Reviewer's report

Title: Modified Gompertz equation for electrotherapy murine tumor growth kinetics: Predictions and new hypotheses

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Reviewer: Howard Yang

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Some tumor growth functions were proposed in this paper by modifying the solution of the Gompertz equation.

These functions were used to fit the tumor volume data from mice in the control group and the treatment groups with different low-levels of direct electric currents (DEC). With the estimated parameters corresponding to the different DECs, the tumor volume functions were applied to interpolate and extrapolate tumor volume kinetics under different conditions.

The estimated functions and their derivatives characterized the tumor growth/shrink kinetics. Some interesting predictions and hypotheses were made from these functions.

Major Compulsory Revisions:

1. It seems that Komarova [3] did not report tumor cell lines with diameters between 0.1 and 0.2 cm. Please provide a correct reference.

2. Those parameters specified in the figure legends for Figure 2-3 do not give the plots in Figure 2a-c and Figure 3a-c. It was mentioned in the main text that the parameters in the Table 1 were used in the computation. But the parameters described in the figure legends were different from those in the Table 1.

3. It is an interesting hypothesis about the self-organization process in tumor growth. But the tumor growth kinetics can only give us limited understanding about this process. More studies at cellular/molecular level are needed to have more meaningful results about the self-organization process in tumor growth.

Minor Essential Revisions:

1. In eq.(1), alpha should be alpha*.

2. In the notes below Table1, GT3 should be TG3.

3. The figure labels Figure1-15 were very confusion. The figure labels used in the figure legends should be used to label the figures.

4. Are the Fig.11 and Fig.12 the same?

5. The figure legends "V<=V0" and "V>=V0" in Figure 3e-f may be misleading.
V is in fact always less than $V_0=0.5$. It is better to use "REG-I" and "REG-II" as the figure legends.

**Level of interest:** An article whose findings are important to those with closely related research interests