

# Consideration and interventions of Commonly used medicinal plants

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Vice-Chancellor for Food & Drug  
Administration

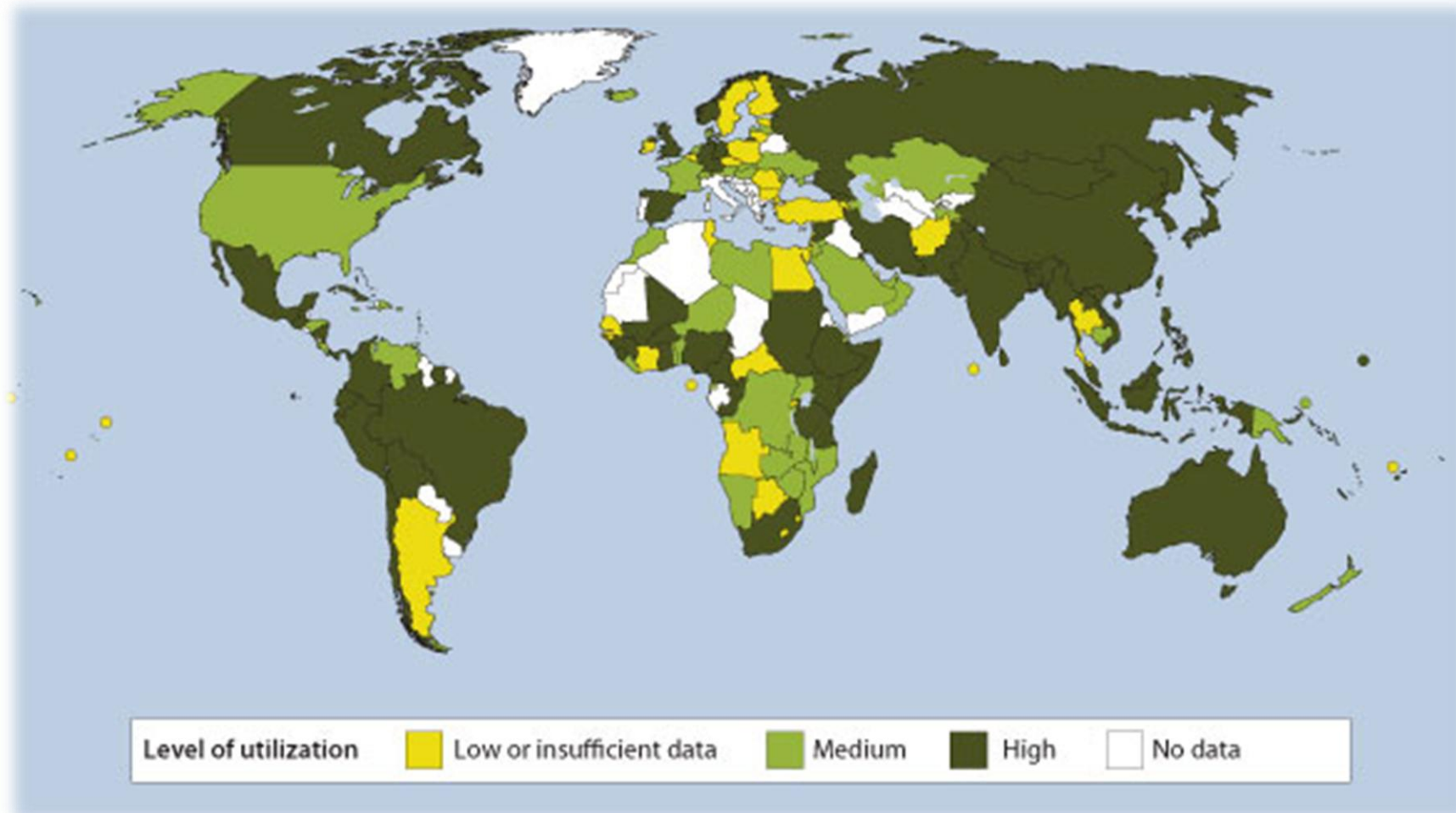


*Dr. S. Hamidi, PharmD/PhD of Pharmacology*  
*FDO.iums.ac.ir*  
*Hamidi.s@kar.iums.ac.ir*

1. *Aloe vera* آلوئه ورا
2. *Althaea officinalis* ختمی
3. *Arctostaphylos uva-ursi* علف خرس
4. *Borago officinalis* L. گل گاوزبان
5. *Calendula officinalis* همیشه بهار
7. *Cinnamomum camphora* کافور
8. *Coriandrum sativum* گشنیز
9. *Curcuma longa* زردچوبه
10. *Ginkgo biloba* L. جینکوبیلوبا
11. *Glycyrrhiza glabra* شیرین بیان
12. *Hypericum perforatum* L. علف چای
13. *Lavandula stoechas* اسطوخدوس
14. *Lawsonia inermis* حنا

15. *Melissa officinalis* L. بادرنجبویه
16. *Myrtus communis* مورد
17. *Olea europaea* زیتون
18. *Panax Ginseng* جینسنگ
19. *Passiflora incarnata* L. گل ساعتی
20. *Rosmarinus officinalis* رزماری
21. *Silybum marianum* خارمریم
22. *Urtica dioica* گزنه
23. *Valeriana officinalis* L. سنبل الطیب
23. *Ziziphus jujuba* L. عناب

