

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Pharmacology and Therapeutics

ESPS manuscript NO: 16960

Title: Antioxidants in liver health

Reviewer's code: 02444989

Reviewer's country: Spain

Science editor: Fang-Fang Ji

Date sent for review: 2015-02-06 19:26

Date reviewed: 2015-02-24 15:37

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good		<input type="checkbox"/> Duplicate publication	
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

This review shows an updated of the different activities of exogenous antioxidants on hepatic metabolism and function. Although the review is focus only on some molecules with antioxidant properties, the effects of these are well described, and this information is useful for the readers. However, there are a series of points that should be clarified by the authors: 1) The description of liver function and metabolism should indicate the main sources of free radicals generated during under its normal and pathological function. 2) Overall, the antioxidants here described have hepatoprotector activity. It is necessary to include an additional paragraph comparing these different effects and to identify their efficacy on liver function. This can be done including a table ordering these compounds from higher to lower activities related to each hepatic effect reported.



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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Pharmacology and Therapeutics

ESPS manuscript NO: 16960

Title: Antioxidants in liver health

Reviewer's code: 00053644

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Science editor: Fang-Fang Ji

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good		<input type="checkbox"/> Duplicate publication	
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Minor revision
		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

Antioxidants are used as reactive oxygen species (ROS) scavengers to eliminate oxidative stress. Page 6: in my opinion, it is not correct to talk about affinity of antioxidants for free radicals, because they does not bind to them, but they function as scavenger or enzymatic. I think necrosis, oxidative stress, and an inflammatory state cause acute and chronic liver injury, therefore the opposite of your affermation

ESPS PEER-REVIEW REPORT

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input checked="" type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		[Y] No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

Casas-Grajales and Muriel review outline current data on the impact of selected antioxidants present in food on liver health. I have several concerns that require attention. Major comments - The authors could tell the main pathways for the formation of free radicals in biological systems. They should describe indirect effects of antioxidants (for example, inhibition of activity or expression of free radical generating enzymes, enhancement of activity or expression of several antioxidant enzymes, and sequestration of iron and/or copper). In this context, the inhibition of CYP2E1 activity (by curcumin, resveratrol, naringenin, and quercetin), and the role of nuclear factor (erythroid-derived 2)-like-2 factor (Nrf2) in curcumin- and resveratrol-induced hepatoprotective effects should be discussed. - Safety issues (including hepatotoxicity) for all compounds should be told. - Curcumin. The authors should mention that: turmeric (curry spice) is a biological source of curcumin; and piperine is an enhancer of curcumin oral bioavailability. The role of miRNAs underlying curcumin-mediated antioxidative effects could be told. - Resveratrol. The role of peroxisome proliferator-activated receptor gamma co-activator, Sirtuin-1, and adenosine monophosphate-activated protein kinase in resveratrol-induced hepatoprotective effects could be



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discussed. - Silymarin. The authors might mention that: silymarin is composed of three isomer flavonolignans (silybin, silydianin, and silychristin); and quercetin as well as naringenin belong to the main components of milk thistle. - Naringenin. Activation of peroxisome proliferator activated receptors underlying protective actions of naringenin on steatotic liver should be mentioned. - Table should include additional information, i.e. the doses of compounds, intervention times, and references. Minor comments - The authors should tell their search strategy. - The role of (green) tea in liver diseases might be discussed. - The authors could shorten the coffee-chapter. - The authors should explain all abbreviations. - Spelling: 1,3,7-trimethyluric acid instead of 1,3,7trimethyluric acid; ref 58: silymarin instead of silimarin (ref. 58).

