

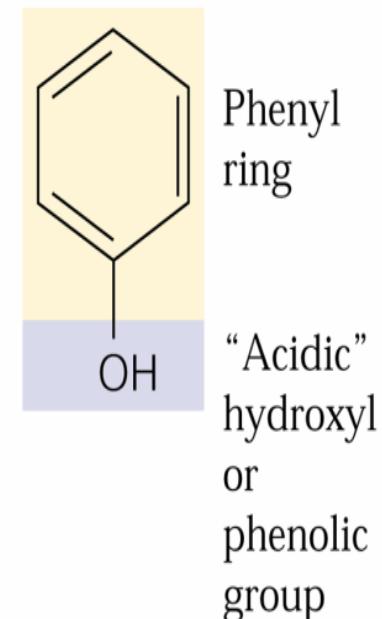
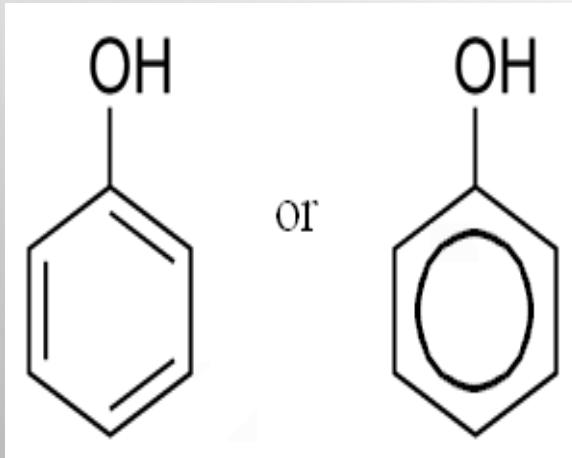
البحث الخامس

الفينولات البسيطة

Simple phenols

- Definition:

Class of chemical compounds consisting of a hydroxyl group bonded directly to an aromatic hydrocarbon group.
The simplest of the class is phenol.

