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## Dr. Sapna Sharma

| Objective               | To make science applicable and available to a common man through the best use of  |
|-------------------------|---|
| Academic qualifications | <ul> <li>the scientific attitude, techniques and technology.</li> <li>Doctor of Philosophy (PhD),</li> <li>Forensic Entomology, Aug, 2002- March, 2006</li> <li>Punjabi University, Patiala, Punjab.</li> <li>PhD Thesis: - Mitochondrial DNA typing for identification of some species of blowflies (Diptera: Calliphoridae).</li> <li>Master of Science,</li> <li>1998-2000, Gold Medalist</li> </ul> |
|                         | Criminology and Forensic Science department, Dr. H.S Gaur University, Sagar, Madhya Pradesh.  |
|                         | <ul> <li>Bachelor of Science (Chemistry, Environmental Science, Zoology),</li> <li>1995- 1998,</li> <li>St. Joseph's College, Bangalore University, Karnataka.</li> </ul>   |
| Professional experience | Associate Professor in Forensic science,  29th Sep 2022 onwards  Assistant Professor in Forensic science,  29th Sep 2010 – Sep 2022  Department of Genetics, Maharishi Dayanand University, Rohtak, India  Assistant Professor in Forensic Biological sciences (temporary basis),  Aug 2010-Sep 2010  Institute of Forensic science and Criminology, Panjab University,  Chandigarh, India              |
|                         | Assistant Professor in Forensic Biological sciences (contract basis),  o Feb 2010- May 2010   |

|                  | Institute of Forensic science and Criminology, Panjab University,<br>Chandigarh, India   |
|------------------|--|
|                  | Senior Research Fellow,  |
|                  | o Aug 2004- April 2006.  |
|                  | Zoology department, Punjabi University, Patiala, India   |
|                  | Junior Research Fellow,  |
|                  | o Aug 2002- Aug 2004.  |
|                  | Zoology department, Punjabi University, Patiala, India   |
|                  | Qualified University Grants Commission (UGC) National Educational Testing  |
| Achievements     | (NET) – Dec 1999 and July 2000.  |
|                  | Qualified University Grants Commission (UGC) National Educational Testing  |
|                  | (NET) test for Junior Research Fellowship (JRF) and Eligibility for  |
|                  | Lectureship, 2001  |
| Awards received  | 1) Awarded the <b>Best Presenter</b> at the 6 <sup>th</sup> orientation programme held at UGC-ASC,   |
|                  | B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan 13-12-2010 to 11-01-2011.   |
|                  | Bill 1811 Idillia Voltivatidyalaya, talampar talam 18 12 2818 to 11 81 2811  |
|                  | 2) Gold-medalist (M. Sc, Criminology and Forensic Science), Dr. H.S Gaur   |
|                  | University, Saugor, Madhya Pradesh.  |
|                  |  |
|                  | 3) Awarded a <b>Medal &amp; Merit certificate</b> for being the topper in M.Sc. (Forensic Science)   |
|                  | by The Indian Academy of Forensic Sciences, Calcutta, West Bengal.   |
|                  | A) Accorded the Best October of Charlest according Fundamental Colores and but the Ch  |
|                  | 4) Awarded the <b>Best Outgoing Student</b> award for Environmental Sciences by the St.  |
|                  | Joseph's College, Bangalore.   |
|                  | Awarded <b>The Kincha Prize for Hindi</b> by the St. Joseph's College, Bangalore.  |
|                  | Principal Investigator of project entitled "Mitochondrial DNA study of some  |
| Projects Awarded | endogamous groups of Haryana", worth Rs.14,13,800, sponsored by the  |
|                  | UGC. Period w.e.f April 2013 to March,2016   |
|                  | Life Member of Indian Academy of Forensic Sciences, Calcutta (West   |
| Professional     | Bengal)  |
| memberships      | Life Member of the Indian Science Congress Association (Membership no.   |
|                  | L20901)  |
|                  | Life Member of The Indian Society of Human Genetics (Membership  |
|                  | no.L/1631/2012)  |
| Ph.D supervision | Kapil Verma registered on 19-01-2015. Topic- Database generation and   |
|                  | characterization of Hypervariable regions of mitochondrial DNA in some ethnic  |
|                  | groups of Haryana: A prospective Forensic study (submitted on 18/07/18)  |
|                  | Jyoti Dalal registered on 30-05-15. Topic- A Forensic study of insect species  |
|                  | for estimation of post-mortem submersion Interval (PMSI) (submitted on   |
|                  | 08/10/20)  |
|                  | Tapeshwar Bhardwaj registered on 19-12-17. Topic- Forensic implications     of using Charge must energie for determining Deat Mexican Interval & Ante- |
|                  | of using <i>Chrysomya</i> species for determining Post Mortem Interval & Ante-   |
|                  | mortem Poisoning (Submitted on 2/6/2023)   |
|                  | Parul registered on 11-08-2021. Topic-Forensic and seasonal analysis of insect and microbial community associated with buried pig carcasses.           |
|                  | insect and microbial community associated with buried pig carcasses  |
|                  | Ravi registered on 11-08-2021. Topic- Forensic analysis of colonization and succession pattern of entomofauna on burnt pig carcasses.                  |
|                  | succession pattern of entomofauna on burnt pig carcasses   |
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## Invited Lectures/ Outreach Lectures