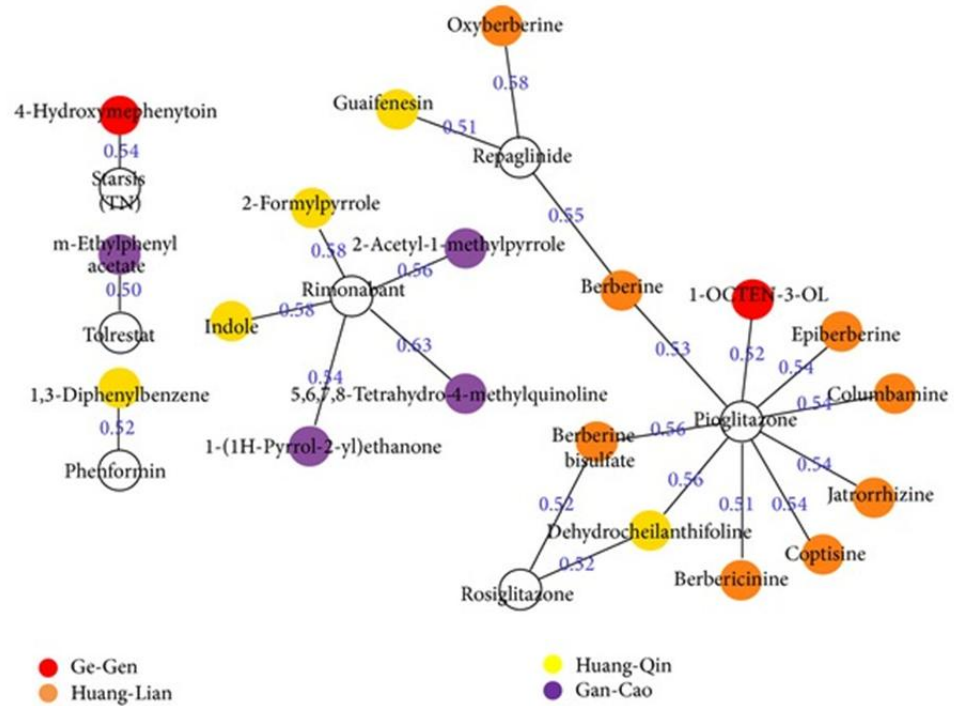
# Medicinal herbs utilization

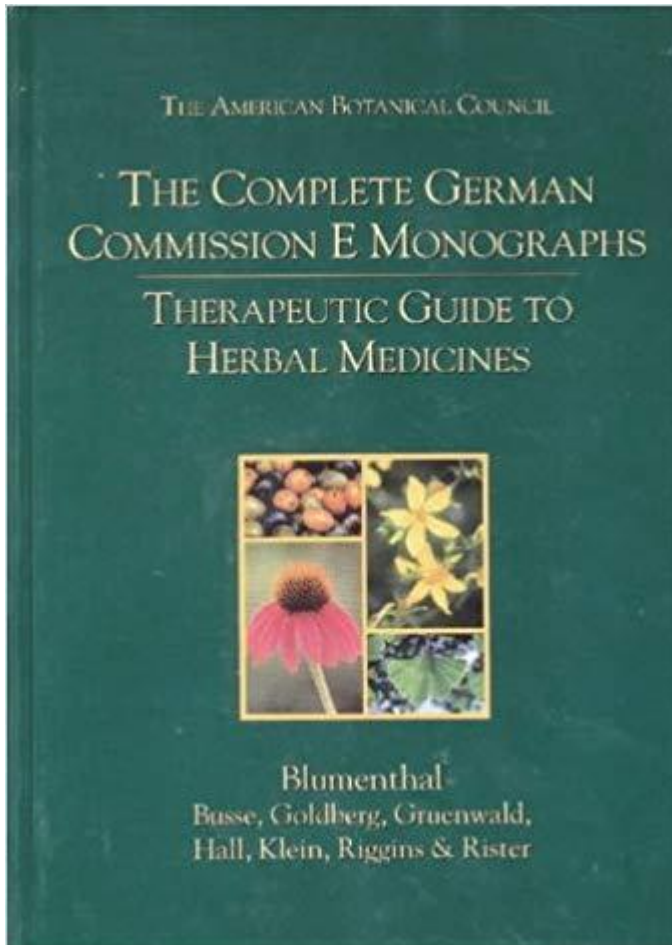


up to 80% of the world's population uses herbal medicine, 2017



# Herbal ingredients





The German **Commission E** is a scientific advisory board that gives scientific expertise for the approval of substances and products previously used in traditional, folk and herbal medicine.