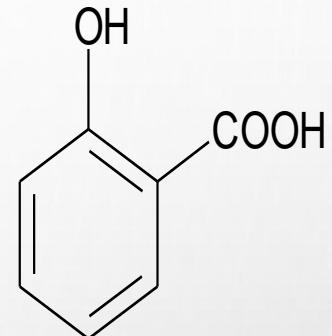


SIMPLE PHENOLIC COMPOUNDS

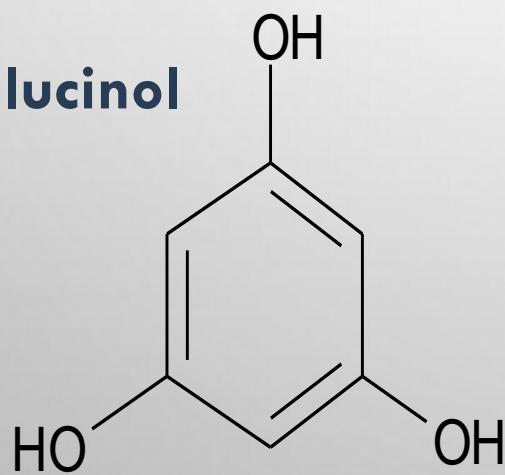
Hydroquinone



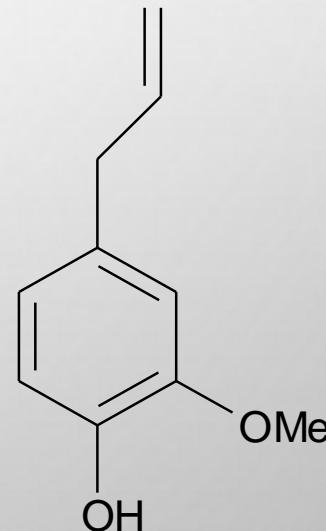
Salicylic acid

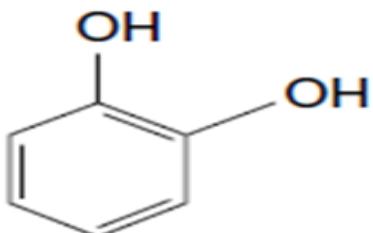


Phloroglucinol

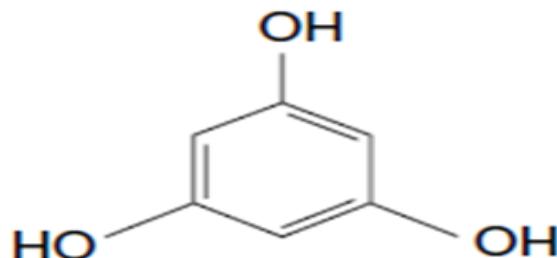


Eugenol

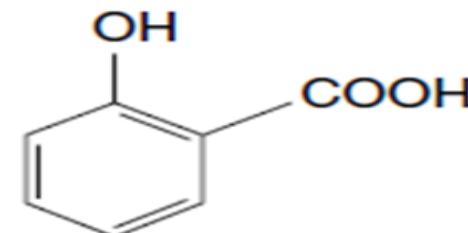




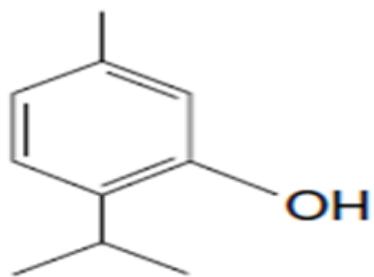
Catechol



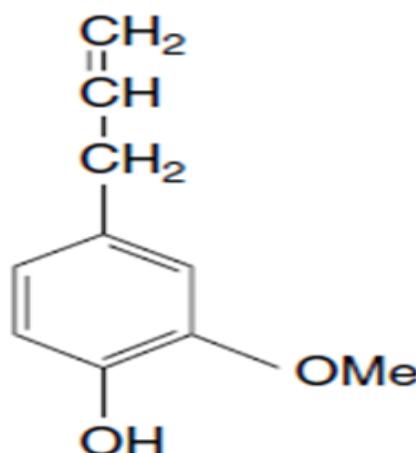
Phloroglucinol



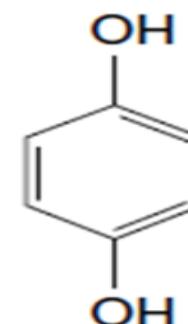
Salicylic acid



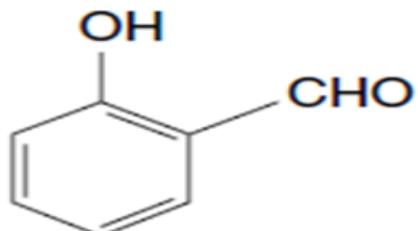
Thymol



Eugenol



Hydroquinone



Salicylaldehyde

Fig. 21.1
Simple phenolic compounds.

السرخس المذكر MALE FERN

- **LATIN NAME:** *Dryopteris filix mas*

- **FAMILY:** Polypodiaceae

- **USED PART:** Dried rhizome

[collected in autumn with the leaf bases].

- **CONSTITENTS**

The active compounds are **phloroglucinole derivatives**

(0,2%, mixtures termed **raw filicin**)



XXXV.

2. Polyp.



Wurmfarn.

M. A. *Lycopodium filiforme* Lvarb.
B. *Lycopodium lobatum* Lvarb.

EFFECTS:

طارد للديدان anthelmintic effect

مضاد فيروسي antiviral

The pharmacological effect is largely due to the **filicic acids**.

Unproven Uses: it is used externally for

rheumatism,

muscle pain,

الآلام العصبية neuralgia

ألم الأسنان and toothache, ألم الأذن earache

ال بواسير burns, hemorrhoids

for teething in infants, and sleep disorders

Contraindications should not be administered in the presence of anemia **فقر الدم**, cardiac, liver or kidney diseases or diabetes.

Precautions and adverse reactions general: The following can occur even with therapeutic dosages:

Nausea **غثيان**, severe headache **صداع شديد**, vomiting, diarrhea **اسهال**.

- ❖ should not be used during **pregnancy** and should not be administered to **children under 4** years and to **elderly** persons

- ❖ Cases of **death**, particularly among children, have been observed following administration of **Filmaron oil** (10% solution of volatile extracts of the rhizomic drug in cooking oil).

