Cannabis on prescription – the fascinating spectrum of cannabinoids

Status
Completed

Duration
10.2018-09.2019

Description
Since the change in the law in March 2017, the demand for cannabis-based drugs has been growing steadily. The antispasmodic and analgesic effect is attributed to the secondary metabolites, the cannabinoids, which are found in the hemp plant. Due to a prohibition of cultivation for many years, the extensive cannabinoid spectrum of hemp (*Cannabis sativa* L.) could not be fully researched and used so far. The focus is not on the psychoactive THC (Δ9-Tetrahydrocannabinol), but on the medical potential of cannabidiol (CBD), cannabigerol (CBG) and cannabidiol acid (CBDA). Within the project, the cannabinoid profile of different *Cannabis* varieties was investigated depending on the developmental stage of the plant and the plant organ.

For this purpose, seven industrial hemp varieties were planted in summer 2018. The trial cuts were carried out at the leaf, bud, flowering and ripening stage. The harvested plant material was further divided into four fractions: Stem, bud/flower, upper third of leaf and lower leaves. From the dried and ground samples, the cannabinoids were then shaken out in a methanol-chloroform mixture using an ultrasonic bath and the filtered extracts were analysed by HPLC. The content of CBD, CBG, CBDA, CBGA, CBC, THC and THCA was examined. The results were evaluated with the statistic program SAS.

The students learned how to produce *Cannabis* extracts for HPLC analysis and received an introduction to working with the HPLC system. They also gained experience in evaluating the data with the statistics software SAS.

Involved persons
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