

Name: Dr. Manish Sharma
Designation: Assistant Professor
Specialization: Entomology & Cytogenetics
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Education:

M.Sc. Zoology (2007, Punjabi University, Patiala)

M.Phil. Zoology (2009, Punjabi University, Patiala)

Ph.D. (15th July 2013, Punjabi University, Patiala)

Title of Ph.D. Thesis: Importance of mitochondrial DNA for the identification and phylogenetic analysis of some species of flesh flies (Diptera: Sarcophagidae).

Professional Experience:

Department of Zoology, Multani Mal Modi College, Patiala (January 15, 2018 till date).

Department of Zoology, Patel Memorial National College, Rajpura (December 04, 2017 to January 13, 2018).

PG Department of Agriculture, GSSDGS Khalsa College, Patiala (July 21, 2016 to April 28, 2017 and July 10 to December 04 2017).

Department of Zoology & Fishery Sciences, Dolphin PG College of Science & Agriculture, Punjab, India (July 30, 2013 to June 30, 2016).

Teaching Interests:

- Cytogenetics & Population Genetics
- Evolutionary Biology
- Developmental Biology
- Molecular Biology
- Immunology

Research Interest:

Forensic Entomology, Taxonomy & Molecular Biology, Flurorosis

Publications

1. Shashi Aggarwal, **Manish Kumar** and Monika Bhardwaj “Incidence of skeletal deformities in endemic fluorosis”. *Tropical Doctor*, (2008) **38(4)**: 231-233. <https://journals.sagepub.com/doi/pdf/10.1258/td.2008.070379>
2. Shashi Aggarwal and **Manish Kumar** “Effect of high fluoride ingestion on serum biochemical indexes in patients of skeletal fluorosis. *Asian Journal of Microbiology Biotechnology Environmental Science*,”(2008),**10(3)**:569-576. http://www.envirobiotechjournals.com/article_abstract.php?aid=1952&iid=69&jid=1
3. Shashi Aggarwal, **Manish Kumar** “Age specific fluoride exposure in drinking water- a clinical multiparametric study. *Asian Journal of Microbiology Biotechnology Environmental Science*,2008, **10(3)**:655-660. http://www.envirobiotechjournals.com/article_abstract.php?aid=1968&iid=69&jid=1
4. Shashi Aggarwal, **Manish Kumar** “Clinical and biochemical profile of serum enzymes in skeletal fluorosis. *Asian Journal of Microbiology Biotechnology Environmental Science*”, (2009) **11(3)**:647-651. http://www.envirobiotechjournals.com/article_abstract.php?aid=4352&iid=152&jid=1
5. Devinder Singh, Manish **Sharma** and Ajay Kumar Sharma, “Identification of three forensically important species of flesh flies (Diptera: Sarcophagidae) based on cytochrome oxidase I gene”. *Indian Journal Forensic Medicine and Toxicology*, (2014) **8(1)**: 12-17. <https://www.indianjournals.com/ijor.aspx?target=ijor:ijfmt&volume=8&issue=1&article=003>
6. Devinder Singh, Manish **Sharma** and Ajay Kumar Sharma “Mitochondrial DNA based identification of forensically important Indian flesh flies (Diptera: Sarcophagidae)”. *Forensic Science International*, (2015) **247**:1-6. <https://www.sciencedirect.com/journal/forensic-science-international/vol/247/suppl/C>
7. Devinder Singh, Manish **Sharma** and Ajay Kumar Sharma, “Molecular identification of two forensically important Indian flesh flies (Diptera: Sarcophagidae). *International Journal of Advanced Research in Science Engineering and Technology*”, (2015) **2(7)**: 884-888. <http://www.ijarset.com/volume-2-issue-7-july-15.html>
8. Devinder Singh, Manish **Sharma** and Ajay Kumar Sharma, “Molecular identification of forensically important Indian flesh flies (Diptera: Sarcophagidae) by using COI gene of mitochondrial DNA”. *Journal of Forensic Research*, (2015) **6**:1-6. <https://www.omicsonline.org/open-access/molecular-identification-of-forensically-important-indian-species-of-fleshflies-diptera-sarcophagidae-by-using-coi-gene-of-mitoch-2157-7145-1000316.php?aid=67996>
9. Devinder Singh, Manish **Sharma** and Ajay Kumar Sharma “Molecular identification of *Parasarcophaga hirtipes* and *Parasarcophaga sericea* based on COI gene in India”. *International Journal of Advanced Life Sciences*, (2016) **9(2)**: 270-275. <http://www.unitedlifejournals.com/ijals/view-article.php?id=569>
10. **Manish Sharma** and Devinder Singh “Mitochondrial COI gene based identification of Indian sarcophagid flies (Diptera: Sarcophagidae): A review”. *International Journal of*