الزنجل أو حشيشية الدينار HOPS

- **LATIN NAME:** *Humulus lupulus*



- **FAMILY:** Cannabaceae **القنبلة**

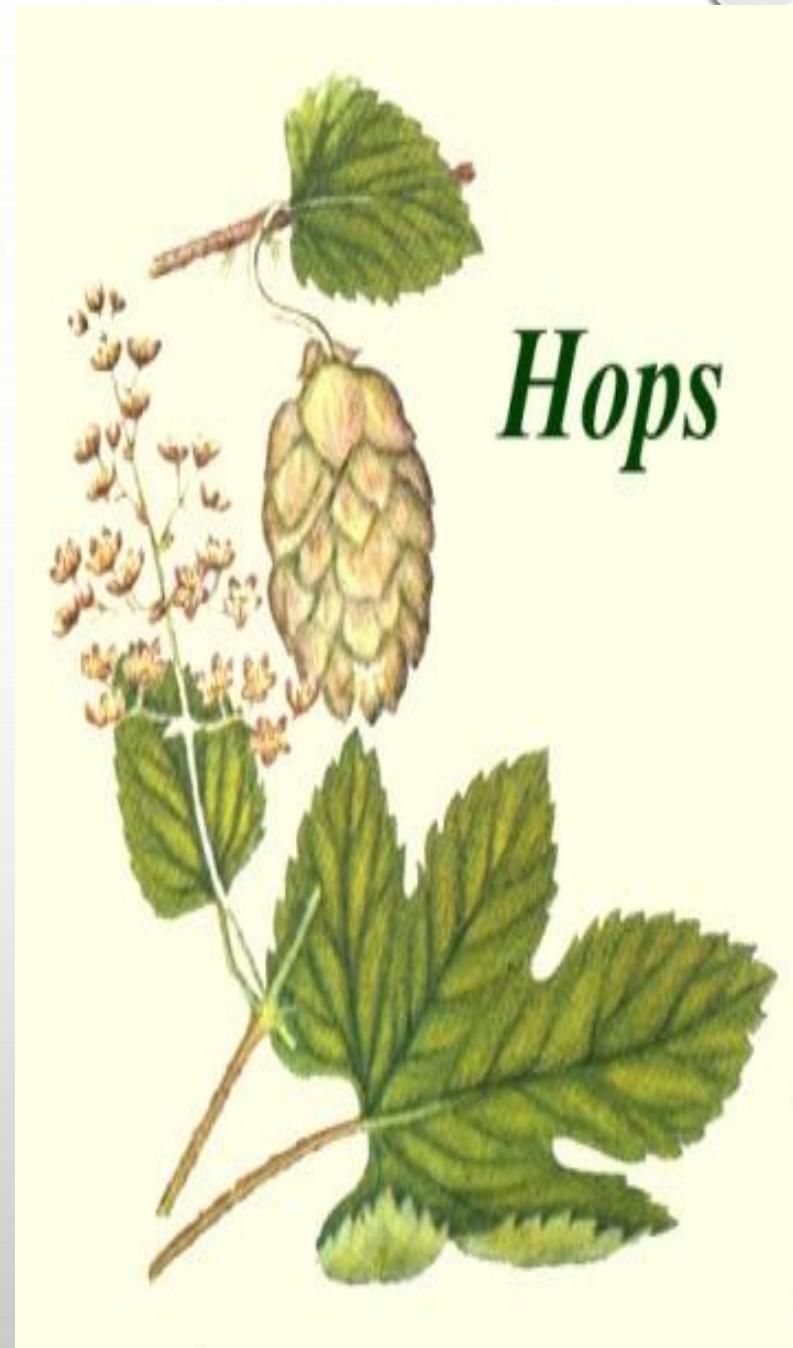
- **USED PART:** the whole dried female flowers

[collected before the seeds ripen and the fresh or dried female inflorescence].



