

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 42856

**Title:** Interplay between post-translational cyclooxygenase-2 modifications and the metabolic and proteomic profile in a colorectal cancer cohort

**Reviewer's code:** 00572720

**Reviewer's country:** France

**Science editor:** Ruo-Yu Ma

**Date sent for review:** 2018-10-17

**Date reviewed:** 2018-10-23

**Review time:** 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input checked="" type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

I do not agree with the authors concerning their title: indeed, the relations existing between the progression of colorectal cancer and the role of COX-2 are very documented. Furthermore, I am surprised that the authors find a very low production of PGE2 in



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tumoral tissues versus non-tumoral tissues. It can be the reality of the study of their colorectal cancer cohort but the authors do not even discuss this surprising result. Indeed, it is known that it is the PGE2 which by settling on its target receptor (EP) who will be responsible for the tumoral proliferation.

#### **INITIAL REVIEW OF THE MANUSCRIPT**

##### ***Google Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

##### ***BPG Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 42856

**Title:** Interplay between post-translational cyclooxygenase-2 modifications and the metabolic and proteomic profile in a colorectal cancer cohort

**Reviewer's code:** 03459541

**Reviewer's country:** Spain

**Science editor:** Ruo-Yu Ma

**Date sent for review:** 2018-11-14

**Date reviewed:** 2018-11-20

**Review time:** 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

**Title:** New biomarkers in colorectal cancer: the paradigm of post-translational modifications of COX-2  
**Manuscript Type:** Basic study  
The study of Prieto et al. study new biomarkers of colorectal cancer based on post-translational modifications of COX-2.



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They found an altered metabolic and proteomics profile that can be correlated to post-translational COX-2 modifications that induced decreased levels of PGE2. These findings could explain that, although COX-2 was initially proposed as a potential molecular predictor for CRC, its predictive relevance is controversial because other studies have been unable to identify a significant correlation between CRC patients outcome and COX-2 expression mainly due to the high variability in COX-2 levels among CRC patient's. The state-of-the-art is adequate to the field of research. The paper is original because they demonstrated the existence of metabolites that can modify the activity of this enzyme and that could be used as potential biomarkers in this type of cancer as well as the glycosylated-COX-2. However, some revisions should be done to increase the strength of the paper. 1. Previous research pointed COX-1 as an important molecular target for colorectal cancer (Li H et al., 6-C-(E-phenylethenyl)-naringenin suppresses colorectal cancer growth by inhibiting cyclooxygenase-1. Cancer Res. 2014 Jan 1;74(1):243-52 as an example). So this issue should be discussed in deep. 2. In results sections (Figure 1A,) please include more Normal/Tumour cases in the western blot.

## **INITIAL REVIEW OF THE MANUSCRIPT**

### ***Google Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [ Y ] No

### ***BPG Search:***

- ☐ The same title
- ☐ Duplicate publication



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[ ] Plagiarism

[ Y ] No

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**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 42856

**Title:** Interplay between post-translational cyclooxygenase-2 modifications and the metabolic and proteomic profile in a colorectal cancer cohort

**Reviewer's code:** 03001969

**Reviewer's country:** Lebanon

**Science editor:** Ruo-Yu Ma

**Date sent for review:** 2018-11-14

**Date reviewed:** 2018-11-26

**Review time:** 12 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
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			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

In the core tip: the authors state that the levels of both COX2 and PGE2 are elevated in tumor cells but later state that PGE2 levels are significantly lower in tumor cells. Please correct this In the introduction the following sentence is irrelevant as you are talking



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about diagnosis and then jump towards treatment “In order to improve the diagnosis tools, current research focuses on the molecular basis of the disease.” In the results section, it would be better to section it into subsections; for instance relating to the proteomic and another to the metabolic profile. You can add a section in the discussion about how your results could affect diagnosis, prognosis or treatment strategies of CRC. Minor comments: The manuscript needs some minor English and language editing. Below are some however there are many more throughout the manuscript, please check. Change “to” to “with” in the following sentence: proteolysis through the endoplasmic reticulum pathway and has been associated to alterations in the activity of the enzyme Change “and” to “an” in the following sentence: Nuclear magnetic resonance techniques (HRMAS) provide and in-depth analysis for the identification Change “in” to “on” in the following sentence: Although several recent studies have been carried out in CRC patients with NMR techniques, they have been mainly focused in the improvement of screening Change the following sentence “The mean of ages of the participant volunteers were” to this “ the mean age of participants was”

## **INITIAL REVIEW OF THE MANUSCRIPT**

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### ***BPG Search:***

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- ☐ Duplicate publication



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