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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.** | **The study of secondary mitochondrial dysfunction in vascular diseases is an urgent task for neurochemists, neurophysiologists, neuropharmacologists and neurologists. The most important aspect in this direction is the identification of potential molecular and biochemical markers of mitochondrial dysfunction and confirmation of their informativeness and specificity.** |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Yes** |  |
| 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 abstract should be radically rewritten. It is necessary to indicate the importance of a new specific marker of mitochondrial dysfunction in laboratory diagnostics of ischemic stroke. The purpose of the study. Briefly materials and methods. Briefly its results and Conclusion. Justification of the method of its determination** |  |
| **Is the manuscript scientifically, correct? Please write here.**  | **NADH is not a specific marker of mitochondrial dysfunction. The method of its intravital determination is questionable. There are many reviews on mitochondrial dysfunction and its markers.** For example the last one**Belenichev, I.; Popazova, O.; Bukhtiyarova, N.; Ryzhenko, V.; Pavlov, S.V.; Suprun, E.; Oksenych, V.; Kamyshnyi, O. Targeting Mitochondrial Dysfunction in Cerebral Ischemia: Advances in Pharmacological Interventions. Antioxidants 2025, 14, 108. https://doi.org/10.3390/antiox14010108** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | **Many old sources of literature** |  |
| Is the language/English quality of the article suitable for scholarly communications? | Everything is clear to me |  |
| Optional/General comments | The authors took the liberty of discussing the problem of mitochondrial dysfunction, its role in the pathogenesis of ischemic stroke and biochemical markers of this condition. However, the proposal of NADH as a biochemical marker of mitochondrial dysfunction is not supported by anything. ATP can also be proposed. The specificity of the proposed method with references to works from the 80s of the last century is questionable. The authors did not bother to validate this method on animals. Where is NADH determined in mitochondria, cytosol, neurons, glia, vessels, blood? Where is the guarantee that other structurally related molecules will not react to these wavelengths? There is no study design. The proposed model is very traumatic and causes the death of up to 90% of animals. Where is this in the article? There are so many questions. |  |

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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: | **Igor** |
| Department, University & Country | **Ukraine** |