

## Format for ANSWERING REVIEWERS

April 25, 2014

Dear Dr. Ma, Editor in Chief of the World Journal of Pharmacology,



Please find enclosed the edited manuscript in Word format (file name: 8996 -review.doc).

**Title:** Implantable (Bio)sensors as New Tools for Wireless Monitoring of Brain Neurochemistry in Real Time

**Author:** Donatella Farina, Maria D Alvau, Giulia Puggioni, Giammario Calia, Gianfranco Bazzu, Rossana Migheli, Ottavio Sechi, Gaia Rocchitta, Maria S Desole, Pier A Serra

**Name of Journal:** *World Journal of Pharmacology*

**ESPS Manuscript NO:** 8996

The manuscript has been modified and the revisions have been made according to the suggestions of the reviewers:

- (1) **Reviewer 00202869:** The reviewer said: *"This manuscript reviews a range of implantable sensors for online measurement of neurotransmitters, bioenergetics substrates, neuromodulators, and exogenous molecules, also discusses the telemetry systems. This manuscript is well written and insightful. I do not have any substantial criticisms. Minor issues are too many abbreviations used. I strongly suggest that the authors replace the abbreviations with the full name for all neurotransmitters throughout the manuscript, in order to improve the readability. Another minor issue is that the stabilizer PEI is a polymer, not an enzyme (in the end of Section glucose and lactate)."*

All the neurotransmitter abbreviations have been changed with their full name. Only in the reaction schemes and legends acronyms were used. Moreover, the phrase about PEI has been changed in **"the enzyme stabilizer PEI was added"**

- (2) **Reviewer 00504526:** The reviewer said: *"This is an excellent and thorough methodological review on electrochemical microsensors and biosensors that can be used in preclinical research settings for recording neurochemical changes in the brain. Overall the manuscript is very interesting and well prepared. The manuscript could benefit from a discussion of the advantages and disadvantages of this technique in comparison with classic brain microdialysis and in-vivo voltammetry"*.

As suggested by the reviewer, a further paragraph (COMPARISON BETWEEN VOLTAMMETRY AND MICRODIALYSIS) has been added, which compares biosensors with the most common analytical techniques used in vivo, showing the advantages and disadvantages. In addition, for a more rapid understanding, a summary table has been added.

- (3) **Reviewer 00060492:**

- a) The reviewer asked *"In the abstract the phrase "most represented biometric technologies" is awkward. Do you mean the most relevant or common biometric technologies?"*  
In the text, there is no reference to "biometric technologies", but rather text refers to "biotelemetric technologies".
- b) *"In the introduction, the phrase "ideas on the basis" is redundant."*  
According to the reviewer suggestion the phrase "The idea on the basis" has been changed with "The basic idea of".
- c) *"Please make sure when you describe a dimension that it is always clear whether you mean length, width or diameter."*  
All dimensions have been checked. All of them all report what kind of dimension is.

- d) *"Under Acetylcholine, the sentence: "In the last years, the application of biosensors is significantly increased because these devices are cheap, fast, and easy to use and are able to provide real-time qualitative and quantitative information about the composition of a sample.[53]" belongs in the introduction of the paper."*

The phrase "In the last years, the application of biosensors is significantly increased because these devices are cheap, fast, and easy to use and are able to provide real-time qualitative and quantitative information about the composition of a sample.[53]" has been deleted and all the references renumbered throughout the text and in the section.

- e) *"Under Oxygen and Nitric Oxide, what do you mean by "less surface poisoning?"*

The term "poisoning" means "fouling"; "less surface poisoning" has been changed to "less surface fouling".

- f) *"Under Ethanol, the spelling "ethaol" needs correction and the word "relapsing" is used incorrectly."*

The term "ethaol" has been corrected into "ethanol" and the term "relapses" has been changed in "effects".

(4) **Reviewer 00502766:** The reviewer said *"This is an interesting topic. However, I do not know why the authors submitted a rough draft, not the final version. Thus I cannot read the manuscript. Please ask the authors to submit the final version again."*

We are very sorry for the inconvenient and we apologize for this. In this regard, the final version of the manuscript has been cleaned.

(5) **Reviewer 00225292:** We would like to thank the reviewer for having positively considered our manuscript.

Thank you again for considering our manuscript for publication in the *World Journal of Pharmacology*.

Sincerely yours,

*Pier Andrea Serra*

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