

Isolation of sesquiterpene lactones from common ragweed (*Ambrosia artemisiifolia* L.)

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Common ragweed (*Ambrosia artemisiifolia* L., Asteraceae) is an invasive species in Europe with allergic pollens. Ragweed originates from North America, but it also occurs and is spreading in Europe, due to the plant's successful reproductive potential and a strong allelopathic effects against the native flora. Some of the plant's secondary metabolites, called sesquiterpene lactones possess allergic, allopathic, anti-inflammatory, antitumor, antimicrobial activity. In a phytochemical view the plant secondary metabolites have not explored completely. The aim of our study was to isolate the major phytochemicals from the aerial parts of *Ambrosia artemisiifolia*, especially focusing on the sesquiterpene lactone compounds, and elucidate their chemical structure. The methanolic extract of the plant was separated by several chromatographic techniques, including preparative TLC and HPLC analysis. One new and six known sesquiterpene lactones were isolated from the aerial parts of ragweed. Their structure was identified by ¹H NMR, ¹³C NMR and mass spectroscopy. 1'-Noraltamisin, a seco-pseudogaianolide was reported for the first time from this plant. Further investigation needed to identify the biological activities and molecular mechanisms of the isolated compounds, particularly the new seco-pseudogaianolide.

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