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PERSISTENT ORGANIC POLLUTANTS AND DIOXIN CONTAMINATION: ENVIRONMENTAL ISSUES AND MITIGATION TECHNOLOGIES

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BOOK OF ABSTRACTS

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Culturable endophytic microbiomes of Vertiver grass roots exhibit potential for environmental detoxification

Lan-Anh Thi Vu^{1,2,3}, Nhan Thi Nguyen¹, Hai The Pham¹, Huong Thi Thuy Ngo⁴, Dinh Quoc Nguyen⁵,
Van-Tuan Tran^{1,6,*}

¹Faculty of Biology, University of Science, Vietnam National University, Hanoi (VNU), 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam

²Faculty of Environmental Sciences, University of Science, Vietnam National University, Hanoi (VNU), 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam

³Hanoi University of Mining and Geology, 18 Vien Street, Bac Tu Liem, Hanoi, Viet Nam

⁴Phenikaa University, Yen Nghia, Ha Dong, Hanoi, Viet Nam

⁵Vietnam Institute of Geosciences and Mineral Resources, Van Quan, Hanoi, Viet Nam

⁶National Key Laboratory of Enzyme and Protein Technology, University of Science, Vietnam National University, Hanoi (VNU), 334 Nguyen Trai, Thanh Xuan, Hanoi, Vietnam

* Corresponding author: Van-Tuan Tran
Email: tuantran@vnu.edu.vn
Tel.: +84 24 38588856

Abstract

Microorganisms play an important role in nature as well as in human production such as enriching organic matter in the soil, participating in the material cycle in nature, being the direct productive force of the industry. fermentation industry, plays a role in cleaning up the natural environment. In today's environmental pollution treatment, the application of microorganisms is also considered a priority measure because it is an environmentally friendly and sustainable method for the ecosystem. Therefore, the study and evaluation of the role of microorganisms, especially endogenous microflora in order to improve treatment efficiency. In this study, we isolated the microflora in the roots of Vetiver grass. The results detected and identified 16 strains of bacteria and 12 strains of fungi. From there, the fungal strains F3 and F5 were selected with high ability to produce laccase enzyme. With a laboratory scale, we tested the ability to treat methylene blue dye with dye concentrations of 10mg/l and 20mg/l and gave a clear effect after 72 hours of shaking culture. At the same time, fungal strains F3 and F5, bacterial strains B1 and B4 have high ability to produce IAA enzyme, have good activity, stimulate growth to help plants grow well and help Vetiver grass grow well in atmospheric conditions. harsh climate and increase the efficiency of grass pollution treatment.

