

Module title: Medicinal and Aromatic plants

Lecturer: A. Einali (Associate prof.)

Assessments: 30% mid-term exam-1
30% mid-term exam-2
35% final exam
5% Quiz

References:

1. The constituents of medicinal plants: an introduction to the chemistry and therapeutics of herbal medicine, 2nd edition, 2006

Andrew Pengelly

2. Medicinal and Aromatic Plants of the World: Scientific, Production, Commercial and Utilization Aspects, Volume I, 2015

Series Editor: Akos Mathe

Module subjects:

1. Utilization/Significance of Medicinal and Aromatic Plants

1st week: Introduction, Notion of Medicinal and Aromatic Plants (MAPs), Medicinal and Pharmacological Applications

2. Botanical Aspects of MAPs

2nd week: Morphology and physiology

3rd week: Plant Systematics and Taxonomy

4th week: Sustainable Management of MAP Resources

5th week: From Wild Plants to Cultivated Species Domestication

6th week: Productivity of MAPs under the Influence of Environment

3. The constituents of medicinal plants

3.1. Primary Metabolism

7th week: Introduction to phytochemistry, Primary metabolism, Carbohydrates

8th week: Polysaccharides: Gums, mucilage and Immunostimulating polysaccharides, Lipids, *mid-term exam-1*

3.2. Secondary metabolism

9th week: Phenols: Simple phenols, Phenylpropanoids, Salicylates and salicins, Lignans, Coumarins, Stilbenes, and Quinones

10th week: Polyphenols: Tannins and Flavonoids

11th week: Glycosides: Cyanogenic glycosides, Glucosinolates, *mid-term exam-2*

12th week: Terpenes: Monoterpenes, Sesquiterpenes, Diterpene, Tetraterpenes

13th week: Triterpenoid, Saponins

14th week: Essential oils, Resins

15th week: Alkaloids: Introduction, Properties of alkaloids, Classification, Pyridine-piperidine alkaloids, Quinoline alkaloids, Isoquinoline alkaloids

16th week: Tropane alkaloids, Quinolizidine alkaloids, Pyrrolizidine alkaloids, Steroidal alkaloids, Pseudo alkaloids, Purine alkaloids, *Preparation for final exam*