Pharmacognosy Lectures (2 hours/week)

I.

1	02.07.	Pharmacognosy, history of pharmacognosy. Medicinal plant – herbal/crude drug
2	02.14.	Nomenclature. Classification of herbal drugs.
3	02.21.	Sources of drugs, factors involved in the production of drugs. Quality control. From plant to phytopharmaceutical (phytotherapy).
4	02.28.	Compounds of primary metabolism. Carbohydrates. Mono- and oligosaccharides and their drugs. Homogenous polysaccharides and their drugs. Heterogenous polysaccharides: gums, neutral and acidic mucilages, pectins; polysaccharides from microorganisms and fungi. Algae polysaccharides.
5	03.07.	Lipids. Generalities, vegetable oils, alkyne derivatives. Amino acids (which are not constituens of proteins). Cyanogenic glycosides, glucosinolates. Betalains. Protein sweeteners. Lectins. Enzymes.
6	03.14.	Compounds of special (secondary) metabolism. Plant phenolics in general. Phenols, phenolic acids, derivatives and herbal drugs. Coumarins and coumarin containing drugs. Medicinal application and toxicity.
7	03.21.	Lignans, lignan-containing drugs. Biological interest of lignans. Silybum marianum and its significance.
8	03.28.	**holiday**
9	04.04.	Flavonoids, chemical structure and classification, biological properties, use of flavonoid containing drugs, therapeutical significance. Chief flavonoid-containing vegetable drugs. (Crataegus species, Ginkgo biloba, etc.).
10	04.11.	Isoflavonoids, rotenoids, biological significance. Anthocyanins, chief anthocyanin-containing drugs. Phenoloids in Zingiberaceae family (diarylheptanoids and arylalkanones).
11	04.18.	Tannins. Classification of tannins. Structures and properties of hydrolyzable and condensed tannins, biological significance. Chief tannin-containing drugs.
12	04.25.	Polyketides-quinones. Naphthoquinone-containing drugs.
13	05.02.	Laxative hydroxyanthraquinone glycosides. Pharmacological properties. Main hydroxyanthraquinone glycoside-containing drugs. Naphthodianthrone and diterpene quinone containing drugs. Hypericum perforatum. Orcinols and phloroglucinols. Cannabis. Humulus lupulus.
14	05.09.	Medicinal plants / active compounds and redox homeostasis
15	05.16.	Obligatory test - exam

II.

1	2018. 09.11.	Terpenoids. Biogenetic generalities, classification. Monoterpenoids
2	2018. 09.18.	Essential oils I. Distribution, localisatioin, function, physical properties and chemical composition of essential oils. Pharmacological properties and toxicity of essential oils. Chief drugs containing essenital oils I.
3	2018. 09.25.	Chief drugs containing essenital oils II. Oleoresins
4	2018. 10.02.	Iridoids, sesquiterpene lactones, diterpenes and chief drugs
5	2018. 10.9.	Triterpenes and steroids. Saponins and chief drugs
6	2018. 10.16.	Cardioactive glycosides and chief drugs. Unusual terpenoids. Ecdisteroids
7	2018. 10.23.	holiday
8	2018. 10.30.	Alkaloids. Generalities. Alkaloids derived from ornithine and lysine I. (*Tropane alkaloids*)
9	2018. 11.06.	Alkaloids derived from ornithine and lysine II. (pyrrolizidine-, quinolizidine-, indolizidine-, piperidine alkaloids) Alkaloids derived from nicotinic acid. (Tobaccos, Betel) Alkaloids derived from phenylalanine and tyrosine I. (Ephedras and Khat, Peyote)
10	2018. 11. 13.	Alkaloids derived from phenylalanin and tyrosine II. (Curares, Protoberberines, Morphinan alkaloids, Phenethylisoquinolines, Amarillidaceae alkaloids, Monoterpenoid isoquinolines)
11	2018. 11. 20.	Alkaloids derived from tryptophane (Hallucinogenic indole alkaloids, Calabar bean, Ergot alkaloids, Monoterpenoid indole alkaloids, Loganiaceae, Rubiaceae, Apocynaceae, Cinchonas)
12	2018. 11.27.	Alkaloids derived from anthanilic acid and histidene. Terpenoid alkaloids. Cyanogenic glycosides, glucosinolates. Purin bases
13	2018. 11.04.	Test- Competition
14	2018. 12.11.	Results of the test and competition. Plants in complementer and traditional medicines