

## A CONTRIBUTION TO TRADITIONAL MEDICINE IN WEST ANATOLIA

A. ASLAN<sup>a</sup>, A. MAT<sup>\*a</sup>, N. ÖZHATAY<sup>b</sup>, G.SARIYAR<sup>a</sup>

### S U M M A R Y

Herbal remedies used traditionally in 27 provinces of West Anatolia have been studied. Data was collected by a field survey which was carried out among local people. 106 medicinal plant samples belonging to 20 families and 42 species were identified and reported with their vernacular names, parts used, methods of preparing remedies and their therapeutic usage.

**Keywords:** Traditional medicine; Turkey; West Anatolia

### Ö Z E T

Ege Bölgesinin 27 ilinde geleneksel olarak kullanılan tıbbi bitkiler araştırılmıştır. Halk ile yapılan görüşmeler sonucunda bilgiler derlenmiş ve örnekler toplanmıştır. Toplanan 106 adet tıbbi bitki örneği tayin edilerek yerel isimleri, kullanılan kısımları, hazırlanma şekilleri ve tedavideki kullanılışı bildirilmiştir.

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<sup>a</sup> Department of Pharmacognosy, Faculty of Pharmacy, Istanbul University, Beyazıt 34116, Istanbul, Turkey

<sup>b</sup> Department of Pharmaceutical Botany, Faculty of Pharmacy, Istanbul University, Beyazıt 34116, Istanbul, Turkey

\* Corresponding author

E-mail address: afifemat@istanbul.edu.tr

## I N T R O D U C T I O N

Anatolian people have used herbal remedies for centuries (1). Today there are approximately 11.000 plant taxa in Turkey and one third of them are endemic. It is estimated that about 1000 plants are being used traditionally for various purposes.

In the role of continuation of our studies on Anatolian traditional medicines, herbal remedies were reported in 27 provinces of West Anatolia. Data was collected by a field survey which was carried out among local people. There have been three reports concerning the medicinal plants of some parts of this region (2, 3, 4).

West Anatolia is the region situated between the Aegean Sea and Central Anatolia. There is a wide diversity regarding vegetation, climate and surface shapes between western and eastern parts of this region. Therefore, the region is divided into 2 main parts: Aegean part and Inner Central Anatolia. Aegean part has a typical Mediterranean climate with its mild, rainy winters and hot, dry summers. The mild and humid climate produces a rich flora. The Inner Central Anatolian part is cooler in summer and has less rain than the coastal areas and it is quite cold in winter. The mountain ranges lie from east to west, perpendicular to the Aegean Sea creating fertile valleys and fields washed by the rivers of that wanders through the valley.

## R E S U L T S   A N D   D I S C U S S I O N

106 medicinal plant samples belonging 20 families and 42 species were collected and identified. Collected plants are reported with their vernacular names, district, parts of the plant used, usage, preparation, administration and specimens kept in GILAM collection and numbered (GIM No.) (Table 1).

The plant species are used mainly for urinary system and kidney diseases (33.8 %), for intestinal and digestive system diseases (20.4 %), common cold (12.3%), cardiovascular system diseases (8.1 %), as anti-rheumatic, anti-inflammatory and analgesic(6.1 %), as antidepressant, sedative and hypnotic (5.1 %), for skin diseases (% 2.1).

Most used families are Lamiaceae (25 remedies from 17 species), and Asteraceae (11 remedies from 4 species). On the other hand, the most frequently and widely used species is *Hypericum perforatum* with 9 remedies. *Achillea millefolium* follows it with 5 remedies.

The inhabitants of the region usually prepare simple remedies (one crude drug), besides some concoctions remedies. For example, *Malva sylvestris* mixed with *Origanum vulgare*, fruits of *Juniperus oxycedrus*, leaves of *Cydonia vulgaris* and *Agrimonia eupatoria* and grounded and roasted with barley flour. This mixture then is put on abdomen against abdominal pain.