ESPS PEER-REVIEW REPORT

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<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
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<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> Plagiarism	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		[Y] No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

This is an interesting review and I congratulate authors by their work. They clearly resume some literature on antioxidants in liver health. The presentation is comprehensible and convincing. Authors utilize a brief but adequate list of articles to describe the role of some antioxidants, specifically curcumin, resveratrol, coffee, quercetin, silymarin and naringenin. In addition, they summarize this review with one table. However, there are some items that can be considered concerning with the publication of the present manuscript: ? Please, include a list of abbreviations. ? Page 6, paragraph 2, line 11, following "...chronic liver injury": please cite some reference to state last sentence, i.e.: Matés JM, Segura JA, Alonso FJ, Márquez J. Natural antioxidants: therapeutic prospects for cancer and neurological diseases. *Mini Rev Med Chem*. 2009; 9: 1202-1214. [PMID: 19534692 DOI: 10.2174/138955709789055180]. ? Page 6, paragraph 2, line 12, following "...inflammatory state": please cite some reference, i.e.: Wang ME, Chen YC, Chen IS, Hsieh SC, Chen SS, Chiu CH. Curcumin protects against thioacetamide-induced hepatic fibrosis by attenuating the inflammatory response and inducing apoptosis of damaged hepatocytes. *J Nutr Biochem*. 2012; 23:1352-1366. [PMID: 22221674 DOI: 10.1016/j.jnutbio.2011.08.004]. ? Page 6, paragraph 3, line 2, following "...peanuts and

berries”: please cite some article to reinforce this phrase, i.e.: Matés JM, Segura JA, Alonso FJ, Márquez J. Anticancer antioxidant regulatory functions of phytochemicals. *Curr Med Chem*. 2011; 18: 2315-2338. [PMID: 21517750 DOI: 10.2174/092986711795656036]. ? Page 8, paragraph 1, line 2, following “...resveratrol”: please cite some reference, i.e.: Chan CC, Cheng LY, Lin CL, Huang YH, Lin HC, Lee FY. The protective role of natural phytoalexin resveratrol on inflammation, fibrosis and regeneration in cholestatic liver injury. *Mol Nutr Food Res*. 2011; 55:1841-1849. [PMID: 22086758 DOI: 10.1002/mnfr.201100374]. ? Page 8, paragraph 2, line 2, following “...phenolic compounds”: please cite some reference, i.e.: Shin JW, Wang JH, Kang JK, Son CG. Experimental evidence for the protective effects of coffee against liver fibrosis in SD rats. *J Sci Food Agric*. 2010; 90: 450-455. [PMID: 20355067 DOI: 10.1002/jsfa.3838]. ? Page 11 paragraph 1, line 2, “...there are scarce clinical studies...”: please cite some reference to state last sentence, i.e.: Ying HZ, Liu YH, Yu B, Wang ZY, Zang JN, Yu CH. Dietary quercetin ameliorates nonalcoholic steatohepatitis induced by a high-fat diet in gerbils. *Food Chem Toxicol*. 2013; 52: 53-60. [PMID: 23123425 DOI: 10.1016/j.fct.2012.10.030]. ? Page 11, paragraph 2, line 8, following “...phosphatidylethanolamine”: please cite some reference to state last sentence, i.e.: Mata-Santos HA, Dutra FF, Rocha CC, Lino FG, Xavier FR, Chinalia LA, Hossy BH, Castelo-Branco MT, Teodoro AJ, Paiva CN, dos Santos Pyrrho A. Silymarin reduces profibrogenic cytokines and reverses hepatic fibrosis in chronic murine schistosomiasis. *Antimicrob Agents Chemother*. 2014; 58: 2076-2083. [PMID: 24449779 DOI: 10.1128/AAC.01936-13]. ? Page 12, paragraph 1, last line, following “...human hepatic disorders”: please cite some reference, i.e.: Hermenean A, Ardelean A, Stan M, Hadaruga N, Mihali CV, Costache M, Dinischiotu A. Antioxidant and hepatoprotective effects of naringenin and its β -cyclodextrin formulation in mice intoxicated with carbon tetrachloride: a comparative study. *J Med Food*. 2014; 17:670-677. [PMID: 24611872 DOI: 10.1089/jmf.2013.0007]. ? Table 1: please design row tables more clearly for unambiguously to assign main clinical effects to each antioxidant.