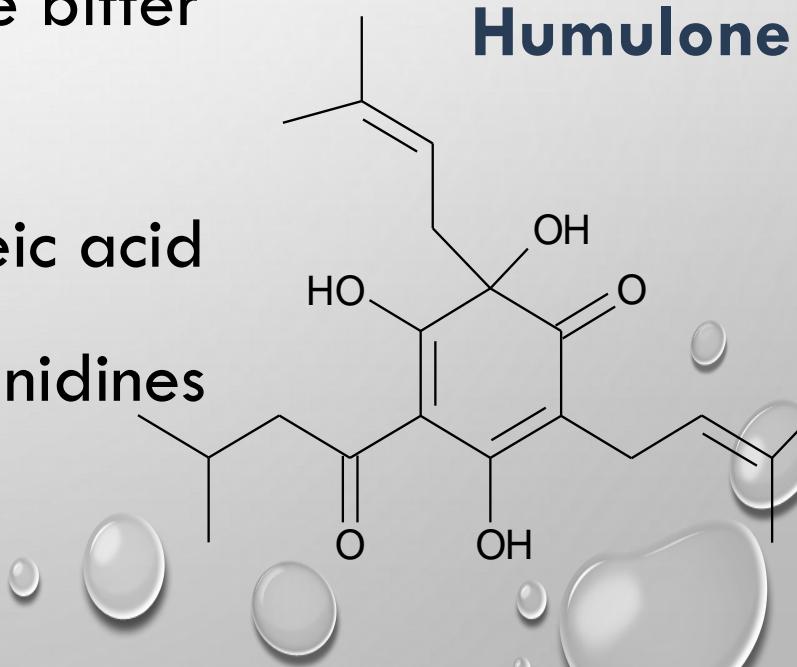
HOPS





CONSTITENTS

- Acylphloroglucinols (10%)
- Alpha-bitter acids: **humulone**
- Beta-bitter acids: **lupulone**
- Volatile oil (0.3-1.0%)
- Resins (oxidation products of the bitter acids)
- Phenolic acid: ferulic acid, caffeic acid
- Tannins: oligomeric proanthocyanidines
- Flavonoids: xanthohumole



Uses:

- The hop bitter acids are **antibacterial** مضاد جرثومي and **antimycotic** مضاد فطري.
- They stimulate the **secretion of gastric juices**.
- strong **spasmolytic effect** on the smooth muscle of the intestinal tract

Indications and usage approved :

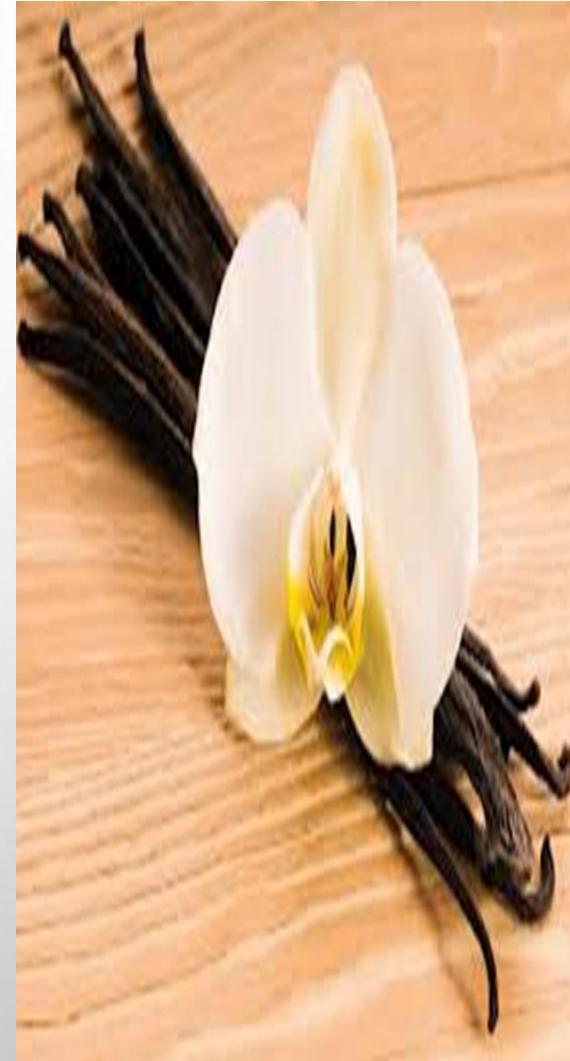
الأرق and insomnia التوتر and nervousness

VANILLA

- **LATIN NAME:** *Vanilla planifolia*
- **FAMILY:** Orchidaceae
- **USED PART:** Vanilla pods (**fruits**).

[They are 15-20cm long, 8-10 mm diameter.

They have a very characteristic odor and taste].

