




Saurabh Sharma

Postdoctoral Scholar, General and Vascular Surgery

 NIH Biosketch available Online

CONTACT INFORMATION

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BIO

Dr. Sharma's current endeavor is focused on addressing the critical need for effective therapies in CNS metastases of melanoma, an area in which modern systemic therapy has made minimal progress with patients continuing to show extremely poor outcomes in checkpoint refractory disease. Dr. Sharma has shown an aptitude for meticulous drug development and has rapidly developed important skills in the unique modeling of the metastatic tumor environment. Recently, Saurabh's application was accepted to the SITC Sparkathon-2023 in prestigious program for promising early investigators to develop high priority immunotherapy projects under direct mentorship of society leaders for development of brain nano targeted immunotherapy. Recently he has applied for the 2023 Society for Immunotherapy of Cancer (SITC) Bristol Myers Cancer Immunotherapy Translational Fellowship Award. Prior to joining the Prof. Amanda R. Kirane (Director of cutaneous melanoma surgery) at Surgery Department, Stanford School of Medicine, Stanford university, Dr. Sharma got the opportunity to work on novel immuno-nanoconjugates for brain cancer (Glioblastoma) as a Postdoctoral Chemist and Pharmacologist under the mentorship of Prof. Ali Khademhosseini (Biomaterial, Tissue Engineering Pioneer, EX-MIT and EX-UCLA Professor and Current CEO, Terasaki Institute) and Prof. Eggehard Holler (EX-Director of Nanomedicine, Cedar Sinai Medical Research Center, Los Angeles, California) at Terasaki Institute for Biomedical Innovation, Los Angeles, California, USA. He worked as an assistant Professor at Department of Pharmaceutical Sciences, School of Health Sciences, UPES Dehradun, India. He pursued his Ph.D (Doctoral Degree) from BITS-Pilani, Pilani Campus, Rajasthan, India. During the PhD research work, Dr. Sharma has designed & developed the novel drug delivery systems for the delivery of the genetic materials (e.g., miRNA, siRNA) and chemotherapeutic agents. The research has a significant contribution in the field of developing novel treatment strategies for cancer therapy. He has experienced significant success in his early career, prior to joining post-doctoral program, as evidenced by his guest Speaker in VIT, Parul University and International Virtual Conference on Recent Trends in Life Sciences. He received a Council of Scientific & Industrial Research (CSIR-SRF) Senior Research Fellowship Award and several presentation awards at various International conferences. Further in detail, Dr. Sharma has shown significant success and contribution in his field as evident by: Dr Sharma holds two granted patents one US patent, PCT and other Indian patent in the field of developing novel drug delivery systems. Dr. Sharma published more than 24 publications (Since 2018, Citations:218, h-Index:10, I10-Index:10) his work at Internationally reputed high-Impact factor journal which included: Advance Science, Small, Lab On a Chip, Acta Biomaterialia, Biomaterials Advances (Materials Science and Engineering: C), Nanomedicine: Nanotechnology, Biology and Medicine, Regenerative Biomaterials, Applied Surface Science, Molecular pharmaceuticals, International Journal of Pharmaceutics etc several others.

HONORS AND AWARDS

- SITC Sparkathon Class of 2023, The Society for Immunotherapy of Cancer (SITC) (Sept. 27-29, 2023)
- Best New Technology Award at SITC-Sparkathon-2023, The Society for Immunotherapy of Cancer's (SITC) 38th Annual Meeting & Pre-Conference Programs (Nov. 1–5, 2023)
- Society For Melanoma Research (SMR) Travel Award on Brain Targeted Nano-Immunotherapy, Society For Melanoma Research (SMR) (6-9 November 2023)
- Expert Research Chapter talk on Nanomedicine Platform technology for Cancer treatments, Institute of Biomaterials, Tribocorrosion, Nano and Regenerative Medicine, VIT, Vellore, India (2023)

STANFORD ADVISORS

- Amanda Kirane, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn: <https://www.linkedin.com/in/saurabh-sharma-735565122/>

Research & Scholarship

RESEARCH INTERESTS

- Science Education

CURRENT RESEARCH AND SCHOLARLY INTERESTS

We develop strategies to transport immunotherapeutic molecules across the blood-brain barrier for imaging and treating brain metastatic cancer.

Currently, under the mentorship of Dr. Amanda Kirane, I have continued my work in cancer-targeted nanotechnology for the treatment of melanoma brain metastases. Immunotherapy of small peptides, small molecules.

