Reviewer's report

Title: Validation of microarray data in human lymphoblasts shows a role of the ubiquitin-proteasome system and NF-κB in the pathogenesis of Down syndrome

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Reviewer: Kwang Chul Chung

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Manuscript Number: 3704258249045945
Title: Validation of microarray data in human lymphoblasts shows a role of the ubiquitin-proteasome system and NF-κB in the pathogenesis of Down syndrome
Authors: Granese B. et al.

Review: In this article the authors found that the extent of protein ubiquitination is considerably suppressed human DS cell lines, while the proteasome activity is increased in both basal and oxidative conditions. They also proved that the transcriptional activity of NF-κB is impaired in DS due to the reduced IκB ubiquitination, increased NF-κB inhibitor (IκB#), and reduced p65 nuclear fraction in human DS lymphoblastoid cell lines. While confirming the increased levels of DSCR1 and DYRK1A proteins as a control for DS condition, they additionally showed that the levels of the transcription factor NFATc2 were also decreased in DS. During revision, Granese et al. properly answered to all the points raised by the reviewers. In addition, the current work nicely provided the additional data, which are required by the reviewers and fully supportive of the conclusions. Therefore, I recommend the prompt acceptance of the current format to your journal.

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.