

NAME	GAYATRI SHARMA	
DESIGNATION	ASSOCIATE PROFESSOR	
EMAIL ID	gsharma10@amity.edu	
CONTACT NUMBER		
RESEARCH INTERESTS	• Molecular Oncology • Cancer Therapeutics • Cancer Diagnostics and Prognostic Biomarkers	

EDUCATIONAL QUALIFICATIONS:

Name of College / University	Degree	Year
Dev Sanskriti Vishwa Vidhayalya, UK, India and experimental work carried out at All India Institute of Medical Sciences	Doctor of Philosophy (Ph.D.)	2009
Department of Biochemistry, Jamia Hamdard University, New Delhi, India,	Master of Science (M.Sc.)	1996
Department of Botany, Delhi University, New Delhi, India	Bachelor of Science (B.Sc.)	1994

Title of Ph.D. thesis: Epigenetic Alterations in Breast Cancer Pathogenesis.

EXPERIENCE (in chronological order): Total 15 Years Research & Teaching

Designation	Type of post held (teaching/ research)	Name of the Institute	Year (From – To)
Associate Professor	Teaching + Research	Amity University Uttar Pradesh, UP	Sept 2022-present
Research Scientist	Research	Department of Biomedical Engineering, Medical College of Wisconsin, Milwaukee, WI	June 2015-Sept 2021
Postdoctoral Research Associate	Research	Department of Genetics, Cell Biology and Anatomy, University of Nebraska Medical Center, Omaha, NE	2011 – 2015
Postdoctoral Fellow	Research	Department of Genetics, Cell Biology and Anatomy, University of Nebraska Medical Center, Omaha, NE	2010-2011
Senior Research Fellow	Research	All-India Institute of Medical Sciences, India	2005-2009
Research Assistant	Research	IGIB, CSIR, India	2003-2005

Teaching/Co py editor	Teaching	Tech Book Electronics Private Ltd	1996- 2002
No. of Ph.D. students supervised			
No. of Post-Doc			
No. of M.Tech. Students supervised:			
No. of B.Tech. Students supervised:			
PUBLICATIONS (total=29) H-index: 19 Citation: 1831 i-10 index: 26		1. Gandhi K, Sharma G . Circulating tumor cells as a clinical, diagnostic, and prognostic biomarker in breast cancer. Breast Dis 2025. doi: 10.1177/15581551241296776 2. Hansen C, Jaidip J, Parchur A, Sharma G , Shafiee S , Sinha S, Himburg Hr , Joshi A Dynamic multispectral NIR/SWIR for in vivo lymphovascular architectural and functional quantification. J Biomed Opt. 2024 Sep 26;29(10):106001. (IF=3.0) 3. Mudadla T, Sharma G, Mishra A, Gola S. Multifaceted Landscape of Omics Data. Bio-Algorithms and Med-Systems. (2024);20(1):22-36. (IF=0.56) 4. Sharma G , Mir Hadi Razeghi Kondelaji, Guru P. Sharma, Christopher Hansen, BS, Parchur AK, Shayan Shafiee, Jagtap J, Brian Fish, Carmen Bergom, Eric Paulson, William A. Hall, Heather A. Himburg, and Amit Joshi X-ray and MR Contrast Bearing Nanoparticles Enhance the Therapeutic Response of Image-Guided Radiation Therapy for Oral Cancer. Technology in Cancer Research & Treatment 2023; 22 (in publication) (IF=2.3) 5. Sharma G , Jagtap J, Parchur AK, Gogineni V, Bergom C, White S., Flister M J, Joshi A, Heritable modifiers of the tumor microenvironment influence nanoparticle uptake, distribution and response to photothermal therapy. Theranostics 2020; 10:5368-5383 (IF=12.4) 6. KC Zimmerman, Sharma G , Parchur AK, Joshi A, Schmidt TG, Experimental investigation of neural network estimator and transfer learning techniques for K-edge spectral CT imaging. Medical Physics 2020; 47, 541-551 (IF=4.56) 7. Parchur AK, Fang Z, Jagtap J, Sharma G , Hub W, Miao Qing R, Joshi A, NIR-II Window Tracking of Hyperglycemia Induced Intracerebral Hemorrhage in Cerebral Cavernous Malformation Deficient Mice. Biomaterial Sciences, 2020;8, 5133-5144 (IF=7.59) 8. Jagtap J, Fish B., Hansen C., Gao F., Sharma G., Parchur A. K., Narayan J., Bergom C. Audi S., Medhora M., Joshi A, A rapid dynamic in vivo near-infrared fluorescence imaging assay to track lung vascular permeability after acute radiation injury. American Journal of Physiology Lung Cellular and Molecular Physiology, 2020, 320(3), L436-L450	

(IF=4.4)

