



Dr. Abhishek Singh

Assistant Professor, National Forensic Sciences University, Goa Campus

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Profile

A forensic geneticist by academia, I conduct research that lies at the intersection of anthropology, population genetics and wildlife forensics. I am specifically driven by the interaction between the socio-cultural evolution and genetic ancestry of human populations in western Himalayan region of India. With strong analytical and written communication skills, I have communicated my research findings to the larger scientific community.

Professional Experience (5 years)

2018 – 2021 Kolkata, India	Junior project fellow, <i>Zoological Survey of India</i>
2021 – 2022 Kolkata, India	Project Biologist, <i>Nature Environment & Wildlife Society</i>
2022 – 2024 Goa, India	Teaching and Research Assistant, <i>National Forensic Sciences University</i>
2024 – present Goa, India	Assistant Professor, <i>National Forensic Sciences University</i>

Education

2019 – 2024 Gandhinagar, India	PhD, <i>National Forensic Sciences University</i> Doctoral advisors: Dr. Satish Kumar, Dr. Mukesh Thakur Dissertation title: Studying genetic polymorphism of high-altitude human populations in the North-West Indian Himalayan ranges: Implications in Human Forensics.
2016 – 2018 Delhi, India	M.Sc, <i>LNJN National institute of criminology and forensic science</i> Specialization- Forensic science (DNA profiling)
2013 – 2016 Noida, India	B.Sc, <i>Amity University</i> Forensic science (hons)

Publications

- 06/2025 **Genetic insights into forensic features and population structure of the Hajong tribe in the Indian regions of Eastern Himalaya**, *Springer Nature*
Vahinde, A., Niranjana, P. H., Priyanka, G., Nijji, C., Sahajpal, V., Rana, A. S., Bhandari, D., Kumar, S., Nidhi, S., & **Singh, A.** *Molecular Genetics and Genomics*. DOI: 10.1007/s00438-025-02262-6.
- 12/2024 **Benzoylmesaconine alters the native structure and activity of hen egg white lysozyme: revealing possible mechanism of aconitum-induced toxicity**, *Springer Nature*
Marycleopha, M., Johnson, J., **Singh, A.**, & Kumar, S. *Forensic Toxicology*. DOI: 10.1007/s11419-024-00709-w
- 09/2024 **Unraveling the impact of deleterious nsSNPs on the MFSD1 protein**, *Elsevier*
Nidhi, S., Kumar, S., Das, A., Singh, A. **Human Gene**. DOI: 10.1016/j.humgen.2024.201320 [↗](#)
- 07/2024 **Population dynamics and genetic isolation in the Central Himalayan region: insights from Sikkim population, India**, *Springer*
Priyanka, G., Vahinde, A., Niranjana, P. H., Sahajpal, V., Bhandari, D., Rana, A. S., Kumar, S., Shukla, M., Nidhi, S., & Singh, A. **Molecular genetics and genomics**. DOI: 10.1007/s00438-024-02160-3
- 04/2023 **Noninvasive genetic monitoring of Chinese pangolin (*Manis pentadactyla*) from Darjeeling district of Northwest Bengal, India**, *Wiley*
Priyambada, P., Singh, V.K., **Singh, A.**, Joshi, B.D., Dalui, S., Wangmo, L.K., Ghosh, A., Thapa, A., Singh, S.K., Chandra, K., Sharma, L.K., Thakur, M. *Wildlife Letters*. DOI: 10.1002/wll2.12005
- 02/2023 **Genetic Diversity of Autosomal STR Markers in the Brahmin Population of Rajasthan and Haryana: Significance in Population and Forensic Genetics**, *Nizhny Novgorod State Medical Academy of the Ministry of Health of the Russian Federation*
Sharma, S., Sahajpal, V., **Singh, A.**, Yadav, R., Thakur, M., Bhandari, D., Shalu, R., Kadian, L., Yadav, C. *Sovremennyye Tehnologii v Medicine*. DOI: 10.17691/stm2023.15.1.07
- 12/2022 **From poops to planning: A broad non-invasive genetic survey of large mammals from the Indian Himalayan Region.**, *Elsevier*
Joshi, B. D., Singh, S. K., Singh, V. K., Jabin, G., Ghosh, A., Dalui, S., **Singh, A.**, Priyambada, P., Dolker, S., Mukherjee, T., Sharief, A., Kumar, V., Singh, H., Thapa, A., Sharma, C. M., Dutta, R., Bhattacharjee, S., Singh, I., Mehar, B. S., Chandra, K., ... Thakur, M. *Science of Total Environment*. DOI: 10.1016/j.scitotenv.2022.158679
- 10/2022 **Evaluation of Genetic Polymorphisms at 21 Autosomal Str Loci in Ramgharia Sikh Population of Punjab, India**, *Taylor & Francis*
Bhambara, A. K., **Singh, A.**, Sahajpal, V., Thakur, M., Bhandari, D., Sharma, S., & Thakar, M. K. *Annals of Human Biology*. DOI: 10.1080/03014460.2022.2126888
- 06/2022 **Insight into the genetic and forensic attributes of Brahmin population of Himachal Pradesh, India**, *Elsevier*
Sahajpal, V., **Singh, A.**, Thakur, M., Bhandari, D., Sharma, S. **Gene reports**. DOI: 10.1016/j.genrep.2022.101574