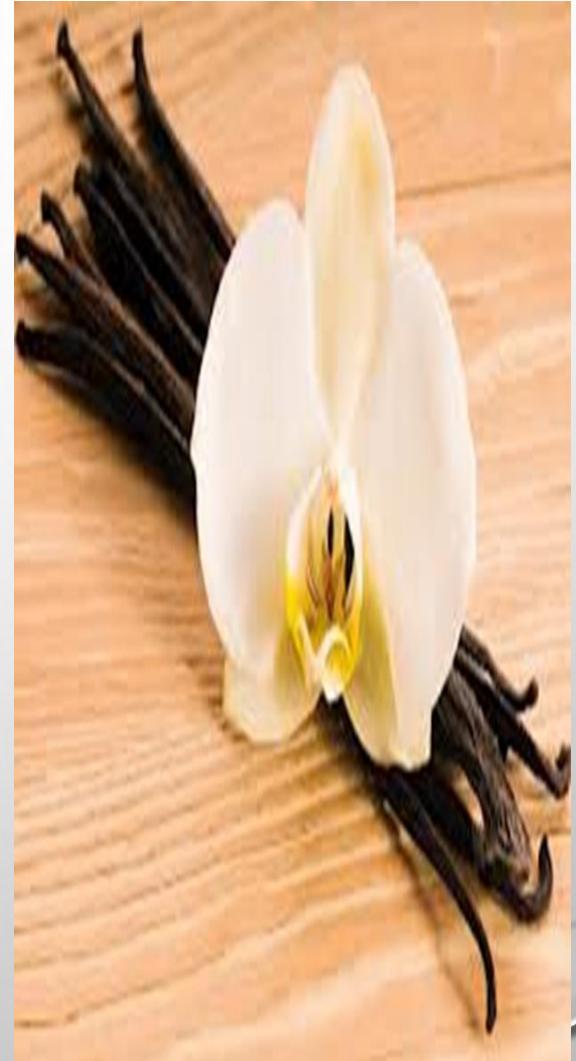


VANILLA

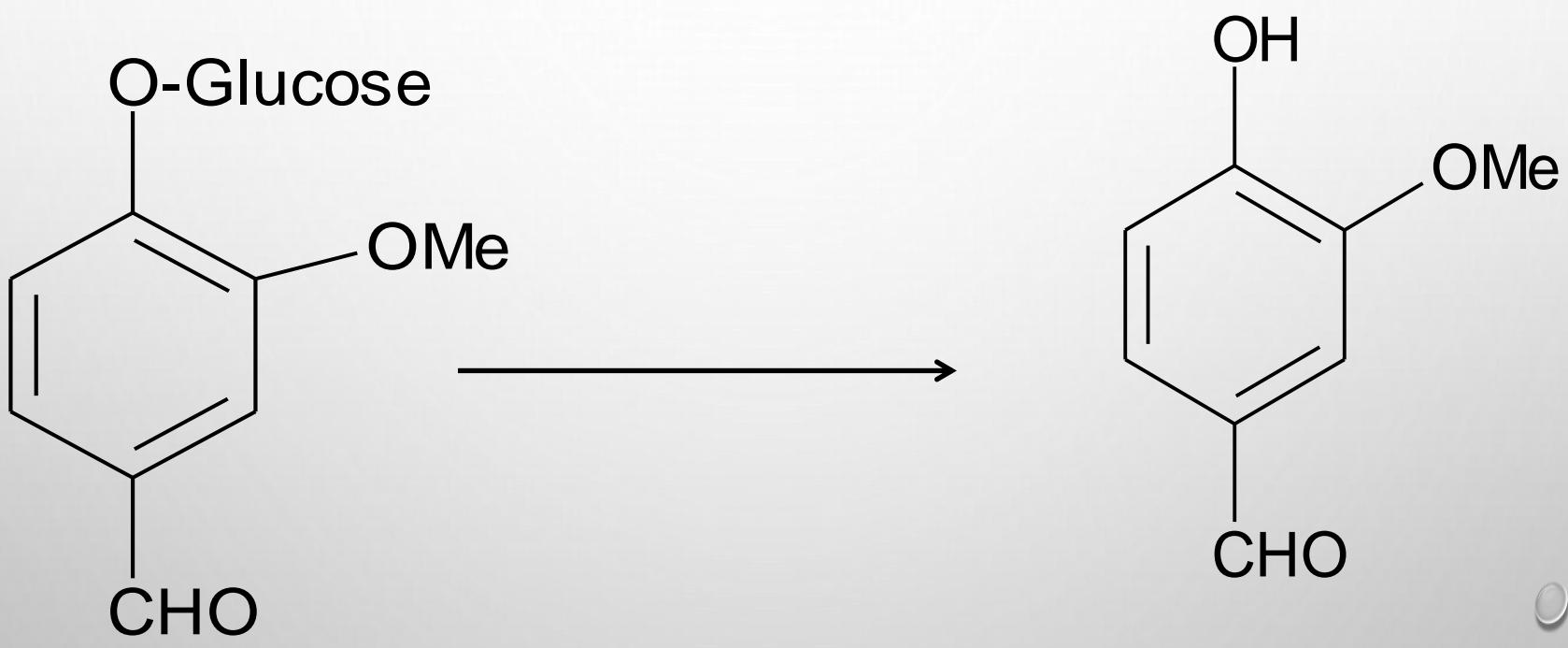
USES

Vanilla pods are widely used in

- confectionery الحلويات
- perfumery العطور
- They can be used as choleric مفرز صفراء



Green vanilla contains glycosides namely: **glucovanillin** (without odor) yield on hydrolysis **vanillin** (special odor)



Glucovanillin

vanillin

الصفصاف

LATIN NAME: *Salix alba*

FAMILY: *Salicaceae* الصفصافية

USED PART: Barks

CONSTITENTS

- Tannins,
- salicoside (salicin glycosides)
- salicylic acid



USES

Analgesic مسكن الم

anti-inflammatory مضاد التهاب

Antipyretic خافض حرارة.

