Reviewer’s report

Title: Syzygium jambolanum treatment improves survival in lethal sepsis induced in mice.

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Reviewer: Haichao Wang

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Dear Section Editor,

In this manuscript, Maciel et al explored the therapeutic potential of a medicinal herb, Syzygium jambolanum, in an animal model of sepsis induced by cecal ligation and puncture. They showed that a hydroalcoholic extract of Syzygium jambolanum improved animal survival rate, stimulated neutrophil infiltration to site of infection/injury (i.e., peritoneal cavity/cecum), and attenuated systemic accumulation of proinflammatory mediators (such as TNF and nitrite). This is a potentially interesting study with some novel findings. However, there are a few concerns that need to be addressed.

- Major Compulsory Revisions
  1). Even in this severe model of sepsis, subcutaneous administration of herbal extract conferred a complete protection against lethal sepsis. This important survival study needs to be repeated at least once in order to increase the sample size to at least N = 20 mice/group. In addition, the animal survival should be monitored for at least two weeks to ensure that this herbal extract did not merely delay the onset of lethality, but rather promote a long-lasting protection against experimental sepsis.

- Minor Essential Revisions
  1). The hydroalcoholic extract contains both alcohol-soluble and water-soluble components. Unlike the water-soluble components, the alcohol-soluble components are probably not soluble in PBS saline. Was there any water-insoluble substance observed after diluting the hydroalcoholic extract with PBS saline?

  2). It was not clear why the cecum was punctured eight times, whereas most other investigators only puncture the cecum once or twice to induce sepsis. It may partly explain why most animals lost survival rather quickly (within 1 day) in the present study, as opposed to 2-5 days in most other studies using this model.

In summary, the authors have described an important finding, which needs to be strengthened with additional experiments as suggested above.

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.