L. ssp. *albida* and *S. orientalis* L. ssp. *pinnatifida* growing wild in Turkey.

MATERIALS AND METHODS

The collection sites of plant materials are as follows; *S. hastifolia* from Sakarya, *S. velenovskyi* from Karabük, *S. albida* ssp. *albida* from Istanbul and *S. orientalis* ssp. *pinnatifida* from Eskişehir. The air-dried and powdered plant materials were subjected to subsequent extraction with acetone, MeOH and MeOH:H_2O (5:1), respectively. Total antioxidant capacities, phenolic contents and flavonoid contents of the extracts were measured by using the previously published methods with slight modifications [3-5].

RESULTS

The results elicited that among the acetone and MeOH extracts, *S. hastifolia* (470.19±1.01 and 249.84±5.00 mg AAE/g extract, respectively) showed the highest ascorbic acid equivalent total antioxidant capacity. In terms of total phenolic contents, *S. orientalis* (158.20±1.93 mg GAE/g extract) displayed the highest gallic acid equivalent total phenolic content among the MeOH extracts. Among the MeOH:H_2O extracts, *S. hastifolia* (127.94±1.33 mg GAE/g extract) elicited the highest amount of total phenol content. Additionally, total flavonoid content test results exhibited that among the acetone extracts, *S. velenovskyi* (147.22±0.67 mg QE/g extract) displayed the highest quercetin equivalent total flavonoid content. Among the MeOH extracts, *S. orientalis* (47.83±0.50 mg QE/g extract) showed the highest total flavonoid content and *S. hastifolia* (36.95±1.15 mg QE/g extract) was following *S. orientalis*. Among the MeOH:H_2O extracts, *S. hastifolia* (53.33±1.53 mg QE/g extract) showed the highest total flavonoid content.

CONCLUSION

Scutellaria species have long been the subject of many phytochemical, analytical and biological studies. In this study, four *Scutellaria* taxa were screened for their antioxidant profiles by calculating their total antioxidant capacities as well as total phenol and total flavonoid contents. Taken together the results of all assays, *S. hastifolia* seems to be more promising species with its total phenolic, flavonoit content as well its and antioxidant activities.

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P-308: CHEMICAL COMPOSITION OF *ONONIS NARIS* SUBSP. *ANGUSTISSIMA* AND *EUPHORBIA GUYONIANA* ESSENTIAL OILS

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INTRODUCTION

Our study lies within the scope of the valorization of algerian medicinal and aromatic plants having the aim of discovering new bioactive natural products. In addition, A biological antioxidant has been defined as any substance that is present at low concentrations compared to an oxidizable substrate and significantly delays or prevents the oxidation of that substrate [1]. The screening of essential oils permits the discovery of new bioactive antibacterial and antioxidant. Our study contributes to the knowledge of chemical composition of essential oils of two plants from Algeria, namely *Ononis natrix* ssp *angustissima* and *Euphorbia guyonana.*

MATERIALS AND METHODS

The oils were extracted by hydrodistillatio and their chemical composition was analysed by Gas-Chromatography (GC/FID) and Gas-Chromatography coupled to Mass-spectrometry (CPG/SM). Identification of essential oil components cmponents of the oil were identified by comparison of their mass spectra with those of a computer library (Wiley 275). Further confirmation was done from retention index data generated from a series of alkanes retention indices (relative to C5-C28 on the DB-5 column. Additionally, the *in vitro* antimicrobial effects for the oils were evaluated by the diffusion method agar [2] against *Staphylococcus aureus*, *Escherichia coli* and *Candida albicans*.

RESULTS AND DISCUSSION

Thirty-four and nineteen compounds represented 91.6% and 92.3% respectively for *O. natrix* ssp *angustissima* and *E. guyoniana* essential oils. hexahydrofarnesylacetone (14.8%), α-cadinol (6.4%), β-eudesmol (6.6%), μ-cadinol and linool (6.2%%) were the major compounds of *O. natrix* ssp *angustissima*, but n-pentadecane (35.5%), and n-heptadecanee (11.3%) were the major compounds in E.O of *E. guyoniana*. The *E. guyoniana* oil presented the highest growth inhibition for all the microorganisms tested.

Fig. 1. Photos of *Ononis natrix* ssp *angustissima and Euphorrbia guyoniana*

CONCLUSIONS

These results indicate that *Ononis natrix* ssp *angustissima* is a good source of hexahydrofarnesylacetone (14, 8%), whereas *E. guyoniana* has two main constituants : n-pentadecane (35, 5%), and n-heptadecanee (11, 3%). *Ononis natrix* ssp *angustissima* essential had the weakest antibacterial activity.

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P-309: NF-κB INHIBITORY FRACTIONS FROM *SAMBUCUS NIGRA*

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INTRODUCTION

Nuclear factor kappa B (NF-κB) is a transcription factor that regulates the expression of several molecules which have critical roles in inflammatory responses such as interleukines, TNFα, iNOS and COX-2 [1]. NF-κB pathway involves in the pathogenesis of chronic inflammatory diseases such as rheumatoid arthritis and asthma as well as several cancers (2,3). For that reason NF-κB pathway have become an important target for drug discovery and development. *Sambucus nigra* (mürver) (Adoxaceae) is a perennial plant which is used traditionally against rheumatismal disorders in Anatolia [4]. The aim of this study is to isolate and identify the NF-κB inhibitory components of *S. nigra* by *in vitro* activity guided fractionation.

MATERIALS AND METHODS

Plant Material: The leaves of *S. nigra* were collected from Uludağ-Bursa (Turkey) in June, 2009. The plants were identified by Prof. Dr. Erdem Yeşilada (Faculty of Pharmacy, Yeditepe University, İstanbul, Turkey). A voucher specimen *S. nigra* (YEF 09021) was deposited at the Herbarium of Yeditepe University.

Extraction and solvent-solvent fractionation: The dried and powdered leaves of *S. nigra* (131 g) were extracted by maceration with methanol (MeOH; 0.9 L) for 24 hr's. The MeOH extract was evaporated to dryness under reduced pressure to give the crude MeOH extract of *S. nigra* (SN-MeOH 37.31 g, yield: 12.8%). SN-MeOH was fractionated by successive solvent extractions with *n*-hexane (14x100 ml), $CHCl_3$ (3x100 ml), EtOAc (4x100 ml), and *n*-butanol saturated with H_2O (3x100 ml). Each of subextract after solvent extractions was evaporated to dryness under reduced pressure to yield ''*n*-hexane subextract'' (**SN-Hex** 9.5 g, yield: 42.2%) ''$CHCl_3$ subextract'' (**SN-$CHCl_3$** 780 mg, yield: 3.5%), ''EtOAc subextract'' (**SN-EtOAc** 1.2 g, yield: 5.3%), and ''*n*-BuOH subextract.'' (**SN-*n*-BuOH** 2.5 g yield: 1.1 %), and "remaining aqueous subextract" (**SN-R-H_2O** 7.7 g, yield: 34.2%), respectively.

Cells and Cell Culture: The Raw 264.7 macrophages were obtained from American Type Culture Collection (ATCC TIB-71). The cells were grown in Dulbecco's modified Eagle's medium supplemented with 10% fetal bovine serum, 4 mM L-glutamin, 100 IU/mL penicillin and 100 μg/mL streptomycin at 37 °C in a humidified atmosphere containing 5% CO2.

WST-1 Cell Viability Assay: The non-toxic concentrations of the samples were determined by WST-1 reagent (Roche Diagnostics; 05 015 944 001) according to the manufacturer's instructions.