



**SDI Review Form 1.6**

Journal Name:	<a href="#">Journal of Advances in Biology &amp; Biotechnology</a>
Manuscript Number:	<b>Ms_JABB_27899</b>
Title of the Manuscript:	<b>Total Phenols Content and Antioxidant Power of Manuka Honey Is Related to 24hr Cytotoxicity Towards MCF-7 Breast Cancer Cells</b>
Type of the Article	<b>Original Research Article</b>

**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)
<b>Compulsory</b> REVISION comments	<p>Manuka honey has been recognized –among others - for its potential antitumor effect and is used as a tumor inhibiting natural supplement. Its antitumor effect is poorly understood and therefore any in vitro uses or clinical trials must be considered with caution.</p> <p>1/ Why cells were incubated for 24hrs?</p> <p>2/ what was the actual concentration of the active components in the culture medium in each case?</p> <p>3/ Do authors wish to prove that this honey has tumor inhibiting properties or that it contains ingredients that kill breast cancer cells [necrotic effect]. It is unclear to me</p> <p>4/ I would like to see microscopic images from those cultures to see how cells die. Does this honey drives cancer cells to death via an apoptotic pathway, produces necrotic effects in culture or simply inhibits cell attachment and movement?</p>	<p>1). See line 130 &amp; 140 Preliminary Investigations were performed at 24 &amp; 48 hr., and then more comprehensive studies were done at 24h.</p> <p>2. Honey contains a complex mixture of active components; the identity of the active components is unknown. We can use total phenols as surrogate measure of active agents. In reply to referee EVA, we have added <u>new figure</u> (fig 1b) showing comparisons based on apparent total phenols content in each treatment (mM). See line 149 &amp; also 157</p> <p>“The concentrations of honey in cell culture media was 2-10% w/v as shown in Fig 1 (x-axis). However, each honey has a different total phenols content (Table 1). Fig 1B shows the concentration of “active component” in each treatment, presented as total phenols content.</p> <p>And line 163</p> <p>The preceding IC50 values were also expressed in terms of the equivalent total phenols content, from which it is evident that UMF 15+ is probably the most potent honey.</p>



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		<p>Line 242</p> <p>3. In the previous study [11], Manuka honey 10+ was demonstrated to produce a dose-dependent apoptosis in MCF-7 cells</p> <p>4. We are grateful for this interesting suggestion related to microscopy and will take this into account in future work.</p>
<b><u>Minor</u></b> REVISION comments		
<b><u>Optional/General</u></b> comments	<p>Natural products used for their antitumor properties is best to be used in primary cultures of cancer cells. Cell lines have their specific identity in contrast to cancer cells extracted directly from a primary tumour. The main goal is to find tumour suppressive or driving to apoptosis natural products. Cell death due to necrotic effects is not a choice</p>	<p>Please see our response to question 3 above. It is believed that manuka honey induces apoptosis in a dose-dependent manner.</p>