

Personal Information

Name: Dr. Neeti Pandey
Gender: Female
Nationality: Indian
Official Address: Department of Zoology, Kalindi College, East Patel Nagar, New Delhi



Academic Qualification

- Ph.D. from Gut Biology Lab, Department of Zoology, University of Delhi, Delhi
- M. Phil (Zoology) from Gut Biology Lab, Department of Zoology, University of Delhi, Delhi
- Qualified CSIR-NET JRF
- M.Sc. (Zoology) from Department of Zoology, University of Delhi, Delhi
- B.Sc. (H) (Zoology) from Acharya Narendra Dev College, University of Delhi, Delhi
- Senior secondary in Biology with Mathematics from GBN Senior Secondary School, Faridabad.

Work Experience

- Serving as Assistant Professor in Kalindi College, University of Delhi, Delhi (28th December, 2023- to present)
- Served as Assistant Professor in SGTB Khalsa College (Adhoc), University of Delhi, Delhi (26th July, 2016- to 20th February, 2023)
- Served as Assistant Professor (Guest) in Deshbandhu College, University of Delhi (January 2016- May 2016)
- Served as Assistant Professor (Guest) in Daulat Ram College, University of Delhi (August 2016- December 2016)
- Served as Assistant Professor (Guest) in Dyal Singh College, University of Delhi (August 2016- December 2016)
- Served as a guest faculty in a coaching institute in Faridabad.
- Served as a guest faculty in a senior secondary school in Faridabad.

Research Interest

- Insect Gut Microbiota and its Application
- Insect stem cell biology
- Insect Gut physiology
- Intestinal Disease Model
- Bioinformatics tools

Research Experience

Senior Research Fellow (July 2012-June 2015)

Worked under the supervision of Professor Rajagopal Raman, Gut Biology Lab, Department of Zoology, University of Delhi, Delhi in a project entitled “*Spodoptera litura* as a model for studying the role of midgut bacteria during intestinal inflammation in insects.” The Key highlights of the study were: -

- 1) We have developed *Spodoptera litura* as a model for studying the role of gut microbiota in intestinal inflammation
- 2) In insects there are no reliable stem cell surface markers. We validated the use of Flow cytometry for the differentiation between mature and stem cells of insect and then used the technique successfully to monitor the proliferation and differentiation of stem cells.
- 3) We deciphered the functional role of gut microbes in insects and concluded that gut commensals which remain low in abundance and benign under optimal conditions may exert modulatory i.e. either positive or negative effects on host fitness in the presence of an inflammatory agent.

Junior Research Fellow (July 2010-June 2012)

Worked under the supervision of Professor Rajagopal Raman, Gut Biology Lab, Department of Zoology, University of Delhi, Delhi in the Project entitled “Molecular characterization and bacterial diversity analysis in *Aleurocanthus woglumi* and *Dialeurolonga mallewaramensis*”. The study involved the molecular characterization and identification of the gut bacteria in *Aleurocanthus woglumi* and *Dialeurolonga mallewaramensis*.

List of Research Publications

- 1) Neeti Pandey, Raman Rajagopal and Shubham Dhara. Pan-Genome Analysis Reveals Origin Specific Genome Expansion in *Enterococcus mundtii* Strains. <https://doi.org/10.48022/mb1.2306.06005>. (June-2024)
- 2) Neeti Pandey and Raman Rajagopal. Comparative analysis of the difference in the midgut microbiota between the laboratory reared and the field-caught populations of *Spodoptera litura*. Accepted in *Microbiology and Biotechnology Letters* (2019).
- 3) Neeti Pandey and Raman Rajagopal. Tissue damage induced midgut stem cell proliferation and microbial dysbiosis in *Spodoptera litura*. Accepted in *FEMS Microbiology Ecology*, doi: <https://doi.org/10.1093/femsec/fix132> (2017).
- 4) Neeti Pandey and Raman Rajagopal. Molecular characterization and diversity analysis of bacterial communities associated with *Dialeurolonga mallewaramensis* (Hemiptera: Aleyrodidae) adults using 16S rDNA amplicon pyrosequencing and FISH. Accepted in *Insect Science*. | DOI: 10.1111/1744-7917.12220. Published by: Wiley Online library (2015)
- 5) Neeti Pandey, Ambika Singh, Vipin Singh Rana and R.Rajagopal. Molecular Characterization and Analysis of Bacterial Diversity in *Aleurocanthus woglumi* (Hemiptera: Aleyrodidae). Accepted in *Environmental Entomology*, 42(6):1257-1264. (2013). Published By: Entomological Society of America
- 6) Natarajan Gayatri Priya, Neeti Pandey and Raman Rajagopal. LNA probes substantially improve the detection of bacterial endosymbionts in whole mount of insects by fluorescent in-situ hybridization. Accepted in *BMC Microbiology* (2012), 12:81.

- 7) Harpreet Singh Raina, Ambika Singh, Sonam Popli, Neeti Pandey, Raman Rajagopal. Infection of Bacterial Endosymbionts in Insects: A Comparative Study of Two Techniques viz PCR and FISH for Detection and Localization of Symbionts in Whitefly, *Bemisia tabaci*. Accepted in PLOS ONE. DOI: 10.1371/journal.pone.0136159

- 8) Jaya Malhotra, Ankita Dua, Anjali Saxena, Naseer Sangwan, Udit Mukherjee, Neeti Pandey, Raman Rajagopal, Paramjit Khurana, Jitendra P. Khurana and Rup Lal Genome sequence of *Acinetobacter* sp. strain HA, Isolated from the gut of polyphagous Insect Pest *Helicoverpa armigera*. Accepted in *Journal of Bacteriology* (2012), 194(18):5156. DOI: 10.1128/JB.01194-12.

