

Review Form 1.6

Journal Name:	Journal of Pharmaceutical Research International
Manuscript Number:	Ms_JPRI_82304
Title of the Manuscript:	Use of one-factor design of experiments (DOE) for Regression Modelling and Validation: A Robust Methodology
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.journaljpri.com/index.php/JPRI/editorial-policy>)

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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)
Compulsory REVISION comments	<p>1) The term "Validation" may be questionable. It seems to me that you assume that your "comprehensive and robust methodology provides the correct answers and you validate other methods against those results. I think you should have more discussion what you mean by "validation" in this context or you could change the term to a more general one.</p> <p>2) "However, the use of DOE ... cannot be used for prediction purposes [4]". You should explain this more and not just have one reference. You should also discuss the relationship to regression modelling (next sentence). Further, you say: "Due to the DOE limitations, these study designs cannot be used for regression modelling." Explain the limitations and why the DOE study designs cannot be used for regression modelling.</p> <p>3) Explain and discuss how your method solves the limitations. Is this method your own invention or from the literature (reference)? If it is your own, you could coin a name for it.</p> <p>4) You could clarify/illustrate the phases of the method, possibly with a diagram/chart. You have listed them very shortly in a paragraph: "Therefore, this study was designed..."</p> <p>5) "...fuzzy was marginally better than MLR". You should define/discuss what you mean by better (See item 1 above).</p> <p>6) "...demonstrated that constructed model's accuracy and forecasting capability". Do you mean: "demonstrated the accuracy and forecasting capability" in comparison to ...</p> <p>7) Check that you have defined all the abbreviations DOE, MLR, MSE and so on. DOE is important and you should have a definition and reference for the concept. Maybe you could explain also "bootstrapping".</p> <p>8) I suggest that you move the R-syntax to an appendix or have a new section with a short preamble for this technical part of the text. You can use a smaller font for y, x1, x2, x3, x4 and have only one line for each of the variables.</p>	<p>1) The term "validation" has been reviewed and the title and text of the manuscript have been revised.</p> <p>2) The statement is elaborated more and refined. More references have been added. Please see the introduction first paragraph line 3-6, and introduction second paragraph line 1-2.</p> <p>3) Responded to comment 3 in the discussion.</p> <p>4) A diagram has been added in the method section (figure 1) to illustrate the process involved in the methodology building. Please see the page 3.</p> <p>5) The statement has been revised to make it more meaningful, representative and understandable. Please see the page 10, para 2, line 7-8.</p> <p>6) The statement has been revised. Please see the page 11, para 1, line 7-8.</p> <p>7) Added. Please check the page 1, page 4 and page 6. Explanation of bootstrapping is also added. Please see page 6, para 1, line 5-8.</p> <p>8) Because the R syntax is a very important part of the study and actually it is a methodology which is developed to model DOE study designs. That is why we recommend keeping that within the method section. However, as suggested by the reviewer a heading has been added before the start of the syntax. Secondly, all alphabets (y, x1,x2,x3,x4) has been changed to lowercase form.</p>
Minor REVISION comments	<p>a) Use consistently "Table 1", "Figure 1" and so on. Correct "table 3.1".</p> <p>b) Use consistently xij1 or Xij1 in tables and in the text.</p> <p>c) Provide a reference for the book by Walpole R.E. al. also in the references list.</p> <p>d) "variables ' matrix" should be "variables' matrix"</p> <p>e) "ranging from 0, 1 and -1" consider changing "0, 1 and -1"</p> <p>f) Consider changing "R syntax were summarized in this section" to "R syntax is summarized" and corresponding changes throughout the text. Check the use of the present and past tense in the text. Be consistent.</p> <p>g) Is it possible to provide matrix equations and present the method and its flow of steps with these equations?</p> <p>h) "R. syntax" ?</p> <p>i) Maybe you should mention earlier in the text (Introduction) that you demonstrate the method with the data from the literature.</p> <p>j) Check typesetting and page breaks in the final version.</p> <p>k) (p<0.001) use consistently one notation, not (P<0001).</p> <p>l) Check the English language: "combine and robust" should be "combined and robust". "To quantify that how..." change "To quantify how..."</p>	<p>a) corrected.</p> <p>b) corrected and made all in lowercase</p> <p>c) reference is added</p> <p>d) corrected</p> <p>e) corrected</p> <p>f) we used past tense in the method and results. However, in introduction, when we used the general facts and explanation of statistical methodologies we used present tense.</p> <p>g) we apologies that we are unable to understand this comment.</p> <p>h) corrected</p> <p>i) added in the last line of introduction</p> <p>j) thanks for mentioning. We will check before submission of the revision</p> <p>k) corrected</p> <p>l) corrected</p>
Optional/General comments	<p>I suggest that the authors add more discussion and explain their method more clearly with comparisons (and references) to corresponding methods in the literature. In this respect, summarise your key findings and discuss the shortcomings of your work. Avoid exaggerating the importance of the results.</p>	<p>Discussion has been added in the article with explanations of the methods and comparison with other studies.</p>

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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)	