RESUME

Name	:	Dr. Neelkamal	
Husband's Name	:	Dr.Devender Sharma	
Date of Birth	:	20th April, 1978	
Work Address	:	Dr. Neelkamal (Associate Professor) Department of Forensic Science, Maharshi Dayanand University, Rohtak-124001, Haryana, India E-mail: <u>neelgenetics@mdurohtak.ac.in</u>	

Academic Qualification:

•	Doctor of Philosophy (PhD) Department of Genetics (Biosciences) Maharshi Dayanand University, Rohtak-124001, Haryana. PhD thesis:
•	Master of Science (MSc) Department of Genetics (Biosciences) Maharshi Dayanand University, Rohtak-124001, Haryana.
•	Bachelor of Science (BSc) Pandit Neki Ram Sharma Government College Maharshi Dayanand University, Rohtak-124001, Haryana.

Academic Distinctions:

•	NET/JRF Awarded by CSIR-UGC, in 2003
٠	CSIR-UGC JRF, 2003-05 (Fellowship)
•	CSIR-UGC SRF, 2005-2007 (Fellowship)

PhD Supervision:

Vikas Kumar TOPIC: A Wildlife Forensic study on Molecular characterization of Blackbuck (Antilope cervicapra) population of Haryana.
Completed: 2018
Kusum
TOPIC: Development and Validation of Age Estimation Statistical tools using Digital Dental Radiographs- A Forensic Study.
Completed: 2020.
Nidhi
TOPIC: Forensic Study of Cannabis Sativa as a Geographical Indicator
Completed: 2023
Preeti
TOPIC: Soil Characterization from various Regions of Haryana: A Forensic perspective
Completed: 2024.
Priyanka (Ongoing)
Jasveer (Ongoing)
Arun (Ongoing)

Projects:

1. Major Project (2011-2014):		ajor Project (2011-2014):
	•	Title: "Characterization of Cytogenetics & Pathology in Prognosis of Acute Lymphocytic Leukemia."

- Funding Agency: UGC
- Grant: ₹11,39,293

2. Minor Project (May-Dec, 2019):

- Title: "Morphological Characterization of Soil Samples as a Physical Evidence."
- Funding Agency: DSW, MDU, Rohtak
- Grant: ₹50,000
- Reference No.: DSW/19320, Dated 8/5/19

Life Membership:

- Life Member of Indian Society of Human Genetics (ISHG).
- Life Member of Indian Science Congress Association (ISCA).

Paper Presented in Seminars / Conferences

-	Dester remaining an "Devin and some with magnitude in a stall 1 11 122 to
•	Poster paper presentations on "Down syndrome with mosaicism in a girl child" in
	Indian Science Congress, 3-7 January, 2007.
•	Poster paper presentations on "Study of different traits of dermatoglyphics in normal
	population" in Indian Science Congress, 3-7 January, 2007.
•	Oral presentation on cytogenetics of Down syndrome patients in seminar on
	Biological Science held by University College, MDU Rohtak, 12-13 March, 2008.
•	Presented a paper on Prevalence & maternal age in Down syndrome in National
	Conference on Medical Biotechnology- Vision 2020, 16-18 April, 2010.
•	Oral presentation on "Phenotypic & dysmorphic variability in Down syndrome
	patients" in National Conference on Multidisciplinary Approach in Frontier Areas of
	Environmental Science & Engineering, GJU Hissar, 4th-5th March, 2011.
•	Presented a paper on "Issues & challenges of forensic science education in India" in
	a National Conference held by Dept. of IMSAR, MDU Rohtak, 12th March, 2011.
•	Oral presentation on "Morphogenetic Variation among Down syndrome patients" in
	National Seminar on Internet Application in Research, Zoology Dept., MDU Rohtak,
	26th March, 2011.
•	Poster presentation on "Forensic science research & internet tools" in National
	Seminar on Internet Application in Research, Zoology Dept., MDU Rohtak, 26th
	March, 2011.
•	Presented a paper on Hematopoietic Stem Cell Malignancy: Acute Leukemias in
	National Seminar on Scientific Development for Human Welfare: Promises &
	Concerns, JVMGRR (PG) College, Charkhi Dadri, Bhiwani, 10-11 February, 2012.
•	Presented a paper on "Phenotypic Mapping & Cytogenetic Characterization of Down
	Syndrome Patients from Haryana State" in International Conference on "Gene,
	Genetics & Genomics: Today & Tomorrow – Human Concern," Punjab University,
	Chandigarh, 3-5 March, 2012.
	-

