

Biologically active compounds of horticultural crops

2017/2018 fall semester

Wednesday, 14-17h, Room: G6

Day	Topic of lecture	
06.09.	Introductory exercises. Grouping of plant originated biologically active compounds. Influencing factors in the accumulation of active compounds, their role in life of plants and humans.	Németh
13.09.	<i>Cancelled</i>	
20.09.	Lipids: fats, oils, prostaglandines. Characteristic compounds, examples, their role in plant's life, their utilisation potential. Phenolic compounds, glycosides, phenyl-propanes, polyphenols.	Németh
27.09.	Characteristic structures of synthesis and accumulation of special compounds in plants.	Szabó
04.10.	Nitrogen containing secondary metabolites. Characteristic compounds, examples, their role in plant's life, their utilisation potential.	Bernáth
11.10.	Essential oils. Terpenoids and other compounds. Characteristic compounds, examples, their role in plant's life, their utilisation potential.	Szabó
18.10.	Steroids, saponines, bitter substances. Characteristic compounds, examples, their role in plant's life, their utilisation potential.	Németh
25.10.	Antioxidants and natural dye compounds. Characteristics, plant examples, human utilisation.	Pluhár
01.11.	<i>National holiday</i>	
08.11.	Minerals, trace elements. Characteristic compounds, examples, their role in plant's life, their utilisation potential.	Szabó
15.11.	Laboratory practice (Dept. of Medicinal and Aromatic Plants) <i>Compulsory participation</i>	Radácsi Cserhádi
22.11.	Saccharides, carbohydrates and vitamins. Characteristic compounds, examples, their role in plant's life, their utilisation.	Gosztola
29.11.	Practical work, exercises, tests	Németh
06.12.	Oral Presentation of homeworks	Németh

Education material: Subject of the lectures and 'pdf' file materials provided by teachers.

Prerequisites for obtaining the credits:

1. Control questions

Each lecture starts with simple test questions from the material of the previous lecture. As minimum, fulfilling at least 60% of the tests are compulsory for exam registration. On the other side, excellent performance in each of these tests results in a final score without exam.

2. Preparation and presentation of individual homework

A specific phenolic type compound or compound group should be chosen by each student based on discussion with the teacher. The homework is a short study (presentation) on its occurrence, biosynthesis/degradation, accumulation, chemical features, role in the plant life, human biological activities including eventual adverse effects, utilisation in different products. The work should be prepared based on scientific literature references. Appr. 3-4

pages and min. 5 references from the last 10 years. The work should be submitted in written form electronically till 01 December (zamborine.nemeth.eva@kertk.szie.hu). The presentation is oral using 'ppt' slides at the last lecture.

2. *Written exam in the examination period* in December-January
The topics of the exam are available in the homepage.

Budapest, 2017. 09. 04.

Zámboriné dr. Németh Éva
course leader