Review of: "Analysis of the Spread of Covid-19 via Atangana-Baleanu Fractional Derivatives"

Elkhateeb ELgarieb[1]

1 Jazan University

Potential competing interests: I declare that I have no competing interests

In this paper, the authors have studied the spread of the epidemic via Atangana-Baleanu Fractional Derivatives. They have presented the mathematical analysis and formulation of a fractional model for the epidemic. Moreover, the existence and uniqueness of the solution for the proposed model is proved. They also investigated the existence of a disease-free equilibrium and analyzed its stability properties. They offered a numerical scheme for the fractional model and presented a range of simulation results in order to validate the theoretical results. When formulating plans to slow the epidemic's progress, these findings can be a useful tool.

In my opinion, the results are new, and the techniques in this paper are interesting. While this is a good paper that might merit publication and there seems to be no mathematical error in the article, I nevertheless have the following comments that should be taken into account.

- There are some typos errors in the manuscript. Remove all typos.
- The English style and grammar should be improved as much as possible.
- Clarify what the paper's contribution is and what parts of the paper are original.
- The Conclusion part may be added with future work.
- Most recent reference papers should be added.

The paper meets the standards of significance required for publication. Therefore, I recommend the manuscript for publication if the corrections mentioned above are made.