



Name		Photograph
Designation	Professor	
Address	Room#18, Department of Botany, Chhattra Marg, Delhi University, Delhi-110007	
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Educational Qualifications		
Degree	Institution	Year
Ph.D.	Delhi University; Research at ICGEB, New Delhi & IRRI, Philippines	1996
PG	University of Delhi, South Campus	1991
UG	Miranda House, Delhi University	1989
Career Profile		
<p>1. Post-doctoral Fellow from 1996-2000 at Department of Entomology, Cornell University, NYSAES, NY 14456, USA, worked on a NSF research project characterizing responses of lepidopteran pests to ingestion of plant anti-feedants.</p> <p>2. Research Associate from 2000-2003 at Department of Plant Pathology, Cornell University, NY14456, USA, worked on USDA funded epidemiological surveys for plant viruses in NY state; proteolytic susceptibility of transgenic PRSV coat proteins, and grape biotechnology.</p> <p>3. Reader, Associate Professor & Professor, 2003-till date, Department of Botany, Delhi University, Delhi-7, India, working as Teacher and Researcher</p>		
Administrative Assignments		
<ul style="list-style-type: none"> • Secretary, Garden Committee, University of Delhi • Warden (2003-2005) at Meghdut Hostel, University of Delhi (residence for 100 women scholars). • Faculty accompanying 5 under-graduate students to <i>Universitas21</i> summer school 2010 on “Global Food Security” at University of Nottingham, Ningbo campus, China (sponsored by CSEC, University of Delhi). • Member of the Delhi University Garden Committee (2003-2011, 2017). • Governing Body, Bhaskaracharyaa College of Applied Sciences, University of Delhi, 2017. • Member of the Delhi University Library Committee (2005-8). 		
Areas of Interest / Specialization		
Plant-Biotic Interactions; Sustainable applications in Biotechnology		
Subjects Taught		
BOT101: Plant Cell Biology; BOT204: Pathogens & Pests of Crop plants; Optional courses: BOT403: Molecular Interactions of plants with ... pests; BOT407: Contemporary concepts and		

methods in cell biology; M. Phil. course Paper 8A: Population Biology; Selected topics in Ph. D. coursework (GR1,GR3, GR4, GR6)

Time table of the subjects usually taught during the current semester

S. No.	Subject	Days	Time	Classroom
1.	BOT101: Cell and Molecular Biology	(i) Tuesday (Theory & Practicals) (ii) Friday (Theory & Practicals)	Theory: 9.40-10.35am, Practicals: 10.35am- 2.15pm	Theory: Room#37, Practicals: Lab#45
2.	BOT204: Pathogens & Pests of Crop Plants	(i) Monday (Theory & Practicals) (ii) Thursday (Theory & Practicals)	Theory: 9.40-10.35am, Practicals: 10.35am- 2.15pm	Theory: Room#37, Practicals: Lab#43
3.	BOT403: Molecular interactions of plants with pathogens and pests	(i) Friday (Theory and Practicals)	Theory: 8.40 - 10.35am, Practicals: 10.35am-2.15am	Theory: Room#208, Practicals: Lab#26
4.	BOT407: Contemporary concepts and methods in Cell Biology	(i)Tuesday (Theory and Practicals)	Theory: 8.40 - 10.35am, Practicals: 10.35am-2.15am	Theory: Room#207, Practicals: Lab#45
5	Ph. D. & M. Phil. Coursework: Paper 8A / B: Population Biology GR1: Effective communication, writing & biostatistics GR3: Methods in field biology GR4:Methods for molecular techniques and tissue culture GR6:Methods for microbiology and plant parasite interactions	GR1: Monday GR3: Wednesday GR4: Thursday GR6: Saturday	Time: 2-4pm	Theory: Committee Room Practical: As per location of the equipment
6.	BOT409: M. Sc. Dissertation	Friday (Tutorials) & Saturday (Meetings)	Time: 2.15pm-5pm	Office: Room#18 Laboratory: Lab#15

Research Guidance

1. **Supervision of awarded Doctoral Thesis: 8**
2. **Supervision of Doctoral Thesis, under progress: 4 +1 (submitted)**
3. **Supervision of awarded M. Phil dissertations: 3**
4. **Supervision of completed M. Sc. dissertations: 20**
5. **Supervision of summer students/interns: 32**

Publications Profile

1.