A different method of preparation of *Papaver rhoeas* is as follows: Petals are placed in a jar and then water is added followed by lemon juice. After leaving the preparation for two weeks they recommend to take 3 spoons every day. This is used to treat kidney stones.

Some drugs are recorded for other than medical purposes such as the bark of *Pistacia lentiscus* which is used against "evil eye".

An unusual application has been seen for *Hyoscyamus niger*. Seeds are boiled in water and the vapour is inhaled through the mouth below the towel against white worms on the teeth. This usage was previously mentioned by other authors (5, 6) in east and south of Anatolia.

Some vernacular names are mentioned here for the first time (7). These are indicated in Table 1 by an asterisk. Some vernacular names were given to different plants in different localities. "Oğul otu" is the vernacular name of *Melissa officinalis* which is used for heart diseases in Bursa and as a cardi tonic, hypnotic, sedative, antidepressant in İzmir. *Helichrysum plicatum* used as a soporific for kids in Afyon is also known as "Oğul otu".

Some new uses were recorded for the following plants: *Achillea millefolium* (anti-diabetic), *Acorus calamus* (carminative for babies), *Adiantum capillus-veneris* (for kidney diseases and stones), *Capsella bursa-pastoris* (to treat tonsillitis), *Cistus salvifolius* (haemostatic, and antirheumatic, externally), *Helichrysum plicatum* (for kidney stones), *Juniperus oxycedrus* (for articulation pain), *Mentha suaveolens* (anticoagulant), *Micromeria myrtifolia* (anti-diarrheic), *Origanum onites* (for kidney stones), *Pistacia lentiscus* (for burns), *Rhus coriaria* (for hemorrhoids), *Rosa canina* (anti-asthmatic), *Thymus serpyllum* subsp. *angustifolium* (anthelmintic).

## E X P E R I M E N T A L

Ethnopharmacological interviews were performed with local people in 27 provinces of West Anatolia. A questionnaire was developed and used, which contains questions concerning: 1)uses of plants, 2)vernacular names, 3)methods of preparation

4)mode of administration 5)traditional practices. Voucher specimens were collected and deposited in the collection of Technical Research Center of Traditional Medicine (GILAM). The plants were botanically identified with the help of the Flora of Turkey and East Aegean Islands (8, 9, 10) and the Herbarium of the Faculty of Pharmacy of Istanbul (ISTE).

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Table 1. Herbal remedies used in West Anatolia.

Family/Species	Local name	District	Part used	Use/preparation and administration (GIM No)
ADIANTACEAE				
<i>Adiantum capillus-veneris</i> L.	Veneris, Altınotu	Aydın (Karacasu)	Leaves	To treat kidney diseases and to pass kidney stones/inf.- int. (441)
ANACARDIACEAE				
<i>Pistacia lentiscus</i> L.	Çerklemik	Manisa (Gördes)	Bark	No medical uses reported. It is used as a souvenir against the "evil eye" by local people (464)
<i>Pistacia terebinthus</i> L. subsp. <i>terebinthus</i>	Melengeç	Aydın (Bozdoğan)	Leaves	For burns/ Inf.-ext. (433)
<i>Rhus coriaria</i> L.	Sumak	Isparta (Sarıkaya)	Aerial parts	For hemorrhoids/ inf.-int. (536)
ARACEAE				
<i>Acorus calamus</i> L.	Eğril otu	Isparta (Sarıkaya)	Roots	Carminative for babies / Tea- int. (552)
ASPIDIACEAE				
<i>Dryopteris pallida</i> L.	Altınotu	Aydın (Bozdoğan)	Whole plant	To pass stones./ Inf.- int. (432)
ASTERACEAE				
<i>Achillea millefolium</i> L. subsp. <i>millefolium</i> .	Ayvadene	Kütahya (Altıntaş)	Whole plant	For abdominal pain, common cold/ Inf.-int. (487)
	Kedi tırnağı	Burdur (Çavdır)	Leaves, flowers	Diabetes / inf.-int. (533)
	Ayvadanası	Isparta (Sütçüler)	Whole plant	For abdominal pain / Inf.-int.(539)
	Ariotu	Afyon (Sultandağı)	Flowers	For kidney diseases/inf.-int.(555)
	Ayvadenesi	Afyon (Sincanlı)	Whole plant	For cardiovascular diseases/inf.-int. (566)