# 1. *Aloe barbadensis/vera* (Aloe)

**Medicinal parts:** Dried juice of the leaves

**Medicinal usage approved by Commission E:**  
Constipation because of laxative effect

**Clinical pharmacology:**

- ✓ ↑ colonic motility, ↓ Reduces fluid absorption
- ✓ Psoriasis, leg ulcers, wounds

**Unproven Uses:**

- ✓ Treatment of seborrheic dermatitis
- ✓ Colit ulcers
- ✓ Evacuation relief in presence of anal fissures, operations



## Precaution and adverse reactions:

- ✓ Danger of electrolyte imbalance
- ✓ ↓ Absorption of orally administered drugs
- ✓ Hypokalemia
- ✓ Colorectal cancer
- ✓ Drug interaction:
  - digoxin, thiazide diuretics
  - antidiabetic drugs
- ✓ Contraindications (Intestinal obstruction, acute inflamed intestinal diseases, appendicitis, abdominal pain of unknown origin)



## Pregnancy:

Contraindicated during pregnancy and children  $\leq 12$  years



## 2. *Althaea officinalis* (Marshmallow)

**Medicinal parts:** Flowers, leaves, syrup, root

**Medicinal usage approved by Commission E:**

- ✓ **Leaves:** Cough / bronchitis
- ✓ **Root:** Irritations of oral and pharyngeal mucosa, Irritation of gastric mucosa

**Clinical pharmacology:**

- ✓ Anti-inflammatory
- ✓ Anti-tussive





### Unproven uses:

- Diarrhea
- Insect bites
- Dermal burn

### Precuations and adverse reaction:

- No adverse reactions in recommended dosage
- Drug interaction (delay of absorbtion)

### Pregnancy and lactation:

Should not be administered during pregnancy, lactation or to children



### 3. *Arctostaphylos uva-ursi* L. (*Uva-Ursi*)

**Medicinal parts:** Dried leaves, preparations of fresh leaves

**Medicinal usage approved by Commission E:**

- ✓ Infections of the urinary tract
- ✓ Inflammatory urinary disorders (cystitis, urethritis, dysuria)

**Pharmacology:**

- ✓ Anti-bacterial
- ✓ Anti-inflammatory
- ✓ Skin depigmentation



## Unproven Uses:

- Diuretic
- Urogenital diseases
- Biliary tract diseases

## Precaution and adverse reactions:

- Gastric sensitivity
- Coloration of urine
- Liver damage
- Drug interactions:



## Drug interactions:

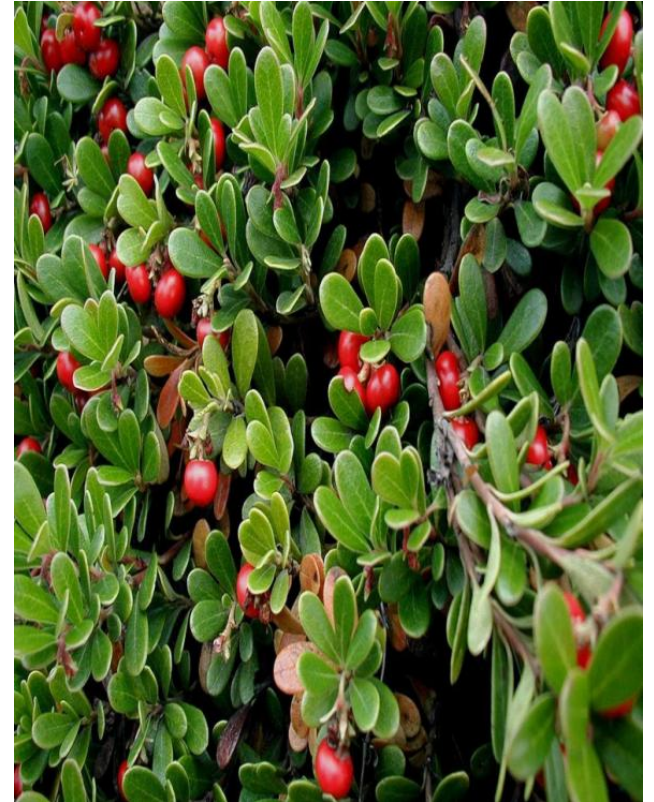
- Thiazide diuretics
- NSAID
- Ferrus

## Overdosage:

- bladder inflammation
- liver damage

Contraindications: kidney disorders, dispeptic complaints, pregnant women, pediatric usage

**Pregnancy, lactation and pediatric:** The drug is contraindicated during pregnancy, in nursing mothers and children  $\leq 12$  years old





## 4. *Borago officinalis* L.

**Medicinal parts:** Dried flowers, dried or fresh foliage, stems and leaves

**Medicinal usage approved by Commission E: -**

Leaves: Tannins (astringent effect), Mucins

**Pharmacology:**

- Anti-inflammatory
- Cardiovascular system
- Arthritomatoid

**Unproven Uses:**

- **Oil:** Neurodermatitis, Food supplement
- **Leaf:** Throat illnesses, bronchial treatment



## Precaution and adverse reactions:

### **Borage oil:**

- Contraindication (epilepsy, schizophrenia)

### **Borage leaf:**

- Small hepatotoxic (pyrrolizidine alkaloid)

### Drug interactions:

- Anti-coagulants, anti-platelets
- Ferrus

**Pregnancy:** Contraindicated



## 5. *Calendula officinalis* L. (Marigold)

**Medicinal parts:** Flowers

**Medicinal usage approved by Commission E:**

- ✓ Inflammation of the mouth and pharynx
- ✓ Wounds and burns, acute and chronic skin inflammation

**Pharmacology:**

- ✓ Anti-microbia/ anti-viral
- ✓ Wound healing



### Unproven uses:

- Externally: varicosis, vascular disease, wounds, inflammatory skin disease
- Internally: internal inflammation, gastritis



