



National Pest Management Association

The Pest Management Foundation has announced the availability of up to \$55,000 to support applied pest management research for 2026. Researchers are invited to submit a 1–2 page preliminary proposal by March 6, 2026, outlining project objectives, methods, timeline, and requested funding.

As a 501(c)(3) charitable organization, the Foundation is committed to advancing the pest management industry through education, research, and outreach by funding projects that deliver measurable, real-world benefits to industry professionals and the communities they serve.

The Foundation seeks research proposals that address practical challenges in professional pest control operations, with priority given to projects demonstrating clear industry applicability.

Key focus areas include;

- improving service effectiveness
- enhancing employee productivity
- reducing operational costs
- identifying new service opportunities
- gaining insights into pest biology and behavior
- developing sustainable pest management solutions.

Researchers are required to submit a 1–2 page preliminary proposal by March 6, 2026, outlining project objectives, methods, timelines, and requested funding. All submissions will be reviewed by the Foundation’s Scientific Review Committee, with selected applicants invited to submit full proposals.

OUR NATIONAL ENTOMOLOGIST



Dr. Imran Khatri

Professor & Chairman, Department of Entomology, Sindh Agriculture University, Tandojam,

He has over 29 years of experience in teaching and research. His work spans insect taxonomy, nanomaterials, and pest management, with over 100 publications and seven new species discoveries. He received the HEC Best University Teacher Award (2022) and patented a Fly Trap for sustainable pest control. He also established the Entomological Society of Sindh to promote student engagement and regional collaboration in entomology, and supervises students in Pakistan and China.

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1 DAY REMAINING

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Training Date
Feb 25, 2026

Time: 10:00 am

Register here before February 22, 2026

<https://forms.gle/6vzGIQ8wF1ripSFG7>

Speaker

Mr. Ahmad Mujtaba
IPM Expert

Contact Us For More Information

0337 9923383

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Low and high-density polyethylene and expanded polystyrene biodegradation by the greater wax moth *Galleria mellonella* L reveals a key role of the gut microbiome.

Polyethylene (PE) is a ubiquitous pollutant that takes long time to degrade naturally. PE breaks down into persistent micro- or nano-plastics that are even more harmful to the environment and human health.

We investigated the ability of the wax worm *Galleria mellonella* (Lepidoptera, Pyralidae) to degrade two different types of PE and expanded polystyrene (EPS). Results showed reductions of up to 69%, 73%, and 50% in the weight of LDPE, HDPE, and EPS, respectively. Antibiotic treatments indicated that PE consumption is highly dependent on an intact population of at least eight different bacteria from the genera *Enterococcus*, *Pseudomonas*, and *Bacillus* identified by 16S rRNA sequencing. Antibiotic treatment reduced the gut bacterial population, negatively affecting larval growth.

The PE-only diet severely affected the growth and development of *G. mellonella* larvae, pupae, and male/female adults. SEM analysis of gut bacteria co-incubated with LDPE discs revealed biofilm formation and PE biodegradation by all the bacteria in culture, supporting the great potential of these bacteria for plastic biodegradation.

FTIR analysis of frass from PE-fed larvae revealed significantly strong PE biodegradation signals as results showed 33 peaks of strong (S) and medium (M) intensity corresponding to wave numbers with PE biodegradation signatures ranging between 1239.50cm⁻¹ to 3077.69cm⁻¹ coding for vinyl hydrocarbons, vinyl ether, vinylene, vinylene trisubst., ketones, ethers, aldehydes, acrylate, diazo ketones and epoxides which is a convincing evidence of PE metabolism. Further research is required to determine the practical implications of wax worm larvae for plastic degradation in the environment.



Dr. Adil Hussain
Professor Department of Entomology
Abdul Wali Khan University Mardan



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