



SDI FINAL EVALUATION FORM 1.1

PART 1:

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| Journal Name: | Advances in Research |
| Manuscript Number: | Ms_AIR_24734 |
| Title of the Manuscript: | Biosensor strategies to detect serum glycobiomarkers |
| Type of the Article | Review paper |

PART 2:

| FINAL EVALUATOR'S comments on revised paper (if any) | Authors' response to final evaluator's comments |
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| <p>Although serious major revision was recommended in the former review, the corrections made by authors seem to be rather coarse and superficial. Although some wrong or confusing statements have been corrected, the article still cannot be accepted because of essential confusing content.</p> <p>The most confusing part still remains the description of the glycosylation pathway:</p> <ul style="list-style-type: none">Some information is duplicated (elongation of N-glycan core), this handicaps following of the textTrimannosyl core is never further cleaved – this was mentione in the former reviewLane 73-74 the added sentence doesn't make senseLane 80 it cannot be stated "without mannose residues", as all N-glycans contain internal trimannosyl core (see above); they lack terminal uncovered mannoseLane 85 "... are the most frequent..." Are there any other monosaccharides in human glycoproteins? <p>Regrettably I feel the authors still are not familiar with the glycosylation pathway and glycoprotein structures, which seems unacceptable when authoring the manuscript on glycobiomarkers.</p> <ul style="list-style-type: none">Lanes 293, 295 I suppose the authors mean anti-PSA antibodies?? <p>Despite the correction of English language has been recommended in the former review, this was not done. The same spelling and grammar errors are present, even those indicated in the former review. Evaluation of English is necessary.</p> | <p>We are grateful for the comments and suggestions for improvement of the manuscript. We made the changes suggested along the paper.</p> <ul style="list-style-type: none">We agree with the reviewer's comments and edited in lines 68 -74: "<i>O</i>-glycosylation is characterized by the attachment of <i>O</i>-Linked glycans through hydroxyl group of serine (Ser) or threonine (Thr) residues, starting with the addition of N-acetyl-galactosamine (GalNAc-O-Ser/Thr) transferred by an N-acetyl-galactosaminyltrasferase in the Golgi apparatus [14]. After, specific transferases elongate different types of core structures, including mucin-type <i>O</i>-linked glycans (core 1, 2, 3, 4; as well as T, TF and Tn antigens), <i>O</i>-linked GlcNAc and <i>O</i>-linked Fuc (Figure 1). In the <i>N</i>-glycosylation, <i>N</i>-linked glycans are attached to the amidic nitrogen of asparagine (Asn) residues within the Asn-X-Ser/Thr glycosylation site, being X different of the proline [15]."We agree with the reviewer's comments and edited in line 76: "This <i>N</i>-glycan precursor originates the pentasaccharide tri-mannosyl core (Man3GlcNAc2) that is prolonged to generate three subtypes of mature <i>N</i>-glycans: high-mannose, complex and hybrid (Figure 1)."We agree with the reviewer's comments and edited in lines 75 -76: "<i>N</i>-glycosylation starts in endoplasmic reticulum, through the synthesis of a <i>N</i>-glycan precursor (Glc3Man9GlcNAc2) from a dolichol phosphate to the Asn site of nascent polypeptide chain. This <i>N</i>-glycan precursor originates the pentasaccharide tri-mannosyl core (Man3GlcNAc2) that is prolonged to generate three subtypes of mature <i>N</i>-glycans: high-mannose, complex and hybrid (Figure 1)."We agree with the reviewer's comments and edited in lines 79 -80: "The resulting structures originate the subtypes of complex <i>N</i>-glycans and hybrid <i>N</i>-glycans (Figure 1) [15, 16]."We agree with the reviewer's comments and edited in line 85: "... compound the <i>N</i>- and <i>O</i>-glycan chains attached to human proteins [15, 16]."We agree with the reviewer's comments and edited lines 306-308: "linked prostate-specific antigen applied anti-PSA antibody to capture PSA and the lectin <i>Wisteria floribunda</i>" and "cancer patients [74]. The use of the anti-PSA antibody allowed the characterization of glycosylation profile" <p>We are grateful for the comments. The English language of the manuscript was corrected by an expert.</p> |