### Precaution and adverse reactions:

- No health hazards or side effects in therapeutic dosages
- Low potential for sensitization after frequent skin contact with the drug
- Contraindicated In case of allergy to plants of the Asteraceae family

### Pregnancy and lactation:

Flos Calendulae should not be administered during pregnancy or lactation or to children



## 6. *Cinnamomum camphora* L. (Comphor tree)

**Medicinal Parts:** Camphor oil extracted from the tree

**Medicinal usage approved by Commission E:**

- ✓ Cough/bronchitis
- ✓ Nervous heart complaints
- ✓ Rheumatism

**Pharmacology:** anti-bacterial effects

**Unproven Uses:**

- ✓ Ext.: muscular rheumatism, circulatory regulation disorders
- ✓ Int.: digestive complaints, hypotension



## Precaution and adverse reactions:

- Skin irritation, Resorbent and/or airborne poisoning
- Contact eczema
- Overdosage (delirium, spasm, respiratory disturbance)

**Pregnancy:** Contraindicated during pregnancy and in pediatrics



*Cinnamomum Camphora*

## 7. *Coriandrum sativum* L. (Coriander)

**Medicinal Parts:** coriander oil and dried ripe fruit

**Medicinal usage approved by Commission E:**

- ✓ Dyspeptic complaints
- ✓ Loss of appetite

**Unproven Uses:**

- ✓ Coughs
- ✓ Dysentery
- ✓ Ext.: Headache, halitosis, oral/pharyngeal disorders



## Precaution and adverse reactions:

- No health risks or side effects in therapeutic dosages
- The drug possesses a weak potential for sensitization





## 8. *Curcuma domestica* (Turmeric)

**Medicinal Parts:** Stewed and dried rhizome

**Medicinal usage approved by Commission E:**

- Dyspeptic complaints
- Loss of appetite

**Pharmacology:**

- ✓ Anti-inflammatory
- ✓ Peptic ulcer and dyspepsia



## Unproven Use:

treatment of bruises, edema, insect bites

## Precaution and adverse reactions:

- ✓ No health hazards or side effects in therapeutic dosages
- ✓ Stomach complaints in case of overdose
- ✓ Allergic dermatitis
- ✓ Contraindication (obstructed biliary ducts, gallstones)
- ✓ Drug interaction: anticoagulants

**Pregnancy:** should not be used during pregnancy and lactation



## 9. *Ginkgo biloba* L.

**Medicinal Parts:** Fresh or dried leaves, and the seeds separated from their fleshy outer layer

### **Medicinal usage approved by Commission E:**

- ✓ Cerebrovascular insufficiency (demential syndrome with symptoms: depression, dizziness, tinnitus)
- ✓ Peripheral arterial occlusive disease (Intermittent claudication, acrocyanosis, post-phlebitis syndrome)

### **Pharmacology:**

- ✓ Cerebral insufficiency
- ✓ Peripheral arterial occlusive disease
- ✓ Vertigo and tinnitus
- ✓ Dementia (Alzheimer)



## Unproven Uses:

- Disturbed brain function
- Concentration
- Memory deficite

## Precaution and adverse reactions:

- No Health risks or side effects in therapeutic dosages
- Gastrointestinal disturbances
- Parentral: headache, phlebit
- Allergic skin reactions in very rare occasions
- Hypersensitivity reactions: spasm, cramp, atonia
- Contraindication: allergy to plant





## Precaution and adverse reactions:

### Drug interactions:

- Anticoagulants, antiplatelets and aspirin
- NSAIDs
- Trazodone
- Anticonvulsants
- Buspirone, SSIRs
- Insulin
- MAOIs
- Omeprazole
- Thiazide diuretics

**Pregnancy:** should not be used during pregnancy  
lactation and in pediatric



## 10. *Glycyrrhiza glabra* L. (Licorice)

**Medicinal parts:** Unpeeled, dried roots and the runners, the peeled dried roots

**Medicinal usage approved by Commission E:**

- ✓ Cough / bronchitis
- ✓ Gastritis

**Pharmacology:**

- ✓ ↓ symptoms of peptic ulcer



## Unproven use:

- ✓ Bronchial catarrh
- ✓ Gastric and duodenal ulcers, appendicitis
- ✓ Ex.: wounds, cuts

## Precaution and adverse reactions:

- ✓ Prolonged use (pseudoaldosteronism)
- ✓ Contraindications:
  - hypertension
  - cholestatic disorders or cirrhosis of the liver
  - hypokalaemia
  - chronic renal insufficiency
  - Pregnancy



## Precaution and adverse reactions:

### ✓ Drug interactions:

- Antihypertensive drugs
- Antiarrhythmic drugs
- Anti-platelets
- Anti-diabetic
- Contraceptive
- Corticosteroid
- Cardiac glycosides (digoxin)
- Thiazide diuretics
- MAOIs
- spironolactone or amiloride



### Overdosage

### Pregnancy:

The drug should not be used during pregnancy, lactation and by children



# 11. *Hypericum perforatum* L. (St. John's Wort)

**Medicinal Parts:** Fresh buds and flowers separated from inflorescences

**Medicinal usage approved by Commission E:**

- ✓ A mild antidepressant and sedative action
- ✓ Minor cuts, burns and skin ulcers