•	Presented a paper on "A Review on Issues & Challenges in Forensic Biology &
	Serology" in National Symposium on "Education & Research in Forensic Sciences:
	Issues & Challenges," Punjabi University, Patiala, 15-16 March, 2012.
•	Presented a paper on "Associated Medical Problems for Down Syndrome" in
	International Symposium on Developmental & Complex Disorders, BHU, Varanasi,
	9-11 December, 2012.
•	Presented a paper on "I.Q. levels & phenotypic variability in Down syndrome" in
	Indian Science Congress, Kolkata, 3-7 January, 2013.
•	Presented a paper on Prenatal & Postnatal History in Down syndrome in National
	Seminar: Next Generation Sciences: Vision 2020 and Beyond, Dept. of Zoology,
	M.D. University, Rohtak, 8th March, 2014.
•	Presented a paper on 'Phenotype & Dermatoglyphics in Down Syndrome' in National
	Seminar: Innovative Researches in Life Sciences, Dept. of Zoology, M.D. University,
	Rohtak, 21st February, 2015.
•	Presented a paper on 'Introduction to Environmental Forensics' in National Seminar:
	Today's Vision: Save Ozone, Save Earth, Dept. of Environmental Science, M.D.
	University, Rohtak, 16th September, 2015.
•	Poster presentation on 'Microscopic examination and comparison of hair
•	characterization of some domestic species with selected wild species' in National
	Conference on 'Genetic Diversity and Therapeutic Potential of Natural Products,'
	Dept. of Genetics, M.D. University, Rohtak, 17th September, 2016.
•	Poster presentation on 'DNA Barcoding & their utility in Biodiversity Conservation'
	in National Seminar on 'Biodiversity: Status & Significance,' Dept. of Botany, M.D.
	University, Rohtak, 21st March, 2017.
•	Poster presentation on 'Species identification through Forensically Informative
	Nucleotide (FINS)' in National Seminar on 'Current Scenario in Forensic
	Investigative Technique,' Dept. of Genetics, M.D. University, Rohtak, 7th September,
	2017.
•	Oral presentation on 'A Forensic Study for the Identification of Species-Specific DNA
	Markers as DNA Barcode of the Indian Blackbuck from Haryana' in International
	Conference on 'Sustainable Agriculture, Energy, Environment & Technology
	(ICSAEET-2018),' M.D. University, Rohtak, 24th-25th February, 2018.

