Author's response to reviews

Title: Antioxidant and antigenotoxic activities of Daphne gnidium leaf extracts

Authors:
Fadwa Chaabane FC (fadwachaabane@yahoo.fr)
Aicha Neffati AN (Aricha@yahoo.fr)
Soumaya Kilani-Jaziri (Soumaya@yahoo.fr)
Amira Loussaeif (Amira@yahoo.fr)
Jihed Boubaker (Boubaker@yahoo.fr)
Kamel Ghedira (kamel@yahoo.fr)
Leila Chekir-Ghedira (leila.chekir@laposte.net)

Version: 2 Date: 3 May 2012

Author's response to reviews: see over
Editor in chief of Complementary and Alternative Medicine

Dear Editor,

I have the pleasure to submit to your journal the revised version of our paper entitled:

**Antioxidant and antigenotoxic activities of Daphne gnidium leaf extracts**

By: Fadwa Chaabane, Aicha Neffati, Somaya Kilani-Jaziri, Amira Loussaïf, Jihed Boubaker, Kamel Ghedira, Leila Chekir-Ghedira

I confirm that this manuscript was submitted solely to this journal and is not published, in press, or submitted elsewhere. I have also prepared my paper and files in accordance with the journal's style and format requirements and all co-authors agree to its publication.

We are willing this paper to be considered for publication in your journal as soon as possible.

Waiting for hearing from you,

Best regards

Pr. Chekir-Ghedira L.
Response to the editor

- As asked by the editor I have discussed the publication in Pharmazie in 2009 and my study which is under consideration in Cancer Cell International by the following paragraph between lines 349 and 360 in pages 14 and 15 in the discussion section:

“Likewise, a previous study on breast cancer cell line showed that extracts from D. gnidium roots have antiproliferative and apoptotic activity against MCF7 cells (43). Besides, the same study showed a pro-inflammatory effect of D. gnidium root extracts at high concentration via prostaglandins E2 (PGE2) and cyclooxygenases (Cox-2) stimulation.

In addition our study on erythroleukemia cells showed that extracts from leaves of D. gnidium have antiproliferatif effect and induced a perturbation of K562 cell cycle. Chloroform extract inhibited human P-glycoprotein-mediated daunorubicin efflux and enhanced intracellular accumulation of daunorubicin in K562/R7 leukemic cells in a dose dependant manner (data not shown). The inductive effect of D. gnidium extracts on the cytotoxicity of MCF7 and K562 cells may also probably be due to its antioxidant properties by perturbing the favorable redox condition and inducing cytotoxicity (44). “

- I modified the abstract to adhere to journal guidelines

- Between lines 66 and 73 in page 3 I added the following paragraph to the background section of the manuscript:

“Reactive oxygen species (ROS), are known to cause the oxidation of biomolecules leading to cellular damage. The tissue injury caused by ROS may include DNA and protein damages, and oxidation of important enzymes. These events could consequently lead to the occurrence of various free radical-related diseases. In the human body, the toxic effects of ROS are combated regularly by a number of endogenous defence and protective mechanisms which
include various enzymes and non-enzymatic antioxidants. These self-defence systems may also be supported by antioxidative compounds taken as foods, cosmetics and herb medicine (8).”

- Between lines 80 and 56 at page 4 I added the following paragraph to the background section of the manuscript:

“At present, there are several antigenotoxicity assays available, which include the micronucleus test, somatic mutation and recombination test (SMART), sister chromatid exchange (SCE) assay and the single cell gel electrophoresis (SCGE) or comet assay. The above-mentioned assays may involve a longer analysis time, a high cost, and specialized skill or may require addition of expensive reagents. Therefore, short-term bacterial assay: SOS chromotest assay is useful and gives an estimation of the genotoxic/antigenotoxic potential of substances (13).”

- I added a competing interests' section
- I added an authors' contributions section
- I added an acknowledgements section