**Pharmacology:**

- ✓ Anti-depressant, Anti-bacterial and anti-viral, Wound healing

**Unproven Uses:**

- Bronchitis and asthma, Gallbladder disease
- Oily preparations internally for dyspeptic complaints, and externally for the treatment of myalgia



# 11. *Hypericum perforatum* L. (St. John's Wort)

## Precaution and adverse reactions:

- Photosensitization
- CNS: headache in 7% patients
- Tannin content (digestive complaints)
- Duration of therapy (2-4 weeks)
- Doesn't affect ability to drive
- Contraindication (allergy to Clusiaceae family)
- Thyroid gland hormones
- Drug interaction:



# 11. *Hypericum perforatum* L. (St. John's Wort)

## Precaution and adverse reactions:

### Drug interaction:

1. Selegiline, MAOIs, TCAs, Trazodone
2. Amiodarone, beta-blockers, Ca-channel blockers
3. Anesthetics
4. Anti-coagulants
5. Ciclosporin
6. Digoxin
7. Phenytoin
8. Statin drugs
9. Benzodiazepines, clozapine, estrogens, omeprazole, theophylline
10. Anti-diabetic drugs
11. Methadone
12. Ferrus
13. Caffeine
14. Tyramine containing foods

### Pregnancy, lactation and pediatric:

should not be administered during pregnancy or lactation or to children



## 12. *Lavandula angustifolia* L. (English lavender)

**Medicinal Parts:** Essential oil

**Medicinal usage approved by Commission E:**

- Anxiety, nervousness
- Insomnia
- Gastrointestinal disorders
- Circulatory disorders

**Pharmacology:**

- Anxiolytic
- ↑ Parasympathetic nerve activity

**Unproven Uses:**

- Cholagogue, Migraine,
- Ext.: Wounds, sedative in spasms





## Precaution and adverse reactions:

- Drowsiness
- Sensitization (oral)
- Allergic contact dermatitis (local)
- Overdosage: affects CNS, headache, convulsion
- **Contraindication:**
  - Allergy to plant,
  - Epilepsy
  - Pregnancy



## Pregnancy, lactation and pediatric:

contraindicated (traditional use for abortification)

# 13. *Lawsonia inermis* L. (Henna)

**Medicinal Parts:** Pulverized leaves, fruit and bark

## **Effects:**

- ✓ Astringent
- ✓ Diuretic
- ✓ Antibacterial

## **Unproven Uses:**

- ✓ Eczema, scabies, fungal infections and ulcers
- ✓ Anti-dandruff in hair lotions
- ✓ Dysentery



## Precaution and adverse reactions:

- Health risks in therapeutic dosages are not recorded
- Stomach complaints (of tannins)

**Pregnancy:** Contraindicated



# 14. *Melissa officinalis* L. (Lemon balm)

**Medicinal Parts:** Oil, dried leaves

**Medicinal usage approved by Commission E:**

- Externally: herpes labialis
- Gastrointestinal disorders
- Sedative

**Pharmacology:**

- ✓ Anti-viral
- ✓ ↓ healing time of herpetic lesions
- ✓ Anti-spasmodic





## Unproven Uses:

- Asthma
- Migraine headaches
- Ext. for rheumatism, nerve pains, stiff necks

## Precaution and adverse reactions:

No health hazards in therapeutic dosages

## Pregnancy, lactation and pediatrics:

Should not be administered



# 15. *Myrtus communis* L. (Myrtle)

**Medicinal Parts:** Dried leaves, Oil

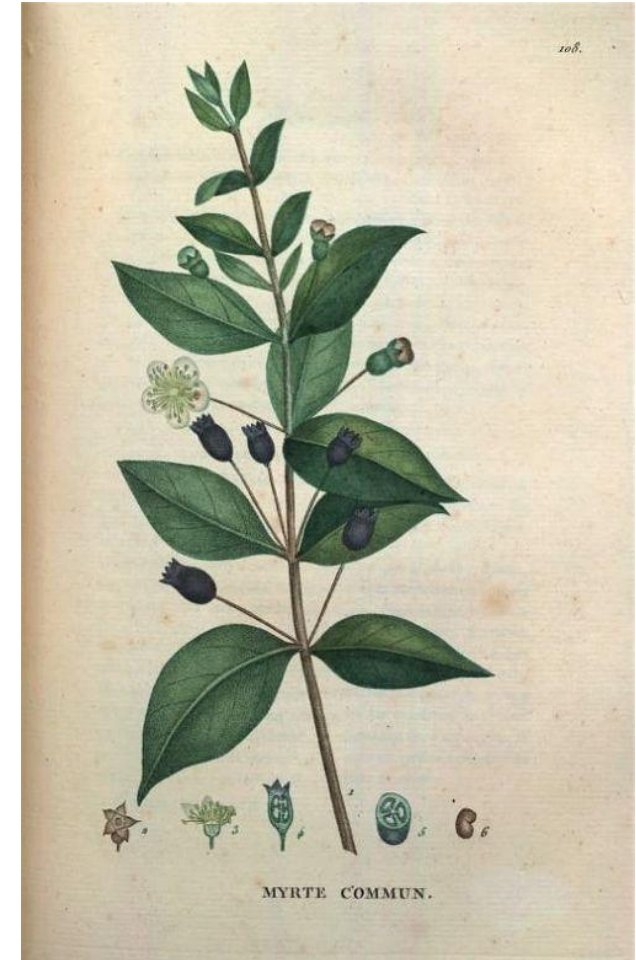
**Effects (oil):** Antibacterial, fungicidal

