Reviewer's report

Title: A phosphodiesterase 5 inhibitor, tadalafil, suppresses stromal predominance and inflammation in a rat model of nonbacterial prostatitis

Version: 0 Date: 26 Jun 2019

Reviewer: Annamaria Morelli

Reviewer's report:

In this manuscript the Authors analyzed the anti-inflammatory effects of the PDE5 inhibitor tadalafil on the prostate of an animal model of non-bacterial prostatitis (NBP). The results show that tadalafil treatment for 30 days normalizes all inflammation-related prostate alterations: 1) stromal predominance, 2) T-cell and macrophage infiltration, 3) cytokine secretion. In general, this study strongly confirm the results reported by previous studies in different animal models of non-bacterial prostatitis, such as metabolic syndrome-induced (see ref. 15 of the manuscript), experimental autoimmune prostatitis (PMID: 30009466) and also in BPH patients (see ref. 16 of the manuscript). Although interesting, a full novelty of the study is not clearly recognizable. Since the aim of the study under evaluation was "to elucidate the anti-inflammatory action of tadalafil on the prostate", novel mechanistic findings are expected that should be better discussed highlighting the advances in comparison with previous reports.

Additional comments:

1) The sentences in the Mat&Meth section "2mg/ml for oral administration" and "once-daily oral tadalafil in a dose 5ml/kg" mean that rats were treated with 10 mg/kg daily. The Authors should specify the criteria for choosing this dose.

2) In the Introduction the sentence "A recent animal study demonstrated that single or repeated tadalafil dosing improves prostate hypoxia in spontaneously hypertensive rats [14]" is wrongly referenced. The correct article from the same group should be: J Sex Med 2011;8:2746-2760

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