Reviewer’s report

Title: CYP1A1 methylation mediates the effect of smoking and occupational polycyclic aromatic hydrocarbons co-exposure on oxidative DNA damage among Chinese coke-oven workers

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Reviewer: Sanghyuk Bae

Reviewer's report:

The authors have examined the association of PAHs exposure and smoking with oxidative stress, and the mediation of CYP1A1 hypomethylation. They reported that part of the association is mediated by CYP1A1 gene. Understanding the mechanism of health effect from environmental exposure is an important research subject, and the present article is well organized. However there are some concerns that should be addressed before publication.

1. Cigarette smoke also contains PAHs and how this could be distinguished from the exposure from coke oven?

2. CYP1A1 is already known to mediate the oxidative metabolism, and many studies examined the association/mediation/mechanism. What is added to the knowledge by the present study?

3. The present study was conducted among workers, and would there be any difficulty in generalization?

4. The smoking was defined as more than 1 cigarette per day for more than 6 months. Was there any rationale for this definition?

Level of interest
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An article of limited interest

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