbils), and the key findings regarding ischemic depolarization and cortical spreading depression. |  |
| **Is the manuscript scientifically, correct? Please write here.**  | The document explores the effects of ischemic conditions on brain functions, particularly focusing on mitochondrial activity and ionic homeostasis. It discusses how energy depletion during ischemia leads to significant changes in ion concentrations, contributing to phenomena like ischemic depolarization and cortical spreading depression. The study utilizes a Mongolian gerbil model to investigate these processes and their implications for understanding stroke |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | Please add several references from the years 2023 and 2024. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes, but the language aspect of this manuscript needs improvement. There are some grammatical errors. |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** |
| Name: | **Fezzeh Hosseinzadeh** |
| Department, University & Country | **Tabriz University of Medical Science, Iran** |