- "Forensic Entomology: Different Environments, one solution!" National Conference on Recent trends and Advancements in Forensic Science-2023 on 17<sup>th</sup> March, 2023 at Department of Forensic Science, Punjabi University, Patiala.
- Delivered a lecture in the Outreach program on Role & extension of Forensic Science in Society to orient BSc. Students of CDRJM Butana, Sonepat, Haryana.
- Forensic Entomology: "3" Seven Day Faculty Development Program on "Current Trends in Forensic Science Education & Career Goals" organized by Amity Academic Staff College & Amity Institute of Forensic Sciences from 18<sup>th</sup> December to 26<sup>th</sup> December, 2023
- "Forensic Psychology:" NALSAR University of Law& Truth Labs, Hyderabad on 06<sup>th</sup> March, 2024
- Lecture on Psychological Assessment in Recent advancements and Trends in Forensic science, delivered during the Five-Day Faculty Development Program on Forensic Science Innovations: Transforming Investigations, held from 22nd to 26th July 2024.
- Delivered lecture as a Resource Person in 2nd Edition of 15th Days Refresher Course on "Advancement in Interdisciplinary Research & Teaching in Science & Technology and IPR"from 09 Dec to 23 Dec 2024

## Papers Presented/ Abstracts Published:

- Sapna Sharma, Jyoti Dalal and Kapil Verma "Study of relationships between blood groups and fingerprints among the population of Haryana, India". Poster presented at National seminar on Innovative Researches in Life Sciences, Feb 2<sup>1st</sup>, 2015 held at Department of Zoology, Maharshi Dayanand University Rohtak
- Sapna Sharma "Entomotoxicology: An emerging and promising frontier in Forensic Science". Poster presented at National seminar on Therapeutic Potential of Natural Products: Current Innovations & Future Trends (under UGC-SAP Programme), Mar 19<sup>th</sup>, 2015 held at Department of Genetics, Maharshi Dayanand University Rohtak.
- 3. **Sapna Sharma, Nisha & Sameeksha** "Forensic diatomological study of some water bodies of Delhi." Poster presented at National conference on Genetic Diversity and Therapeutic Potential of Natural Products (under UGC-SAP Programme)", Sep 17<sup>th</sup>, 2016, Dept. of Genetics, M.D. University, Rohtak.
- Sapna Sharma, Tapeshwar Bhardwaj "Effects of LD50 of Aluminium phosphide poisoning on morphology of Chrysomya pinguis( Diptera: Calliphoridae) larvae". Poster presented at National Conference on "Forensic Science", Dec 19<sup>th</sup>-21<sup>st</sup>, 2016, Dept. of Forensic Science, Punjabi University, Patiala.
- 5. Sapna Sharma and Bhawna Deswal "A Forensic study on identification of poisonous plants with the help of pollen grains." Poster presented at National seminar on "Current scenario in Forensic Investigative Techniques" (under UGC-SAP Programme)", Sep 07<sup>th</sup>, 2017, Dept. of Genetics, M.D. University, Rohtak.
- 6. Sapna Sharma, Jyoti Dalal, S.K Dhattarwal, Kapil Verma & Tapeshwar Bhardwaj "Forensic entomology: the indispensable component of forensic taphonomy." Oral presentation at International symposium on Sustainable agriculture Energy Environment & Technology(ICSAEET-2018) organized by Environmental Sustainability Management Cell and Society for Sustainable

