Abstract Template

Title: ***Traditional medicine in Paraguay: A cross-sectional ethnobotanical survey of medicinal plants used for the treatment of the gastro-intestinal nematodes (GIN) in humans and animals***

Meza Ocampos Griselda[1,2], Torres Ñumbay Miguel[2], Alvarenga Nelson[3], Pereira Sühsner Claudia[4], Hoste Hervé[1]
1. UMR IHAP 1225 INRAE/ENVT, 23 chemin des capelles Toulouse F-31076 France.
2. Departamento de Farmacologia y Toxicologia, Facultad de Ciencias Veterinarias, Campus Universitario de San Lorenzo Km 9,5, PO BOX 1061, San Lorenzo, Paraguay.
3. Departamento de Fitoquímica, Dirección de Investigación, Facultad de Ciencias Químicas, Campus Universitario de San Lorenzo Km 9,5, PO BOX 1055, San Lorenzo, Paraguay.
4. Laboratorio de Análisis de Recursos Vegetales. Departamento de Biología. Facultad de Ciencias Exactas y Naturales, Campus Universitario, San Lorenzo Km 9,5 PO BOX 1039, San Lorenzo, Paraguay.

Keywords: **alternative treatment, ethnoveterinary, ethnobotanical knowledge, medicinal plants, nematodes**

I. Abstract

Gastro-intestinal nematodes (GIN) are responsible for parasitic diseases that frequently affects humans and animals in the tropics. A cross-sectional ethnobotanical survey was conducted in the Central Department of Paraguay. This study aimed to collect information on traditional medicine, to list medicinal plants used for the treatment of GIN in humans and animals and to select 4 medicinal plants to carry out future screening on photochemistry and bioactivity.

The survey was carried out among herbalists, vendors, veterinarians, and traditional healers. The data were collected using semi-structured interviews and "free list" with a total of 384 participants. Sampled was applied by the "quota" method per district. A phytochemical screening was carried out of the selected plants. Descriptive methods were used to summarize data and the quantitative indices were calculated using the Salience Index and Fidelity level.

96.88% of participants reported use medicinal plants and 86.29% mentioned knowledge of plants with properties against GIN. A total of 16 plants were mentioned to treat GIN both in humans and livestock. Among them, 4 plants were selected: *Kyllinga odorata, Cassia occidentalis, Artemisia absinthium, Verbena litoralis* (Image1) for further studies to confirm anthelmintic properties. The results of qualitative phytochemical analyzes showed the presence of a range of secondary metabolites such as alkaloids, tannins, saponins, triterpenoids, steroids, coumarins, which can lead to the discovery of potential alternative treatment of GIN in small ruminants and to validate the ethno medicinal knowledge.

II. Image:



Image 1. Kyllinga odorata Valh. (a), Cassia occidentalis L.(b), Artemisia absinthium L. (c), Verbena litoralis Kunth. (d)

III. References:

1. WHO (2002). WHO Traditional medicine strategy2014-2023. World Health Organization. Retrieved April 21, 2020, from http://www.who.int/medicines/publications/traditional/trm_strategy14_23/en/.
2. HURRELL, J. A., ALBUQUERQUE, U. P. (2012). Is Ethnobotany an Ecological Science? Steps towards a complex Ethnobotany. *Ethnobiology and Conservation*, *1*(0), Article 0. https://ethnobioconservation.com/index.php/ebc/article/view/13
3. METRAUX, ALFRED. (1927). Migrations historiques des Tupi-Guarani. *Journal de la Société des Américanistes de Paris* 19. 1-45.
4. PAVETTI, C., BASUALDO, I., ORTIZ, M., SORIA, N. (1988). Plantas nativas de uso en medicina popular en el Paraguay. Parte III. *Acta Amazonica*, *18*(suppl 1-2), 39–48. https://doi.org/10.1590/1809-43921988185048
5. WARREN, D.M. AND B. RAJASEKARAN (1993) Putting local knowledge to good use. *International Agricultural Development* 13 (4): 8-10.

IV. Biography:

Griselda Meza Ocampos is a second year PhD student at the Polytechnic Institute of Toulouse (INP), France.

She is a Doctor of Veterinary Medicine (DVM) (National University of Asuncion, Paraguay) and has a Master in Public Health and Epidemiological surveillance of human and animal diseases (MSc SEMHA) from ENV Alfort, University Paris 11 and Paris 12, in collaboration with Cirad, Montpellier.

She has a scholarship from the Paraguayan government "Becas Carlos Antonio Lopez" (BECAL), and serves as a link between the students and the national activity in terms of epidemiological surveillance, sanitary protocols and research activities. She is part of the registry of the National Network of Health volunteers in Paraguay.

She is currently working on her PhD thesis: "Bioactive Plants of Paraguay against parasitic GINs of small ruminants", as a co-directed project between Paraguay and France She currently conducts her research under direction of Dr. Hervé Hoste within the INMD team at the UMR 1225 IHAP INRAE / ENV Toulouse.

Her PhD project aims at examining medicinal plants with bioactive potential used by the population of Paraguay for the treatment of gastrointestinal nematodes (GIN) in small ruminants,

Presenting author details



Full Name: Griselda Asunción Meza Ocampos
Contact number: +33766757871
Twitter account: non
Linked In account: Griselda Meza

Session name/ number: 11 - Pharmacognosy & Phytochemistry of Medicinal Plants
Category: (Oral presentation/ Poster presentation)