Reviewer's report

Title: Primary DNA Damage (Comet Assay) in Relation to Genetic Polymorphisms for CYP1A1, EPHX and GSTM1 in Workers at a Graphite Electrode Manufacturing Plant

Version: 1  Date: 13 July 2007

Reviewer: Thomas Bruening

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Comments:

Moretti et al. investigated DNA damage in workers exposed to PAH in a graphite electrode manufacturing plant. They found the association between occupational exposure to PAH and DNA damage. However, none of the genotypes analyzed had any significant influence on primary DNA damage as elevated by the Comet assay. This is a well designed and much needed study in this confusing area of research. This manuscript can be accepted for publication. However, some changes, explanations are needed:

Page 10, para. 1, lines 4-5: Moreover, 1OHP was significantly correlated with DNA … . This part belongs to the next part: “Influence of exposure on the Biological End-Points” and shows the results presented in Table 1. Additionally, on the page 16, para. 1, line 2 is: No significant correlations were observed between … . This statement is in conflict with the statement above.

The reference: Merlo et al. (A mortality cohort study among workers in a graphite electrode production plant in Italy. Occup Environ Med. 2004 Feb; 61(2): e9) should be discussed on page 16 between para. 1 and 2, together with the results presented by Marczynski et al. (2002) and those of this manuscript.

Additionally, the part conclusion should be improved.

Minor points:

The title should be changed. Is: … Primary DNA Damage (Comet Assay) in Relation to genetic … . Should be: Primary DNA Damage and genetic … .

Abstract: line 1: Is: … In the present paper we reported the results… . Should be:
... The results of a cross-sectional study ... are presented.
Abstract: line 3 and through the text: Is: ... PAHs ... Should be: ... PAH
Abstract: line 5: and in unexposed controls ... This should be omitted.
Abstract: para. 2, line 2: Is: ... plant, ... Should be: ... plant ...
Abstract: para. 2, line 2: ... PAHs. Urinary ... Should be ... PAH. Urinary ...
Abstract: para. 3, line 1: ... workers than in reference ... Shoud be: ... workers compared to reference ... .
Abstract: para. 2, line 1: Is: ... and formation ... It should be withdrawn.
Page 4, line 2 from the bottom: Is: ... pripheral blood leukocytes [37]. ... Should be: ... pripheral blood leukocytes (PBL) [37].
Page 8, para. 1, line 1: Is: Peripheral blood leukocytes (PBLs) ... Should be: PBL ...
Page 9, para. 2, line 4: Is: ... freedom; the ... Should be: ... freedom. The ...
Page 11, para. 2, line 4: Is: ... are reported in ... Should be: ... are showed in ...
Page 12, para. 2: Is: ... A statistically significant influence of genetic polymorphisms was observed only between ... . This is not shown in the Table 6.
Page 13, para. 1, line 6: Is: ... (biomarker of biologically effective does) ... This is redundant and it should be withdrawn (see p. 4)
Page 13, para. 1, lines 6-9: This part is redundant and it should be withdrawn (see p. 10).
Page 13, para. 2: In this part the correlation between urinary 1OHP concentration found in the presented study with the results concerning total PAH concentration already published should be assessed.
Page 14, para. 2: This part should be withdrawn because it is already in ‘Statistical Analysis of Data’ in “Methods” (see p. 9).

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions
Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:
I declare I have no competing interests