

## Dr. Abhishek Mukherjee

**Designation:** Assistant Professor

**Qualifications:** M.Sc., Ph.D.



College/ Universities	Degree Awarded	Year of Award	Grade/ Classification
The University of Burdwan	M.Sc.	2009	1st
The University of Burdwan	Ph.D.	2016	Zoology

Title of PhD thesis: “**Phytochemical interactions between the kakrol, *Momordica cochinchinensis* Spreng and its insect pest, *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae)**”

### About Me:

After completion of M.Sc, (Specialization on Ecology and Environmental Science) I start my research work as CSIR-UGC NET JRF and then SRF from Burdwan University. My research interest was in chemical ecology of Host Plant and Pest insect interaction. I completed my PHD in 2016. Presently working as Assistant Professor in the Post Graduate Department of Zoology, Maulana Azad College, Kolkata, from 2015.

### ○ Current Teaching:

Postgraduate and Undergraduate teaching in Zoology since 2015 [Areas of Specialization: Ecology and Environmental Science]

### Research Interests:

My current research interests include allelopathy, environmental toxicology, Chemical ecology, insect behaviour etc. But my prime object of research is to studies on the allelochemicals of different plant which may provide clues to environment friendly products which might be included in IPM schemes of the adult insects such as baited traps.

### ○ Main Research Projects – Applied

### Selected Publications:

#### International Journals

- 1) Sarkar, N., **Mukherjee, A.** and Barik, A. (2013). Olfactory responses of *Epilachna dodecastigma* (Coleoptera: Coccinellidae) to long-chain fatty acids from *Momordica charantia* leaves. ***Arthropod-Plant Interactions***, 7: 339-348. ISSN: 1872-8855 & I.F.-1.441.
- 2) Sarkar, N., **Mukherjee, A.** and Barik, A. (2013). Long-chain alknaes: allelochemicals for host location by the insect pest, *Epilachna dodecastigma* (Coleoptera: Coccinellidae). ***Applied Entomology and Zoology***, 48: 171-179. ISSN: 0003-6862 & I.F.-0.888.
- 3) **Mukherjee, A.**, Sarkar, N. and Barik, A. (2013). Alkanes in flower surface waxes of *Momordica cochinchinensis* influence attraction to *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae). ***Neotropical Entomology***, 42:366-71. ISSN: 1519-566X & I.F.-0.756.
- 4) **Mukherjee, A.**, and Barik, A. (2014). Long-chain free fatty acids from *Momordica cochinchinensis* Spreng flowers as allelochemical influencing the attraction of *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae). ***Alleopathy journal***, 33:255-266. ISSN: 0971-1693 & I.F. -0.846.
- 5) **Mukherjee, A.**, Sarkar, N. and Barik, A. (2014). Long-chain free fatty acids from *Momordica cochinchinensis* leaves as attractants to its insect pest, *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae). ***Journal of Asia-Pacific Entomology***, 17:229–234. ISSN: 1226-8615 & I. F. -1.046.

- 6) Sarkar, N., **Mukherjee, A.** and Barik, A. (2014). Attraction of *Epilachna dodecastigma* (Coleoptera:Coccinellidae) to *Momordica charantia* (Cucurbitaceae) leaf volatiles. ***The Candian Entomologist***, 147:168-180. ISSN: 0008-347X & I.F. - 0.837.
- 7) Adhikary, P. **Mukherjee, A.** and Barik, A. (2014). Role of surface wax alkanes from *Lathyrus sativus* L. seeds for attraction of *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae). ***Journal of Stored Products Research***, 59:113-119. ISSN: 0022-474X & I.F.-1.750.
- 8) **Mukherjee, A.**, Sarkar, N. and Barik, A. (2014). *Momordica cochinchinensis* (Cucurbitaceae) leaf volatiles: semiochemicals for host location by the insect pest, *Aulacophora foveicollis* (Coleoptera: Chrysomelidae). ***Chemoecology***, 25:93-104. ISSN: 1423-0445 & I.F.-1.298.
- 9) Adhikary, P., **Mukherjee, A.** and Barik, A.(2014). Attraction of *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae) to four varieties of *Lathyrus sativus* L. seed volatiles. ***Bulletin of Entomological Research***, 105:187-201. ISSN: 0007-4853 & I.F.-1.758.
- 10) **Mukherjee, A.**, Sarkar, N. and Barik, A. (2015). Leaf surface *n*-alkanes of *Momordica cochinchinensis* Spreng as short-range attractants for its insect pest, *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae). ***Alleopathy journal***, 36:109-122. ISSN: 0971-1693 & I.F.-0.846.
- 11) Karmakar, A., **Mukherjee, A.**, and Barik, A. (2016). Floral volatiles with colour cues from two cucurbitaceous plants causing attraction of *Aulacophora foveicollis*. ***Entomologia Experimentalis et Applicata***, 158:133-141. ISSN: 1570-7458 & I.F.-1.62.
- 12) **Mukherjee, A.** and Barik , A. (2016). Long-chain primary alcohols in *Momordica cochinchinensis* Spreng leaf surface waxes. ***Acta Botanica Gallica***, 163:61-66. ISSN: 2381-8107 & I.F. - 0.871
- 13) Adhikary,P., **Mukherjee, A.** and Barik, A. (2016). Free fatty acids from *Lathyrus sativus* seed coats acting as short-range attractants to *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae). ***Journal of Stored Products Research***, 67:56-62. ISSN: 0022-474X & I.F.-1.8.
- 14) Sarkar, N., **Mukherjee, A.** and Barik, A. (2016). Effect of bitter gourd (Cucurbitaceae) foliar constituents on development and reproduction of *Epilachna dodecastigma* (Weid.) (Coleoptera:Coccinellidae). ***International Journal of Tropical Insect Science***,36:195-203 ISSN: 1742-7584 & I.F.: 0.625.
- 15) Manna, S.,Hazra, S.,**Mukherjee, A.** (2016).Qualitative and Quantitative Evaluation of Gall Induced by *Pseudophacopteron alstonium* Yang et Li 1983 (Hemiptera: Psyllidae: Phacopteronidae) as Plant Parasite, in *Alstonia scholaris* Leaves. ***Proceedings of the Zoological Society***, doi.org/10.1007/s12595-016-0199-2. ISSN: 0373-5893.
- 16) **Mukherjee, A.**, Karmakar, A, and Barik, A. (2017). Bionomics of *Momordica cochinchinensis* Fed *Aulacophora foveicollis* (Coleoptera: Chrysomelidae). ***Proceedings of the Zoological Society***, 70:81-87. ISSN: 0373-5893.
- 17) Mitra, S., Karmakar, A, **Mukherjee, A.**, and Barik, A. (2017). The Role of Leaf Volatiles of *Ludwigia octovalvis* (Jacq.) Raven in the Attraction of *Altica cyanea* (Weber) (Coleoptera: Chrysomelidae).***Journal of Chemical Ecology***, 43:679-692. . ISSN: 0098-0331 & I.F.-2.385.
- 18) Karmakar, A, Mitra, S., Mukherjee, A., and Barik, A. (2018). Variations in composition of alkanes and free fatty acids in *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae) on exposure to monocrotophos. ***Proceedings of the Zoological Society***, (Accepted). ISSN: 0373-5893.

