

ISOLATION AND IDENTIFICATION OF LAB FROM DOMESTIC ANIMALS AS POTENTIAL ANTIFUNGAL AND DETOXYFICATION AGENTS

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The increasing reliance on commercial animal feeds highlights the urgent need for new solutions to address the harmful effects of toxins contained in feed. Mycotoxins are harmful substances produced by mold fungi that can cause damage to the health of animals, agricultural productivity, and can ultimately impact human health through our food consumption. Mycotoxins are well-known for their capacity to cause serious health problems and result in significant economic losses around the globe. Addressing the issue of mycotoxin contamination in food and animal feed has become an urgent and significant challenge that requires immediate action. Our investigation focuses on exploring the use of lactic acid bacteria (LAB) derived from domesticated animals as a novel and eco-friendly method to purify animal feeds that have been contaminated with harmful substances. The aim of this approach is to offer a safer alternative that enhances the nutrition and well-being of animals. This method addresses the various aspects associated with mycotoxin contamination, including its impact on health. To accomplish this, the samples were isolated using classical microbiological methods, the identification of the isolates was done by molecular microbiological methods (genomic DNA extraction, repetitive PCR (rep-PCR), 16S rDNA PCR). In the upcoming stage of my PhD research, we'll conduct a comprehensive analysis of the LAB that we have isolated and identified from the different types of strains we have. Systematic research is required to identify the most potent strains that can hinder the growth of mycotoxin-producing molds like *Aspergillus flavus*, *Aspergillus clavatus*, and *Fusarium* species. The research was supported by project 2020-1.2.4-TÉT-IPARI-2021-00001 – „Mikotoxinok egészségi kockázatának csökkentése élelmiszerekben mikrobiológiai megelőzéssel, lebontással és mentesítéssel” and Tempus Public Foundation –Stipendium Hungaricum Scholarship. The authors acknowledge the Hungarian University of Agriculture and Life Sciences's Doctoral School of Food Science for the support of this study.