1. Sudeshna Mazumdar-Leighton, Cheerukeri Raghavendra Babu and John Bennett (2000) "Identification of novel serine proteinase gene transcripts in the midguts of two tropical insect pests, *Scirpophaga incertulas* (Wk.) and *Helicoverpa armigera* (Hb.)" *Insect Biochemistry and Molecular Biology* 30 (1): 57-68.
2. Sudeshna Mazumdar-Leighton and Roxanne M. Broadway (2001) "Identification of six chymotrypsin cDNAs from larval midguts of *Helicoverpa zea* (corn earworm) and *Agrotis ipsilon* (black cutworm) feeding on the soybean trypsin inhibitor" *Insect Biochemistry and Molecular Biology* 31 (6/7): 633-644.
3. Sudeshna Mazumdar-Leighton and Roxanne M. Broadway (2001) "Transcriptional induction of diverse midgut trypsin from larval *Helicoverpa zea* (corn earworm) and *Agrotis ipsilon* (black cutworm) feeding on the soybean trypsin inhibitor" *Insect Biochemistry and Molecular Biology* 31 (6/7): 645-657.
4. D. Shah, B. Nault, H. Dillard, S. Mazumdar-Leighton and D. Gonsalves, 2003, "Incidence and spatial patterns of viruses in New York snap beans in 2002" *Phytopathology*, 93: S78.
5. Nault, B.A., D. Shah, H. Dillard, S. Mazumdar-Leighton, D. Gonsalves and A. McFaul (2003) "Aphid dispersal and virus incidence in snap bean fields". In *Proceedings of the Mid Atlantic Fruit and Vegetable Convention*. Hershey, PA. Pennsylvania Vegetable Growers Association. pp. 39-41.
6. Nault, B.A., D. Shah, H. Dillard, S. Mazumdar-Leighton, D. Gonsalves and A. McFaul (2003) "Seasonal patterns of aphid movement and virus incidence in snap bean fields". In *Proceedings of the New York State Vegetable Conference*. Cornell Cooperative Extension and New York State Vegetable Growers Association. pp. 84-87.
7. DA Shah, HR Dillard, S Mazumdar-Leighton, D Gonsalves and B Nault, (2006), "Incidence, Spatial patterns, and Associations among Viruses in Snap Bean and Alfalfa in New York", *Plant Disease*, 90:203-210.
8. A Bhattacharyya, S. Mazumdar, S Mazumdar-Leighton and CR Babu, (2006), "A Kunitz proteinase inhibitor from *Archidendron ellipticum* seeds: Purification, characterization, and kinetic properties", *Phytochemistry* 67:232-241.
9. A Bhattacharyya, S Mazumdar Leighton and CR Babu, (2007), "Bioinsecticidal activity of *Archidendron ellipticum* trypsin inhibitor on growth and serine digestive enzymes during larval development of *Spodoptera litura*", *Comp. Biochem. Physiol. C. Toxicol. Pharmacol.*, 145(4):669-677.
10. A Bharadwaj, S Leelavathi, S Mazumdar-Leighton, A Ghosh, S Ramakumar and V ShivaReddy, (2008), "The critical role of partially exposed N-terminal Valine residue in stabilizing GH10 Xylanase from *Bacillus* sp. NG-27 under poly-extreme conditions", *PLoS One*, 3(8):e3063.
11. A Bharadwaj, S Leelavathi, S Mazumdar-Leighton, A Ghosh, S Ramakumar and V ShivaReddy, (2010), "The critical role of N- and C-terminal contact in protein stability and folding of a family 10 Xylanase under poly-extreme conditions", *PLoS One*, 5(6):e11347.
12. B Oppert, EN Elpidina, M Toutges and S Mazumdar-Leighton, (2010), 'Microarray analysis reveals strategies of *Tribolium castaneum* larvae to compensate for cysteine and serine protease inhibitors' *Comp Biochem Physiol Part D Genomics Proteomics*, 5(4):280-7.
13. M Saikia, YT Singh, A Bhattacharya and S Mazumdar-Leighton, (2011), 'Expression of diverse midgut serine proteinases in the sericigenous Lepidoptera *Antheraea assamensis* (Helfer) is influenced by choice of host plant species' *Insect Molecular Biology*, 20(1):1-13. Online September 2010.
14. P Singh-Pant, P Pant, SK Mukherjee and S Mazumdar-Leighton, (2012), 'Spatial and temporal diversity of begomovirus complexes in papayas with leaf curl disease' *Archives of Virology* 157:1217-1232.
15. YT Singh, S Mazumdar-Leighton, M Saikia, P Pant, S Kashung, K Neog, R Chakravorty, S Nair, J Nagaraju, CR Babu, (2012), "Genetic variation within natural populations of endemic

