Garcia EF, de Oliveira MA, Candido LC, Coelho FM, Costa VV, Queiroz-Junior CM, Boff D, Amaral FA, de Souza DD, Teixeira MM, Braga FC. (2016). Effect of the Hydroethanolic Extract from Echinodorus grandiflorus Leaves and a Fraction Enriched in Flavone-C-Glycosides on Antigen-Induced Arthritis in Mice. *Planta Med.* 2016 Jan 29. [Epub ahead of print].

The leaves of *Echinodorus grandiflorus* are traditionally used in Brazil to treat several inflammatory conditions, including arthritis. This study aimed to investigate the antiarthritis activity of the 70% ethanol extract of *E. grandiflorus* leaves and a standardized flavonoid-rich fraction in an antigen-induced arthritis model in mice. Previously immunized mice were treated *per os* with saline (control group), 70% ethanol extract (100-1000 mg/kg), or a flavonoid-rich fraction (0.7-7.2 mg/kg) 40 minutes before and 3 and 6 hours after the challenge with antigen into the knee joint. The administration of the 70% ethanol extract and flavonoid-rich fraction to mice significantly reduced neutrophil recruitment to the joint cavity and in periarticular tissue. The levels of chemokine (C-X-C motif) ligand 1, tumor necrosis factor-α, and interleukin-1β quantified by the enzyme-linked immunosorbent assay (ELISA) in the periarticular tissue were also diminished in mice treated with the 70% ethanol extract and flavonoid-rich fraction, as well as mechanical hypernociception. Histological analysis confirmed that both the 70% ethanol extract and flavonoid-rich fraction suppressed joint inflammation and inhibited cartilage and bone destruction when compared to the control group. Our results demonstrate, for the first time, that *E. grandiflorus* has anti-inflammatory activity in an experimental arthritis model and highlights the role of flavonoids in the observed response.