Reviewer's report

Title: Electron Paramagnetic Resonance Spectroscopic Studies Of Intestinal Homogenates From NSAIDs Treated Rats.

Authors:

Sivagurunathan Somasundaram (sivasoma@med.unc.edu)
Jasvinder Shergill (j_shergill@kcl.ac.uk)
John Wrigglesworth (john-wrigglesworth@kcl.ac.uk)
Sue Rafi (s_rafi@kcl.ac.uk)
Ingvar Bjarnason (ingvar_bjarnason@kcl.ac.uk)

Version: 2 Date: 14 Mar 2002

Reviewer: Prof H Sakurai

Level of interest: not specified

Advice on publication: Accept after discretionary revisions

The submitted manuscript by Somasundaram et al reports the mechanistic study of NSAIDs in terms of inhibition of electron transport on the basis of the experiments on EPR, permeability and morphology. The obtained results are interesting to understand the pharmacological activity and toxicity of indomethacin in relation to the mitochondrial respiratory chain, suggesting that NO plays an important role. However, in the sections of Materials and Methods, Results, and Discussion, many questions arose as follows.

1) The title of the manuscript does not appear to reflect the results of the investigation.
2) When the authors isolated the submitochondrial fraction, did they check the purity of the fraction by some enzyme activities such as succinate dehydrogenase and glucose-6-phosphatase?
3) Did the authors test the other types of inhibitors of iNOS in the experimental stages.
4) The expression of, for example, 90 uL of submitochondrial particles is not suitable, instead, the authors should use the expression such as protein amounts or contents in an EPR tube.
5) The measurement conditions for EPR should be described in detail in the Materials and Methods section.
6) In Results, more detail explanations are needed, especially in the figures 3, 4, and 5.
7) It might be natural to consider that the center S3 reacts with NO generated in the system. Why the intensities of EPR signal due to g=2.02 are almost the same between the systems for indomethacin, indomethacin plus DAHP, and control?
8) Many spell errors are found in the manuscript.

Then the manuscript is recommended to accept in the journal, however, the authors should extensively improve and revise the manuscript before the publication.

Competing interests:

None declared.