- The **salicin** component is responsible for the **anti-inflammatory** and **antipyretic** effects.
- The **tannin** content has **astringent** properties on mucous membranes.

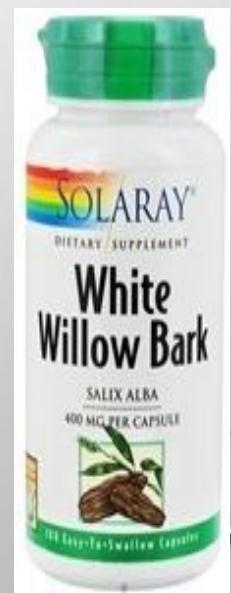
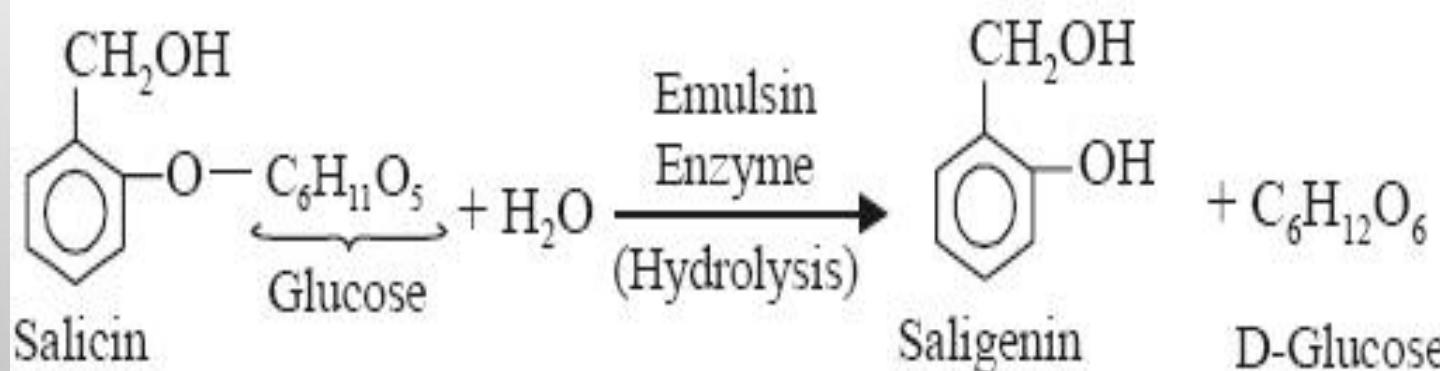


الصفصاف الأبيض White Willow

- Native to Europe and western and central Asia
- It is a medium-sized to large tree growing up to 10–30 m tall



Salicin is a simple phenolic glucoside consisting of the aglycone saligenin (also known as salicyl alcohol) and glucose





