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

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Potential competing interests: No potential competing interests to declare.

After a thorough revision of this paper, here are the suggested corrections and improvements:

1-In the literature, there are many articles analyzing the spread of COVID-19. The current title is not representative enough; it should be more precise. This remark also applies to the abstract.

2-It is necessary to add a paragraph in the introduction to introduce fractional calculus and its applications in real-world phenomena in general.

3-Add another paragraph discussing fractional mathematical models that analyze the spread of COVID-19, highlighting the importance of fractional models compared to classical models.

4-What is the contribution of this paper? In other words, what is the novelty of this mathematical model compared to existing models?

5-In Definition 3, the formula is correct for $\gamma \in (0,1)$, not for (k,k+1).

6-We write Lemma 1, not Lemma (1). The same remark applies to Theorem and Remark….

.7- In Remark 1, correct the right-hand side of the first property to z(t)-z(a).

8-After equation (2), correct this sentence: "the model variables in (1) are non-negative, and has appropriate initial conditions" to "the model parameters and initial conditions in (1) are non-negative."

9-In Theorem 1, steps 2 and 3, the total number N(t) = S(t) + E1(t) + I(t) + E2(t) + R(t) + D(t) + Q(t). It is necessary to check the mathematical development. Correct the proofs of steps 2 and 3.

10-Add references to the data collected in Algeria.

In conclusion, this paper requires further improvements before it can be considered for publication.