

PLENARY PRESENTATIONS

RECENT PHYTOCHEMICAL STUDIES ON *Astragalus*, *Polygala*, AND *Teucrium* SPECIES

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Our continuing investigations of plants from the flora of Türkiye and other parts of the Mediterranean Basin have resulted in the isolation and structural characterization of numerous classes of secondary metabolites. Our recent studies have focused on *Astragalus* L. species belonging to the family Fabaceae, *Teucrium* L. species from the Lamiaceae, and *Polygala* L. species from the Polygalaceae. The plants investigated were collected in Türkiye and Libya. These studies led to the isolation of structurally diverse natural products, including oleanane- and cycloartane-type triterpene saponins from *Astragalus* species [1]. The results of our ongoing phytochemical investigation of the roots of *Astragalus ihsancalisii* Dönmez & Uğurlu will be presented in detail [2]. *Teucrium davaeanum* Coss. and *T. zanonii* Pamp. are medicinal plants traditionally used in Libya for their antidiabetic properties. Phytochemical investigations of the aerial parts of these plants resulted in the isolation of diglycosidic iridoids, phenylethanoid triglycosides, di-C-glycosyl flavonoids, and oleanane-type bisdesmosidic saponins [3]. Studies on selected *Polygala* species from the flora of Türkiye afforded lignans, xanthenes, sucrose and oligosaccharide multiesters, and oleanane-type ester saponins [4,5]. The structures of the isolated compounds were elucidated through chemical derivatization and spectroscopic methods, including UV and IR spectroscopy, one- and two-dimensional NMR spectroscopy, and high-resolution mass spectrometry.

This presentation will provide an overview of these recent findings, with particular emphasis on the resolution of challenging structural problems through the complementary use of chemical and spectroscopic techniques.

References

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