•	Poster presentation in a National Seminar on 'A Forensic Study on Inheritance and
	Variability of Handwriting Features Among English Language Writers' in
	International Seminar on 'Sustainable Environment & Agriculture Under Global
	Climate Change,' M.D. University, Rohtak, 21st February, 2019.
•	Poster presentation on 'Physical Characterization of Soil: A Forensic Study' in
	International Conference-2019 (CTM-2019), Current Trends in Microbiology and
	Microbiome Research: A Global Perspective, INSCR & Department of Microbiology,
	M.D. University, Rohtak, 11th-12th October, 2019.
•	Oral presentation on 'A Review on Forensic Microbiology & Public Health Issues' in
	National Conference on 'Current Understanding of Pathogenesis of Human Diseases,'
	Dept. of Genetics, M.D. University, Rohtak, 23rd February, 2021.
•	Oral Presentation on "Identification of Diatom Genera as a Forensic Tool: Study from
	a District of Haryana" in National Webinar cum Workshop on "Ethics in Biomedical
	Research & GCP Guidelines," Human Ethics Committee & Dept. of Zoology, M.D.
	University, Rohtak, 15th March, 2021.
•	Oral Presentation on "Different Methods for the Estimation of Post Mortem Interval:
	A Forensic Perspective," 17th Annual International Conference of South India
	Medico-Legal Association, Dept. of Forensic Medicine & Toxicology, AIIMS,
	Hyderabad, 5th-6th October, 2021.
•	Poster presentation on 'Characterization of Soil Samples Using UV-VIS-NIR Diffuse
	Reflectance Spectroscopy' in National Conference on 'Promoting IPR in University
	System,' Center for IPR Studies in collaboration with Dept. of Zoology, M.D.
	University, Rohtak, 3rd June, 2023.
•	Oral Presentation on "Age Estimation from Sternum Bone Using Radiograph
	Technique," International Conference on Engineering, Social Sciences &
	Management (ICESSM), Dept. of Applied Sciences & Dept. of Computer
	Applications, Jaipur, 22nd June, 2023.
•	Oral Presentation on "GC-MS Analysis of THC Content in Cannabis Sativa Leaves:
	Geographical & Seasonal Indicators," 15th IASR International Conference on
	Forensic Science, IASR, 23rd-25th August, 2023.
•	Oral Presentation on "Genetic Diversity of Microsatellite Loci of Indian Blackbuck
	(Antilope Cervicapra)." at 5th International Conference on Forensic Science (online),
	hosted by Sherlock institute of Forensic Science, India. 11th to 13th December, 2024.
L	

List of Publications:

- Minakshi Vashist, Neelkamal, and Ritu Yadav. 2008. "Phenotypic variability and delayed development in Down syndrome patients of Haryana," *Journal of Cytology & Genetics*, 9: 47-53.
- Minakshi Vashist, Ritu Yadav, Neelkamal, and Amit Kumar. 2008. "Evaluation of Digital configuration of mentally retarded patients," *National Journal of Life Sciences*, 5(2), pp. 295-298.
- Minakshi Vashist, Neelkamal, Ritu Yadav, and Meena Lal. 2009. "Trisomy- T (21; 21) with mosaicism in a Down Syndrome girl child: case report," *International Journal of Human Genetics*, 9(2), pp. 105-107. Scopus, WOS.
- Minakshi Vashist, Neelkamal, Shivani Kachroo, and Ritu Yadav. 2009. "ATD angle: A diagnostic tool in Down Syndrome patients," *National Journal of Life Sciences*, 6(1), pp. 93-97.
- Minakshi Vashist, Ritu Yadav, Neelkamal, and Amit Kumar. 2010. "Axial triradius as a preliminary diagnostic tool in patients of mental retardation," *The Internet Journal of Biological Anthropology*, 4(1). ISSN-1939-4594. Scopus.
- Minakshi Vashist, Ritu Yadav, Neelkamal, Radha Rathee, Shiksha Sharma. 2010.
 "Dermal pattern of Haryana population," *National Journal of Life Sciences*, 7(1), pp. 63-66.
- Minakshi Vashist, Ritu Yadav, Neelkamal, and Radha Rathee. 2011. "Dankmeijer's Index (D.I.) in Mental Retardation," *The Internet Journal of Biological Anthropology*, 4(2). ISSN-1939-4594. Scopus.
- Minakshi Vashist, Neelkamal, and Amit Kumar. 2011. "Does paternal age exist as a risk factor in trisomy 21?" *Biosciences Biotechnology Research Asia*, 8(1), pp. 321-324. ISSN: 0973-1245. Scopus, WOS.

