Reviewer's report

Title: Retinal upregulation of inflammatory and proangiogenic markers in a model of neonatal diabetic rats fed on a high-fat-diet

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Reviewer: Edward Wylegala

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In the paper "Retinal upregulation of inflammatory and proangiogenic markers in a model of neonatal diabetic rats fed on a high-fat-diet" by Gallo at all. the authors evaluated the effect of a high-fat-diet on the development of diabetic retinopathy. All histological and immunohistochemical analysis are performed in rat model of diabetes mellitus. The authors conclude that diabetic animals fed on a high-fat-diet showed microvascular changes, an increased GFAP immunoreactivity and increased upregulation of inflammatory and proangiogenic markers as compared to diabetic animals fed on a normal diet. The topic is of strong importance since the epidemiological data regarding the influence of diet on the development of diabetic retinopathy and macular edema are inconclusive. All the experiments are well-conducted. The presented results are convincing, however it would be interesting to see whether the observed effect is progressive in time. Thus in my opinion more time points would be worthy to analyze in the future continuation of the study. I strongly recommend the MS for publication in BMC Ophthalmology.

Minor comments:
1. In the introduction: the phrase “specific disorders of the electroretinogram” should be replaced by “specific abnormalities of the electroretinogram”
2. In figure 8 and 10 the there is disproportion between the size of presented bands of GAPDH controls. As constitutive proteins they should have the same density among evaluated groups.
3. In discussion the authors assume that VEGF is produced by glial cell whereas the immunohistochemical results presented on figure 9 indicate rather its endothelial origin. So the authors should attempt to perform double immuno-labelling or modify the discussion.

Level of interest: An article of importance in its field

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

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests' below.