

## **Chemical markers and chemosystematic approach in Brassicales**

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The Brassicales order (APG III) belongs to Eurosides and comprises 17 families and 398 genera. The chemistry of Brassicales species is diverse, but reveals the chemical affinity of their families due to the occurrence of flavonoids (35%) and glucosinolates (25%), which were characterized as good chemical markers. Flavonoids consist mainly of flavones and flavonols, presenting low flavone / flavonol ratio. These micromolecules usually contain unprotected hydroxyls and when protected, occurs mainly by glycosylation, revealing the basal characteristics of their taxa. Glycosinolates are predominantly of the ally type and are commonly found in the Brassicaceae, Capparaceae and Cleomaceae families. The results of the chemosystematic analysis confirmed the affinity between the families Brassicaceae, Capparaceae and Cleomaceae, and supported the concept of monophyly in the order Brassicales. However, more chemical data from other families are needed to improve chemosystematic findings.