

Review Form 1.6

Journal Name:	Journal of Advances in Mathematics and Computer Science
Manuscript Number:	Ms_JAMCS_92763
Title of the Manuscript:	MATHEMATICAL ANALYSIS OF AN EBOLA MODEL WITH CARRIERS, RELAPSE AND RE-INFECTION
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)
<u>Compulsory</u> REVISION comments	<ol style="list-style-type: none"> 1. The Author must give the reason about choosing the SEIRC model. In Introduction, the author said "Currently, there is no cure for Ebola", but the model uses class R. 2. The equilibrium points (states) of mathematics model are usually determined by making the right side of every equation in System (2) and solving the new System that is gotten. The Author to proof the existence of The Endemic Equilibrium (EE) use the other method but I think the proof given by the author is incomplete like the statement "but from equation (2) of system (2), $E=(\mu+\delta+\alpha)/\gamma$" whereas the equation (2) of System (2) is the differential equation $dE/dt = \beta SI-(\mu+\gamma)E$. Therefore, the statement "This implies that I is a constant. Theoretically, the number of infectives in a population remains a constant ..." are incorrect. The Author must read again the definition of equilibrium state (point). 3. The Author should evaluate all the eigenvalues of matrix JDFE because matrix JR is only 2 x 2 matrix, the author can calculate directly using roots of quadratic equation. 4. The Author must be able to convince the readers about the value of every element in matrix JEE because the Author did not give the exact value of The Endemic Equilibrium (EE). 	
<u>Minor</u> REVISION comments	<ol style="list-style-type: none"> 1. The Author must add the meaning of θ in dR/dt and dC/dt 2. The Author must add the difference between class E and class C. 3. What are the meaning of S_t, E_t, I_t, R_t, and C_t in Proof of Proposition 3.1? I think the author must give explanation about new symbols that appear firstly in new paragraph 4. The first line under Proposition 3.2, I think the correct sentence is "Proof. From Proposition (3.1) the solutions ..." 5. At subsection 3.3, The statement "This is established by letting parameters $E = 0$, $I = 0$ and $R = 0$" is incorrect. You can change into "This is established by letting variable $I = 0$" 	
<u>Optional/General</u> comments		

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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