<i>Achillea nobilis</i> L.	Ayvananasi, Ayvanenesi	Manisa (Gördes)	Seeds	Against abdominal pain esp. for women and newborn babies. Common cold / inf.- int.(416)
	Ayvadana otu	Manisa (Selendi)	Flowers	For stomachache / Inf.-int (444)
<i>Artemisia absinthium</i> L.	Ayvadene, yakaotu	Isparta (Aksu)	Flowers	For common cold and nausea / inf.-int. (527)
	Acıyavşan otu	Isparta (Sarıkaya)	Leaves	stomachache/inf.-int.(572)
<i>Helichrysum plicatum</i> DC subsp. <i>plicatum</i>	Yayla otu	Isparta (Sütçüler)	Whole plant	To pass kidney stones/inf.- int.(543)
	Oğulotu	Afyon (Sincanlı)	Whole plant	As tea, at insomnia. Soporific for kids. (565)
BRASSICACEAE				
<i>Capsella bursa- pastoris</i> (L.) Medik	Çobançantası	Denizli (Çameli)	Whole plant	To treat tonsillitis / Inf.- int.(502)
	Çobançantası	İzmir (Ödemiş)	Whole plant	To stop bleeding. For menstrual disorder (dysmenorrhea) , antidiarrhea / Inf.-int. (513)
CANNABACEAE				
<i>Humulus lupulus</i> L.	Şerbetçiotu	İzmir (Ödemiş)	Whole plant	Soporific agent, tranquilizer, diuretic, appetizer, to decrease sexual desire and to stop early ejaculation at men /inf.-int.(509)
CISTACEAE				
<i>Cistus salviifolius</i> L.	Parnulduk	Aydın (Koçarlı)	Leaves	Haemostatic / the leaves put on bleeding skin /- ext.(418)
	Karağan	Isparta (Sütçüler)	Whole plant (fresh)	Rheumatism, Sciatica/ inf. -ext.(573)
CUPRESSACEAE				
<i>Juniperus oxycedrus</i> L. subsp. <i>oxycedrus</i>	Ardıç	İzmir (Ödemiş)	Fruits	Diuretic, anti-rheumatic. Muscles pain management. Gives strengths and youthful / inf.-int. (512)

EQUISETACEAE				
<i>Equisetum ramosissimum</i> Desf.	Atkuyruğu, Zemberekotu	İzmir (Ödemiş)	Aerial parts	Urinary system disease, kidney and bladder stones, tuberculosis and diabetes. Haemostatic at inner bleeding / inf.- int.(515)
HYPERICACEAE				
<i>Hypericum perforatum</i> L.	Çay otu	Manisa (Gördes)	Flowers	For gastric ulcer and stomachaches. For relaxation / Tea – int. (415)
	Kantaronotu	İzmir (Bayındır)	Flowers	For burns and wound healing; kept in olive oil for a month and applied on burns and wound / ext. (422)
	Sarı çiçek	İzmir (Kemalpaşa)	Flowering stems	Peptic ulcer and stomachache; kept in olive oil for a while / Taken a table spoon every morning before meal. (427)
	Sarı papatya	Aydın (Bozdoğan)	Flowers	Cough /inf.- int.(435)
	Mide otu	Muğla (Milas)	Flowers	For indigestion / inf. – int.(437)
	Sarı çiçek	İzmir (Kiraz)	Aerial parts	Stomachache/inf.-int. Burns/maceration.- ext.(454)
	Kantaron çiçeği	İzmir (Ödemiş)	Flowers	Stomachache, against intestinal parasites and ulcers. To heal stubborn- wound. Anti-pyretic, antidiarrhea, against arteriosclerosis/ inf. – int.(516)
	Yara yaprağı	Afyon (Sultandağı)	Leaves (fresh)	To heal inflamed wounds; taken off membrane on leaves and covered on wound.(568)
	Sarı çiçek	İsparta (Sütçüler)	Flowers	For kidney pain / inf. Int. (574)