Recent Scientific Research. (2015) **7(1):** 8279-8281.
<https://www.recentscientific.com/mitochondrial-coi-gene-based-identification-indian-sarcophagid-flies-diptera-sarcophagidae-review>

11. Devinder Singh, Manish **Sharma** and Ajay Kumar Sharma “ Cytochrome Oxidase I gene based identification of forensically important Indian flesh flies (Diptera: Sarcophagidae)”. Journal of Entomological Research, 2016, **40(2):**195-200.
<https://www.indianjournals.com/ijor.aspx?target=ijor:jer&volume=40&issue=2&article=015>
12. Heena Sachdeva and **Manish Sharma** “ Clinical manifestations of leishmaniasis: a review”, International Journal of Advanced Research in Science Engineering and Technology, 2016, **3(12):** 3093-3095.
http://www.ijarset.com/upload/2016/december/19_IJARSET_heena.pdf
13. Heena Sachdeva and **Manish Sharma** “Diagnosis of Visceral Leishmaniasis. International Journal of Advanced Research in Science, Engineering and Technology , 2016, **3(12):** 3096-3097. <http://www.ijarset.com/upload/2016/december/19.html>
14. **Manish Sharma**, Palwinder Singh and Devinder Singh “Taxonomic studies on flesh fly species (Diptera: Sarcophagidae) *Parasarcophaga dux* and *Parasarcophaga sarupi* of Indian origin”. International Journal of Entomology Research. 2017, **2(4):** 21-24.
<http://www.entomologyjournals.com/archives/2017/vol2/issue4/2-4-13>
15. **Manish Sharma**, Palwinder Singh and Devinder Singh “ Morphological studies on *Parasarcophaga albiceps*, *Parasarcophaga macroauriculata* and *Parasarcophaga ruficornis* (Diptera: Sarcophagidae) of Indian origin. International Journal of Fauna and Biological studies”, 2017, **4(4):** 157-161.
<http://www.faunajournal.com/archives/?year=2017&vol=4&issue=4&part=C&ArticleId=372>
16. **Manish Sharma**, Palwinder Singh and Devinder Singh “ Taxonomic studies on *Ravinia pernix*, *Boettcherisca peregrina* and *Seniorwhitea reciproca* (Diptera: Sarcophagidae) of Indian origin”. International Journal of Zoology Studies, 2017, **2(5):** 81-88.
<http://www.zoologyjournals.com/archives/2017/vol2/issue5/2-5-17>
17. **Manish Sharma**, Palwinder Singh and Devinder Singh “Studies on three Indian species of Genus *Parasarcophaga* Johnston and Tiegs (Diptera: Sarcophagidae)”. International Journal of Entomology Research, 2017,**2(5):** 109-115.
<http://www.entomologyjournals.com/archives/2017/vol2/issue5/2-5-28>
18. **Manish Sharma** and Devinder Singh “ Use of Scanning Electron Microscopy (SEM) in Forensic Entomology”. International Journal for Science and Advance Research in Technology, 2017, **3(1):**64-66. <http://ijsart.com/Home/IssueDetail/8207>
19. Heena Sachdeva and **Manish Sharma** “Reservoir and transmission of Visceral Leishmaniasis”, International Journal of Scientific Research in Science and Technology., 2017, 3(1): 59-60. <http://ijsrst.com/paper/767.pdf>
20. Heena Sachdeva and **Manish Sharma** “*Leishmania*-Host Interaction and Survival Strategies "A Review". International Journal for Science and Advance Research in Technology, 2017,**3(1):** 41-43. <http://ijsart.com/Home/IssueDetail/8200>