- Agriculture & Resource Management (SSARM), Feb 24-25<sup>th</sup>, 2018 M.D. University, Rohtak.
- 7. Sapna Sharma & Kapil Verma. "Database generation and characterization of haplogroups in Yadav population of Haryana based on hypervariable regions of mitochondrial DNA" Poster presented at National symposium on Database Development and biocuration, Apr 6-7<sup>th</sup>, 2018, Dept. of Plant Molecular Biology.UDSC, New Delhi.
- 8. Sapna Sharma, Tapeshwar Bhardwaj and Jyoti Dalal, "Cadaver decomposition and Soil Environment: the mutual affect." Poster presentation at International seminar on Sustainable Environment & agriculture under Global Climate change, organized by Dept. of Environmental Science in collaboration with Society for Sustainable Agriculture & Resource Management (SSARM), Feb 21st, 2019 M.D. University, Rohtak.
- 9. Sapna Sharma " Understanding Schizophrenia in Forensic Context." Oral presentation at National conference on "Current Understanding of Pathogenesis of Human Genetic Diseases", February 23rd 2021, Dept. of Genetics, M.D. University, Rohtak
- **10. Sapna Sharma & Parul** "Effect of porous and non-porous surfaces on bloodstain pattern formation". Oral presention at 2 nd CAPACITY BUILDING NATIONAL WEBINAR cum WORKSHOP On "Ethics in Biomedical Research and GCP Guidelines", March 15th 2021, organized by Human Ethics Committee and Department of Zoology, Maharshi Dayanand University.
- 11. Sapna Sharma & Pooja "Evaluation of the effectiveness of two presumptive tests for production of fewer false-positive results during blood detection". Poster presention at National Conference on "Promoting IPR in University System", June 03rd 2023, organized by Centre for IPR Studies in collaboration with Department of Zoology, Maharshi Dayanand University.
- 12. Sapna Sharma "Impact of diazepam-alcohol cocktail on the development and morphometrics of two important blowflies: a forensic entomotoxicological perspective". Oral presentation at 14<sup>th</sup> Annual Scientific Meeting of the Balkan Academy of Forensic Sciences, October 05<sup>th</sup>-08<sup>th</sup>, 2023 at Istanbul, Turkiye.

