










# Sanjay Kumar Mohanty

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 Portfolio



## Education

- 2020 – 2025 (exp.)    **Ph.D. Computational Biology, Indraprastha Institute of Information Technology-Delhi, New Delhi, India.**  
Thesis title: *Integrative Computational Frameworks for GPCR Biology: From Receptor Logic to Functional Modulation.*  
CGPA: 9.35
- 2018 – 2020    **M.Sc. Bioinformatics, Central University of South Bihar, Gaya, Bihar, India.**  
Thesis title: *The Cellular Basis of The Loss of Smell In 2019-nCoV Infected Individuals.*  
CGPA: 9.54
- 2015 – 2018    **B.Sc. Botany(Honors), Utkal University Bhubaneswar, Odisha, India.**  
Percentage: 72.17%

## Teaching Experience

- 2021 – 2022    **Introduction to Quantitative Biology,**  
Indraprastha Institute of Information Technology, New Delhi, India.  
Academic Session: Winter semester
- 2021 – 2022    **Machine Learning for Biomedical Applications,**  
Indraprastha Institute of Information Technology, New Delhi, India.  
Academic Session: Monsoon semester
- 2020 – 2021    **Communication Skills (English),**  
Indraprastha Institute of Information Technology, New Delhi, India.  
Academic Session: Winter semester
- 2020 – 2021    **Computational Gastronomy,**  
Indraprastha Institute of Information Technology, New Delhi, India.  
Academic Session: Monsoon semester

## Research Publications

### Journal Articles

- 1 V. Gautam, S. Duari, S. Solanki, *et al.*, "Scamage: A context-aware prediction engine for cellular age, aging-associated bioactivities, and morphometrics," *Cell Reports*, vol. 44, no. 2, 2025.
- 2 S. K. Mohanty, A. Mittal, A. Gaur, *et al.*, "Deep learning reveals endogenous sterols as allosteric modulators of the gpcr-gα interface," *eLife*, vol. 14, 2025.
- 3 S. Arora, A. Mittal, S. Duari, *et al.*, "Discovering geroprotectors through the explainable artificial intelligence-based platform agextend," *Nature Aging*, vol. 5, pp. 144–161, 2024.
- 4 S. Arora, S. Satija, A. Mittal, *et al.*, "Unlocking the mysteries of dna adducts with artificial intelligence," *ChemBioChem*, vol. 25, no. 1, e202300577, 2024.

- 5 **S. K. Mohanty**, S. Maryam, V. Gautam, *et al.*, "Transcriptional advantage influence odorant receptor gene choice," *Briefings in Functional Genomics*, vol. 22, no. 3, pp. 281–290, 2023.
- 6 **S. K. Mohanty**, A. Mittal, A. Gaur, *et al.*, "Gcoupler: An ai-enhanced tool unveiled endogenous intracellular allosteric modulators of evolutionary conserved gpcr-gα interface," *bioRxiv*, pp. 2023–02, 2023.
- 7 V. Gautam, R. Gupta, D. Gupta, *et al.*, "Deepgraphh: Ai-driven web service for graph-based quantitative structure–activity relationship analysis," *Briefings in Bioinformatics*, vol. 23, no. 5, bbac288, 2022.
- 8 A. Mittal, **S. K. Mohanty**, V. Gautam, *et al.*, "Artificial intelligence uncovers carcinogenic human metabolites," *Nature Chemical Biology*, vol. 18, no. 11, pp. 1204–1213, 2022.
- 9 V. Gautam, A. Mittal, S. Kalra, *et al.*, "Ectracker: Tracking and elucidating ectopic expression leveraging large-scale scrna-seq studies," *Briefings in Bioinformatics*, vol. 22, no. 6, bbab237, 2021.
- 10 A. Gupta, M. Choudhary, **S. K. Mohanty**, *et al.*, "Machine-olf-action: A unified framework for developing and interpreting machine-learning models for chemosensory research," *Bioinformatics*, vol. 37, no. 12, pp. 1769–1771, 2021.
- 11 K. Gupta, **S. K. Mohanty**, A. Mittal, *et al.*, "The cellular basis of loss of smell in 2019-ncov-infected individuals," *Briefings in bioinformatics*, vol. 22, no. 2, pp. 873–881, 2021.
- 12 R. Gupta, A. Mittal, V. Agrawal, *et al.*, "Odorify: A conglomerate of artificial intelligence–driven prediction engines for olfactory decoding," *Journal of Biological Chemistry*, vol. 297, no. 2, 2021.

## Proceedings

- 1 A. Mittal, **S. K. Mohanty**, M. Gupta, and G. Ahuja, "Evolv: A multimodal deorphanization approach for therapeutically relevant odorant receptors," in *CHEMICAL SENSES*, OXFORD UNIV PRESS GREAT CLARENDON ST, OXFORD OX2 6DP, ENGLAND, vol. 48, 2023.

## Skills

Coding	Python, R, SQL, PHP, Perl, C, C++, ...
Databases	MySQL, MongoDB.
Softwares	Modeller, Gromacs, Docker, LigBuilder, AutoDock, MGLtools, STAR, CellRanger, scVello, Seurat, MIMOSA, MEGA, ...
Visualisation	Pymol, UCSF Chimera, Adobe Illustrator, InkScape.
Languages	Strong reading, writing and speaking competencies for English, Hindi, and Odia (Native language).
Misc.	Academic research, teaching, training, consultation, illustration, and publishing.






## Academic Achievements

### Awards and Fellowships




2023	<ul style="list-style-type: none"> <li>Gold medalist, The School of Earth, Environmental and Biological Science, CUSB, India</li> <li>Best Graduate, Department of Bioinformatics, CUSB, India</li> </ul>
2021	DST INSPIRE Fellowship, (DST/INSPIRE/o3/2021/001936)
2020	Merit Award, CUSB Semester Topper Merit Scholarship 2019/2020
2019	Merit Award, CUSB Semester Topper Merit Scholarship 2018/2019

## Academic Achievements (continued)

### Conference/Symposium

- 2024  **Cell Symposia: Chemical biology in drugging the undrugged 2024** at UCSF, San Francisco, USA
-  **ICGB-5: 5th International Conference on Genome Biology** at MKU, Madurai, India
- 2023  **Algorithms that Transformed Molecular Biology (ATMB)** at IIIT-Delhi, New Delhi, India
- 2022  **DBT-sponsored workshop on "AI in Modern Biology"** at ICGB, New Delhi, India
- 2019  **Workshop Series on Machine Learning** at IIT-Patna, Patna, India

### Certification

- 2025  **European Molecular Biology Organization PhD course**, EMBO
- 2024  **Lecture Course, Post-transcriptional regulation in ageing and age-related diseases**, EMBO
- 2015  **Post-Graduation Diploma in CS**, NIITS

## References


### Dr. Gaurav Ahuja

Associate Professor (CB)


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### Dr. Debarka Sengupta


Professor (CB, CSE)


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New Delhi-110020, India.

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### Dr. Shashi Kumar Gupta


Senior Scientist

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Sector 10, Jankipuram Extension,

Lucknow 226031, Uttar Pradesh, India.

 <https://www.rnaindia.org/team/shashi-kumar-gupta>

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### Dr. Tarini Shankar Ghosh


Assistant Professor (CB)

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