21. Heena Sachdeva and **Manish Sharma** “Organ specific immunity in visceral Leishmaniasis” International Journal for Science and Advance Research in Technology, 2017,**3(1)**: 79-80. <http://ijsart.com/Home/IssueDetail/8217>
22. Heena Sachdeva and **Manish Sharma** “Role of cytokines in Leishmaniasis”. International Journal for Science and Advance Research in Technology, 2017, 3(1): 81-82. <http://ijsart.com/Home/IssueDetail/8218>
23. Manish Sharma and Devinder Singh “Utility of Random Amplified Polymorphic DNA (RAPD) In Forensic Entomology, International Journal of Scientific Research in Science and Technology, 2017,**3(1)**: 56-58. [https://www.semanticscholar.org/paper/Utility-of-Random-Amplified-Polymorphic-DNA-\(RAPD\)-Sharma-Singh/7425ae9f2537de05c1e2ec1c4ec11fb0f497ef52](https://www.semanticscholar.org/paper/Utility-of-Random-Amplified-Polymorphic-DNA-(RAPD)-Sharma-Singh/7425ae9f2537de05c1e2ec1c4ec11fb0f497ef52)
24. **Manish Sharma**, Palwinder Singh and Devinder Singh “Taxonomic studies on *Bercaea cruentata*, *Lioproctia annandalei* and *Sarcosolomania kaushalensis* (Diptera: Sarcophagidae) of Indian origin”. Journal of Entomological Research, 2018, **42(1)**: 113-120. <https://www.indianjournals.com/ijor.aspx?target=ijor:jer&volume=42&issue=1&article=0> 20

Review Articles

1. Devinder Singh, Madhu Bala, **Manish Kumar** and Bhanvi Wadhawan, “ Forensic Entomology: An exhaustive review”. Annals of Entomology, (2009), **27(1-2)**:1-44. https://mafiadoc.com/queue/forensic-entomology_5ca22385097c4796338b456f.html
2. **Manish Sharma** and Devinder Singh “Historical approach of forensic entomology: a review”. International Journal of Advanced Research in Science Engineering and Technology, (2015), **2(9)**: 838-845. <http://www.ijarset.com/volume-2-issue-9-september-15.html>
3. **Manish Sharma** and Devinder Singh “Morphology & molecular based identification of forensically important Indian flies (Diptera): A review”. International Journal of Scientific Development and Research, (2016),**1(9)**: 268-273. <http://www.ijedr.org/viewpaperforall.php?paper=IJSDR1609040>
4. **Manish Sharma** and Devinder Singh “Cytochrome Oxidase I (COI) gene based identification of Indian blow flies (Diptera: Calliphoridae): A review”. International Journal for Science and Research in Technology, (2016),**2(8)**: 110-111. <http://ijsart.com/Home/IssueDetail/5721>
5. **Manish Sharma** and Devinder Singh “DNA based techniques for the identification of forensically important flies (Diptera): A review”. International Journal of Scientific Development and Research, (2016), **1(12)**: 160-166. <https://pdfs.semanticscholar.org/e4f1/c3aa67cfde72d1197617002d2196c25a705d.pdf>

