**Reviewer 1**

* I hesitated to recommend this manuscript for publication since it provides very limited amount of new and primarily significant material. However, the authors did a lot of work but simply did not arrive at any important result. The work appears to be conducted properly and results seem realistic. A number of plant extracts was assayed for a variety of meaningful and related to the subject enzyme-inhibitory and in vitro antioxidant activities but overall the authors got none-to-medium activity. A major drawback is that no pure constituents of the assayed extracts were assayed simultaneously with the extracts and only two extracts have been chemically analyzed. The results on HP and ASS are the only scientifically acceptable results since only for these two a chemical profile of the extracts was provided in the work. What does a biological test on an extract (in this work 11 additional extracts) of unknown and variable composition mean? Little or nothing.

Thanks for your kind and useful recommendations. Plants from Apiaceae family, which were the target plants in this study, are known as the main source of coumarins. As mentioned in discussion, coumarins are well known for their activity towards central nervous system, and have been reported to own notable inhibitory potential against AChE and BChE. We previously published a similar paper on the coumarin fractions and coumarin compounds of *Angelica officinalis*, a coumarin-rich plant species and reported a strong cholinesterase inhibitory effect\*.

\*F.S. SENOL, K. SKALICKA WOZNIAK, M.T.H. KHAN, **I. ERDOGAN ORHAN**, B. SENER, K. GLOWNIAK: An *in vitro* and *in silico* approach to cholinesterase inhibitory and antioxidant effects of the methanol extract, furanocoumarin fraction, and major coumarins of *Angelica officinalis* L. fruits. *Phytochemistry Letters*, 4, 462-467, 2011.

Before that, we also published another paper on cholinesterase inhibitory effect of coumarins (seven coumarin derivatives, namely; umbelliferone, 4-methylumbelliferone, 4-hydroxycoumarin, scopoletin, 8-methoxypsoralen, bergapten, and *iso*-bergapten)\*\*.

\*\***I. ORHAN**, F. TOSUN, B. SENER: Coumarin, anthroquinone, and stilbene derivatives with anticholinesterase activity. *Zeitschrift für Naturforschung*, 63c, 366-3709, 2008.

Therefore, in the current study, from our point of view, it was very important to conduct those kind of experiments as their cholinesterase, tyrosinase inhibitory and antioxidant potential were not determined before. Besides, some of the species screened here have been reported to be traditionally used against memory problems in some countries. Submitted manuscript is a part of our ongoing project on discovering novel cholinesterase or TYR-inhibiting medicinal plants. It is also true that no pure constituents of the assayed extracts were assayed simultaneously, however, they were tested previously as abovementioned and constituted a base for this research. Results are discussed and cited in the text.

* There is a mismatch between the statements given by the authors that they expect coumarins to be active principles and the discussion about antioxidant activity of flavonoids as responsible for the activity.

Since neurodegeneration is linked to oxidative damage, antioxidant potential of all extracts were tested. Flavonoids and phenolic acids are the most well recognised antioxidant, however coumarins can also share responsibility. Only coumarins and their role are discussed

* It appears odd to expect simple coumarins (not bound to a sugar) to be major constituents of a methanol extract (hence, the low amount of these in extracts perhaps?).

Plants from Apiaceae family are rich in different types of coumarin, what was confirmed also by numerous studies performed in ours laboratories. Each plant can contain furano- pirano and simple coumarins, at the same time. According to results already published in the literature (eg. *Waksmundzka-Hajnos et al., Phytochem. Anal., 2004, 15, 1-7* and *J. Chromatogr. A, 2004, 800, 181-187*), as well as our own previously published studies (*Skalicka-Woźniak and Głowniak, Molecules, 2012, 17, 4133-4141*), methanol seems to be the best choice as extrahent.

* All in all, I believe that the paper could be published as a short paper/note after some condensation. There are some minor issues that need to be take care of.

Thanks for your kind evaluation. In contrary with However, your appreciation on being published as short paper, the paper actually contains quite a good number of experimental methods to screen many plant species (thirteen) as well as HPLC analysis of the active extracts, it deserves to be published as a full paper in our opinion. Minor issues have been addressed.

* The standard used in the tyrosinase test as presented in the experimental part (baicalein, a flavonoid) and in figure 1 (kojic acid, a fungal metabolite) is not the same. Which of the two was used? Kojic acid is a known ferric ion chelator...

The reference used for TYR inhibitory activity assay is alpha-kojic acid in this study. Since we sometimes use baicalein also as reference of herbal origin, due to copy-pasting of the method, it was mistakenly written as baicalein.

* There is no meaning of the digits that denote peaks in the chromatograms given in figure 3.

Proper explanations of digits were included to Figure’s legend and is yellow-highlighting.

* The language needs brushing up at quite a few places.

The paper has been revised accordingly and all linguistic errors have been corrected, which were indicated by yellow-highlighting.