

# Isolation of Pesticide Degrading Bacteria from Paddy Field †

V. B. Malathi <sup>1,\*</sup>, A. Reena <sup>2</sup>

<sup>1</sup> Department of Microbiology, Chennai National Arts & Science College, Avadi, Chennai – 54

<sup>2</sup> PG Department of Microbiology, MohamedSathak College of Arts & Science, Shollingnallur, Chennai – 119

\* Correspondence: malathivb@yahoo.co.in (V.B.M.);

† Presented at Virtual symposium to observe World Antimicrobial Awareness week “Applications of biotechnology and microbiology with special emphasis on Antimicrobial resistance”, 18-24 November 2020, Chennai, India

**Received: 10.11.2020; Revised: 15.11.2020; Accepted: 17.11.2020; Published: 10.01.2021**

**Abstract:** Pesticides are, in fact, not new to the human race. People in the past used various plants, extracts, or chemicals to control pest infestation. Chemical pesticides, which are frequently used to minimize pests to reduce crop yield losses and retain crop quality, pose a great threat to the environment. Though the loss of food has been reduced a lot, excessive usage of these pesticides led to soil and water pollution, thereby affecting humans' health. Pesticide degradation is the process by which a pesticide is transformed into simpler compounds like CO<sub>2</sub>, NH<sub>3</sub>, H<sub>2</sub>O as a result of either chemical reaction like photolysis, hydrolysis, or microbial actions. Bacteria, Fungi, and actinomycetes play an important role in the degradation of pesticides at low cost. But the rate of efficiency of degradation is a big question mark as the natural environment is always changing and complex. Hence, this study is focused on the isolation of indigenous pesticide degrading bacteria from polluted soil.

**Keywords:** pesticide; photolysis; degradation; bacteria.

© 2021 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## Funding

This research received no external funding.

## Acknowledgments

This research has no acknowledgment.

## Conflicts of Interest

The authors declare no conflict of interest.