9. Gogineni V. R., Maddirela D, RamW, Jagtap J, **Sharma G**, Parchur A K, Joshi A, Kim D-H, Larson A C,. White S B, “Localized and triggered release of oxaliplatin for the treatment of colorectal liver metastasis”. Journal of Cancer 2020 Oct 12;11(23):6982-6991
10. Jagtap J, **Sharma G**, Parchur AK, Gogineni V, Laviolette P, Bergom C, White S,. Flister M J, Joshi A, Methods for Detecting Host Genetic Modifiers of Tumor Vascular Function Using Dynamic Near-Infrared Fluorescence Imaging. Biomed Optic 2018, 9(2):543-556 **(IF=3.75)**
11. Parchur AK, **Sharma G**, Jagtap J, Gogineni V, Flister MJ,. White S B, Joshi A, Vascular Interventional Radiology-Guided Photothermal Therapy of Colorectal Cancer Liver Metastasis with Theranostic Gold Nanorods. ACS Nano 2018, 12 (7): 6597–6611 **(IF=18.03)**
12. Flister MJ, Tsaih SW, Stoddard A, Plasterer C, Jagtap J, Parchur AK, **Sharma G**, Prisco AR, Lemke A, Murphy D, Al-Gizawiy M, Straza M, Ran S, Geurts AM, Dwinell MR, Greene AS, Bergom C, La Violette PS, Joshi A. Host genetic modifiers of nonproductive angiogenesis inhibit breast cancer. Breast Cancer Res Treat 2017; 165: 53–64 **(IF=4.87)**
13. Griffin Nicolas I*, **Sharma G***, Zhao X, Sameer Mirza, Shashank Srivastava, Bhavana J. Dave, Mohammed Aleskandarany, Emad Rakha, Shakur Mohibi, Hamid Band and Vimla Band. ADA3 regulates normal and tumor mammary epithelial cell proliferation through c-MYC. Breast Cancer Research 2016; 18(1):113. (*co-first authors) **(IF=6.46)**
14. Gogineni V. R., Jagtap J M, Parchur A K, **Sharma G**, Joshi A, White S B. Photothermal Ablation: A Perspective on Technique. Intervent Oncol 360. 2015; 3(12): e141-E147
15. Mukhopadhyay P, Farrell T, **Sharma G**, McGuire T R, O’Kane B, Sharp J G. Heterogeneity of Functional Properties of Clone 66 Murine Breast Cancer Cells Expressing Various Stem Cell Phenotypes. PLOS ONE 2013, Nov 12; 8(11): e78725 **(IF=3.75)**
16. **Sharma G***, Mirza S*, Pandya P, Ralhan R. Expression of DNA methyltransferases in breast cancer patients and analyze the effect of natural compounds on expression of DNA methyltransferases and associated proteins. J Breast Cancer. 2013; 16(1):23-31. (*co-first authors) **(IF=1)**
17. Mirza S, **Sharma G**, Gupta SD, Parshad R, Srivastava A, Gupta SD, Ralhan R. Clinical significance of promoter hypermethylation of ER β and RAR β 2 in tumor and serum DNA in Indian Breast Cancer Patients. Ann Surg Oncol. 2012; 19(9):3107-15 **(IF=5.33)**
18. **Sharma G**, Mirza S, Parshad R, Gupta SD, Ralhan R. DNA methylation of circulating DNA: a marker for monitoring efficacy of neoadjuvant chemotherapy in breast cancer patients. Tumor Biol. 2012; 33(6):1837-43 **(IF=3.65)**
19. **Sharma G**, Mirza S, Parshad R, Srivastava A, Gupta

