



SDI Review Form 1.6

Journal Name:	Annual Research & Review in Biology
Manuscript Number:	2013_ARRB_8763
Title of the Manuscript:	Current Methods Used in the Protein Carbonyl Assay
Type of the Article	Minireview 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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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)
	The paper submitted by Purdel et al. aims to summarize the current methods used to analyse protein carbonylation as biomarker of oxidative stress. The main concern of this review is that the content does not fit with the title. This means that the content relies on describing old techniques and only very few paragraphs are considering new approaches to identification of carbonylated proteins or techniques used to assess the nature and the amino acid(s) oxidatively modified.	Endorsed. We took into account the comment and updated the mini-review with several recent developments in this field, like dot blot method, microfluidic chip, Bodipy-hydrazide derivatization, iTRAQ technique: Tamarit J., de Hoogh A., Obis E., Alsina D., Cabiscol E., Ros J. Proteomics 2012; 75:3778-3788. Madian A. G. and Regnier F.E. J Proteome Res. 2010; 9(8): 3766–3780. Meany DL, Xie H, Thompson LV, Arriaga EA, Griffin TJ. Proteomics. 2007;7(7):1150-63. Hollins BC, Soper SA, Feng J. Lab Chip. 2012;12(14):2526-32. Wehr N. B. and Levine R. L. Anal Biochem. 2012; 423(2): 241–245.
<u>Compulsory</u> REVISION comments	There are some conceptually errors such as referring “reduced glutathione” as biomarker of oxidative stress (lines 102-3). Lines 224-5: “The identification of carbonyl proteins is mainly done using immunoblotting assays, especially using the commercial kits developed in the last years.” The meaning of this sentence is confusing; it is clear that this kits can't do “Identification” of carbonylated proteins” Is this	Endorsed. The word “reduced” was deleted in the revised document. Endorsed. Indeed, the kits are referring to the quantification. The sentence was updated, accordingly.



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	referring to “quantification of protein carbonyls?... (not “carbonyl proteins” as stated...). Please rewrite for clarity The authors state –in the abstract- that “...while the attack of reactive oxygen species on proteins and the formation of protein carbonyls were less investigated”. Which are the data to sustain this sentence since there are thousands of papers related to the impact of reactive oxygen species on proteins... Many of the references are not correctly referred Line 75 ref. [5] or line 283, ref.[6], to cite some of them	Endorsed. Actually we wanted to underline that protein carbonyls are investigated since 1990, so in the last 30 years. The sentence was updated accordingly. Endorsed. The references were revised accordingly. Ref 5- was changed with Dalle-Donne et al. Clinica Chimica Acta 2003; 329:23–38. Ref 6- was changed with Banan et al. Gut 2000;46:830– 7.
<u>Minor</u> REVISION comments	There are many typographical errors throughout the text meaning that the text has not been carefully revised before submission Line 283 “cased” Line 261 “quantified” Line 234 “Batista” Line 204 “amonts” Table 1 “Erythrocytes” to cite just a few	Endorsed. See the revised document
<u>Optional/General</u> comments		