

Publication

Assessment of anti-protozoal activity of plants traditionally used in Ecuador in the treatment of leishmaniasis

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AIM OF THE STUDY: For the assessment of the in vitro anti-protozoal potential of plants traditionally used in Ecuador in the treatment of leishmaniasis, a combined approach based on interviews with healers as well as a literature search was carried out. **MATERIALS AND METHODS:** From three regions of Ecuador, 256 local healers called 'Agents of Traditional Medicine' (ATMs) were interviewed about their knowledge of the use of plants to treat and heal the illness recognized by the ATMs as leishmaniasis. From literature sources, 14 plants were identified as being used in the treatment of leishmaniasis. Subsequently, plant material was collected from a representative selection of 39 species. A total of 140 extracts were screened in vitro against *Leishmania donovani*, *Plasmodium falciparum*, *Trypanosoma brucei* rhodesiense and *Trypanosoma cruzi*. Additionally, these extracts were evaluated for their anti-microbial activities using five gram-positive and -negative bacteria as well as *Candida albicans*. **RESULTS AND CONCLUSIONS:** The survey resulted in 431 use-records for 145 plant-taxa used for the treatment of leishmaniasis. The 10 most frequently reported taxa accounted for 37.7% of all records. In the case of leishmaniasis, activity was observed for *Elephantopus mollis*, *Minquartia guianensis*, *Bocconia integrifolia*, *Gouania lupuloides*, *Scoparia dulcis*, an as-yet-unidentified species of *Piper* and *Brugmansia*. For the leaves of *M. guianensis* and the twigs and bark of *G. lupuloides* a good selectivity index (SI) was found. IC(50) values and the SI of active plant extracts are presented

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