LAMIACEAE				
<i>Calamintha nepeta</i> (L.) Savi subsp. <i>glandulosa</i> (Req.) P.W. Ball.		İzmir (Bayındır)	Aerial parts	Stomachache/inf.-int.(498)
<i>Lavandula stoechas</i> L. subsp. <i>cariensis</i> (Boiss.) Rozeira	Sargan otu	Aydın (Koçarlı)	Flowering stems	Cardiovascular system and respiratory system / inf.- int.(417)
	Gargan	Aydın (Bozdoğan)	Aerial parts	Stomachache / inf.- int.(431)
	Gargan	Muğla (Milas)	Aerial parts	Bronchitis/inf.-int.(440)
	Karahan ?	Muğla (Ula)	Aerial parts	Neuropathy, cardiovascular system disease. /inf. -int.(460)
<i>Melissa officinalis</i> L.	Oğul otu	Bursa (Keleş)	Whole plant	Heart diseases/decoc.- int.(472)
	Oğul otu	İzmir (Ödemiş)	Whole plant	Cardiotonic, sedative, hypnotic, antidepressant, anti-stress/inf.-int.(517)
<i>Mentha pulegium</i> L.	Narpız	Muğla (Milas)	Aerial parts	Abdominal pain, intestinal diseases/inf.-int.(438)
	Filizkin	Manisa (Gördes)	Whole plant	Stomachache, common cold and intestinal disease. / inf. -int.(462)
<i>Mentha suaveolens</i> Ehrh.	Narpız	Burdur (Çavdır)	Whole plant	Anticoagulant/inf.- int.(545)
<i>Micromeria myrtifolia</i> Boiss. et Hohen.	Amel otu	Burdur (Altınyayla)	Aerial parts	Anti-diarrhea /inf.- int.(537)
<i>Origanum majorana</i> L.	Mercanköşkü	Muğla (Milas)	Aerial parts	Gastric ulcer/inf.-int.(436)
<i>Origanum onites</i> L.	Kuşbudak	Aydın (Bozdoğan)	Bark	To pass kidney stones/inf.- int.(429)
	Eşek kekiği	Muğla (Eşen)	Aerial parts	For common cold /tea- int.(470)



