Reviewer's report

Title: Cigarette smoke increases cardiomyocyte ceramide accumulation and inhibits mitochondrial respiration

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Reviewer: LI JIA

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The authors demonstrated that lung cells are capable of producing and secreting ceramides with smoke exposure, which consequently impaired cardiomyocyte mitochondrial respiration. Therefore, the authors suggest that ceramide is an important mediator of altered myocardial mitochondrial function and ceramide inhibition might be considered to protect heart function with smoke exposure. This study is of interest and well written, while several points need to be addressed.

Minor Essential Revisions

1. What’s the n size of the experiment? What’s the cell passage number?
2. In Fig 1. What’s the concentration of added ceramide and how long of the left ventricle myocardium were permeabilized?

Discretionary Revisions

1. In general, how do you quantify the isolated mitochondria? Have you checked the cell apoptosis caused by high production of ceramide? How do you distinguish that the impaired heart function is due to cell death or the inhibition of mitochondrial respiration?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests