

Name: **Dr. Vinod Kumar Chauhan**

Designation: **Assistant Professor**

Department/Institute/University:

**Department of Zoology.**

**Siksha Bhavana (Institute of Science)**

**Visva-Bharati (A Central University)**

**Santiniketan – 731 235**

**Birbhum, West Bengal, INDIA**



Email address: [vinodkumar.chauhan@visva-bharati.ac.in](mailto:vinodkumar.chauhan@visva-bharati.ac.in)/ [vkc0706@gmail.com](mailto:vkc0706@gmail.com)

Contact No: +91 7893969230/ 6301538015

VIDWAN: <https://vidwan.inflibnet.ac.in/profile/200173>.

### **Education**

- **Doctor of Philosophy** (August 2012 – January 2018), University of Hyderabad, Hyderabad, Telangana, India  
Thesis: “Larval mid-gut responses against sublethal dosages of Cry toxins in Lepidopteran pest, *Achaea janata*”
- **Master of Sciences** (July 2009 – August 2011), University of Mysore, Mysuru, Karnataka, India
- **Bachelor in Science** (June 2006 - May 2009), Osmania University, Hyderabad, Telangana, India.

### **Additional qualifications**

- Certificate course in Bioinformatics (2011)
- Add-on Course in Cheminformatics in the academic year 2007-2008

### **Academic/ Research experience**

- Joined as Assistant Professor, Visva-Bharati since 04.01.2021-till date
- Post-doctoral Research Associate at University of Hyderabad (01.02.2018-31.12.2020).

### **Teaching**

- Masters’ courses (PG): Genetics and Molecular Biology, Immunology, Methods in Biology, Comparative Endocrinology and Animal Physiology
- Bachelors’ courses (UG): Invertebrates zoology, Immunology, Molecular Biology, Insect vector and diseases, Animal cell Biotechnology
- Skill Enhancement courses (UG): Sericulture and Apiculture; Instrumentation and Laboratory techniques.
- Multidisciplinary courses (UG): Applied Zoology
- Ph.D coursework: Research Methodology

### Areas of Research

- Insect Molecular Biology and Physiology
- Integrated Pest Management
- Invertebrate Pathology
- Insect genomics and proteomics
- Ameliorative effects of Insect by-products in non-communicable diseases (NCDs).

### Research Guidance

- Ph.D=2 (Ongoing)
- Masters' dissertation = 13

### Research Project

(List of projects implemented/being implemented)

| Project Title                                                                                                                 | Funding Agency                                | Duration               | Sanction Cost          | Role  | Status    |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------|------------------------|-------|-----------|
| Identification and Characterization of molecular marker(s) for early detection of pebrine disease in <i>Bombyx mori</i>       | SERB, Govt. of India (start-up grant project) | 2021-23<br>(24 months) | Rs (₹)-<br>28,71,000/- | PI    | Completed |
| Identification and Characterization of thermoplastic-degrading enzymes from the stored grain pest, <i>Corcyra cephalonica</i> | DDHR-GIA                                      | 2023-26<br>(36 months) | Rs (₹)-<br>45,05,280/- | Co-PI | Ongoing   |

### Publications

(List of papers published in SCI Journals, in year wise descending order)

| Sl. No | Title and Year of Publication                                                                                                                                              | Name of Journal                                                                                   | Link to the article                                                                                 |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 01     | Transcriptomic analysis of <i>Bombyx mori</i> in its early larval stage (2 <sup>nd</sup> instar) of development upon <i>Nosema bombycis</i> transovarial infection. (2024) | <i>Journal of Invertebrate Pathology</i><br>I.F: 2.4                                              | <a href="https://doi.org/10.1016/j.jip.2024.108157">https://doi.org/10.1016/j.jip.2024.108157</a>   |
| 02     | An insight in proteome profiling of <i>Tuta absoluta</i> larvae after entomopathogenic fungal infection. (2022)                                                            | <i>Scientific Data</i><br>I.F: 6.9                                                                | <a href="https://doi.org/10.1038/s41597-022-01593-y">https://doi.org/10.1038/s41597-022-01593-y</a> |
| 03     | Gut-specific arylphorin mediates midgut regenerative response against Cry-induced damage in <i>Achaea janata</i> . (2021)                                                  | <i>Comparative Biochemistry and Physiology – Biochemistry &amp; Molecular Biology</i><br>I.F: 1.8 | <a href="https://doi.org/10.1016/j.cbpb.2021.110600">https://doi.org/10.1016/j.cbpb.2021.110600</a> |

|               |                                                                                                                                                                                                  |                                                                                                |                                                                                                                           |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 04            | Mid-gut aminopeptidase N expression profile in Castor semilooper ( <i>Achaea janata</i> ) during sublethal Cry toxin exposure.(2021)                                                             | <i>Journal of Biosciences</i><br>I.F: 2.1                                                      | <a href="https://doi.org/10.1007/s12038-021-00148-4">DOI: 10.1007/s12038-021-00148-4</a>                                  |
| 05            | RNA-Seq analysis and <i>de novo</i> transcriptome assembly of Cry toxin susceptible and tolerant <i>Achaea janata</i> larvae (2019)                                                              | <i>Scientific Data</i><br>I.F: 6.9                                                             | <a href="https://doi.org/10.1038/s41597-019-0160-0">https://doi.org/10.1038/s41597-019-0160-0</a>                         |
| 06            | Midgut <i>de novo</i> transcriptome analysis and gene expression profiling of <i>Achaea janata</i> larvae exposed with <i>Bacillus thuringiensis</i> (Bt)-based biopesticide formulation. (2019) | <i>Comparative Biochemistry and Physiology- Part-D (Genomics &amp; Proteomics)</i><br>I.F: 2.4 | <a href="https://doi.org/10.1016/j.cbpd.2019.02.005">doi:10.1016/j.cbpd.2019.02.005</a>                                   |
| 07            | Validation of reference gene(s) for quantitative gene expression profiling using rice moth, <i>Corcyra cephalonica</i> as a model (2019)                                                         | <i>Gene Reports</i><br>I.F: 1.0                                                                | <a href="https://doi.org/10.1016/j.genrep.2018.10.007">https://doi.org/10.1016/j.genrep.2018.10.007</a>                   |
| 08            | Fat body remodelling in <i>Spodoptera litura</i> (Lepidoptera: Noctuidae) during post embryonic development (2017)                                                                               | <i>Entomon</i><br>NAAS rating: 5.24                                                            | <a href="https://entomon.in/index.php/Entomon/article/view/325">https://entomon.in/index.php/Entomon/article/view/325</a> |
| 09            | Larval Mid-Gut Response to Sub-Lethal Dose of Cry Toxin in Lepidopteran Pest, <i>Achaea janata</i> (2017)                                                                                        | <i>Frontiers in Physiology (Invertebrate physiology)</i><br>I.F:3.4                            | <a href="https://doi.org/10.3389/fphys.2017.00662">DOI:10.3389/fphys.2017.00662</a>                                       |
| 10            | Insecticidal effects of hemocoelic delivery of <i>Bacillus thuringiensis</i> Cry toxins in <i>Achaea janata</i> larvae. (2017)                                                                   | <i>Frontiers in Physiology (Invertebrate physiology)</i><br>I.F:3.4                            | <a href="https://doi.org/10.3389/fphys.2017.00289">DOI:10.3389/fphys.2017.00289</a>                                       |
| 11            | Differential oxidative stress responses in castor semilooper, <i>Achaea janata</i> . (2015)                                                                                                      | <i>Journal of Invertebrate Pathology</i> I.F: 2.4                                              | <a href="https://doi.org/10.1016/j.jip.2015.10.002">https://doi.org/10.1016/j.jip.2015.10.002</a>                         |
| <b>Sl. No</b> | <b>Chapter Title</b>                                                                                                                                                                             | <b>Book Title</b>                                                                              | <b>Publisher and ISBN</b>                                                                                                 |
| 01            | Insect resistance towards <i>Bacillus thuringiensis</i> toxins (2023)                                                                                                                            | Recent trends in Insect pest Management (Vol:10)                                               | Akinik publications<br>ISBN: 978-93-5570-909-7                                                                            |
| 02            | <i>Bacillus thuringiensis</i> (Bt) toxin and their mode of action in agricultural pest as potential biopesticides (2023)                                                                         | Advances in Agricultural Entomology ( Vol:23)                                                  | Akinik publications<br>ISBN: 978-93-5570-711-6                                                                            |

### Public domain links

#### Google Scholar:

<https://scholar.google.com/citations?user=gT3SMrQAAAAJ&hl=en>

#### Research Gate:

<https://www.researchgate.net/profile/Vinod-Chauhan-2>

### **Awards/Honours/Fellowships**

- 2017: National Eligibility of Lectureship (UGC/NET) In Life Sciences
- 2014: Senior Research Fellowship (DBT-SRF)
- 2012: Junior Research Fellowship (DBT-JRF)
- 2012: Andhra Pradesh state Eligibility test (APSET-2012) In Life Sciences
- 2012: GATE (Life Sciences)
- 2010: Indian Academy of Sciences (IAS), Bangalore Summer Research Fellowship
- 2009: JNU- CEEB (Biotechnology).
- 2008: Louis Pasteur Research Award For the year 2007-08 for excellence in Microbiology Research from Nizam College, Osmania University, Hyderabad

### **Training/Workshops**

- Participated National level hands on workshop on CRISPR-Cas9, held at SRM-DBT Platform for Advanced Life Sciences Technologies, SRM University, Chennai from March 6- 8, 2019.
- Participated in DST-SERB School on Chemical Ecology held at National center for Biological Sciences (NCBS), TIFR, Bangalore from February 17- 28, 2014.
- Attended Genomics training workshop for quantitative PCR and Microarray at School of Life Sciences, University of Hyderabad, Hyderabad from August 27-30, 2012.

### **Conference presentation (Invited/oral/poster)**

- National Seminar on Recent Advances in Animal Science (7-8 th, March, 2024) held at Department of Zoology, Siksha-Bhavana (Institute of Science), Visva-Bharati, Santiniketan.
- 6th Asian Lepidoptera Conservation Symposium (17-21 September, 2019), Zoological Survey of India, Kolkata, West Bengal, India
- International conference on entomology (3-5 December, 2016), Punjabi University, Patiala, Punjab, India.
- International Symposium on Comparative endocrinology and Integrative Physiology (August 4-7, 2015), University of Kerala, Thiruvananthapuram, Kerala, India.
- International Conference on Comparative Endocrinology and Physiology. (October 21-23, 2013). RTM University, Nagpur,

India.

- 82nd Annual meeting of The Society of Biological Chemists (India) (December 2-5, 2013) at University of Hyderabad, Telangana, India
- 95th Indian Science Congress (3-7, January, 2008) at Andhra University, Visakhapatnam, Andhra Pradesh, India.

#### **Resource Personnel**

- Participated as Resource personnel (Molecular Biology) in DST –SERB School in Insect Biology held at University of Hyderabad, Hyderabad (2015), Punjabi University, Patiala (2016), St. Joseph's College Devagiri, Calicut University (2017)

#### **Member of Society**

- Life Member - Indian Society for Comparative Endocrinology

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