

# Antioxidants in Natural Environment

## Course description

**Subject leader:** Tamás Hofmann, Ph.D., associate professor

**Lecturer:** Tamás Hofmann, Ph.D., associate professor

**Institute:** University of Sopron, Faculty of Forestry, Institute of Chemistry

**Course code:**

**Credit points:** 3

**Evaluation:** oral exam / written exam / mid-term grade

**Instruction hours/week (lecture + practice):** 2 + 0

**Language:** English

## Course content

Antioxidants contribute to defense and related mechanisms in plants and take part in significant processes in the natural environment. In the framework of the course the main types of antioxidants are discussed as well as their function and role in plants and their interaction with the environment. Specific fields will be covered also depending on the interests of the students. Definition and classification of antioxidants and antioxidant systems. Function and role. Measuring antioxidant capacity – methods and assays. Main types of antioxidants and their role in forest plants with a special on plant protection, climate change, etc... explained by examples. Role of enzymatic and non-enzymatic antioxidants in plant defense. As the closing of the course some individual work is done by the students in form of a short presentation of a selected topic.

## Required and recommended reading

R.R. Watson: Polyphenols in Plants, Academic Press, 2018

D.K. Gupta, J.M. Palma, F.J. Corpas: Antioxidants and Antioxidant Enzymes in Higher Plants, Springer, 2018

S.D. Gupta: Reactive Oxygen Species and Antioxidants in Higher Plants, CRC Press, 2011