

Opis delovnega mesta mladega raziskovalca/ke (Description of the Young Researcher's position)

1. Članica UL (UL member):

Biotehniška fakulteta / Biotechnical faculty

2. Ime, priimek in elektronski naslov mentorja/ice (Mentor's name, surname and email):

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3. Raziskovalno področje (Research field):

4.02; Biotehnika; Živalska produkcija in predelava; Mikotoksini
4.02; Biotechnical sciences; Animal production; Mycotoxins

4. Opis delovnega mesta mladega raziskovalca/ke (Description of the Young Researcher's position):

Vključuje morebitne dodatne pogoje, ki jih mora izpolnjevati kandidat/ka za mladega raziskovalca/ko, ki niso navedeni v razpisu za mlade raziskovalce.

slo:

Mladi raziskovalec/ raziskovalka se bo vključil(a) v raziskave na področju **proučevanja mikotoksinov v modelnih sistemih in mesnih izdelkih**. Zelo pomembno poznati pogoje in možnosti razvoja mikotoksigenih plesni. V raziskavi se bomo ukvarjali predvsem z raziskovanjem vpliva okoljskih dejavnikov (temperature in relativne vlage) na modelnih sistemih in na realnih vzorcih. Modelni poskusi bodo bili opravljeni na trdnih in tekočih gojiščih, tudi prilagojenimi simulaciji mesnih izdelkov. Ugotovitve bomo aplicirali na realne vzorce, predvsem salame narejene na slovenskih kmetijah. Velik del raziskovanja se bomo ukvarjali z analitiko mikotoksinov, ki jih proizvajajo inokulirane plesni. Prav tako bomo proučevali morebitni zaviralni starterskih kultur. Analize metabolitov bodo temeljile na ekstrakciji in determinaciji in kvantifikaciji na LC-MS/MS. Študija bo obravnavala več ciljev trajnostnega razvoja, ki so tudi del nekaterih globalnih ciljev, določenih pri Združenih narodih; Cilj 2 – Odprava lakote: Raziskave mikotoksinov in njihovega vpliva na mesne izdelke so neposredno povezane z varnostjo hrane. Razumevanje in ublažitev kontaminacije z mikotoksini bo prispevalo k zagotavljanju varnejše in boljše hrane. Cilj 3 – Zdravje in dobro počutje: Besedilo poudarja potencialne učinke mikotoksinov na zdravje ljudi in živali. Raziskovanje in zmanjšanje tvorbe mikotoksinov v mesnih izdelkih je v skladu s ciljem spodbujanja dobrega zdravja in počutja. Cilj 12 – Odgovorna poraba in proizvodnja: Cilj študije je razviti modele in strategije za zmanjšanje prisotnosti mikotoksinov v mesnih izdelkih, kar je v skladu z zagotavljanjem trajnostnih vzorcev potrošnje in proizvodnje. Cilj 13 – Podnebni ukrepi: Raziskava omenja podnebne spremembe, ki so posledica globalnega segrevanja in vplivajo na razvoj toksigenih plesni. Razumevanje omenjenih vplivov lahko prispeva k obravnavi podnebnih sprememb. Z izvedeno študijo bomo pomembno prispevali k bolj trajnostni in odporni verigi preskrbe s hrano. Večina raziskovalnega dela bo potekala v laboratoriju. Prednost bodo imeli kandidati s predznanjem na področju živilske tehnologije, ki je temelj raziskav. Zaželeno je znanje tekočinske kromatografije.

eng:

The young researcher will be involved in research in the field of studying mycotoxins in model systems and meat products. Understanding the conditions and potential for the development of mycotoxigenic molds is crucial. This research will focus on investigating the influence of environmental factors, particularly temperature and relative humidity, on both model systems and real samples. Experiments will be conducted using solid and liquid media, specifically designed to simulate meat products. The insights gained will be applied to real samples, with a particular focus on salami produced on Slovenian farms. A significant portion of the research will involve analyzing mycotoxins produced by inoculated molds, as well as exploring potential inhibitory starter cultures. Metabolite analysis will be conducted through extraction, followed by determination and quantification using LC-MS/MS. Present study addresses several Sustainable Development Goals (SDGs), which are a set of global goals established by the United Nations; Goal 2 - Zero Hunger: The research on mycotoxins and their impact on meat products is directly related to food safety and security. Understanding and mitigating mycotoxin contamination contribute to ensuring safe and nutritious food. Goal 3 - Good Health and Well-being: The text highlights the potential health effects of mycotoxins on humans and animals. Investigating and minimizing mycotoxin formation in meat products aligns with the goal of promoting good health and well-being. Goal 12 - Responsible Consumption and Production: The project aims to develop models and strategies to reduce the presence of mycotoxins in meat products. This aligns with the goal of ensuring sustainable consumption and production patterns. Goal 13 - Climate Action: The study mentions climate changes caused by global warming affecting the developmental stages of

toxigenic fungi. Understanding these climate-related impacts contributes to addressing climate change concerns. By addressing these goals, the research aims to contribute to a more sustainable and resilient food supply chain. Preference will be given to candidates with prior knowledge in the field of food science and technology, which is the basis of research. Knowledge of liquid chromatography preferred.