	Kekik	Burdur (Altınyayla)	Aerial parts, seeds	Against intestinal gas and common cold for babies; put squashed seeds on baby's abdomen. / inf.-int.(525)
<i>Origanum syriacum</i> L. var. <i>bevanii</i> (Holmes) Ietswaart	Kekik	Muğla (Milas)	Aerial parts	For common colds, stomachache and intestinal disease / decoc.- int.(439)
<i>Origanum vulgare</i> L.	Kekik	İzmir (Kemalpaşa)	Leaves	Gastric ulcer, stomachache/inf.-int.(424)
<i>Salvia fruticosa</i> Miller	Adaçayı	Burdur (Altınyayla)	Aerial parts	For common cold/inf.int.(532)
<i>Salvia officinalis</i> L.	Bozşapılan	Manisa (Selendi)	Leaves, flowering stems	Stomachache and peptic ulcer. To increase intestinal motility. /inf.-int.(443)
<i>Sideritis perfoliata</i> L.	Kırkboğum	Afyon (Sincanlı)	Whole plant	Gastric diseases/inf.-int.(540)
<i>Teucrium polium</i> L.	Ak kekik	Bursa (Keleş)	Whole plant	Gynecological diseases/inf.-int.(477)
	Haptutan otu	Burdur (Çavdır)	Whole plant	To pass kidney stones/ inf.-int.(546)
	Oğul otu	Isparta (Sütçüler)	Stems	Cardiac diseases, vasodilatation /inf.-int.(577)
<i>Thymus longicaulis</i> C.Presl. subsp. <i>chaubardii</i> (Boiss.&Heldr. ex Reichb. fil) var. <i>chaubardii</i>	Kekik	İzmir (Ödemiş)	Aerial parts	Appetizer, against indigestion, to relive intestinal gas, anthelmintic, diuretic, bronchodilator, antimicrobial at dental disease/ inf.-int.(511)
<i>Ziziphora taurica</i> Bieb. subsp. <i>taurica</i>	Karaçay	Burdur (Altınyayla)	Stems and leaves	For common cold/inf.-int.(554)
LAURACEAE				
<i>Laurus nobilis</i> L.	Tehnel, Defne	İzmir (Bayındır)	Fruits	Kidney diseases/inf.-int.(448)

	Tehnel, Defne	İzmir (Bayındır)	Leaves	Soften hair/ inf. -ext.(449)
	Tehnel, Defne	Muğla (Fethiye)	Leaves	Common cold/inf.int.(469)
LORANTHACEAE				
<i>Viscum album</i> L. subsp. <i>album</i>	Ökseotu	İzmir (Ödemiş)	Whole plant	Antihypertensive, diuretic, antispasmodic, constipation, hypnotic, headache, dizziness, Cancer and hepatitis / maceration –int; for tachycardia, neurological diseases /inf.-int.(518)
MALVACEAE				
<i>Malva sylvestris</i> L.	Ebegümeci	Burdur (Gencali)	Leaves	Abdominal pain, stomachache, rheumatism /inf.-int. Mixed with other plants (Ebegümeci, Kara ot, Ardiç kiliği, Koyun otu ve ayva yaprağı) and grounded and roasted with barley flour /covered with this mixture at abdominal pain./ext.(524)
PAPAVERACEAE				
<i>Papaver rhoeas</i> L.	Gelin çiçeği	Kütahya (Domaniç)	Petals	To pass kidney stones/maceration(two weeks in water and lemon juice) –int.(3 tablespoons per day)(483)
PLANTAGINACEAE				
<i>Plantago major</i> L. subsp. <i>major</i>	Sinirotu	Bursa (Keleş)	Leaves	For urinary system infections /inf.-int. Taken a glass 3 times a day before meal.(476)
ROSACEAE				
<i>Cerasus avium</i> (L.)Moench	Kiraz	İzmir (Kemalpaşa)	Stipes	For kidney stones/inf.int.(425)

<i>Rosa canina</i> L.	Kuşburnu	İzmir (Bayındır)	Seeds	Asthma/ inf.- ift (421)
	Kuşburnu, Köpek gülü	Aydın (Kayacak)	Whole plant	Asthma/syrup- int.(465)
SOLANACEAE				
<i>Hyoscyamus niger</i> L.	Vandibi	Afyon (İhsaniye)	Seeds	Dental disease/ inhalation (530)
URTICACEAE				
<i>Urtica dioica</i> L.	Isırgan	İzmir (Ödemiş)	Seeds	Diuretic, antioxidant, detoxification, cardiovascular disease, edema, expectorant, for respiratory system disease, rheumatism, anthelmintic, aphrodisiac, anemia, Vitamin-E deficiency/dec. -int.(519)
<i>Urtica pilulifera</i> L.	Gidişen, Isırgan	Manisa (Selendi)	Whole plant	Lung cancer, expectorant/ inf.- int. (445)

inf. = infusion

dec. = decoction

int. = internal use

ext. = external use