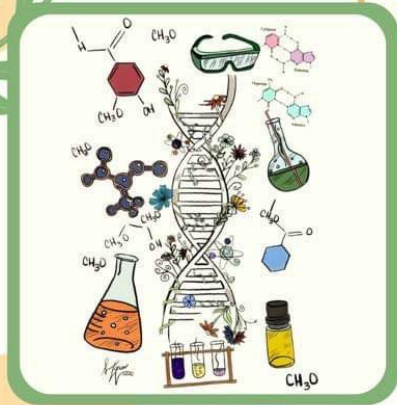


تفريغ عقاقير



Pharmacognosy PREPARATION OF CRUDE DRUGS FROM MEDICINAL PLANTS

Cultivation, collection and processing of
herbal drug
References
Trease and Evans, Pharmacognosy

اسم الموضوع:

إعداد الصيدلاني/ة: *أمنة بعبارة*



لجان الرُفَعَات

Chemical or Biogenetic Classification

Based on this type of classification we can group the medicinal plants into:

1. Carbohydrates → primary metabolite

2. Glycosides: → Digoxen

a. **Anthraquinone Glycosides** – Aloe , Cascara , **Rhubarb** , Senna

b. **Saponins Glycosides** – Quillaia , Glycyrrhiza

c. **Cyanophore Glycosides** – Wild cherry bark

d. **Isothiocyanate Glycosides** – **Mustard**

e. **Cardiac Glycosides** – **Digitalis** , Strophanthus

f. **Bitter Glycosides** – **Gentian** / **Calumba** / **Quassia** ✕

3. Tannins → مركبات عيانية ضئيلة

4. Volatile Oils: Monoterpenes & Sesquiterpenes

5. Resins: Complex mixture of compounds like resinols , **resin acids** , resinotannols: Cannabis , Capsicum , Turmeric , Balsam of Tolu and Peru , Myrrh , Ginger.

6. Alkaloids: Nitrogenous substance

Pyridine and Piperidine – Lobelia , Nicotiana

Tropane – Datura , Stramonium , Hyoscyamus , Henbane .

Quinoline - Cinchona

Isoquinoline – Opium , Ipecac , Calumba .

Indol – Ergot , Rauwolfia .

Amines – Ephedra

Purines – Tea , Coffee .

7. Triterpenes

هناك السلايد
حفظ بس
عليه هائل

المركبات
التي تحتوي
على السكران

رأي مثلاً
طائفة
لناي (بعض)
بالش

فئة
ربعضاً
Benzoic
acid



كتب تعوي على
كتابة واحدة شاملة.

Monographs

A **monograph** (Classical Greek, "One Writer" or "Single Writing") is a work of writing upon a **single subject**

← يتكون عن موضوع واحد

A single document that forms a complete text in itself.

Normally it is used for a work intended to be a complete and detailed exposition of a substantial subject at a level more advanced than that of a textbook.

← أكثر تقدماً

Monographs form a component of the review literature in science and engineering.

← ليست ببسب البيانات كما بالفرصة



Published monographs

تخطيط معايير
الهيئة

→ The aim has been to set standards for quality, efficacy and safety in order that the many traditional herbs meet legal requirements. The following are of note:

1-German Commission E monographs.

وزارة الصحة الألمانية

These were developed for the German Federal Health Authority between 1978-1994 and involve 324 herbs used in German traditional medicine. → The monographs give sources, constituents and considerable pharmacological and clinical information.

→ They have now been translated into English and published by the American Botanical Council in 1999 as a single work.

ترجموها من
الألماني للإنجليزي
فريق كتاب

حافيه
Reference



2- ESCOP monographs: → من الاتحاد للأدوية Monographs

ESCOP (European Scientific Cooperative for Phototherapy) Information is given on **approved therapeutic uses**, and unlike the Commission E monographs, **provides references.**

3- AHP monographs:

The American Herbal Parmacopoeia planned to have published 11-13 monographs by the end of 2000.

→ There is naturally a selection of American traditional herbs with some overlap with the European monographs.

بعض النباتات بأعيركا العالية

4- WHO monographs: منظمة الصحة العالمية

The World Health Organization published Volume I of its *Monographs on Selected Medicinal Plants* in 1999. It contains standards for quality of drugs together with a therapeutic section.

5- USP monographs:

The United States Parmacopoeia is also producing herbal monographs.