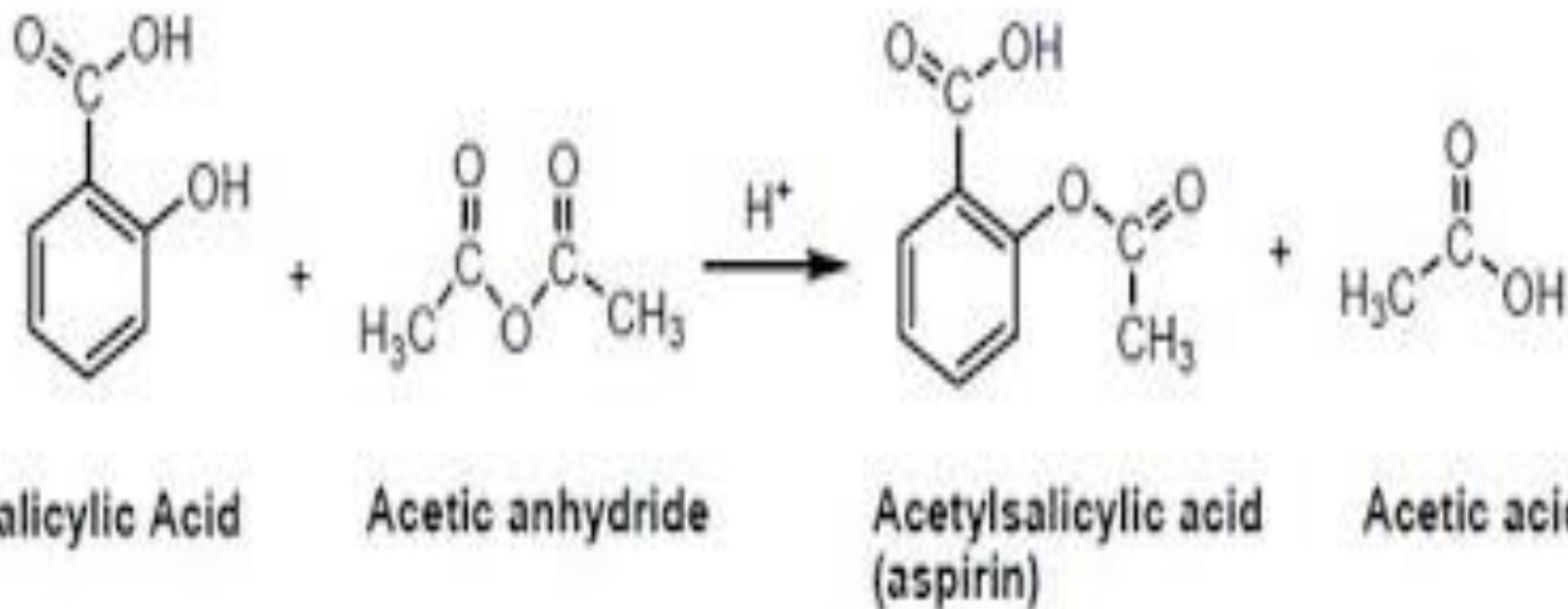
Salicin & Aspirin



- The german pharmaceutical company bayer began looking for a version of salicylic acid with a better side effect profile.
- Between 1893 and 1897 **felix hoffman** developed an improved way of producing acetylsalicylic acid.
- He tested it on his father whose chronic arthritis improved markedly.
- In 1899 acetylsalicylic acid was commercially released with the name aspirin which is equally active and better tolerated



Salicin & Aspirin



BEARBERRY LEAVES

أوراق عنب الدب

LATIN NAME: *Arctostaphylos uva-ursi*

FAMILY: *Ericaceae* الخانجية

USED PART: Leaves. 2-3 cm long

CONSTITUENTS:

- Tannins, glycoside arbutinoside.

USES:

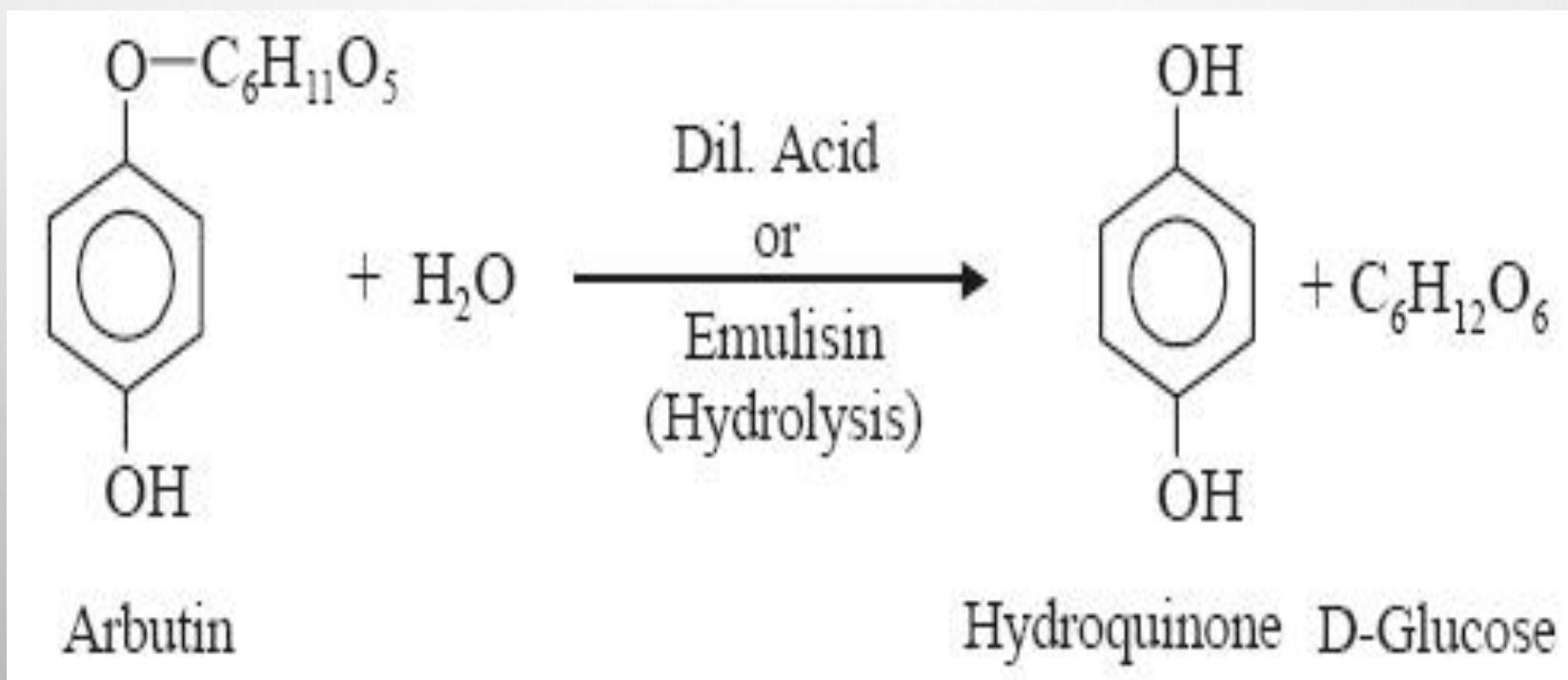
- **Diuretic** مدر

- **astringent** قابض

- **antiseptic on urinary tract** مطهر ملتحي بولية.



The antimicrobial effect is associated with the aglycon hydroquinone released from arbutin (transport form) or arbutin waste products in the alkaline urine



Habitat :in northern hemisphere, of Europe Asia and America.

Description: the bearberry is a small shrub, with much branched, irregular stems and evergreen leaves.

Leaves are of a leathery texture like a spatula in form.



LEMON BALM المليسة

LATIN NAME :

Melissa officinalis

Family : Lamiaceae

الشفوية

USED Part : leaves



CONSTITUENTS:

essential oil , rosmarnic acid

USES:

mild sedative مهدئ لطيف

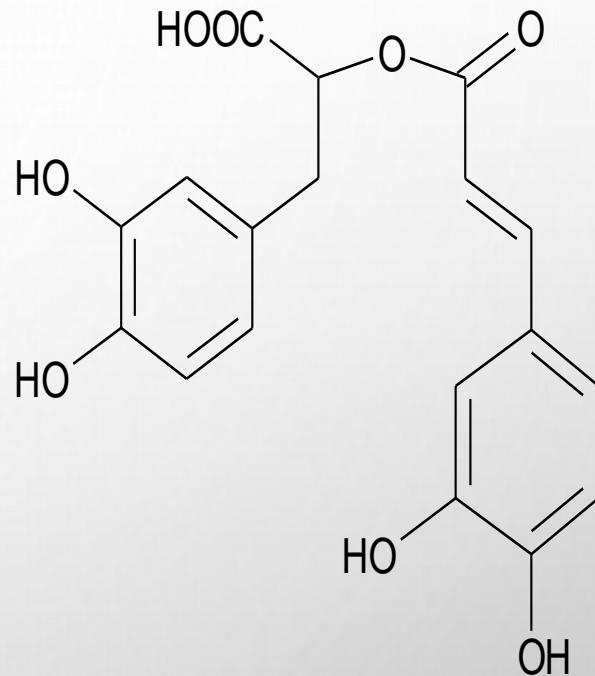
carminative طارد ريح

Spasmolytic مضاد تشنج

Antibacterial effects

Antiviral effects

Anti-oxidative effects مضاد أكسدة



Rosmarinic acid

PROPOLIS OR BEE GLUE

العکبر أو البروبوليس أو صمغ النحل

- **Propolis** is a resinous mixture that is used as a sealant مادة عازلة for unwanted open spaces in the hive خلية النحل.
- **Constituents:**
 - phenoles 58%
 - beewax 24%
 - glucoflavonoids
 - bioelements
- **Uses:**
 - العلاج بالنحل Apitherapy
 - مضاد بكتيري antibacterial
 - مخدر موضعي local anaesthetic