- Minakshi Vashist, Amit Kumar, and Neelkamal. 2011. "Evaluation of prenatal, postnatal & neonatal causes as the risk factors for patients with different I.Q. level of mental retardation," *Biosciences Biotechnology Research Asia*, 8(1), pp. 247-252. ISSN: 0973-1245. Scopus, WOS.
- Minakshi Vashist, Shivani Kachroo, Neelkamal, and Ritu Yadav. 2011. "Improvisation in PCR for amplification of GC-rich sequences (CGG Repeats) in PARAX gene in humans," *International Journal of Biotechnology & Biosciences*, 1(3), July-Sept., pp. 247-252. ISSN: 2231-0304.
- Ashok Kumar, Radha Rathee, Minakshi Vashist, Neelkamal, Sunita Singh, and Sumiti Gupta. 2012. "Acute Lymphocytic Leukemia: An Epidemiological & Hematological study from Haryana," *Biosciences Biotechnology Research Asia*, 9(2), pp. 813-817. ISSN: 0973-1245. Scopus, WOS.
- Ashok Kumar, Minakshi Vashist, Radha Rathee, and Neelkamal. 2012. "Dermatoglyphics in children of acute lymphocytic leukemia from Haryana," *International Journal of Biotechnology and Biosciences*, 2(4), pp. 272-275. ISSN: 2231-0304.
- Minakshi Vashist, Neelkamal, Ritu Yadav, Amit Kumar, Shiksha Sharma, and Radha Rathee. 2012. "Dermatoglyphics – A Diagnostic Tool in Trisomy–21," J. Applied Biosciences, 38(2), pp. 146-150. ISSN (Online): 0975-864X. WOS.
- **M. Vashist and Neelkamal.** 2013. "Maternal age: a controversial factor in trisomy 21," *Rev Med Int Sindr Down*, 17(1), pp. 8-12. ISSN: 1138-011X.
- Neelkamal, Radha Rathee. Nov 2013. "Acute Lymphoblastic Leukemia: Characterization and its Prognostic Values," *International Journal of Pharma Research & Review*, 2(11), pp. 27-36. ISSN: 2278-6074. IC Value: 5.15, Impact Factor = 3.6.
- M. Vashist, Neelkamal, and Kirti Grow. 2013. "Does any correlation exist between I.Q. levels, Diagnosis Age & Morphological parameters in Down Syndrome patients?"

International Journal of Theoretical & Applied Sciences, 5(2), pp. 79-83. ISSN No. (Online): 2249-3247.

- Radha Rathee, Neelkamal, Ashok Kumar, Minakshi Vashist, Ritu Yadav. June 2014. "Dermatoglyphic patterns of Acute Leukemia patients," *International Research Journal of Biological Sciences*, 3(6), pp. 90-93. ISSN: 2278-3202. Impact Factor = 1.269.
- Neelkamal, Jyoti, and Rinki. July 2015. "Estimation of sex from footprints using standard footprint length formula, heel ball index & foot index," *Indian Journal of Forensic Medicine & Toxicology*, 9(2), pp. 8-12. ISSN: 0973-9122P & ISSN: 0973-9130E. Scopus.
- Neelkamal, Radha Rathee, Minakshi Vashist, Ashok Kumar. 2015. "Environmental Factors as causative agents for Acute Lymphoblastic Leukemia," *European J. of Biomedical & Pharmaceutical Sciences*, Aug 2015, 3(6), pp. 90-93. ISSN: 2278-3202. Impact Factor = 2.062.
- Kumar Vikas and Neelkamal. 2015. "Wildlife DNA Evidence: Recognition, Collection and Preservation," *Res. J. Forensic Sci.*, 3(7), pp. 8-15. ISSN: 2321–1792.
- Neelkamal, Jyoti, Divya, Jyoti Sharma. 2015. "Cheiloscopy: A Tool for Sex Identification," *International Journal of Forensic Science & Pathology*, July-December 2015, 9(2), pp. 193-198. ISSN: 0973-9122.
- Vikas Kumar, Neelkamal, and Arun Sharma. 2017. "DNA barcoding as a wildlife forensic tool (WFT) for species identification: a case study on blackbuck (Antilope Cervicapra) in India," *Int. J. Adv. Res.*, 5(6), pp. 1283-1287. ISSN: 2320-5407.
- Kusum Singal, Neelkamal. 2017. "Dental radiology: an adjunctive aid in age estimation," *Annals and Essences of Dentistry*, 9(3), pp. 8c-11c. ISSN: 0976-156X.
- Singal K, Sharma N, N Preeti. 2018. "Usage of Open Access Computer Image Editing Software (Adobe Photoshop) in Forensic Dentistry," *J Forensic Sci & Criminal Invest.*, 7(4). ISSN: 2476-1311, Impact Factor = 0.793.

