

AFB1 removal by lactobacillus plantarum in artificially contaminated environment

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Lactic acid bacteria whose most of the member belong probiotics are subjected to many research related with their anti-carcinogenic properties. *Lactobacillus plantarum* is typically responsible for “plant” fermentation including pickle and olive fermentations. Due to their widespread existence in the human and animal diet led to gain attraction. In this study, we aimed to investigate that the AFB1 removal property of indigenous isolate of *L. plantarum*. *L. plantarum* (109 cells/mL) was co-incubated with 5ppm AFB1 containing PBS and samples were collected 0, 3, 6, 12 and 24 hours and immediately analyzed using high performance liquid chromatography equipped with fluorescence detector (HPLC-FLD) without extraction step. *L. plantarum* cell viability did not change

during the co-incubation. HPLC-FLD results showed us *L. plantarum* cells significantly (75.93% ±3.43) reduced the AFB1 at 12h. This decontamination was not formed any by-product. Thus *L. plantarum* is capable of AFB1 removal in artificially contaminated environment safely and may prevent chronic exposure in gut before reaching the kidney.

Biography

Sebnem Kurhan graduated from Uludag University, Bursa, Turkey as Food Engineer in 2010 and attended for Master of Science program in Department of Food Engineering, Ankara University, Ankara, Turkey. In 2012 she received a Master's degree. After a short experience in private sector, she now works as a specialist. She completed PhD at 2013 spring semester in Abant Izzet Baysal University, Bolu, Turkey. She works on “DNA-bioprotective effects of industrially important lactic acid bacteria” in her thesis. She has worked as a researcher in 9 national projects and published 1 paper and made 2 oral and 2 poster presentations as author in different international congresses. She has been working as a specialist in Novel Food Technologies Development, Application and Research Center in Abant Izzet Baysal University. She is using actively high performance liquid chromatography (HPLC), gas chromatography, laser scanning confocal microscope, flow cytometer and particle size analyzer.

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