- 05/2022 **Genetic diversity and population structure of the northern red muntjac (*Muntiacus vaginalis*) in Indian Himalayan region**, *Springer*
Singh, V.K., Joshi, B.D., **Singh, A.**, Singh, S.K., Chandra, K., Sharma, L.K., Thakur, M. *Mammalian Biology*. DOI: 10.1007/s42991-022-00254-2
- 03/2022 **Genetic ancestry defies social organization in human populations of western Himalaya, India. Program of the 91st Annual Meeting of the American Association of Biological Anthropologists.**, *Wiley*
Singh, A., Sahajpal, V., Kumar, S., Thakur, M. **Am J Biol Anthropol**
<https://doi.org/10.1002/ajpa.24514>
- 01/2022 **African or Asiatic origin? Genome analyses solved the mystery of the hybrid origin of the rescued lion cub**, *Elsevier*
Singh, A., Thakur, M., Kumar Sharma, L., & Banerjee, D. **Gene**.
DOI: 10.1016/j.gene.2022.146228.
- 11/2021 **Population genetic attributes of common leopard (*Panthera pardus fusca*) from Uttarkashi, Western Himalayas**, *Springer Nature*
Singh, V. K., Singh, S. K., Joshi, B. D., **Singh, A.**, Kumar, H., Chandra, K., Sharma, L. K., Thakur, M. **Molecular Biology Reports**. DOI: 10.1007/s11033-021-06908-7.
- 11/2021 **Key genetic and forensic attributes of Uttarakhand population of India**, *Springer Nature*
Singh, A., Sahajpal, V., Kumar, S., Shukla, M., Bhandari, D., Sharma, S., Sharma, L.K., Thakur, M. **International Journal of Legal Medicine**. DOI: 10.1007/s00414-021-02637-5.
- 10/2021 **Establishing Cranio-Dental Keys for Human and Non-Human Primates: Implication in Forensic Investigations**, *Springer Nature*
Roy, J., **Singh, A.**, Rohith, M.M., Sharma, L.K., .**Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.** DOI: 10.1007/s40011-021-01306-2
- 10/2021 **Genetic monitoring of Himalayan goral (*Naemorhedus goral*) from Western Himalayas, India**, *Springer Nature*
Singh, V. K., Joshi, B. D., Singh, S. K., Dolker, S., **Singh, A.**, Chandra, K., Sharma, L. K., Thakur, M. **Molecular biology reports**. DOI: 10.1007/s11033-021-06716-z.
- 09/2021 **Cranio-dental signature of three big cats of India: implications in wildlife forensics**, *Springer Nature*
Roy, J., **Singh, A.**, Rohith, M.M., Sharma, L.K., Johnson, A., Joshi, H., Chinnadurai, V., Chandra, K., Thakur, M. **Proceedings of the Zoological Society**.
DOI: 10.1007/s12595-021-00390-6
- 08/2021 **Indian Grey Wolf and Striped Hyaena sharing from the same bowl: High niche overlap between top predators in a human dominated landscape**, *Elsevier*
Mukherjee, T., Chongder, I., Ghosh, S., Dutta, A., **Singh, A.**, Dutta, R., Joshi, B.D., Thakur, M., Sharma, L.K., Venkatraman, C., Ray, D., Chandra K. **Global Ecology and Conservation**. DOI: 10.1016/j.gecco.2021.e01682.
- 07/2021 **Species identification from seized animal oil: a case study of suspected Gangetic dolphin (*Platanista gangetica*)**, *Springer Nature*
Singh, A., Ghosh, A., Dolker, S., Chinnadurai, V., Sharma, L. K., Chandra, K., & Thakur, M. **International journal of legal medicine**. DOI: 10.1007/s00414-021-02574-3.