#### National Journals

- 19) **Mukherjee, A.**, Sarkar, N., Roy, N. and Barik, A. (2012). Green approach of gold nanoparticle synthesis from sunflower leaf. ***International Journal of nanotechnology and applications***, 62: 89-96. ISSN 0973-631X.

- 20) **Mukherjee, A.** and Barik, A. (2013). Potential allelopathic effects of *Ludwigia adscendens* on the seed germination and seedling growth of rice. *Indian Journal of Agricultural Research*, 47: 1-15. ISSN: 0367-8245.
- 21) Sarkar, N., **Mukherjee, A.** and Barik, A. (2013). Determination of n-alkane profile through developmental state of *Momordica charantia* L. flowers. *The Ecoscan*, Special Issue Vol III. 83-86. ISSN:0974-0376.
- 22) **Mukherjee, A.**, Sarkar, N. and Barik, A. (2013). Efficacy of the esterified fatty acids from *Momordica cochinchinensis* Spreng leaf toward its insect pest, *Aulacophora foveicollis* (Coleoptera: Chrysomelidae). *TheEcoscan*, Special Issue Vol III. 93-97. Presented in NASEED-2013 on 25-27 January 2013 at Sambalpur University. ISSN:0974-0376.
- 23) **Mukherjee, A.**, Malik, U., Chattopadhyay, C. and Barik, A. (2014). Allelopathic effects of the weed, *Polygonum orientale* L. on jute. *Indian Journal of Agricultural Research*, 48:278-286. ISSN: 0367-8245.

#### Book Chapter

- 1) **Mukherjee, A.**, Basak, S. and Biswas, S. (2018). Monocrotophos resistance in *Aulacophora foveicollis* In: Bose, M., Aditya (Bandyopadhyay), S., and Poddar, S. (Eds.), Contemporary Health Issues and Environmental Impact. Lincoln University College, Malaysia. ISBN: 978-967-10937-9-5 (In press).

#### **Others:**

##### **Paper Presentation:**

1. Efficacy of the esterified fatty acids from *Momordica cochinchinensis* Spreng leaf toward its insect pest, *Aulacophora foveicollis* (Coleoptera: Chrysomelidae). Presented in NASEED-2013 on 25-27 January 2013 at Sambalpur University.
2. Role of *Momordica cochinchinensis* Spreng (Cucurbitaceae) flower surface wax alkanes in the attraction of *Aulacophora foveicollis* Lucas (Coleoptera: Chrysomelidae). Presented in *Bioprospecting of Natural Products* on 5-6<sup>th</sup> December 2013 at Burdwan University
3. Evidence of growing pesticides resistance in *Aulacophora foveicollis* a polyphagous pest. Presented in "International Conference On Contemporary Health Issues And Environmental Impact", on 30<sup>th</sup> November, 2017 at Sarojini Naidu College for Women, Kolkata.

##### **Contact Details:**

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##### **Professional Memberships and Activities:**

Life member of Zoological Association of Burdwan

##### **Related Links:**

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