



Dr. Shilpi Gupta

Assistant Professor-III | AIMMSCR
Senior Consultant Microbiologist | Felix Hospital

Specialization: Clinical and Translational Cancer Biology with a focus on Head and Neck, Cervical and Breast Cancers | HPV and Viral Oncology | Transcriptional and miRNA-mediated Gene Regulation | Cancer Stem Cells and Therapy Resistance | Cancer Microbiome | Liquid Biopsy-Based Biomarkers Discovery | Multi-Omics in Cancer Research | Targeted Cancer Therapeutics and Drug Discovery | Phytochemical-Based Anti-Cancer Strategies

“THE SG LAB: Where Translational Science Meets Real-World Cancer Solutions”

Dr. Shilpi Gupta obtained her Ph.D. in Biomedical Sciences from the University of Delhi, Delhi, in 2015. During her doctoral research, she was among the first to investigate the functional role of the key transcription factors AP-1 and NF-κB in poor cellular differentiation, aggressive tumorigenesis, and metastasis in tongue carcinoma. Her doctoral work significantly contributed to understanding the molecular basis of oral cancer progression and aggressiveness. During her Ph.D., she was actively involved in several important research projects as a Senior Research Fellow, including “Prevalence of HPV in Adolescent Girls in Tamil Nadu” and “Prevalence of HPV Infection and Its Physical Status in Cancers of Different Organ Sites.” These studies strengthened her expertise in HPV biology and cancer epidemiology. Following her Ph.D., Dr. Gupta joined the Amity Institute of Molecular Medicine and Stem Cell Research (AIMMSCR), Amity University Uttar Pradesh, Noida, as a National Postdoctoral Fellow (NPDF). Her postdoctoral research focused on the transcriptional and epigenetic targeting of HPV-positive and HPV-negative oral tongue cancers and cancer stem cells. She worked extensively on deciphering mechanisms of drug resistance and chemo-sensitization, with particular emphasis on exploring novel herbal-based therapeutic agents.

Subsequently, she served as an ICMR-Centenary Postdoctoral Fellow at the National Institute of Cancer Prevention and Research, Noida, India. There, her research centered on the AP-1/FRA-2- and NF-κB/c-REL-associated protein interactome, with the objective of identifying non-canonical and de novo protein-protein interactions associated with HPV infection, tobacco exposure, and alcohol use in oral tongue cancer. This work aimed to uncover novel molecular targets for the development of precision and personalized therapies for aggressive and therapy-resistant oral cancers.

At present, Dr. Shilpi Gupta is serving as Assistant Professor-III at AIMMSCR, Amity University Uttar Pradesh, Noida. She is also actively involved in advanced translational cancer research with a strong focus on oral, cervical and breast cancers. Her current research interests include cancer stem cells, transcriptional and post-transcriptional regulation, therapy resistance, liquid biopsy-based biomarkers, cancer microbiome, exosomal microRNAs, CRISPR/Cas9-based genome editing, and multi-omics approaches for early diagnosis, prognosis and targeted therapy. Dr. Gupta has made substantial contributions to the field of cancer biology and translational oncology, and her work has been published in reputed journals such as The Lancet Oncology, Scientific Reports, Oncotarget, Translational Oncology, Biomedicines, IJMR etc. Her broader research goal is to identify clinically actionable molecular pathways and biomarkers that can improve early detection, risk stratification, and therapeutic outcomes for cancer patients.

In addition to her research, Dr. Gupta is deeply engaged in academics and teaching. She teaches a wide range of subjects including Cancer Biology, Bioethics and Clinical Trials, Cancer Stem Cells, Biomarkers and Molecular Diagnostics, Microbiology, Haematology, Human Physiology, Molecular Biology and Tissue and Stem Cell Culture. Through her combined contributions in research, teaching, and translational science, Dr. Gupta continues to advance the field of cancer biology with a strong commitment to impactful and clinically relevant research.