- 05/2021 **Applicability of human-specific STR systems, GlobalFiler™ PCR Amplification Kit, Investigator 24plex QS Kit, and PowerPlex® Fusion 6C in chimpanzee (*Pan troglodytes*)**, *Springer Nature*
Singh, A., Sahajpal, V., Thakur, M., Sharma, L. K., Chandra, K., Bhandari, D., & Sharma, A. **BMC research notes**. DOI: [10.1186/s13104-021-05632-6](https://doi.org/10.1186/s13104-021-05632-6).
- 05/2021 **Deltamethrin modulates the native structure of Hen Egg White Lysozyme and induces its aggregation at physiological pH.**, *Elsevier*
Varma, N., Singh, A., Ravi, V.K., Thakur, M., Kumar, S. **Colloids and surfaces. B, Biointerfaces**. DOI: [10.1016/j.colsurfb.2021.111646](https://doi.org/10.1016/j.colsurfb.2021.111646).
- 04/2021 **Digging out the keys in the heap of seized pangolin scales: up scaling pangolin conservation using wildlife forensics**, *Elsevier*
Priyambada, P., Jabin, G., Singh, A., Ghosh, A., Singh, S. K., Chatterjee, M., Venkatraman, C., Chandra, K., Sharma, L. K., & Thakur, M. **Forensic science international**. DOI: [10.1016/j.forsciint.2021.110780](https://doi.org/10.1016/j.forsciint.2021.110780).
- 12/2020 **Genetic evidence of shared ancestry among diverse ethno-linguistic human populations of Himachal Pradesh**, *Elsevier*
Singh A, Sahajpal V, Kumar S, Shukla M, Bhandari D, Sharma S, Sharma A, Chandra K, Sharma L.K., Thakur M. **Gene**. DOI: [10.1016/j.gene.2020.145373](https://doi.org/10.1016/j.gene.2020.145373).
- 10/2020 **Time-lapse sentinel surveillance of SARS-CoV-2 spread in India**, *PLOS*
Thakur, M., Singh, A., Joshi, B. D., Ghosh, A., Singh, S. K., Singh, N., Sharma, L. K., Chandra, K. **PloS one**. DOI: [10.1371/journal.pone.0241172](https://doi.org/10.1371/journal.pone.0241172).
- 10/2020 **Designing a multi-epitope peptide based vaccine against SARS-CoV-2**, *Nature*
Singh, A., Thakur, M., Sharma, L.K., Chandra, k. **Scientific Reports**. DOI: [10.1038/s41598-020-73371-y](https://doi.org/10.1038/s41598-020-73371-y)
- 09/2020 **Genetic polymorphism of 20 autosomal short tandem repeats (STRs) in Himachal Pradesh population**, *Springer Nature*
Sahajpal, V., Singh, A., Thakur, M., Sharma, A., Bhandari, D., Sharma, L.K., Chandra, K., Kumar, S. **International journal of legal medicine**. DOI: [10.1007/s00414-020-02254-8](https://doi.org/10.1007/s00414-020-02254-8).
- 09/2020 **Pangolin Indexing System: implications in forensic surveillance of large seizures**, *Springer Nature*
Singh, A., Priyambada, P., Jabin, G., Singh, S.K., Joshi, B.D., Venkatraman, C., Chandra, K., Sharma, L.K., Thakur, M. **International journal of legal medicine**. DOI: [10.1007/s00414-020-02362-5](https://doi.org/10.1007/s00414-020-02362-5).
- 09/2020 **Exploring the effect of nsSNPs in human YPEL3 gene in cellular senescence**, *Nature*
Singh, A., Thakur, M., Singh, S.K., Sharma, L.K., Chandra, K. **Scientific Reports**. DOI: [10.1038/s41598-020-72333-8](https://doi.org/10.1038/s41598-020-72333-8)
- 07/2020 **Evaluation of genetic polymorphism at 20 autosomal STR loci in Rajput population of Himachal Pradesh**, *Springer Nature*
Sahajpal, V., Singh, A., Thakur, M. Sharma, A., Chandra, K., Sharma, S. **International journal of legal medicine**. DOI: [10.1007/s00414-019-02198-8](https://doi.org/10.1007/s00414-019-02198-8)
- 07/2020 **Assessment of genetic polymorphism at 20 autosomal STR loci in scheduled caste population of Himachal Pradesh**, *Springer Nature*
Sahajpal, V., Singh, A., Thakur, M., Sharma, A., Chandra, K., Kumar, S. **International journal of legal medicine**. DOI: [10.1007/s00414-019-02204-z](https://doi.org/10.1007/s00414-019-02204-z)

