BIOACTIVITY STUDIES OF LIGNANS FROM Helianthus Annuus


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INTRODUCTION

Lignans are secondary metabolites originated through shikimic acid pathway. They are widely distributed in the vegetable Kingdom. They are formed by the union of two phenylpropane units and they constitute a complex family of skeletons and functionalizations.

RESULTS AND DISCUSSION

Fresh leaves of H. annuus cv. Stella and SH-222 were extracted with water at room temperature for 24 h. This aqueous extracts were re-extracted with methylene chloride and ethyl acetate. The different fractions obtained were fractionated and assayed. The polar bioactive fractions yielded compounds 1-11 (Figure 1). The spectroscopic data of 1-6 and 8-11 were identical to those previously reported for pinoresinol (1), siringaresinol (2), medioresinol (3), buddlenol E (4), larciresinol (5), 7-hydroxylariciresinol (6), neo-olivil (8), dihydro-dehydrodiconiferilic alcohol (9), 1-(4’-hydroxy-3’-methoxyphenyl)-2-[4”-(3hydroxypropyl)-2”-methoxyphenoxy]-propane-l,3-diol (10) and 3-(4-hydroxy-3,5-dimethoxyphenyl)propan-l-ol (11). This is the first time that compound 7 has been isolated as aglycone natural product. The isolated compounds were bioassayed (Figure 2) and Structure-Activity Relationship (SAR) study has been performed.
Figure 1. Lignanes and phenolic compounds isolated from *H. annuus*

REFERENCES


