## $6^{\text{th}}$ Global Summit on ENVIRONMENTAL HEALTH

April 14, 2025 | Amsterdam, Netherlands

## Variability evaluation of the native medicinal species Baccharis crispa Spreng for its domestication and conservation in the province of Córdoba, Argentina

## Ana G. Chaves

National University of Córdoba (UNC), Argentina

In Argentina, numerous native and introduced aromatic and medicinal plant species are commercially utilized. For native species, plant material is primarily obtained through collection from wild populations, an extractive practice that endangers these species by neglecting their natural regeneration, leading to irreversible resource loss. Baccharis crispa Spreng. ("carqueja"), a medicinal native species from Córdoba province, is particularly at risk due to high market demand for its hepatic properties. Cultivating this species could reduce pressure on wild populations. However, understanding phenotypic variability in natural populations is crucial for conservation, domestication, cultivation, and genetic improvement, ensuring a sustainable supply of quality plant material. This study evaluated carqueja germplasm from various localities in Córdoba province. Results revealed low germination and cutting establishment rates, absence of dormancy, and sustained viability over time. Morphometric and agronomic analyses confirmed variability among individuals cultivated in the same environment, highlighting differences between cultivated and wild populations. Additionally, carqueja showed promising antiviral activity against HSV-I and CHIKV. The research extends to other species, including Origanum sp., Minthostachys verticillata, Hedeoma multiflora, and Lippia integrifolia. These efforts involve agronomic evaluations, molecular characterization, and the development of in vitro germplasm conservation protocols for medium and long-term storage. To promote sustainable practices, the team collaborates with producers, collectors, and agricultural schools through university extension programs, aiming to transfer knowledge and develop guidelines for sustainable harvesting and cultivation of these species. These integrated efforts support the preservation and utilization of Argentina's aromatic and medicinal plant biodiversity.

## **Biography**

Ana Guadalupe Chaves is an Agronomist and Adjunct Professor at the National University of Córdoba, serving in the Genetics Department of the Faculty of Agricultural Sciences. Since 2004, she has been dedicated to research, outreach, and teaching in the field of aromatic and medicinal plant production. In 2007, she began focusing her studies on the native medicinal species Baccharis crispa Spreng, aiming to support its domestication—a long-term project she continues to lead. Dr. Chaves holds a Master's degree (2012) and a Ph.D. (2020) in Agricultural Sciences. Her academic and scientific contributions center on the sustainable use and development of native plant species with medicinal properties.