11/2019 **Cross-species validation of human specific STR system, SureID® 21G and SureID® 23comp (Health Gene Technologies) in Chimpanzee (Pan Troglodytes),** *Springer Nature*
Singh, A., Thakur, M., Sahajpal, V., Singh, S.K., Chandra, K., Sharma, A., Devi, N., Bernot, A. **BMC Research Notes.** DOI: 10.1186/s13104-019-4801-3

Patent/IPR

07/2025 **A System for Isolating High-Quality Metagenomic Deoxyribonucleic Acid (DNA) from Soil Samples.,** *German Patent (Granted)*
202025103421

09/2023 **Novel Lysis buffer and a method for DNA extraction from whale Amberggris.,** *Indian Patent (Published)*
202331010047A

Projects

2021 – 2022 **Current status, distribution and conservation threats of Swamp deer (Rucervus duvaucelii) in India**
The study assessed the conservation status, distribution and population dynamics of Swamp Deer in India

2018 – 2021 **Distribution and population assessment of Striped Hyena (Hyaena hyaena), Indian Wolf (Canis lupus pallipes), Golden Jackal (Canis aureus), Leopard cat (Prionailurus bengalensis), and Wild Boar (Sus scrofa) in South West Bengal State for conservation and management planning**
The study identified that adjoining area of southern part of Purulia district, South West part of Bankura district and extreme North West portion of Jhargram district (including some areas of Kangsabati South, Bankura South and Jhargram forest division), has high habitat suitability for all the five studied species

Awards

2023 **Forensic Hackathon-2023,** *National Forensic Sciences University (NFSU) in association with the Directorate of Forensic Science Services (DFSS) and under the auspices of the Ministry of Home Affairs (MHA), Government of India*

2022 **ITS travel grant,** *DST SERB*

2017 **CBSE-UGC NET (LS) Forensic Science,** *UGC*

2016 **University award for Best organizing ability,** *Amity University*

Conferences

2024 **Amberggris Origins Unveiled: A Multifaceted Approach for Conservation,**
Kuala Lumpur, Malaysia *Oral Presentation*
Society for Wildlife Forensic Science conference

2023 **DNA isolation from whale Amberggris- A novel hack,** *Oral Presentation*
Gandhinagar, India Forensic Hackathon-2023

2023 Gandhinagar, India	Ancestral genetic tracing defies socio-cultural structure in the north-western human populations of India , <i>Presentation & Participation</i> 25th All India Forensic Science Conference
2022 Prague, Czech Republic	Ancestral deconvolution confronts socio-cultural structure in western Himalayas Oral presentation (Online) Congress of the European society for evolutionary biology
2022 Madgaon, India	National Symposium in Forensic Medicine & Toxicology death deserve dignity- The way we look at it , <i>Participation</i>
2022 Vienna, Austria	Genetic ancestry supports cultural history of northwestern Himalayan Muslims Poster Presentation European Human Genetics Conference, 2022
2022 Denver, USA	Genetic ancestry defies social organization in human populations of western Himalaya, India , <i>Oral Presentation</i> AABA annual conference, 2022
2016 Noida, India	CRP: A potential biomarker for inflammation and disease prognosis , <i>Poster Presentation</i> International conference on nurturing global healthcare

Workshops

2023 Ponda, India	One day workshop on Sexual Assault Investigations , <i>National Forensic Sciences University, Goa campus</i>
2023 Ponda, Goa, India	5 days training programme on Virtual Autopsy , <i>National Forensic Sciences University and Virtual Autopsy India</i>
2022 Ponda, India	Capacity building and training of forest frontline staff and stakeholders in wildlife conservation through forensic techniques , <i>National Forensic Sciences University, Goa</i>
2022 Kolkata, India	A hands on training workshop on NGS , <i>Indian Institute of Science Education and Research</i>
2019 Kolkata, India	Training workshop on comparative osteology , <i>Zoological Survey of India</i>