6. **Manish Sharma** and Devinder Singh “Forensic Entomology: An Indian prospective”. International Journal Scientific Research in Science, Engineering & Technology, (2016),**2(1)**: 207-209. <http://ijsrset.com/IJSRSET162148>
7. **Manish Sharma** and Devinder Singh “A Review on Phylogenetic Analysis of Forensically Important Flies (DIPTERA). International Journal for Science and Advance Research in Technology, (2017),**3(1)**: 75-78.<http://ijsart.com/Home/IssueDetail/8211>
8. Heena Sachdeva and **Manish Sharma** “A review of current treatment strategies based on cisplatin for leishmaniosis, Annals of Parasitology, (2022; 68(3):435-445.
9. **Manish Sharma** and Heena Sachdeva “DNA Based Identification of Scuttle Flies (Diptera: Phoridae) & their forensic Importance: A Review, International Journal of Entomology Research, (2023), 8(2) 140-143.

Book/Book chapter:

1. Heena Sachdeva and **Manish Sharma**, Efficacy of *Withania somnifera* in the Treatment of Leishmaniasis: A Review, 2024, In Recent Trends in Life Sciences, Vol. IX, Akinik Publications, New Delhi.

Conference / Seminars

A) Resource Person / Invited Lectures:

1. Delivered online lecture “Forensic Entomology” Insects as Evidence in Medicolegal Investigation” using Natural Biodiversity Facebook Group on December 05, 2020.
2. Delivered invited lecture entitled “Forensic Entomology, Molecular Ysstematics and Phylogeny” organized by Department of Zoology, S.D. College Barnala under DBT Star College Scheme on March 20, 2024

B) Paper presented:

1. One paper has been presented in **National seminar on Environmental and applied Zoology**, held at Kurukshetra University, Kurukshetra during January, 23-25, 2008.
2. One abstract entitled “Quantitative evaluation of lipid metabolism and electrolyte imbalance in fluorotoxicity” has been published in **11th Punjab National Congress**, held at Thapar University, Patiala during February 7-9, 2008.
3. Two abstracts have been published in **5th International symposium on Genetics, Health and Disease** held at Guru Nanak Dev University, Amritsar during February 17-19, 2008.
4. Participated in **UGC sponsored National Symposium on Biodiversity, Cell and Molecular Biology** held in the Department of Zoology, Panjab University, Chandigarh during February 27-27, 2008.
5. Paper entitled ”**Flesh flies: a valuable tool for forensic science investigation**” presented in the National Conference on Environment degradation and its impact on Mankind, held in the Department of Zoology, Punjabi University, Patiala

- during November 19-20,2009.
6. One paper entitled “**Molecular identification of five species of forensically important flesh flies on the basis cytochrome oxidase I gene**” has been presented in the International Congress on Entomology, held in the Department of Zoology and Environmental Sciences, Punjabi University, Patiala during February 17-19, 2012.
 7. A paper entitled “Identification of forensically important Indian flesh flies (Diptera: Sarcophagidae) on the basis of shorter fragment of COI gene of mtDNA” has been presented in the National Conference on Man and Environment, held in the Zoology and Environmental Sciences, Punjabi University, Patiala during October 15-16, 2012.
 8. A paper entitled “**Mitochondrial COI Gene Based Identification of Three Forensically Important Flesh Flies (Diptera: Sarcophagidae)**” has been presented in the National Conference on Recent Advances in Chemical, Biological and Environmental Sciences (RACES) held at Multani Mal Modi College, Patiala during February 19-20, 2016.
 9. A paper entitled “**Incidence of skeletal fluorosis among the population of malwa region of Punjab, India**, has been presented in the National Conference on Recent Advances in Chemical, and Environmental Sciences (RACES) held at Multani Mal Modi College, Patiala during April 11-12, 2019.
 10. A paper entitled "**Comparison of AT rich region in 465bp fragment of mitochondrial COI gene of ten species of flesh flies (Diptera: Sarcophagidae)**", has been presented in 3rd National Conference on Innovations in Bioscience and Technology (NCIBT) held at Multani Mal Modi College, Patiala on March 07, 2020.
 11. A paper entitled "**Comparison of AT rich region in 450bp fragment of mitochondrial COI gene of ten species of flesh flies (Diptera: Sarcophagidae)**", has been presented in 11th National Conference on Recent Advances in Chemical, Biological and Environmental Sciences (RACES) held at Multani Mal Modi College, Patiala on April 12-13, 2023.