- SD, Pandya P, Ralhan R. Maspin expression in invasive ductal breast carcinoma and its relation to expression of VEGF and MTA1. *Tumor Biology* 2011; 32(1):23-32 (**IF=3.65**)
20. **Sharma G**, Mirza S, Parshad R, Srivastava A, Gupta SD, Pandya P, Ralhan R. Promoter hypermethylation of genes involved in DNA damage in tumor and serum DNA in Invasive ductal breast carcinoma patients. *Life Sciences* 2010; 87(3-4):83-91(**IF=6.78**)
21. **Sharma G***, Mirza S*, Pandya P, Ralhan R. Demethylating Agent 5-Aza-2-Deoxycytidine Enhances Susceptibility of Breast cancer cells to anticancer agents. *Molecular Cellular Biochemistry* 2010; 342(1-2):101-9 (*co-first authors) (**IF=3.84**)
22. Mirza S, **Sharma G**, Parshad R, Srivastava A, Gupta SD, Ralhan R. Promoter hypermethylation of Stratifin, ER α and PRB in tumor and serum DNA and its utility in Indian breast cancer patients. *Clinical Biochemistry* 2010; 43(4-5):380-6 (**IF=2.58**)
23. **Sharma G**, Mirza S, Parshad R, Srivastava A, Gupta SD, Pandya P, Ralhan R. CpG hypomethylation of MDR1 gene contributes to the prognosis of Invasive ductal breast carcinoma of Indian. *Clinical Biochemistry* 2010; 43 (4-5): 373-9 (**IF=2.58**)
24. **Sharma G**, Mirza S, Ralhan R. Promoter hypermethylation of multiple genes and their potential prognostic relevance in Indian breast cancer patients. *Cellular Oncology* 2009; 31(6):487-500 (**IF=6.73**)
25. Prasad CP, Mirza S, **Sharma G**, Parshad R, Rath G, Gupta SD, Ralhan R. Epigenetic alterations of CDH1 and APC genes: Relationship with activation of Wnt/ β -catenin Pathway in invasive ductal carcinoma of breast. *Life Sciences* 2008; 83(9-10):318-25 (**IF=6.78**)
26. Mirza S, **Sharma G**, Prasad CP, Parshad R, Srivastava A, Gupta SD, Ralhan R. Promoter hypermethylation of TMS1, BRCA1, ER α and PRB in serum and tumor DNA of invasive ductal breast carcinoma patients. *Life Sciences* 2007; 81(4):280-7 (**IF=6.78**)
27. **Sharma G**, Mirza S, Prasad CP, Srivastava A, Gupta SD, Ralhan R. Promoter hypermethylation of p16INK4A, p14ARF, CyclinD2 and Slit2 in serum and tumor DNA from breast cancer patients. *Life Sciences* 2007; 80(20):1873-81 (**IF=6.78**)
28. Shukla S*, Mirza S*, **Sharma G***, Parshad R, Gupta SD, Ralhan R. Detection of RASSF1A and RARbeta hypermethylation in serum DNA from breast cancer patients. *Epigenetics*. 2006; 1(2):88-93. (*co-first authors) (**IF=4.91**)
29. John L, **Sharma G**, Chaudhuri S P, Pillai B. Cigarette smoke extract induces changes in growth and gene expression of *Saccharomyces cerevisiae*. *BBRC* 2005; 338(3):1578-86 (**IF=3.57**)
30. Kumar A, John L, Alam MM, Gupta A, **Sharma G**, Pillai B, Sengupta S. Homocysteine- and cysteine-mediated growth defect is not associated with induction of oxidative

	stress response genes in yeast. Biochem Journal 2006; 396 (1):61-9 (IF=4.09) BOOK CHAPTERS (7): 1. T. Mudadla, S. Gola and G. Sharma Navigating the multifaceted landscape of omics. In Multiomics Technology in Human Health and Diseases; Elsevier, 2025, Ch 3, 49-61. 2. Sharma, G.; Parchur, A. K.; Jagtap, J. M.; Hansen, C. P.; Joshi, A. Hybrid Nanostructures in Targeted Drug Delivery. In Hybrid Nanostructures for Cancer Theranostics; Elsevier, 2019, Ch 8, 139-158. 3. Sharma, G.; Jagtap, J. M.; Parchur, A. K.; Hansen, C. P. Ionizing radiation stimulated breast cancer nanomedicine. In External Field and Radiation Stimulated Breast Cancer Nanotheranostics; IOP Publishing Ltd, 2019, Ch 8, 1-21. 4. Parchur, A. K.; Jagtap, J. M.; Sharma, G.; Hansen, C. P. Radiation and ultrasound stimulated breast cancer nanomedicine, In External Field and Radiation Stimulated Breast Cancer Nanotheranostics; IOP Publishing Ltd, 2019, Ch 6, 1-6. 5. Parchur, A. K.; Jagtap, J. M.; Sharma, G.; Gogineni, V.; White, S. B.; Joshi, A. Remotely Triggered Nanotheranostics. In Nanotheranostics for Cancer Applications; Springer, Cham, 2019, 5, 429. 6. Parchur, A. K.; Jagtap, J. M.; Sharma, G.; Gogineni, V.; Hansen, C. P.; White, S. B.; Joshi, A. Nanostructures for Externally Triggered Chemo/Thermal Therapies, In Hybrid Nanostructures for Cancer Theranostics; Elsevier, 2019, p105-124. 7. Gayatri, Rashi and Beena Pillai: Book Review “Microarray Technology” published in Newsletter Bioinformatica Vol. 1 Issue 2, May 2004.
PATENTS (<i>total no.</i>)	Details:
RESEARCH PROJECTS Completed: (<i>total no.</i>) Ongoing: (<i>total no.</i>)	Details:
AWARDS & HONOURS/ DISTINCTIONS	Best Presentation Award at 34th Annual Conference of Clinical Biochemists of India, Delhi, Feb 2007. Best Presentation Award at 28th Annual Convention of Indian Association for Cancer Research & International Symposium on emerging Challenges and Approaches in Cancer Biology, Bangalore, India, February 21-24, 2009 Travel Award for Oral Presentation at 254th ACS National Meeting & Exposition, August 20–24th, 2017, Washington, DC Travel Award for Oral Presentation at 20th International Symposium on Recent Advances in Otitis Media, June 9-13th, 2019, LA, USA
MEMBERSHIP with Professional/ Academic bodies	American Association for Cancer Research, Radiological Society of North America and Biomedical Engineering Society

