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**The 11th Annual Meeting of The Good Practice in Traditional Chinese Medicine Research Association (GP-TCM RA)**

Date: 18-20 September 2023

Venue: Fletcher Wellness Hotel Leiden, The Netherlands

**Abstract submission form**

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|  | **Guidelines for Submission of Abstracts** |
|  | * Abstract submission for poster presentations is now open to all researchers in the field of traditional Chinese medicine or herbal medicines * All abstracts must be submitted in doc- or docx-format to: gp.tcm.congress@gmail.com **not later than** * **1 August 2023**. Please note that abstracts sent by pdf will **not** be accepted. * Your abstract should be prepared according to the following instructions (abstracts that do not follow the format will **not** be accepted):  1. Please prepare your abstract using the below abstract form. 2. The abstract must be written in English and it should be brief and concise. Concerning style please refer to the below abstract template (confined to one A4 page). 3. The maximum length of the main text must not exceed 300 words (excluding references, acknowledgement). The abstract can include figures, tables, references and acknowledgement. Longer abstracts will be rejected. 4. Statistical evaluation is obligatory for pharmacological and clinical data. Do **not** use phrases like “… results will be presented…” Abstracts will undergo a strict peer review process. Abstracts without definite results will **not** be accepted. 5. Abstracts accepted for poster presentation at the conference will be notified by mid-August with details on preparation of the poster. In addition, some abstracts will be selected for flash poster presentations, i.e. a 2-minute slot for you to present a verbal overview of your poster at the conference. All presented posters will be eligible for the best poster awards. |

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**Abstract Form**

**Combination of microscopy and HPTLC to authenticate *Securidaca longepedunculata* Fresen.samples, one of the highest-selling medicinal plants on Lubumbashi markets**

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Introduction: Authentication of marketed medicinal plants is essential to ensure the safety of users of medicinal plants, i.e. ~79% of the population in Lubumbashi (DR Congo) [1, 2]. Best-selling species may be subject to adulteration or substitution, because of their economic importance. This study aims to authenticate the root samples of *Securidaca longepedunculata* Fresen*,* one of the most used species in this city.

Materials and Methods: A survey was conducted among the medicinal plant sellers in Lubumbashi’s markets and other public spaces, to identify the best-selling species. Microscopic characteristics of the powdered drug were combined with HPTLC fingerprints of the methanolic extracts to assess the identity of 31 purchased samples, by comparison with 2 authenticated reference samples. As abundant starch granules were detected in some samples, an enzymatic determination of starch was carried out.

Results: A total of 108 stalls were visited, and the *S. longepedunculata* root samples were found in 27.7 %. These roots were sold mainly in powder form, for the treatment of sexual weakness, typhoid fever, sinusitis, and constipation. From the 31 samples purchased from different herbalists, 23 (74 %) conformed with the microscopic elements observed in the 2 reference samples. The 8 samples different according to microscopy also showed major differences in their HPTLC profiles, for both polyphenols and terpenoids fingerprints. Among these samples, 6 showed differing HPTLC profiles, implying that they would be from 6 different adulterant species; 1 of them was also diluted with flour (57.6 % starch). From the 2 remaining samples, 1 presented chromatographic bands common with the reference samples but with additional spots, indicating either a contamination or a phytochemical variant; the second was diluted with flour (35.3 % starch). Results from this study indicate the substitution of *S. longepedunculata* in ¼ of the samples but obtained data did not allow to determine which were the adulterant species and whether substitution took place at harvest or in the market.

Conclusions: Some *S. longepedunculata* sellers encounter identification problems. Further analyses are needed to identify species confused or mixed with *S. longepedunculata* and the eventual risks involved.

References:

1. Mutombo et al., PLoS One, 2022. 17, e0276325. <https://doi.org/10.1371/journal.pone.0276325>

2. Masondo et al. South African Journal of Botany, 2019. 126, 40–57. <https://doi.org/10.1016/j.sajb.2019.06.037>

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