



SDI Review Form 1.6

Journal Name:	European Journal of Medicinal Plants
Manuscript Number:	Ms_EJMP_26453
Title of the Manuscript:	Natural Products Screening for the Identification of Selective Monoamine Oxidase-B Inhibitors
Type of the Article	Original Research 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.

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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)
Compulsory REVISION comments	<p>A previous work (Mazzio et al., Phytother Res. 2013; 27[6]: 818–828) focused to identification of (h)MAO-B inhibition from plant species using high throughput screening. This work included, among others, the evaluation of <i>Psoralea corylifolia</i>, <i>Phellodendron amurense</i>, <i>Glycyrrhiza uralensis</i> and <i>Ferula asafoetida</i>, species that displayed greater activity in this study. According to this information, there are doubts about the real contribution of this work in the research of natural species with hMAO-B inhibition.</p>	<p>The following paragraph was added to pages 17-18 on line 393 for clarification of the significance of this research. “A previous report from our laboratory showed that these four plants have hMAO-B inhibition, which supports the current findings [17]. In this report, extracts were only tested against one isozyme, the hMAO-B. The current study reveals that the four plants studied have high selectivity to the hMAO-B inhibition, which distinguishes them from plants, which have non-selective or hMAO-A selective inhibitions. Research on the selectivity of the studied plants against either MAOs isozymes has not been reported before. We believe that these findings of the ranked plants are of significant importance when searching for natural resources of selective MAO isozyme inhibitors. The chance to find phytochemicals with selective MAO-B inhibition is believed to be higher in extracts with selective MAO-B inhibition. Moreover, our findings of MAO-B selectivities were validated using two methods. Therefore, the consistency of the obtained results supports that there are extracts that are selective MAO-BIs.”</p> <p>Also, the following modifications were added to the abstract conclusion for clarity: “The obtained results indicate that <i>Psoralea</i></p>



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		<p><i>corylifolia</i> seeds, <i>Ferula assafoetida</i>, and <i>Phellodendron amurense</i> ethanolic extracts have selective inhibitions for MAO-B. Highlighting these extracts as natural resources for novel selective MAO-BIs encourages investigations for their therapeutic use in neurodegenerative diseases including Parkinson's disease."</p>
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<p>Minor REVISION comments</p>	<p>The paper uses incorrectly the term “potency” (in the context of pharmacology). For example, it says: ...“In the other hand, the further extensive extraction dramatically enhanced the potency, particularly at high concentrations”. The extracts cannot be potent at high concentrations because that potency refers to an effect with low concentrations. This confusion persists along the whole manuscript.</p>	<ol style="list-style-type: none"> 1. The mentioned sentence was rephrased in the corrected manuscript on line 370-371 to enhance clarity; . “On the other hand, the further extensive extraction dramatically enhanced the extracts potencies. Particularly at high concentrations and similar to the used standards of DEP and pirlindole, the high extracts potencies concealed, but did not alter, their preserved <i>h</i>MAO-B relative inhibition (Fig. 4 and 5).” 2. For other potency expressions in the manuscript, the word was changed to <i>inhibitory effect</i> when we do not measure the IC50, in the following lines; Line 24-25 “led to increased inhibitory effects” Line 276-277 “The first step in our <i>h</i>MAO-B inhibition selectivity screen was to determine the percent inhibitory effects against the <i>h</i>MAO-B activity. The most effective inhibitors of >85% <i>h</i>MAO-B activity in Figure 3 B” Line 283-285 “the screened extracts with shared characters of activities against <i>h</i>MAO-B and RI_B (PAB, PCS, GUR, and FAR) were selected for further selectivity determination.” Line 285-287 “That method of selection based on the top six ranked screen plants inhibitory efficacy and RI_B is to include selective <i>h</i>MAO-Bs properties that are hidden by extract high inhibitory efficacy.” Line 325 “The results indicate that the screen was successful in finding potent RI_Bs. Also, extracts efficacies of inhibition are relatively high and their selectivities to inhibit <i>h</i>MAO-B had not been altered nor masked by the extensive extraction.”
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		<p>Line 327 "...with PCS higher inhibition against hMAO-B ($p < 0.01$) than GUR."</p> <p>Line 289 "plants for the top relative inhibitors of..."</p> <p>Line 292 "...top effective six extracts..."</p> <p>Line 293 "...The most effective RI_B extracts..."</p> <p>Line 322 "...equally effective hMAO-B inhibition..."</p> <p>Line 325 "...finding effective RI_{BS}."</p> <p>Line 334 "...All four extracts effectively inhibited..."</p> <p>Also, the Fig 3 word potency was also changed to "Highest % hMAO-B inhibition with RI_B"</p>
<p><u>Optional/General</u> comments</p>		