Invited lectures

2024 Goa, India	Investigative techniques in Wildlife Forensics , <i>Goa University</i>
2023 New Delhi, India	Resource person for Online Two-Week Refresher course Zoology on the theme "Wildlife Forensic" , <i>Pandit Madan Mohan Malviya National Mission on Teachers and Teaching scheme, Ministry of Education (MoE)</i>
2023 Ponda, India	Resource person "Wildlife Forensics Bootcamp" , <i>National Forensic Sciences University, Goa Campus</i>
2023 Gandhinagar, India	2 Weeks of Hands on training program on capillary sequencing and fragment analysis , <i>Gujarat Biotechnology Research Centre and National Forensic Sciences University</i>

2022 Ponda, India	Resource person "Capacity building of forest frontline staff and stakeholders for wildlife conservation through forensic techniques", <i>National Forensic Sciences University, Goa Campus</i>
2022 Gandhinagar, India	Hands-on training program on capillary sequencing and fragment analysis, <i>Gujarat Biotechnology Research Centre and National Forensic Sciences University</i>
2018 New Delhi, India	Forensic Biotechnology, <i>National Institute of Criminology and Forensic Science</i>

Skills

Communication skills	● ● ● ● ●	Problem Solving	● ● ● ● ●
Critical Thinking and Flexibility	● ● ● ● ●	Resource and management planning	● ● ● ● ●
Teamwork	● ● ● ● ●		

Languages

• English	• Hindi	• Angika
• Bhojpuri	• Marathi	• Bengali

Certificates

Behavioral Science Amity University	English and Communication Skill Course Amity University	Forensic-Psychology Aptitude and Caliber Test LNJN National Institute of Criminology and Forensic Science, Ministry of Home Affairs, Government of India
National Cadet Corps B level	Forensic Aptitude and Caliber Test- Plus 2022 National Forensic Sciences University, Ministry of Home Affairs, Government of India	

Interests

• Theater	• Poetry	• Sports
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Courses

2017 India	Introduction to proteomics, IIT Bombay
2017 India	Interatomic: label-free biosensors and protein array, IIT Bombay

Organizations

2022 – present Panji, India	Office of the Director General of Police, Govt of Goa, <i>Member, Departmental Selection Committee</i>
2019 – 2022 Kolkata, India	Centre for Forensic Sciences, ZSI, Research Fellow Handling and report writing of wildlife forensic cases

Media outreach

2023 Ahmedabad, India	NFSU Goa's faculty bags award , <i>Ahmedabad Mirror</i>
2023 Goa, India	Abhishek Singh bags award at Forensic Science Hackathon , <i>Navhind Times</i>
2023 Bhagalpur, India	Young Scientists research on whale DNA , <i>News 18</i>
2023 Patna, India	Abhishek grabs prize for research on Whale DNA , <i>Prabhat Khabar</i>
2022 Kolkata, India	Definition of hybrid needed in Wildlife Protection Act , <i>Millennium post</i>
2022 India	DNA analysis of seized lion cub throws a challenge for wildlife crime , <i>The Hindu</i>
2021 Chandigarh, India	Study unveils genetic links between upper castes SCs in Himachal , <i>The times of India</i>
2020 Kolkata, India	Vaccine has potential to induce innate, adaptive immune systems & can neutralize SARS-CoV-2 , <i>Millenniumpost</i>
2020 India	Experts develop forensic kit to check illegal trading of pangolins , <i>Hindustan times</i>
2020 India	SARS COV 2 virus Chinese and European variants most prevalent in India , <i>tv9hindi</i>
2020 India	Chinese and European variants of SARS COV 2 most prevalent in India , <i>Hindustan Times</i>
2020 Patna, India	Research of zoological survey of India, Corona changed its form 198 times for transition, No change in Bihar , <i>Prabhat Khabar</i>

References

Dr. Satish Kumar, *Professor & Dean*, National Forensic Sciences University
satish.kumar@nfsu.ac.in, +91-9265663474

Dr. Mukesh Thakur, *Scientist D*, Zoological Survey of India
thamukesh@gmail.com, +91-8171051282

Dr. Bheem Dutt Joshi, *Scientist C*, Zoological Survey of India
+91-7906220339, joshidutt01@gmail.com

Memberships and other information

American Association of Biological Anthropologists, *Student member*

International Primatological Society, *Student member*

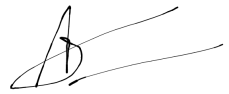
European Society of Evolutionary Biology (ESEB), *Student member*

Editorial Board Member, *BMC Genomics journal*

American society of primatologists, *member*

Declaration

I hereby declare that the above particulars of facts and information stated are correct to the best of my belief and knowledge



Dr. Abhishek Singh