## Papers/ Proceedings published

- 1) Neelkamal and **Sapna Sharma** Forensic science research & internet tools Proceedings of National seminar on Internet: applications in research(2011); 59-60. ISBN: 978-81-920945-1-9.
- Dr. Sapna Sharma, Kapil Verma, Vikas Kumar. Microbiology with an Emphasis on Forensic Applications. Indian Journal of Applied Research. 2013; 3(10): 67-70
- **3)** Kapil Verma, Jyoti Dalal and **Dr. Sapna Sharma**. Scientific concepts of Polymerase Chain Reaction (PCR). Int J Pharm Sci Res 2014; 5(8): 1000-09.doi: 10.13040/IJPSR.0975-8232.5(8).1000-09.
- **4)** Kapil Verma, Meenakshi and **Dr. Sapna Sharma**. Lip print patterns among the students of Maharshi Dayanand University (MDU) Rohtak, Haryana. Int. J. Pharm. Biol. Sci. 2014; 4: 2.
- 5) Sapna Sharma & Devinder Singh. Mitochondrial DNA of two forensically important species of Chrysomya (Diptera: Calliphoridae) from India, Oriental Insects (2014), DOI: 10.1080/00305316.2015.1013181
- 6) Kusum Singal & Sapna Sharma (2016): Gender determination by mental foramen using linear measurements on radiographs: A study in Haryana population, Indian J of Forensic Medicine & Toxicology 2016; 10(1):44-49. DOI:10.5958/0973-9130.2016.00011.
- 7) Jyoti Dalal, Sapna Sharma, Kapil Verma, S.K. Dhattarwal, Tapeshwar Bhardwaj. Data of drowning related deaths with reference to entomological evidence from Haryana. Data in Brief 2017; Volume 15, Pages 975-980, ISSN 2352-3409, https://doi.org/10.1016/j.dib.2017.10.064.
- 8) Singal K, Sharma S. Age Estimation by Position of Mental Foramen in Haryana Population: A Radiographic Study. J Adv Med Dent Scie Res 2017;5(12):68-73. ISSN Print: 2348-6805, DOI 10.21276/jamdsr.2017.5.12.20
- 9) Kapil Verma, Sapna Sharma, Arun Sharma, Jyoti Dalal and Tapeshwar Bhardwaj, Data on Haplotype diversity in the hypervariable region I, II and III of mtDNA amongst the Brahmin population of Haryana, Data in Brief, https://doi.org/10.1016/j.dib.2018.01.011
- 10) Kapil Verma, Sapna Sharma, Arun Sharma, Jyoti Dalal, Tapeshwar Bhardwaj, Sequence polymorphism data of the hypervariable regions of mitochondrial DNA in the Yadav population of Haryana, Data in Brief 2018; Volume 18:164-171, ISSN 2352-3409, https://doi.org/10.1016/j.dib.2018.03.004.
- 11) Jyoti Dalal, Sapna Sharma, Tapeshwar Bhardwaj, S. K. Dhattarwal & Kapil Verma (2020) A seasonal study of the decomposition pattern and insects on submerged rabbit carcases, Oriental Insects, https://doi.org/10.1080/00305316.2020.1789009
- **12)** Jyoti Dalal, Sapna Sharma, Tapeshwar Bhardwaj, S.K. Dhattarwal, Kapil Verma (2020), Seasonal study of the decomposition pattern and insects on a

- submerged pig cadaver, Journal of Forensic and Legal Medicine, Volume 74, ISSN 1752-928X, https://doi.org/10.1016/j.jflm.2020.102023.
- **13)** Bhardwaj, T, Sharma, S, Dalal, J. *et al.* The implication of morphometrics and growth rate of dipteran flies in forensic entomotoxicology research: a review. *Sci Nat* **107**, 50 (2020). <a href="https://doi.org/10.1007/s00114-020-01707-9">https://doi.org/10.1007/s00114-020-01707-9</a>
- **14)** Bhardwaj, T., Sharma, S., Dalal, J. *et al.* Effects of aluminium phosphide on larval morphometry of two important *Chrysomya* species. *Int J Legal Med* (2022). https://doi.org/10.1007/s00414-022-02940-9
- 15) Dalal, J, Sharma, S, Bhardwaj, T, Dhattarwal, SK. Assessment of post-mortem submersion interval using total aquatic decomposition scores of drowned human cadavers. *J Forensic Sci.* 2023; 00: 1–9. https://doi.org/10.1111/1556-4029.15220
- **16)** Sharma, Sapna; Verma, Kapil. Haplotype Diversity of Mitochondrial DNA in the Jat Population of Haryana. Journal of Forensic Science and Medicine 9(4):p 320-330, Oct–Dec 2023. | DOI: 10.4103/jfsm.jfsm\_4\_22