- Kumar V, Sharma N, Sharma A, Verma K, Singal K, Kumar M. 2018. "A data-based study in support of Blackbuck related cases from Haryana," *Data in Brief*, 7, pp. 1196-1200. ISSN: 2352-3409, Impact Factor = 0.93. Scopus, WOS.
- Kumar V, Sharma N, Singal K, Sharma A. 2018. "A Wildlife Forensic Study for the Species Identification of Indian Blackbuck Through Forensically Informative Nucleotide Sequencing (FINS)," *Biosci Biotech Res Asia*, 15(1). ISSN: 0973-1245, Impact Factor = 0.139. Scopus, WOS.
- Sunil Singh, Kusum Singal, Arun Sharma, Neelkamal Sharma. NDPS Cases in Kangra, Kullu, Una and Hamirpur During 2013-2017- A Retrospective Study, *J Punjab Acad Forensic Med Toxicol*, 2018; 18(2):42-44. ISSN: 0972-5687, Impact Factor= 0.139. Scopus.
- Kusum Singal, Neelkamal Sharma, S.C. Narula, Vikas Kumar, Permila Singh. Age Estimation Using Non-Destructive Approach: A Comparative Forensic Analysis, *Journal of Panjab Academy of Forensic Medicine & Toxicology*, June 2019: 19(1)29-34. ISSN: 0972-5687, Impact Factor= 0.139. Scopus.
- Kusum Singal, Neelkamal Sharma, Permila Singh, Vikas Kumar, Neha Punia, Monika Yadav. Pulp/Tooth Area Method: A Potential Statistical Tool for Age Estimation Using Digital Dental Radiographs, *Indian Journal of Forensic Medicine & Toxicology*, June 2019: 13(2): 228-233. ISSN: 0973-9130, Impact Factor= 0.142. Scopus.
- Singal K, Kaidan R, Singh S, Narwal P, Sharma N. Dental Practitioners: Are They Real Patrons of Forensic Odontology? *J Indian Acad Forensic Med*, 2019 Jan-Mar; 41(1):42-44. ISSN: 0971-0973, Research Impact Factor= 0.05.
- Kusum Singal, Neelkamal Sharma, Vikas Kumar, and Permila Singh. Coronal Pulp Cavity Index as Noble Modality for Age Estimation: A Digital Image Analysis, *Egyptian Journal of Forensic Sciences*, July 2019: 42. ISSN: 2090-5939, Impact Factor= 1.152. Scopus, WOS.
 - Kusum Singal, Neelkamal Sharma, S.C. Narula, Vikas Kumar, Permila Singh, V.J. Munday. Evaluation of Age by Kvaal's Modified Measurements (KMM) Using

Computer-Aided Imaging Software and Digitized Parameters, *Forensic Science International: Reports*, Aug 2019: 1. ISSN: 2665-9107, Scopus, WOS.