**(leaves):** Antimicrobial, antiedemic

**Unproven Uses (oil):** bronchitis, whooping cough, tuberculosis of lungs

**(leaves):**

- ✓ Bronchitis, Sinusitis, Tuberculosis
- ✓ Ext.: ear infections, leukorrhea



## Precaution and adverse reactions:

- No health hazards or side effects in therapeutic dosages
- Rare cases: nausea, vomiting, diarrhea
- **Contraindications:**
  1. gastrointestinal inflammatory illnesses
  2. biliary duct
  3. liver diseases
- Overdosage: life-threatening poisoning
- Pediatric use: glottal spasm, respiratory failure



**Pregnancy and pediatric use:** should not be used

## 16. *Olea europaea* L. (Olive)

**Medicinal Parts:** Dried leaves, oil from ripe drupes

**Effects:**

**(Leaves):**

✓ hypotensive, antiarrhythmic and spasmolytic

**(Olive oil):**

✓ Antisclerotic, ↓ plasma glucose





## Unproven Uses (Olive oil):

Internally: constipation, gastrointestinal ulcer

Externally: psoriasis, eczema, sunburn, mild burns  
and rheumatism

## Precaution and adverse reactions:

- No health hazards in therapeutic dosages
- Contraindicated during gallstone diseases



# 17. *Panax Ginseng* (Ginseng)

**Medicinal Parts:** Dried root

**Medicinal usage approved by Commission E:**

- Mental and physical capacities
- Convalescence

**Pharmacology:**

- ✓ Anti-fatigue activity
- ✓ Anti-diabetic activity
- ✓ Impotence



## Unproven Uses:

- Hepatotoxicity prevention
- Coughs, vomiting
- Nervous disorders

## Precaution and adverse reactions:

- Cardiovascular disease
- Diabetes
- Adverse reactions: insomnia, nosebleed, headache, nervousness, vomit
- Counterfeit products
- Estrogen-like effects
- dyspeptic complaints



## Precaution and adverse reactions:

### Drug interactions:

- antiplatelets
  - anti-diabetic drugs
  - estrogen
  - loop diuretics
  - MAOIs
- 
- Overdosage: ginseng abuse syndrome (GAS)

**Pregnancy/Lactation:** It is not recommended for use during pregnancy, lactation and to pediatric .





## 18. *Passiflora incarnata* L.

**Medicinal Parts:** Whole or cut dried herb and the fresh aerial parts

**Medicinal usage approved by Commission E:**  
Nervousness and insomnia

### **Pharmacology:**

- ✓ Anti-inflammatory
- ✓ Antimicrobial activity
- ✓ Uterine stimulant effects



## Unproven Uses:

- Internally: depressive states, nervous gastrointestinal complaints, antispasmodic, dysmenorrhoea, nervous tachycardia
- Externally: hemorrhoids, bath additive for nervous agitation

## Precaution and adverse reactions:

- No health hazards or side effects in therapeutic dosages
- Hypersensitivity
- Rhinitis
- Drowsiness: ability to drive a car may be impaired

## Pregnancy, lactation and pediatric:

↑ uterine contraction and is Contraindicated during pregnancy



# 19. *Rosmarinus officinalis* L. (Rosemary)

## Medicinal Parts:

- Oil extracted of the leaves and leafy stems,
- Flowering, dried twig tips,
- Dried and fresh leaves,
- Fresh aerial parts collected during flowering and the flowering branches

## Medicinal usage approved by Commission E:

Int.: Dyspeptic complaints, Loss of appetite, Rheumatism

Ext.: Blood pressure problems



## Pharmacology:

- Anti-microbial and antiviral
- Spasmolytic (gallbladder ducts, upper intestine)
- Circulation improvement

## Unproven Uses:

- Digestive symptoms
- Headaches and migraine
- Externally: wounds, eczema





## Precaution and adverse reactions:

- No health hazards in therapeutic dosages
- Contact allergies
- Overdosage

**Pregnancy:** Contraindicated



## 20. *Silybum marianum* (Milk Thistle)

**Medicinal Parts:** Ripe seeds

**Medicinal usage approved by Commission E:**

- Supportive treatment of hepatitis and cirrhosis induced by alcohol, drugs or toxins
- Dyspeptic complaints and gallstones

**Pharmacology:**

- ✓ Exp.: Anti-oxidant, anti-hepatotoxic, anti-inflammatory
- ✓ Clin.: Hepatitis (Alcohol-induced, viral, drug/toxin-induced)



## Unproven Uses:

- Anti-dote to *Amanita mushroom*
- Amenorrhoea
- Constipation



## Precaution and adverse reactions:

- No health hazards or side effects in therapeutic dosages
- Mild laxative
- Contraindication (allergy to Asteraceae family)
- Drug interactions (yohimbine, phentolamine)