- silkmoths, *Antheraea assamensis* (Helfer) from North-East India indicates need for in situ conservation” PLoS ONE 7(11): e49972 doi:10.1371/ journal.pone.0049972.
16. U Bhardwaj, A Bhardwaj, R Kumar, S Leelavathi, V SivaReddy and S Mazumdar-Leighton (2014) “Revisiting Rubisco as a protein substrate for insect gut proteases.” Archives of Insect Biochemistry and Physiology, 85(1): 13-35. Online December 2013.
17. R Kumar, U Bhardwaj, P Kumar and S Mazumdar-Leighton (2015) “Midgut serine proteases and alternative host plant utilization in *Pieris brassicae* L.” Frontiers in Physiology, 6:95 doi: 10.3389/fphys.2015.00095. Published online 31st March 2015.
18. S. Mazumdar-Leighton and VK Choudhary (2017) “Metagenomics at grass roots” Resonance (Elsevier) Journal of Science Education (Indian Academy of Sciences) 22(3):291-301.

Popular Articles:

- “Loktak: the largest floating lake of the world needs restoration” (2013) Current Science, 104: 10. <http://www.currentscience.ac.in/Volumes/104/01/0010.pdf>
 - “Rabha’s weave” (2008) www.mugadbase.com
 - “Biotechnology: A new era for Plant Biotechnology and Plant Protection” (2000) www.apsnet.org/online/feature/Biotechnology.html
2. *Other publications (Peer reviewed Book Chapters; Edited works, Book reviews, Festschrift volumes, etc.)*
- (i) **Book Chapter: Cindy-Leigh Hamilton, Sudeshna Mazumdar-Leighton, Icolyn Amarakoon, Marcia Roye (2016) “Tomato Yellow Leaf Curl” in “Virus Diseases of Tropical and Sub-Tropical Crops” eds. P Tennant and G Fermin, CABI International Press, Oxfordshire, UK, pp. 177-188.**
 - (ii) **Book Chapter: Gustavo Fermin, Sudeshna Mazumdar-Leighton, Paula Tennant (2018) “Viruses of Prokaryotes, Protozoa, Fungi, and Chromista” in “Viruses: Molecular Biology, Host Interactions and Applications to Biotechnology” eds. P Tennant, G Fermin and J Foster, Elsevier, Academic Press, (ISBN 9780128112571), pp. 217-244.**
 - (iii) **Book Chapter: Gustavo Fermin, Paula Tennant, Sudeshna Mazumdar-Leighton (2018) “Transgenic virus-resistant papaya: current status and future trends” in “Genes, genetics and Transgenics for Virus Resistance in Plants” eds. BL Patil, Caister Academic Press, (ISBN 9781910190814), pp. 141-158.**

