Antinociceptive effect of hyperbrasilol B, a dimeric phloroglucinol derivative isolated from *Hypericum* species native to Souther Brazil.

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**keywords:** antinociceptive; hyperbrasilol B; Hypericum caprifoliatum.

**Introduction:** *Hypericum caprifoliatum* Cham. & Schlecht presents antinociceptive effects in mice mediated by opioid receptors activation (Viana et al., *Braz. J. Med. Biol. Res.* 36(5):631, 2003). The main compounds of the *H. caprifoliatum* lipophilic extract are phologlucinol derivates, e.g. uliginosin B (UliB) and hyperbrasilol B (HypB). These compounds have been proposed as chemotaxonomic marker for species of *Hypericum* native to Southern Brazil (von Poser et al. *Global Science Books*, vol.4, chapter 56, 2006). UliB presented antinociceptive effect in mice (15 mg/kg; i.p. and p.o.) on hot-plate and acetic acid induced writhing tests. This effect is mediated by opioid and D₂-like receptors activation (Stolz et al., *Prog Neuropsychopharmacol Biol Psychiatry*, 2012). UliB and HypB present structural similarity. The aim of this study was investigate the antinociceptive effect of HypB.

**Methods:** HypB was isolated from the n-hexane extract of aerial parts of *H. caprifoliatum* by chromatographic methods and identified through ¹H RMN. A antinociceptive effect (15 mg/kg, i.p. and 1.4-19.4 mg/kg, p.o.) and motors parameters (15 mg/kg, i.p. and 10 mg/kg, p.o.) in mice were evaluated by the hot-plate and rota-rod tests (n=9-12/group), respectively. The results were analyzed by two way RM ANOVA followed by Student-Newmann-Keuls. All protocols were approved by CEUA/UFRGS (21060/2011).

**Results and discussion:** HypB presented antinociceptive effect in the hot-plate test, being the maximal effect reached at 13 mg/kg, p.o. (18.0±7.4s; p<0.001 vs. vehicle) and 19.6 mg/kg, p.o. (18.9±4.7; p<0.001 vs. vehicle). HypB 15 mg/kg i.p. also presented antinociceptive effect in hot-plate test (23.2±1.5s; p<0.001 vs. vehicle). Vehicle was used as control (p.o. = 12±2.0s and i.p. = 11±0.7s). HypB 13 mg/kg, p.o. and 15 mg/kg, i.p. did not affect motor coordination on rota-rod test. In conclusion, hyperbrasilol B seems to contribute for the antinociceptive effect previously reported for *H. caprifoliatum*. These results strengthen the assumption that phloroglucinol derivatives from species of the genus *Hypericum* native to South Brazil represent a new chemical feature with antinociceptive properties.

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