



**E525**

### **ISOLATION OF LACTIC ACID BACTERIA FROM FAECES OF PIGS AND THEIR ANTAGONISTIC EFFECTS ON THE GROWTH OF TOXIN PRODUCING ASPERGILLUS FLAVUS STRAINS**

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Mycotoxins are secondary metabolites produced by moulds. Certain strains of lactic acid bacteria (LAB) have low molecular weight metabolites that can inhibit other microorganisms. This work aimed to expand the collection of LAB strains available at the laboratory from faeces samples of pigs, because of their exposure to mycotoxins through their diet, allowing to isolate LAB that can hinder toxigenic mould development and for detoxification purposes. To accomplish this, the samples were isolated using classical and molecular microbiological methods (genomic DNA extraction, repetitive PCR (rep-PCR), 16S rDNA PCR). The inhibitory effect of LAB strains on aflatoxin B1-producing *Aspergillus flavus* strains was studied. All isolated strains were grouped based on the patterns obtained using rep-PCR. The strains were identified as belonging to 10 different species: *Enterococcus durans*, *E. faecium*, *E. hirae*, *Lactiplantibacillus plantarum*, *Lactobacillus amylovorus*, *L. brevis*, *L. reuterii*, *Ligilactobacillus agilis*, *L. salivarius* and *Streptococcus alactolyticus*. All 72 isolates from pig faeces belonged to the lactic acid bacteria group. Best lactic acid bacterium strains for inhibiting growth of aflatoxin B1-producing *Aspergillus flavus* strains were *Lactobacillus salivarius* SR64, *Pediococcus pentosaceus* SR66, SR68, and *Lactiplantibacillus plantarum* SR25.

The research was supported by project 2020-1.2.4-TÉT-IPARI-2021-00001 and Tempus Public Foundation –Stipendium Hungaricum Scholarship.

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### **Color intensity and carotenoids contents of different honey's botanical origin**

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Honey is a natural source of valuable nutrients including sugars, amino acids, antioxidants, pigments (carotenoids and flavonoid), minerals and vitamins. Pigment and phenolic compounds concentrations, age and botanical origin are the main factors responsible for the natural color of honey. The aim of the current research was to investigate the effect of different honey's botanical origin (acacia, meadow, chestnut and pine honey) on its color and pigment contents ( $\beta$ -carotene and lycopene). Fifty-one honey samples were collected from different regions of Kosovo and analysed for color intensity,  $\beta$ -carotene and lycopene using UV/Vis Spectrophotometry. In addition, the relationship between color intensity and honey's pigments was determined using Spearman correlation test. Pfund values for color intensity of chestnut honey samples were significantly higher than other botanical origin honey samples. Chestnut honey samples had significantly higher  $\beta$ -carotene concentrations compared to meadow and pine honeys samples. On the other hand, no significant differences on lycopene contents were observed between different botanical origin honey samples. Significant positive correlation was observed between color intensity and  $\beta$ -carotene contents for all the studied honeys. Furthermore, significant positive correlation was also observed between the studied pigments in honey samples.

**BIOSYSFOODENG 2023**

9<sup>th</sup> June, 2023. LURDY CONFERENCE AND EVENT CENTRE, BUDAPEST, HUNGARY