Publications in the Last one year

- (i) **Book Chapter: Gustavo Fermin, Sudeshna Mazumdar-Leighton, Paula Tennant (2018) “Viruses of Prokaryotes, Protozoa, Fungi, and Chromista” in “Viruses: Molecular Biology, Host Interactions and Applications to Biotechnology” eds. P Tennant, G Fermin and J Foster, Elsevier, Academic Press, (ISBN 9780128112571), pp. 217-244.**
- (ii) **Book Chapter: Gustavo Fermin, Paula Tennant, Sudeshna Mazumdar-Leighton (2018) “Transgenic virus-resistant papaya: current status and future trends” in “Genes, genetics and Transgenics for Virus Resistance in Plants” eds. BL Patil, Caister Academic Press, (ISBN 9781910190814), pp. 141-158.**

Conference Organization/ Presentations (in the last three years)

- **Lead talk on “Understanding persistence and evolution of begomoviruses infecting feral papaya and solanaceous weeds by epidemiological screenings” and poster (PA68) at 8th International Geminivirus Symposium, November 7th, 2016, at New Delhi, India**
- **Poster (#426-4/1024) presented at Annual Meeting of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America**

with the Entomological Society of America, 2015, Minneapolis, USA

- Public lecture at India International Centre, 2015 (available as webcast) entitled “The Very Hungry Caterpillar: Plant-Insect Interactions and the Giant Silkworms of NE India”
- Public lecture on “Multiple Dimensions of the Biotic Environment of Plants” at DS Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, at INSPIRE Internship program, 16th December 2013
- Paper entitled “Understanding the biology of plant interactions with the biotic environment: applications to food security” at an event on “Global food security” organized by University of Nottingham, Ningbo, China, at Shanghai Expo 2010.
- Public lecture entitled “On the wings of a golden silk moth” for the Delhi University Lecture Series 2010.
- Paper and posters presentation at Annual Meeting of the ESA, 2007, San Diego, USA
http://www.esa.confex.com/esa/2007/techprogram/paper_29147.htm
http://www.esa.confex.com/esa/2007/techprogram/session_6097.htm

Research Projects (Major Grants/Research Collaboration)

Two completed Extramural projects funded by Department of Biotechnology Government of India, on:

- (1) Genetic Diversity of *A. assamensis* silk moths from NE India (P.I. collaborating with CMERTI, CSB, Assam) Output: See www.mugadbase.com
- (2) Restoration Ecology program for Mined areas (Co-PI)
- (3) One project funded by DU-DST Purse Grant on mustard pest complexes (Individual PI). See <http://www.youtube.com/watch?v=AAP2y-xcbM8>

Awards and Distinctions

- The Distinguished Alumna Award 2017 from Miranda House Alumnae Association, Delhi University

Association With Professional Bodies

1. Editing

- Co-edited special March 22nd 2017 issue of Resonance (A Journal of Science Education from the Indian Academy of Sciences, Bangalore) celebrating “Women in Science”
- Reviewing
- Reviewed manuscripts for Plant Molecular Biology (2017); Physiological Entomology (2017), VirusDiseases (2017); Frontiers in Physiology (2016), Euphytica (2015), Insect Science (2016), Molecular Biology Reports (2012, 2013, 2018), Woodpecker Journal of Agricultural Research (2012, 2011), African Journal of Microbiology Research (2012), Oecologia (2010), Journal of Plant Physiology (2010), Insect Biochemistry & Molecular Biology (2001, 2002), Comparative Biochemistry and Physiology (2002), Plant Science (2003), Peptides (2009), Journal of Insect Physiology (2010), Insect Molecular Biology (2011); Archives of Insect Biochemistry and Physiology (2011, 2012); Woodpecker Journals (2012); African Journal of Biotechnology (2012-13), Current Science (2003-2011).

2. Advisory Committees and Boards

- Member of Scientific Advisory committee of IBSD (Institute of Biodiversity and Sustainable development), Imphal, Manipur (2010-13)
- Member of Project Advisory Committee, NBSFARA/NASF, ICAR (2013-16)
- Member, Scientific Advisory Committee, CUES, Ambedkar University of Delhi, 2015-2017.
- Editorial Board, Resonance, a Journal for Science and Education in India.

3. *Life Memberships* * **Delhi University Botanical Society, Indian Virological Society**

Other Activities

- **Mentor to 34+ summer/project students from various colleges of Delhi University and other institutions (2004-2017).**

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.