Research Metrics			
Total Research Experience	15+ Years		
Total SCI Publications	18		
Total Book chapters	5		
Total citation: 1,034	Total Impact factor (IF): 90.617	Highest IF: 54.433 Lowest IF: 1.8	H-index: 15 i-10 index: 15

Research Grants and Funded Projects (PI/Co-PI)

Ongoing Projects:

1. Principal Investigator (2025–2028)

Project Title: *Leveraging salivary microbiome early detection, prognosis, and risk stratification of oral potentially malignant disorders and cancer.*

Funding Agency: ICMR

2. Principal Investigator (2024–2027)

Project Title: *Evaluating the chemo-sensitizing and therapeutic effects of aspirin and curcumin combination in oral cancer..... induced by anti-cancer drugs.*

Funding Agency: CST-UP

3. Co-Principal Investigator (2025-2028)

Project Title: *Comprehensive immunological evaluation of selected ... medicines for management of ulcerative colitis.*

Funding Agency: CCRH, Ministry of AYUSH

Principal Investigator: Dr. Kumud Bala, AIB, Amity University, Noida

4. Co-Principal Investigator (2025–2028)

Project Title: *Anticancer efficacy and molecular basis of Dawa-ul-Kurkum on the tumorigenesis of pancreatic ductal adenocarcinoma.*

Funding Agency: CCRUM, Ministry of AYUSH

Principal Investigator: Prof. Manoj Garg, AIMMSCR, Amity University, Noida

Completed/Awarded Projects:

5. Principal Investigator (2021–2025)

Project Title: *Deciphering protein in cancer stem cells as a potential therapeutic target for aggressive tongue cancer therapy.*

Funding Agency: DHR-ICMR

Status: Completed

6. Principal Investigator (2023)

Project Title: *Targeting the NF- κ B pathway as a potential therapeutic strategy for tongue squamous cell carcinoma*

Funding Agency: DBT, under BioCARE Programme for Women Scientists

Honours and Awards obtained:

1. **BioCARE Women Scientist Award**, Department of Biotechnology (DBT), Government of India, 2023 (award offered but not availed)
2. **Young Scientist Award** (YSS/2020/000215/PRCYSS), Department of Health Research (DHR)-ICMR, Government of India, 2021
3. **Dr. D. S. Kothari Postdoctoral Fellowship** (BL/18-19/0090), University Grants Commission (UGC), Government of India, 2018 (award offered but not availed)
4. **ICMR Postdoctoral Fellowship** [3/1/3/PDF(18)/2018-HRD], Indian Council of Medical Research, 2018
5. **National Postdoctoral Fellowship** (PDF/2016/000017), DST-SERB, Government of India, 2016
6. **Best Poster Presentation Award**, Indian Association for Cancer Research (IACR), 2013
7. **Senior Research Fellowship**, Indian Council of Medical Research (ICMR), 2011

Selected Publications:

1. Prabhat Kumar, Archita Dey, Rishabh Lakhera, Jayant Maini, Bhudev C. Das[#], **Shilpi Gupta[#]**. Targeting transcriptional and post-transcriptional pathways in head and neck cancer. BBA reviews on Cancer. (IF. 8.3) *In revision.*
2. Prabhat Kumar, Rishabh Lakhera, Sadhna Aggarwal, **Shilpi Gupta[#]**. Unlocking the Therapeutic Potential of Oral Cancer Stem Cell-Derived Exosomes. Biomedicines. 2024, (IF. 4.9). [#]Corresponding Author.
3. Prabhat Kumar*, **Shilpi Gupta***, Bhudev C. Das et al. Saliva as a potential non-invasive liquid biopsy for early and easy diagnosis/prognosis of head and neck cancer. Translational Oncology, 2023. doi.org/10.1016/j.tranon.2024.101827 (IF. 5). *Equal Contribution.
4. **Shilpi Gupta**, Prabhat Kumar & Bhudev C. Das. Opportunities and Challenges to Making Indian Women Cervical Cancer Free. Policy: Viewpoint, IJMR, 2023, DOI: 10.4103/ijmr.ijmr_1052_23 (IF. 5.274).