C) Attended

1. Participated in **UGC sponsored National Symposium on Biodiversity, Cell and Molecular Biology**, organized by Department of Zoology, Panjab University Chandigarh during February 2-27 2008.
2. Participated in **23rd National Congress of Parasitology** held at Anna University, Chennai during November 17-20, 2011.
3. Participated in **National Conference on Man and Environment**, organized by Department of Zoology and Environmental Sciences Punjabi University Patiala during October 15-16, 2012.
4. Participated in **XII International conference on Vector and Vector Borne Diseases** on September 16-18, 2013 at Udaipur, Rajasthan organized by Mohanlal Sukhadia University, Udaipur (Rajasthan) and NAVBD, Bhubaneshvar (Odisha),

India.

5. Participated in the **2nd NSS Youth Convention** held at Punjabi University, Patiala on January 12, 2013.
6. Participated in one day International Virtual Conference on Novel Corona and Novel Challenges: Life Ahead with Covid-19, organized by Sri Guru Gobind Singh College, Sector 26, Chandigarh on June 03, 2020. Participated in online National Webinar on Covid-19 Pandemic: Impact & Strategies for Education Sector in India organized by Gitanjali Teachers Training College, Murshidabad, in Association with “The Progress” on June 3, 2020.
8. Participated in one day Online Capacity Building Program on Basic Tools and Techniques for Online Teaching organized by Centre for E-Learning and Teaching Excellence & UGC-Human Resource Development Centre, Punjabi University Patiala on August 9, 2020.
9. Participated in online Lecture on the theme Covid-19 and the State of State Finances organized by Department of Social Sciences, Multani Mal Modi College, Patiala on November 10, 2020.
10. Member of Organizing Committee of one day online National Webinar on the theme Solid Waste Management organized by Multani Mal Modi College, Patiala, on November 10, 2020.
11. Attended Webinar on “Virtual Labs” organized by Centre for E-Learning and Teaching Excellence (CELTE), Punjabi University Patiala on April 17 2023.
12. Attended a Symposium and Participated in the Open House Discussion on NEP 2020-Policy Praxis organized by IQAC, Multani Mal Modi College Patiala in collaboration with The Council for Teacher Education Foundation (CTEF)-Punjab & Chandigarh Chapter on May 8 2023.

Workshops and training courses

1. Participated in “**Research Interface Workshop on insect diversity with emphasis on Microlepidoptera**” held in the Department of Zoology, Punjabi University, Patiala during March 24-25, 2007 under the auspicious of Ministry of Environment and Forests, Govt. of India, New Delhi.
2. Participated in Training programme on “**Social Harmony and Human Rights**” organized by the Department of NSS, Punjabi University, Patiala in collaboration with Rajiv Gandhi Institute of Youth Development, Sriperumbudur during December 13-15, 2010.
3. Participated in **ICMR sponsored workshop on “Informatics in Medicine**” held at Bioinformatics Centre, Department of Biophysics, AIIMS, New Delhi during February 16-18, 2012.
4. Participated in Seven days **NSS Training Course (as NSS Programme Officer)** organized by Department of NSS, Punjabi University, Patiala under the aegis of Ministry of Youth Affairs and Sports, Government of India, during November 12-18, 2014.
5. Participated in **two days workshop on “Electron Microscopy in Life Sciences**” organized by Department of Physics & Astrophysics, University of Delhi jointly with Electron Microscope Society of India (EMSI), during July 07-08, 2014.

