Reviewer's report

Title: Alteration of renal respiratory complex-III during experimental type-1 diabetes

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Reviewer: Surendra Katyare

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Comment on the paper: Alteration of renal respiratory complex-III during experimental type-1 diabetes by Munusamy et al.

The authors examined the effect of STZ diabetes on complexes of respiratory chain at the end of 5 weeks after the induction of diabetic state. It was found that two Complex III subunits: Core 2 protein and Rieske protein were up-regulated in the diabetic renal mitochondria which possibly affected the assembly of complex III subunits.

The approach is sound and the results have given newer insights into effects of diabetic nephropathy on mitochondrial subunit assembly.

It has been reported that in STZ diabetic rats the kidney mitochondrial ATPase and respiratory activity with selected substrates increased (Ref. 9 in the manuscript). The authors should have discussed increased ATP content in this context. Increase in ARPase per se does not increase ARP content; increased respiratory activity provides the driving protonmotive force. It has also been reported that the cytochrome aa3 contents increased in STZ diabetes (Ref. 9 in the manuscript). However, the authors did not find changes in complex IV. This discrepancy should have been discussed.

The authors used whole kidney for isolating mitochondria. If medulla is not removed this can vitiate the results. It would have been desirable to use cortex for isolation of mitochondria. Then one gets clean results.

In one or two places the sentences are incomplete. Manuscript needs to be thoroughly and carefully checked for such errors/omissions.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
No