5. **Shilpi Gupta**, Prabhat Kumar and Bhudev C. Das. HPV+ve/-ve Oral Tongue Cancer Stem Cells: A Potential Target for Relapse-free Therapy. *Translational Oncology*, 2021 (IF. 4.8).
6. Prabhat Kumar*, **Shilpi Gupta***, Bhudev C. Das. Towards global elimination of cervical cancer in all groups of women. *The Lancet Oncology*, 2019 (IF: 54.433). *Equal Contribution.
7. Vaishali Chandel, Prabhat Kumar, **Shilpi Gupta** et al. Metabolic regulation in HPV associated head and neck squamous cell carcinoma. *Life Sciences*, 2020 (IF. 6.8).
8. **Shilpi Gupta**, Prabhat Kumar, Nishi Sharma, Daman Saluja, Alok C. Bharti, Bhudev C. Das. Constitutive Activation of NF- κ B p50/c-Rel Subunits Contribute in Tumor Aggressiveness and Metastasis during Tongue Carcinogenesis, *Oncotarget*. 2018 (IF. 5.2).
9. Anand N. Srivastava, Jata S. Misra, **Shilpi Gupta et al**, Cervical Cancer Screening in Rural India: Status and Current Concepts. *IJMR*, 2018 (IF. 5.274).
10. **Shilpi Gupta**, Prabhat Kumar & Bhudev C. Das. HPV: molecular pathways and targets. *Current Problems in Cancer*. 2018 (IF. 3.19).
11. **Shilpi Gupta**[#], Prabhat Kumar, Jayant Maini et al. Long non-coding RNAs Emerging as Potential Epigenetic Biomarkers for Tobacco and/or Alcohol-Induced Head and Neck Cancer. *JCGB*, 2019. (IF-3.45).
12. Abhishek Tyagi, **Shilpi Gupta**, Prabhat Kumar, Bhudev C. Das et al. Emerging role of FRA-1 as a novel target for radio-sensitization in HPV-associated cancers. *AACR*, 2017 (IF. 9.1).
13. **Shilpi Gupta**, Prabhat Kumar, Bhudev C. Das et al. Selective participation of c-Jun with Fra-2/c-Fos promotes aggressive tumor-phenotypes and poor prognosis in tongue cancer. *Scientific Reports, Nature*. 2015.

Selected articles in books/health magazines:

1. **Shilpi Gupta**, Prabhat Kumar, Bhudev C. Das. How Liquid Biopsies are Transforming Cancer Detection in India. *Science India*, 2026, Vol.19 (116), 14-17.
2. Prabhat Kumar, Archita Dey, Rishabh Lakhera, Bhudev C. Das and **Shilpi Gupta** (Corresponding Author*). Phytochemicals as Potential Chemo-Preventive Agents for HPV-Linked Cancers. In: *Plant Natural Products and Biotechnological Aspects in the Era of Climate Change*. AAP–CRC Press, USA (*in press*).
3. Bhudev C. Das and **Shilpi Gupta**. Safeguarding and Empowering Our Women. *Science India*, 2024, 19 (94).
4. **Dr. Shilpi Gupta**. Cervical Cancer Is Fully Preventable, Treatable If Caught Early. 2023. bwhealthcacreworld.businessworld.in.
5. **Shilpi Gupta**, Prabhat Kumar, Ankan Mukherjee Das, D. K. Gupta & B. C. Das. Human Viruses: Infection, Prevention and Potential Target(s) for Therapy–A Comprehensive Review. ‘Human Viruses: Diseases, Treatments and Vaccines- The New Insights. pp3-54. Springer. 2021.
6. Hoda Elkhenany and **Shilpi Gupta**, Mesenchymal stem cell-derived exosomes and regenerative medicine. Role of Exosomes in Biological Communication Systems. pp141-164, Springer-Nature. 2021.
7. **Shilpi Gupta**, Prabhat Kumar and Bhudev C. Das. “DNA Tumor Viruses” in Text Book of Oncology in Indian Context. 2018.

Professional affiliations:

Editorial Roles

- Guest Editor, *Frontiers in Oral Health*
- Guest Editor, *International Journal of Molecular Sciences (IJMS)*
- Guest Editor, *Discover Oncology* (Springer Nature)

Reviewer Roles: Reviewer for journals including:

- *Journal of Cell Communication and Signalling*
- *BMC Cancer, Frontiers in Oncology*
- *Journal of Toxicology Research, Journal of Cancer Medicine, Clinical and Translational Medicine*
- *Journal of Fetal Surgery, Journal of Advanced Forensic Sciences*

Personal Details:

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