



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	2013_IJBcRR_7264
Title of the Manuscript:	Total Antioxidant Capacity: Correlation with other Antioxidants and Clinical Utility of Their Levels in Chronic Obstructive Pulmonary Disease

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
1. It is quite disappointing that the authors do not have the relationship with the clinicians that did the spirometry studies on these patients. Without the spirometry data there are no correlations made to pulmonary function even within the COPD group (smokers vs. non-smokers). This makes it very difficult to make any useful conclusions to the clinical significance of this study. 2. Despite the authors' comments, the statistics and presentation in the tables is still confusing to this reviewer. Yes Table 3 shows the descriptive statistics, but there is no justification provided for the use of the K-S test and what is considered significant. It is not clear why this test is used at all. The data for the ANOVA presented in Table 4 is fine if another reviewer asked for it, and it is should be the same data that is used for the Bonferroni for Table 5. It is not clear why the Z-S test is even used or needed. It is also not clear in Table 5 why the data is presented as "Mean Difference". The Bonferroni compares means between groups. It is done as a "post-hoc test" for multiple comparisons to determine which comparisons between groups are significant, once you know that the overall data set is significant from the ANOVA. The way	I fully agree with the editor of the journal. All the spirometry details and their correlation with number of aspects are being studied by separate clinician team. So it is ethically improper to make any comments. I am looking specifically for the biochemical alterations. I sincerely express my inability to use their data for my article at this stage. All the statistical analysis was completely revised on suggestions of a reviewer with help of another scientist with Post graduate in biostatistics with specialisation in operation research from IIT, Powai, Mumbai. ANOVA plus , post –hoc BONFERRONI as suggested has been applied. All the suggestions of reviewer were incorporated. KS test was conducted on suggestion of another reviewer Justification of KS test ANOVA and Bonferroni was clearly given . Please refer line 176 and then 202 to 208. Kolmogorov-Smirnov test was done for testing the normality of each analyte in each of the four groups. It was found not significant for all the analyte (P> 0.05) (Table 3) AND therefore ANOVA was accordingly applied to all the analytes. Thus Table 3 indicates RAW data as asked by one reviewer as well as test the normality of each analyte from KS significance (see last column of table 3), for further deciding the statistical tool to be applied.



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the data is presented in Table 5 does not show this. It makes this reviewer question what data was used for the Bonferroni.

3. It is still not evident that TAC can be used for diagnosis of COPD. Perhaps for the **management** of COPD but this was not tested. The results only suggest that TAC is different in COPD patients and **may** have some clinical usefulness. This is all that can be said. Please change the wording in the last sentence of the Abstract/conclusion section to: "CP and TAC showed statistically significant differences between controls and COPD patients and may have clinical utility in the management of COPD. However, ..." Please also change Section 4 Conclusion in a similar way. Also add "A larger study with enough patients in each COPD GOLD group will be needed to specifically link the clinical utility of these antioxidant measurements."

Table 5 is made to exhibit the clinical relevance by showing the mean difference. What has been highlighted is that clinically it will be difficult to differentiate between 3.8 and 4.3 (as in albumin) but comparatively easy to differentiated between 36 and 27.7 (TAC). So there are certain differences which are significant statistically but not clinically (as in case of albumin and urate). Therefore mean differences are given in table 5. Higher the mean difference better it is clinically.

Further to make very clear, see the mean ALBUMIN in Nonsmoker Controls and Nonsmoker COPD (see table 3) it is 4.3 and 3.8 resp. Now see the mean difference in ALBUMIN between Nonsmoker Controls and Nonsmoker COPD it is 4.3 minus 3.8 **Mean Difference between groups (x-y) (4th column of table 5)** thus 0.51* It is statistically significant (see table 5). But for a clinician this small difference will not have any relevance. Thus the data used for the Bonferroni is the same that is given in Table 3. You can check for all the analytes in all the groups.

In agreement with the editor of the journal, all the suggested changes have been incorporated in the manuscript in ABSTRACT as well as in CONCLUSION.

Finally, I sincerely thank the EDITOR for meticulously going through the manuscript and giving extremely valuable suggestions, towards the overall improvement of article.