Published Books (Single Author)

- 1) Dr. Neeti Pandey. Structure and Function of Invertebrates, M.Sc. Zoology (Previous year), Lalit Narayan Mithila University. ISBN Number- 978-93-5338-671-9 (2019)
- 2) Dr. Neeti Pandey. Structure and Function of Invertebrates, M.Sc. Zoology (Previous year), M.P (Bhoj) University. ISBN Number- 978-93-5453-837-7 (2022)
- 3) Dr. Neeti Pandey. Prayogik prani Vigyan Part One (English Version), Practical book, B.Sc. Zoology Ist Year, M.P Bhoj University (2022)
- 4) Dr. Neeti Pandey. Prayogik prani Vigyan Part Two (English Version), Practical book, B.Sc. Zoology IInd Year, M.P Bhoj University (2022)
- 5) Dr. Neeti Pandey. Prayogik prani Vigyan Part Three (English Version), Practical book, B.Sc. Zoology IIIrd Year, M.P Bhoj University (2022)
- 6) Dr. Neeti Pandey. Prayogik prani Vigyan Part One (Hindi Version), Practical book, B.Sc. Zoology Ist Year, M.P Bhoj University (2022)
- 7) Dr. Neeti Pandey. Prayogik prani Vigyan Part Two (Hindi Version), Practical book, B.Sc. Zoology IInd Year, M.P Bhoj University (2022)
- 8) Dr. Neeti Pandey. Prayogik prani Vigyan Part One (Hindi Version), Practical book, B.Sc. Zoology IIIrd Year, M.P Bhoj University (2022)

Published Books (Co-Author)

- 1) Dr. Neeti Pandey, Dr. Pradeep Kumar, Dr. Soumya. Molecular Biology, M.Sc. Microbiology (Previous year), Alagappa University. ISBN Number- 978-93-5338-759-4 (2018)
- 2) Dr. Neeti Pandey and Dr. Sushil Kumar Upadhyay. Animal Biotechnology, M.Sc. Zoology (Final year), Alagappa University. ISBN Number- 978-93-5453-382-2 (2021)

Academic/Administrative Responsibilities

- Member of organizing committee in National symposium held at Deshbandhu College, University of Delhi in the year 2016.
- Participated as resource person and member of organizing committee in 'RAP a STEP' workshop held in Punjabi University, Patiala, Punjab in the year 2016
- Member of Plastic and Glassware purchase committee, Department of Zoology, SGTB Khalsa College, University of Delhi, Delhi (2016-To date)
- Member of Excursion committee, Department of Zoology, SGTB Khalsa College, University of Delhi, Delhi (2016-2017)
- Member of Instrument maintenance committee, Department of Zoology, SGTB Khalsa College, University of Delhi, Delhi (2017-To date)
- Member of Zoology Museum committee, Department of Zoology, SGTB Khalsa College, University of Delhi, Delhi (2017-To date)
- Member of magazine committee, SGTB Khalsa College, University of Delhi, Delhi (2018- 2019)
- Member of Strokes Society, SGTB Khalsa College, University of Delhi, Delhi (2017-To date)
- Member of NSS, SGTB Khalsa College, University of Delhi, Delhi (2021-To date)

- Conducted Practical examination as internal as well as external examiner in several colleges under University of Delhi, Delhi
- Theory paper correction at centres allotted by University of Delhi, Delhi
- Member of - Board of examiner for setting question paper at undergraduate level (2021- 2022)
- Committee member for drafting the syllabus of first year Zoology paper of B.Sc. Life Science under NEP (2022)

Workshop and Conference

- Oral presentation in the conference to celebrate World immunology day held on 2nd May, 2018 at department of Zoology, university of Delhi.
- One month long faculty induction program (FIP-02) held from 7th May to 2nd June at SGTB Khalsa College.
- National workshop on introduction to virtual classes for blended learning held on 6th March, 2018 at SGTB Khalsa College.
- National seminar on e-learning and MOOCs in higher education held on 29th March, 2017 at SGTB Khalsa College.
- Faculty development program on Wildlife Conservation and Management held on 19th February, 2018 at Sri Venkateswara College.
- ‘Undergraduate Science teachers’ workshop themed at developing scientific temper in students: tools and techniques held on 31st January, 2017 at Ramjas College.
- Young Scientist Conclave: India international Science festival
- Research as pedagogy a science teacher education program (RAP A STEP)
- International symposium on Microbial Biotechnology: diversity, genomics and Metagenomics at University of Delhi, Delhi, India
- International congress on chronobiology: Biological clocks and health issues in 21st century
- International conference on Recent trends in developing bioremediation strategies for HCH and other chlorinated contaminants
- National Symposium on Reproductive Health in India: Concerns and Awareness held at Deshbandhu College, University of Delhi, India

- National symposium on Environment: Greener Future and Awareness held at Deshbandhu College, University of Delhi
- Workshop on open data development and transparency initiatives

Awards and Achievements

- Qualified CSIR-NET JRF Fellowship
- Science meritorious Award, University of Delhi
- Secured position in Faculty Induction Program- FIP-02 held at SGTB Khalsa College from 2nd May 2018 to 02 June, 2018.
- Won prize in many cultural programmes.

I hereby declare that information provided here is correct to the best of my knowledge and belief.

Dr. Neeti Pandey

Assistant Professor

Kalindi College

University of Delhi, New Delhi