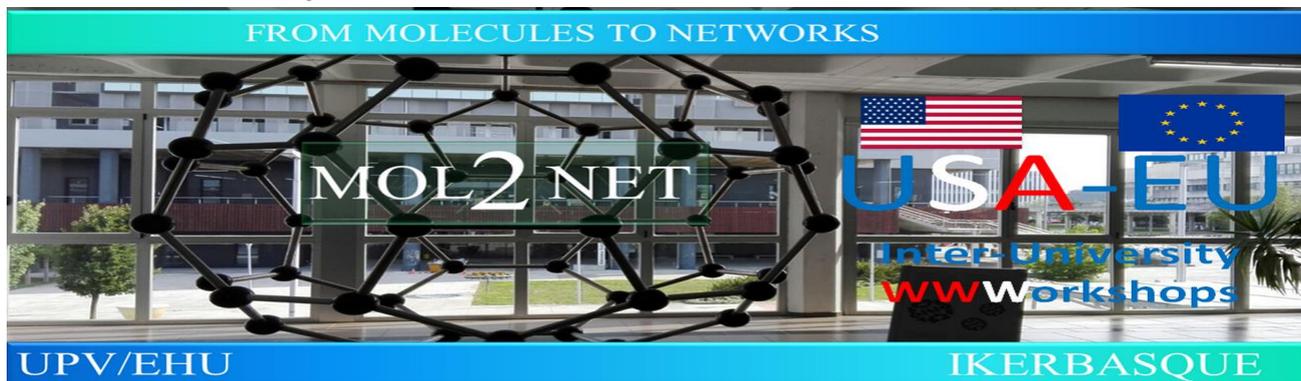




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### **Pharmacobotanical study of aerial vegetative organs of *Senna splendida* (Leguminosae): a species of ethnomedicinal interest**

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#### **Abstract.**

*Senna splendida* (Vogel) H.S.Irwin & Barneby (Leguminosae) is a ethnomedicinal species native to Brazil, popularly known in the country as “fedegoso-grande and “feijão-brabo”, it is used against kidney diseases, bronchitis, rheumatism, anemia and inflammations. A pharmacobotanical study of the aerial vegetative organs of *S. splendida* was carried out, looking for morphoanatomical data that can contribute to the taxonomy and quality control of its ethno-drugs. Paradermic sections of both epidermal surfaces and cross sections of the leaf and stem were made freehand. Histochemical tests were also performed to indicate the types of plant metabolites. *Senna splendida* is a sub-shrubby to shrubby, with cylindrical stems, leaves with 4-leaflets, sub-cylindrical petiole, leaflet blade are oblong

or narrowly ovate, and carthaceous. In transverse section, the stem has the vascular system syphonostelic, ectophloic, continuous, consisting of a single circular vascular bundle, and a well-developed medullary parenchyma. The vascular system is collateral in the rachis, petiole, and midrib; the petiole and midrib showed four main bundles and two accessories; and the leaf rachis showed a main bundle and two accessories. The leaflet epidermis is hypostomatic, which has sinuous anticlinal cell walls on the both surfaces with anisocytic and paracytic stomata. The mesophyll is dorsi-ventral with a single-palisade, and 4-5-seriate spongy parenchyma. Inorganic idioblasts druse-type and prismatic crystals were observed near de vascular system of rachis, leaflet midrib, and petiole. Histochemical tests indicated the presence of starch, structural and non-structural phenolic compounds, alkaloids, and proteins in various parts of the leaflets, and also in the stem. The pharmacobotanical study of *Senna splendida* provided subsidies for its taxonomy and, in addition, it contributed to the quality control of its ethno-drugs and, thus, expanded the anatomical knowledge for the genus *Senna*. Financial support: CNPq and CAPES.

**Keywords:** *Cassia*, Ethnobotany, Fabaceae, Medicinal plant.

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