- Singal K, Sharma N, Singh P, Kumar V. Teeth as an Anatomical Modality for Age Estimation Using Radiographic Approach, *J Anat Soc India*, Oct 2019; 68:153-8. ISSN: 0003-2778, Impact Factor= 0.195. Scopus, WOS.
- Manju Tobria, Kusum Singal, Vikas Kumar, Neelkamal Sharma, and Permila Singh. A Forensic Study on Inheritance and Variability of Handwriting Features Amongst English Language Writers, *Journal of Punjab Academy of Forensic Medicine and Toxicology*, January 2020: 20(2):28-33. ISSN: 0972-5682. Scopus.
- Preeti Sangwan, Tarsem Nain, Kusum Singal, Nidhi Hooda, Neelkamal Sharma. Soil as a Tool of Revelation in Forensic Science: A Review, *Analytical Methods*, Nov 2020; 12(43):5150-5159. Impact Factor= 2.596. Pub Date: 2020-09-25. Scopus, WOS.
- Sangwan P, Nain T, Yadav P, Sharma N. Molecular Approaches in Soil Microbial Analysis-Forensic Perspective, *Biosciences Biotechnology Research Asia*, June 2023, 20(2): 367-379. ISSN: 0973-1245, Impact Factor= 0.139. Scopus, WOS.
- Hooda N, Sangwan P, Sharma K, Sharma N. Pattern of Cannabis Abuse Cases from Himachal Pradesh - A Retrospective Evaluation, *International Journal of Forensic Toxicology & Legal Medicine*, July 2023, 26(1&2): 167-175. ISSN: 0974-4614. Scopus, Google Scholar, ICI.
- Preeti Sangwan, Chongtham Nimi, Tarsem Nain, Rajinder Sings, Neelkamal Sharma. Discrimination of Soil Samples Collected from Haryana (India) Using Non-Destructive ATR-FTIR Spectroscopy Coupled with Multivariate Statistical Analysis, *Indian Journal of Science and Technology*, April 2024, 17(11):1087-1096. ISSN Print: 0974-6846, Electronic: 0974-5645. Web of Science, Scopus/UGC Care Listed.
- Priyanka Yadav, Nitin Bishariya, Jasbir Lather, S. Dhattarwal, Neelkamal Sharma, Arun Lohhra. Assessing the Impact of Corrosive Acids on Human Bone Integrity in Forensic Context, *Forensic Science, Medicine & Pathology*, 22 August 2024. ISSN: 1556-

2891, Impact Factor= 1.5, Pub Med. DOI: 10.1007/s12024-024-00861-0, Corpus ID: 271920759, PMID: 39172313. Scopus/UGC Care Listed, WOS.

 Nidhi Hooda, Uttam Singh, Neelkamal Sharma, Kapil Sharma, Arun Sharma. Forensic Characterization of Tetrahydrocannabinol (THC) in Cannabis Sativa Leaf Specimens from Himachal Pradesh Using GC-MS – A Seasonal and Geographical Study, *Journal of Punjab Academy of Forensic Medicine & Toxicology* (Accepted). 2024; 24(1), 40-43. ISSN: 0972-5687, DOI: 10.5958/0974-083X.2024.00008.X. Scopus/UGC Care Listed.

No. of Abstracts - 27

Papers in reviewed proceeding of national seminar

• N	Neelkamal & Minakshi Vashist. 2011. "Morphogenetic Variation among Down
	yndrome patients." In Proceedings of the National Seminar on Internet Application in
-	Research, held on 26th March, 2011 by the Zoology Department, MDU Rohtak.
()	Published in Nov, 2011), pp. 16-18. ISBN: 978-81-920945-1-9.
• N	Neelkamal & Sapna Sharma. 2011. "Forensic science research & internet tools." In
	-
	Proceedings of the National Seminar on Internet Application in Research, held on 26th
Ν	Aarch, 2011 by the Zoology Department, MDU Rohtak. (Published in Nov, 2011), pp.
5	9-60. ISBN: 978-81-920945-1-9.
• S	apna Sharma, Minakshi Vashist & Neelkamal. 2011. "Internet as a tool in genetics
re	esearch." In Proceedings of the National Seminar on Internet Application in Research,
h	eld on 26th March, 2011 by the Zoology Department, MDU Rohtak. (Published in Nov,
2	011), pp. 24-25. ISBN: 978-81-920945-1-9.
• N	Veelkamal, Radha Rathee, Minakshi Vashist & Vikas Kumar. 2015. "Phenotype &
E	Dermatoglyphics in Down syndrome patients." In Proceedings of the National Seminar
0	n Innovative Researches in Life Science, held on 21st February, 2015 by the Zoology
E	Department, MDU Rohtak. (Published in Nov, 2015), pp. 115-117. ISBN: 978-81-
9	20945-5-7.