**Pregnancy, lactation and pediatric:** should not be administered during pregnancy or lactation or to children

## 21. *Urtica dioica* L. (Stinging Nettle )

### Medicinal Parts:

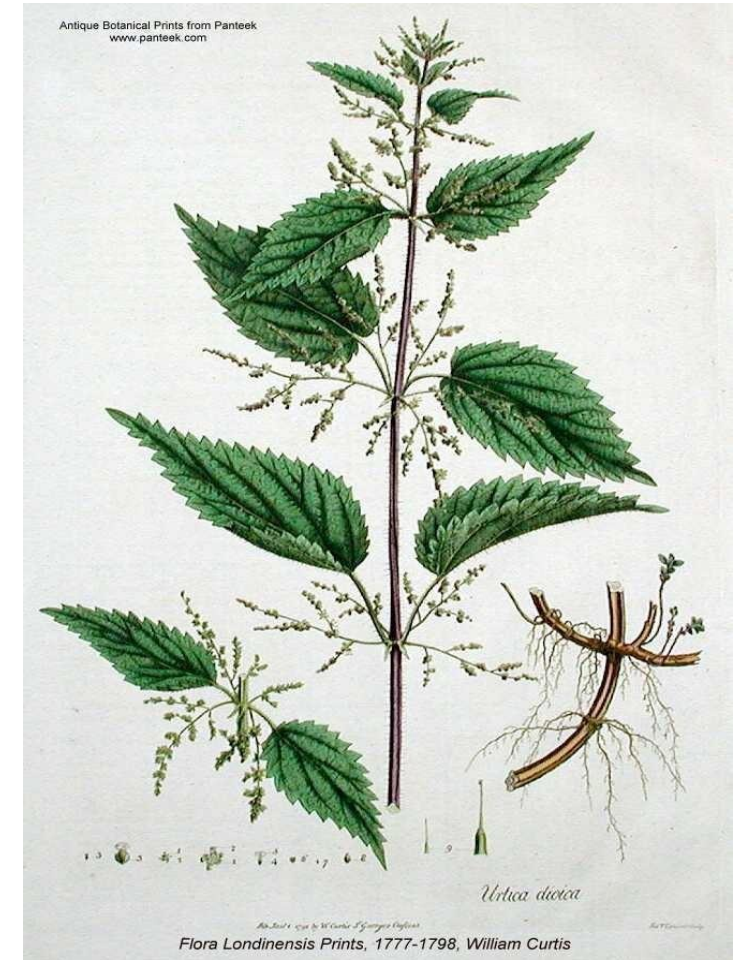
Fresh and dried flowering plant and the roots

### Medicinal usage approved by Commission E: (Flowering plant)

- ✓ Infections of the urinary tract
- ✓ Kidney and bladder stones
- ✓ Rheumatism and sciatica

### (Plant root):

- ✓ Prostate complaints
- ✓ Irritable bladder





## Effects: Flowering plant:

- ✓ Diuretic
- ✓ Analgesic
- ✓ Anti-rheumatic
- ✓ Anti-inflammatory

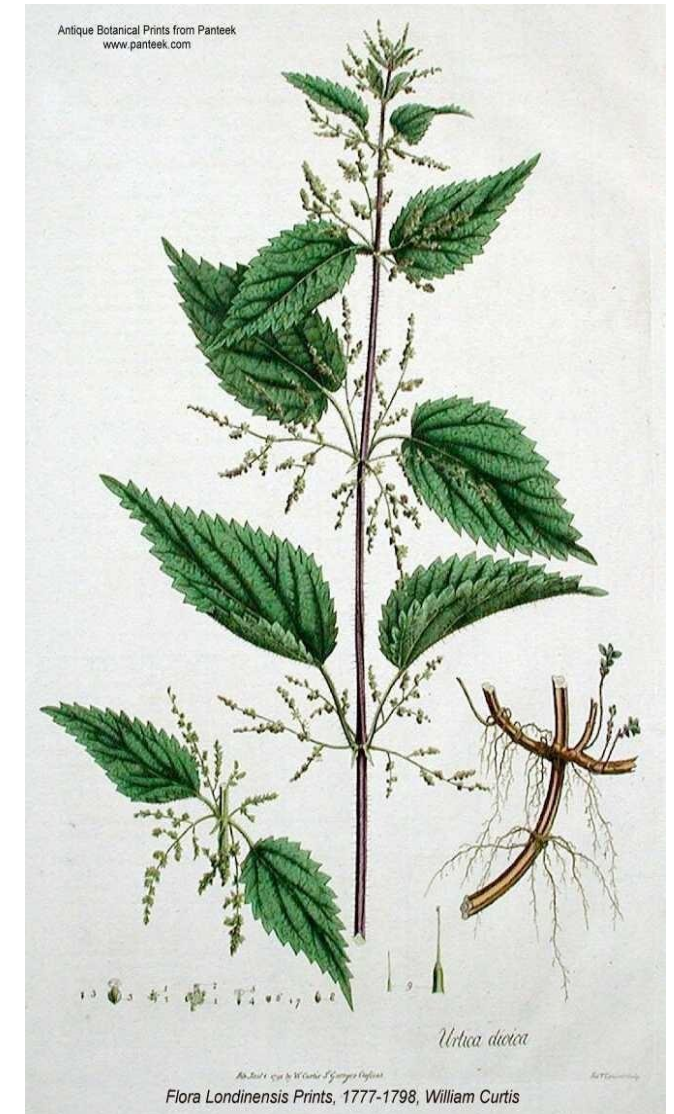
## Plant root:

