

Review Form 1.6

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_90621
Title of the Manuscript:	Dynamics and analysis of chronic brucellosis in sheep
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<https://www.journaljamcs.com/index.php/JAMCS/editorial-policy>)

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>In this work, The authors propose and study a new fractional-order model for the transmission dynamics of brucellosis with a special focus on sheep-to-sheep transmission.</p> <p>I have read the manuscript. The subject is interesting and the results seem correct. Nevertheless, there are some comments which must be answered before its acceptance for publication.</p> <p>1- The authors must justify the choice of mass action law in place of the other incidence functions (standard incidence, Saturated incidences,...). Indeed, with the use of other incidences functions, there is a possibility that the backward bifurcation phenomenon will appear.</p> <p>2- The sensitivity analysis comes after the parameter estimation.</p> <p>3- The basic reproduction number depends on the fractional order parameter alpha. But in section 4.4, even when the fractional order varies, the basic reproduction remains the same. This must be corrected. You must draw the basic reproduction number in terms of alpha</p> <p>4- To show numerically the global stability of the DFE whenever $R_0 < 1$, you need to choose parameter values such that $R_0 = 0.98$ for example. The case of Figure 10 does not depict it because the value of R_0 is close to 0.</p>	
Minor REVISION comments	It is important to show also the model system fitted to brucellosis daily cases from Egypt after Fig.8	
Optional/General comments	The authors must take into account the above comments and suggestions	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	

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