Reviewer's report

Title: Influence of NADPH oxidase on inflammatory response in the primary intestinal epithelial cells from patients with ulcerative colitis

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Reviewer: Fabian Schnitzler

Reviewer's report:

1. More information about the activity of the IBD would have been helpful: Endoscopic scoring, e.g. Mayo score and histologic scoring of the biopsies in the 19 patients with UC should be given in the paper.

2. The authors mentioned that patients receiving immunosuppressive therapy or treated surgically were excluded from the study. Was there also steroid treatment included? This should clarified in the patients and methods section of the paper.

3. Did the patients receive 5-ASA treatment? 5-ASA seem to reduce the oxidative DNA damage in animal models. This should be addressed in the paper.

4. Furthermore no information was provided with respect to iron supplementation. Therapeutic iron can increase iron-mediated oxidative stress in ulcerative colitis. This information would be helpful.

5. Stimulation of colonic epithelial cells with bacterial endotoxin LPS significantly increased the level of TNF-α and generation of ROS related to NADPH oxidase activity in the colonic epithelial cells of UC patients. NOD2/CARD15 seem to play a minor role in UC patients as seen in several genetic studies because of low incidence of NOD2/CARD15 mutations in UC patients. However, in this study information about the NOD2/CARD15 status of the patients would have been interesting, as mutations in the NOD2/CARD15 gene have an influence on the LPS induced immune response.

6. Also information about TLR4 mutations would have been interesting. Toll-like receptors (TLRs) are also linked to the recognition of pathogen-derived products, including LPS and therefore mutations in the TLR4 receptor might have an influence on the results of the presented study.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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