



SDI Review Form 1.6

Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	2013_IJBcRR_7590
Title of the Manuscript:	Comparison of Apo B and TG/HDL ratio with HOMA IR model to predict insulin resistance in patients with metabolic syndrome
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)
Compulsory REVISION comments	Abstract: In general, abstract is poorly explored. It must contain more information about the Methodology (e.g., if man and women were both included) in the study; in Results it must explore the magnitude of differences and include absolute data. Conclusion cannot be sustained by the data. Material and Methods: 1. Please, describe the (cut off values) for the CRITERIA adopted and indicates a reference in page in line 77. 2. A Statistic analysis section MUST be included to detail the tests were performed. 3. The r=value varied several times along presentation of correlation coefficient data (compare in abstract, results and discussion sections) (e.g. 0.029 vs. 0.29, 0.41 vs. 0.041)??? The correlation coefficient lower than 0.5 is a weak correlation and cannot predicts correlation between 2 variables, even that it give a p-value lower than 0.05. A strong correlation must overpass 0.75, which means a R2 over than 50%. Thus, the actual correlations cannot support the conclusions. 4. The ApoB quantification, which is the goal of the study study, was not mentioned in methodology section. Furthermore, it is crucial to indicate which apoB was determined, ApoB48 and/or ApoB100?? (lines 82-87). 5. The AUC-ROC must be applied to determine the ability of TG/HDL-C ratio and ApoB to predict insulin resistance. A ROC curve is a plot of sensitivity (true positive) versus	All necessary correction are done. Cut off for the adopted criteria mentioned in the manuscript. Pl. refer to line no.92,93 Statistical analysis section is included. Pl. refer to line no.104-109 The r value mentioned in the manuscript is corrected. The correlation coefficient values of the parameters are compared in this study and hence it is found that Apo B is better indicator of IR. (line No. 120-122) The methodology for analysis of Apo B is now mentioned in the manuscript. This Apo B refers to Apo B 100 as Apo B 48 is part of transient chylomicrons which is not part of the study. (line no. 96) Author's comment: We are in agreement with the reviewer. Construction of ROC demands establishing cut off values for getting sensitivity (PPV)and specificity (NPV). Moreover ours was



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	1-specificity (false positive). When the AUC-ROC equals 0.5, then the rate of true positivity is equal to that of false positivity, an indication that the test (i.e., TG/HDL-C ratio) does not predict the disorder (i.e., insulin resistance). Please see: 1) Sumner et al.: Metab Synd Rel Disord 2010:v8;n6 – pp511-4. 2) Kawamoto et al.: Lip Health Dis 2010:9;138. Results: 1. Considering both gender were included in the study, how can authors explain the reason for the presentation of the results in only one table? Since the CRITERIA for MS are gender-specific, it must be presented separately. 2. Result section is very poorly explored and must detail the magnitude of differences and the interpretation of the Graphs. 3. Why authors used Tukey's pot-hoc test for comparison of 2 groups in data from table 1? Tukey is applied after ANOVA when considering more than 2 groups. 4. The legend in graph 1 and 2 must be equivocated, especially in graph 2, where apoB is presented in 'x' axis in spite of 'y' axis. Please, compare graph 1 and 2 legends. Discussion: Discussion is superficial and did not emphasize the weakness of the present correlation coefficient. Conclusion: Although the idea of authors are really interesting their conclusion cannot be supported by the present data. English:	purposive sampling method where we have included all subjects of Metabolic syndrome following NCEP ATP III criteria. Either HOMA IR or TG/HDL or Apo B was not employed to diagnose metabolic syndrome With due apologies we wish to inform that contribution to MS due to gender variation was not the objective of this study and hence male and female subjects were not separately mentioned or analyzed but were matched for age and socioeconomic status. Result section is corrected The reviewers comment is accepted. Student 't' test is now applied. Refer table 1 and line no.105 The legends for both graphs 1 and 2 shows HOMA IR on Y- axis and TG/HDL or Apo B on X- axis. The language is corrected to the best capacity of the authors who are not native English. However, the editors may correct it as deemed necessary
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	Must be revised by a native.	
<u>Minor</u> REVISION comments	1. Include references in line 52 and 55. 2. In lines 61-62, please describe if it refers to ApoB48 and/or ApoB100. 3. Indicate the commercial trade for the insulin ELISA kit – line 85 - change percent by % in line 123. - correct text errors in lines 132, 152 and 156. 4. The data in table do not require more than one decimal point.	All corrections are done 1. Refer to line no. 55 2. Refer to line no. 61 3. Refer to line no. 97 4. Refer to line no. 133
<u>Optional/General</u> comments	This report intitled Comparison of Apo B and TG/HDL ratio with HOMA IR model to predict insulin resistance in patients with metabolic syndrome indicates that circulating ApoB better predicts the insulin resistance in subjects with MS, compared to the well validated TG/HDL ratio. Although merely descriptive, the study brings some novelty and can contribute to the repertoire of markers that can be easily determined in routine laboratory exams to predict the IR. The theme purposed by the group is interesting and has reasonable originality since the cost and the difficult for determination of circulating insulin as well as the hyperinsulinemic-clamp make these approaches unviable for usual tests. However, the study fails in several aspects that include a) the lack of attention along text description and graph editing, b) the poor construction of statistic analysis, methods and results description and c) the absence of confirmatory analysis such as the AUC-ROC. Thus, the study must include additional experiments and information to turn it more eligible for publication in <i>Int J Biochem Res & Rev</i>.	