



SDI Review Form 1.6

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	Ms_IJBCRR_22348
Title of the Manuscript:	THE MATHEMATICAL MODEL OF SELF-OSCILLATIONS OF KAI PROTEINS IN INCUBATION SOLUTION
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.

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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	1. According to Author's guidelines the Material and methods section has to be the next after Introduction. Authors also need to expand this section clarifying the main approaches you used in the study. For uninitiated reader it is mandatory to know from this section whether authors' model and presented constants were verified by direct experiment. If you have used only one approach (as it is noted in Materials and Methods) it could be useful to mention some examples of its successful usage for other analogous models. 2. Conclusions section is needed. It has to underline the main results of the work and note if the results are corresponded to in vivo studies or other modelling of KaiC oscillation. 3. Fig. 2. On Y-axis the concentration has to be supplied with units of measurement.	This work - theoretical research therefore I remove the section materials and methods, and also in fig2. oscillations of conditional variables are presented and therefore units of measurements has conditional character Is added
<u>Minor</u> REVISION comments	Language has to be checked. For example: activities [7,8] – [7, 8] consist from he rate – consists from the rate	Is corrected
<u>Optional/General</u> comments	Unfortunately I am not so keen in mathematic modelling for making conclusions concerning author's calculations. However I think that the main results of them are: 1. Showed temperature-compensatory mechanisms of KaiC system regulation. 2. The proved oscillatory mechanism of phosphorylation-dephosphorylation cycle of KaiC. Am I right concluded that authors declare this oscillation as one of possible molecular clock that functions in the cells? I think it has to be underlined in the Conclusions, abstract and discussed in the Discussion sections. Maybe it could be good to divide Results and Discussion.	