6. Participated in **two days workshop on “Hands on training in basic Flow Cytometry and its applications”** organized by National Institute of Pathology, ICMR, New Delhi during August 28-29, 2014.
7. Participated in **two days workshop on “Advances in Biotechnology and its applications in Conservation Biology”** organized by Department of Biotechnology, Dolphin (PG) Institute of Biomedical and Natural Sciences, Dehradun in collaboration with Wildlife Institute of India and Zoological Survey of India, Dehradun, during October 16-17, 2014.
8. Participated in **Three days Workshop on “Molecular cloning and expression of recombinant protein”** organized by National Institute of Pathology, ICMR, New Delhi during March 18-20,2015. Attended **Faculty Development Program** at Dolphin (PG) College of Science & Agriculture, Chunnikalan, Fatehgarh Sahib Punjab (May 11-17, 2016).
9. Attended Faculty Development Program at Dolphin (PG) College of Science & Agriculture, Chunnikalan, Fatehgarh Sahib Punjab (May 11-17, 2016).
10. Participated in **One Day Workshop on “Combating Desertification, Land and Degradation and Drought”** organized by PG Department of Agriculture, GSSDGS Khalsa College Patiala in collaboration with NEAC program sponsored by Ministry of Environment, Forests and Climate Change, Govt. of India and Punjab State Council for Science and Technology, Chandigarh on March 26, 2017.
11. Attended **Faculty Development Program** at Multani Mal Modi College, Patiala. (July 20-26, 2018).
12. Attended Faculty Development Program at Multani Mal Modi College, Patiala. (July 17-22, 2019).
13. Attended Four Week Induction/ Orientation Programme for Faculty in Universities/ Colleges/ Institutions of Higher Education Organized by Teaching Learning Centre, Ramanujan College University of Delhi under the aegis of Ministry of Human Resource Development, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from June 04- July 01, 2020.
14. One Week Online FDP on Research Methodology for Social Sciences Organize by Council for Teacher Education Foundation in collaboration with Multani Mal Modi College, Patiala from July, 20-26th, 2020.
15. Attended 7- Days Virtual National Level Capacity Building Programme on Integration of Pedagogy & Technology in Teaching-Learning organised by Multani Mal Modi College Patiala in collaboration with Council for Teacher Education Foundation (CTEF) during July 13-19, 2021.
16. Attended Four Week Induction/ Orientation Programme for Faculty in Universities/ Colleges/ Institutions of Higher Education Organized by Teaching Learning Centre, Ramanujan College University of Delhi under the aegis of Ministry of Human Resource Development, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching from December 20, 2021 to January 19, 2022.
17. Attended Two Weeks Refresher Course in Zoology organized by Ramanujan College, New Delhi during April 10-24, 2023.
18. Attended Short-Term Course on NEP Orientation and Sensitization Programme organized by UGC-Malaviya Mission Teacher Training Centre (HRDC), Punjabi University, Patiala from January 16-25, 2024.

19. Attended One Week Faculty Development Programme "Developing MOOCs" (25 - 31 December, 2023)" organised by Teaching learning Centre, Ramanujan College , University of Delhi, under the Ministry of Education sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) scheme in collaboration with Multani Mal Modi College Patiala and Dr CV Raman University Chhattisgarh during March 24-30, 2024.

Achievements, Awards and Recognitions

1. Participated in the **Special Discussion** on the topic “**Vidayarthi Jeevan at NSS**” on **NSS Day** which was aired on 22.9.2011 at 06:30p.m. by **AIR, Patiala**.
2. Awarded **University Colour for Best Volunteer** for the year 2010-2011 by the **Department of NSS** in the NSS Day Function on September 24, 2011.
3. Successfully organized (member of organizing committee) a 7 Days Workshop on **Modern Techniques in Biological Sciences** at MM Modi College, during July 3- August 6, 2018.

Membership

- Life Member, Indian Academy of Vector Borne Diseases
- Life Member, Society of Mitochondrial Research and Medicine
- Member (Special Invitation in Board meeting on 22.11.2019) Board of Under Graduate Studies in Zoology, Department of Zoology and Environmental Sciences, Punjabi University, Patiala.
<https://drive.google.com/file/d/1VBmhyRTNODZ5wehgBj6ZzESCgc80RPzw/view>