Pharmacognosy

PREPARATION OF CRUDE DRUGS FROM MEDICINAL PLANTS

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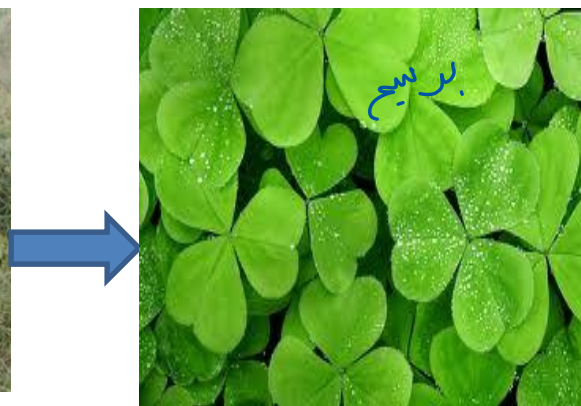
References

Trease and Evans, Pharmacognosy

Dr. Jamila Dibas

Dr. Talal Abu rojai

GRAPHICAL OUTLINE



By Erhirne Earnest O.

Preparation of drugs for commercial market

- Crude drugs: undergo only drying and preparation by grinding → طحن
- Preparation of drugs for commercial market includes:
 1. Collection
 2. Harvesting
 3. Drying (By airflow or complete drying operation)
 4. Garbling
 5. Storage and preservation

Collection of medicinal plants

يؤثر

Time of collection affects both quality and quantity of active constituents.

المادة الفعالة

It has been found that active constituents in plants vary in amount and nature throughout the year so **Seasonal Collection is required.**

يختلف

*المادة الفعالة تختلف من

فصل لفصل ومن وقتة الى وقتة

الزود

For example: Rhubarb contains no anthraquinone in winter, instead it contains anthranols, In summer, anthranols are oxidized to anthraquinones (**active constituent**) so Rhubarb collection must be in summer.

← مادة تنوكل

المادة الفعالة عنده
anthraquinones

← اوراق الشاي

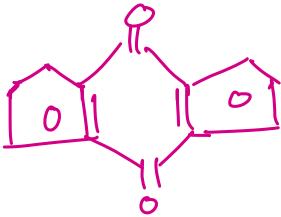


لا فائدة



Active Anthraquinone

1. Rhubarb
2. Senna
3. Cassia
4. Alo vera



Collection of medicinal plants

• 2. Time of the Day

- Flowers : Morning ✓

- Leaves (exceptions are available) : afternoon

الأوراق

فترة بعد الظهر



• 3. Stage of maturity and age:

- - Clove: buds ^{براعم} *زيت الليمون oligonol*

- - leaves: at flowering stage.

يقطفه قبل ما تفتح الزهرة

يجمعها
تجمع المواد الفعالة
لأنها منقولة الأوراق في مرحلة النضج
(لا يتم في مرحلة الازدهار)

not at the fruit stage



قرنفل قبل النضج

Collection of plant materials:

- Suitable time for collection the amount of a constituent is usually not constant throughout the life of a plant.
- Roots and rhizomes should be collected in the raining season. In most cases they must be washed free of adhering soil and sand. (التربة تكون طويلاً) ← بعد ما نغسل البطاطا فتخلصها
- Bark should be collected in the dry season. (الجلود تاشف) ← الجوت تاشف
- Leaves should be collected at the flowering stage. (Not the fruit stage) ← على الندي
- Flowers should be collected when fully developed and also in the morning after the morning dew had evaporated. (على الندي)
- Fruits and seeds should be collected when fully ripe.
- Whole plant should be collected during flowering stage



الشيء

- Generally, when, plant part reaches it's optimal state of development, it is assumed that the targeted active constituent is in highest concentration:
- **1. Roots and rhizomes collected at the end of the vegetation period (in autumn).** → Rainy time / خريف زياره
- **2. Bark is collected in the spring.** → ربيع
- **3. Leaves and herbs are collected when photosynthesis is most active and before fruit maturation.** ✓
- **4. Flowers are usually gathered when fully developed.**
- **5. Fruits and seeds are collected when fully-grown and ripe.**
- **6. Seeds: fully matured and before the fruits have opened**

قبل ما تتطايرو
بينو الزهره

Preservation

- Preservation aims at limiting **decomposition** processes as much as possible.
- The plant material must first be **preserved** so that the active compounds will remain unchanged during transport and storage.

النباتات
أولاً تكون
Preserved
عشان تفضل
المركبات الفعالة
دون تغيير

Factors that might affect the quality of crude drugs:

كواليتي
على
Crude
Drugs

1. Light ✓
2. Oxygen ✓
3. Attacks by insects (this can be achieved by using methyl bromide or heating up to 65C) ✓
4. Low Temperature ✓

واحافظ عليها من التلف