- ✓ Prostatic hyperplasia (Pharmacology)
- ✓ Antiviral
- ✓ Systemic lupus erythematosus-like pathology

- ✓ **Unproven Uses (Flowering plant):**  
Asthma, coughs, oily hair and dandruff

## (Plant root):

Edema, rheumatism, gout and prostatitis



## Precaution and adverse reactions (Flowering plant):

- No health hazards in therapeutic dosages
- Possible allergic reactions
- Stinging sensation
- Contraindication
- Drug interaction (Diclofenac, ferrus)

## (Plant root):

- No health hazards in therapeutic dosages
- Mild gastrointestinal complaints

**Pregnancy:** Contraindicated during pregnancy and lactation and in children under the age of 12 years



## 22. *Valeriana officinalis* L.

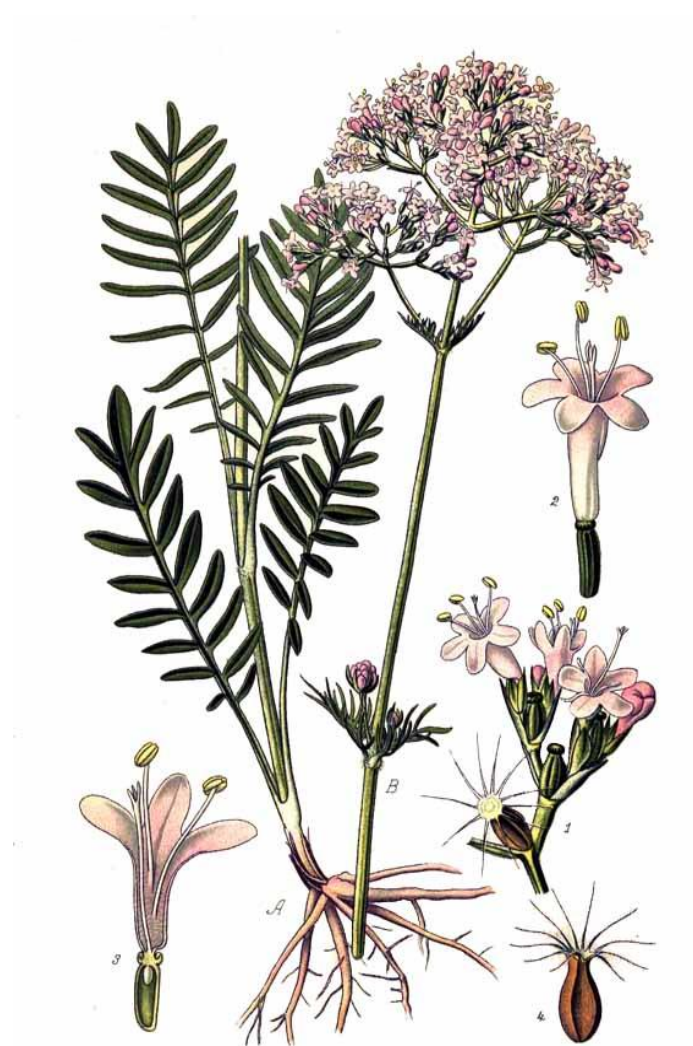
**Medicinal Parts:** Carefully dried underground parts and the dried roots

**Medicinal usage approved by Commission E:**

- ✓ Sedative
- ✓ Sleep promoting

**Pharmacology:**

- Spasmolytic
- Minor sedative
- ↑ Sleep quality



Pl.156. *Valériane officinale*. *Valeriana officinalis* L.

## Unproven Uses:

- Epilepsy
- Headaches
- Spasmolytic (smooth muscle gastrointestinal pains)

## Precaution and adverse reactions:

- Drowsiness (avoidance machinery vehicles)
- Headaches, insomnia
- Overdosage (bradycardia, arrhythmia)
- Gastrointestinal complaints, Contact allergies
- Drug interactions (CNS depressants, Ferrus, alcohol)

**Pregnancy:** Contraindicated during pregnancy, lactation and children  $\leq 12$  years





## Precaution and adverse reactions:

### Drug interactions:

- Liver toxicity drugs
- Barbiturates, benzodiazepines, alcohol
- Opioid analgesics
- Loperamid
- Ferrus

**Pregnancy:** Contraindicated during pregnancy, lactation and children  $\leq 12$  years



## 23. *Zyzyphus jujuba* L. (Jujube)

**Medicinal Parts:** Fruit

### **Effects:**

- ✓ Emollient
- ✓ Anti-allergic
- ✓ Sedative
- ✓ Hypotensive

### **Pharmacology:**

- ✓ Hypnotic-sedative and Anxiolytic effect
- ✓ Cancer
- ✓ Anti- allergic



## Unproven Uses:

- Nutrient and tonic
- Liver disease
- Stress ulcers

## Precaution and adverse reactions:

No health hazards or side effects in therapeutic dosages



## References:

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