LAB AFFILIATIONS

- Amanda Kirane, Kirane Lab (11/29/2022)

Publications

PUBLICATIONS

- **Antibody-Free Immunopeptide Nanoconjugates for Brain-Targeted Drug Delivery in Glioblastoma Multiforme.** *Bioconjugate chemistry*
Sharma, S., Lee, D., Maity, S., Singh, P., Chadokiya, J., Mohaghegh, N., Hassani, A., Kim, H., Gangarade, A., Ljubimova, J. Y., Kirane, A., Holler, E.
2025
- **Deciphering pericyte-induced temozolomide resistance in glioblastoma with a 3D microphysiological system mimicking the biomechanical properties of brain tissue.** *Acta biomaterialia*
Maity, S., Jewell, C., Yilgor, C., Kawakita, S., Sharma, S., Gomez, A., Mecwan, M., Falcone, N., Ermis, M., Monirizad, M., Kouchehbaghi, N. H., Zehtabi, F., Khorsandi, et al
2025
- **Antibody-Free Immunopeptide Nano-Conjugates for Brain-Targeted Drug Delivery in Glioblastoma Multiforme.** *bioRxiv : the preprint server for biology*
Sharma, S., Lee, D., Maity, S., Singh, P., Chadokiya, J., Mohaghegh, N., Hassani, A., Kim, H., Gangarade, A., Ljubimova, J. Y., Kirane, A., Holler, E.
2025
- **Smart biomaterials in healthcare: Breakthroughs in tissue engineering, immunomodulation, patient-specific therapies, and biosensor applications** *APPLIED PHYSICS REVIEWS*
Raheem, A., Mandal, K., Biswas, S., Ahari, A., Najafabadi, A., Farhadi, N., Zehtabi, F., Gangrade, A., Mecwan, M., Maity, S., Sharma, S., Arputharaj, J., Khan, et al
2025; 12 (1)

- **Recent Developments in Glioblastoma-On-A-Chip for Advanced Drug Screening Applications.** *Small (Weinheim an der Bergstrasse, Germany)*
Maity, S., Bhuyan, T., Jewell, C., Kawakita, S., Sharma, S., Nguyen, H. T., Hassani Najafabadi, A., Ermis, M., Falcone, N., Chen, J., Mandal, K., Khorsandi, D., Yilgor, et al
2024: e2405511
- **Single cell analysis of melanoma reveals a prognostic myeloid cell signature associated with survival and response to immunotherapy in advanced melanoma**
Ahmad, M., Heo, L., Nair, R., Sharma, S., Kirane, A.
AMER ASSOC IMMUNOLOGISTS.2024
- **Clinical and Translational Opportunities of Nanocarriers Containing RNAi for the Management of Triple-Negative Breast Cancer** *ADVANCED THERAPEUTICS*
Sharma, S., Pradhan, R., Lee, D., Sharma, M., Nasab, S., Hejmady, S., Chander, S., Mohaghegh, N., Maity, S., Khan, S., Khademhosseini, A., Kirane, A.
2024
- **Toward the Development of Functional Biomarker Assays: Analysis of Neoadjuvant Intralesional Oncolytic Virus Response in High-Risk Stage II Melanoma**
Kirane, A., Lee, D., Ahmad, M., Sharma, S., Serasanambati, M., Lowe, M., Applebee, C., Safrygina, E., Swetter, S., Reddy, S., Warner, A., Funchain, P., Wang, et al
SPRINGER.2024: S33-S34
- **Advancing precision cancer immunotherapy drug development, administration, and response prediction with AI-enabled Raman spectroscopy.** *Frontiers in immunology*
Chadokiya, J., Chang, K., Sharma, S., Hu, J., Lill, J. R., Dionne, J., Kirane, A.
2024; 15: 1520860
- **Phenylthiazolidin-4-one piperazine Conjugates: Design, Synthesis, anticancer and antimicrobial studies** *RESULTS IN CHEMISTRY*
Singh, D., Patel, R., Aggarwal, A., Das, A., Sharma, S., Behera, B., Panigrahy, R., Kirane, A. R., Kharkwal, H., Kumar, P., Bokolia, N., Sankaranarayanan, M., Chander, et al
2024; 7
- **Design, Synthesis, Anticancer and Antimicrobial Studies of 2-Phenylthiazolidin-4-one Glycinamide Conjugates** *CHEMISTRYSELECT*
Singh, D., Aggarwal, A., Patel, R., Das, A., Sharma, S., Behera, B., Panigrahy, R., Maity, S., Kirane, A. R., Kharkwal, H., Sankaranarayanan, M., Wadhwa, P., Khan, et al
2023; 8 (42)
- **Apatite-coated Ag/AgBr/TiO₂ nanocomposites: Insights into the antimicrobial mechanism in the dark and under visible-light irradiation** *APPLIED SURFACE SCIENCE*
Mohaghegh, N., Endo-Kimura, M., Wang, K., Wei, Z., Najafabadi, A., Zehtabi, F., Kouchehbaghi, N., Sharma, S., Markowska-Szczupak, A., Kowalska, E.
2023; 617
- **Influence of Nanocarrier Type on the Drug Delivery Aspects of Docetaxel: Empirical Evidences** *JOURNAL OF PHARMACEUTICAL INNOVATION*
Alshahrani, S. M., Thotakura, N., Sharma, S., Quadir, S., Chaurawal, N., Sharma, S., Chitkara, D., Raza, K.
2023; 18 (2): 641-652
- **Predicting targeted- and immunotherapeutic response outcomes in melanoma with single-cell Raman spectroscopy and AI.** *bioRxiv : the preprint server for biology*
Chang, K., Serasanambati, M., Ogunlade, B., Hsu, H. J., Agolia, J., Stiber, A., Gu, J., Chadokiya, J., Rodriguez, G. E., Singh, P., Sharma, S., Gonçalves, A., Verma, et al
2026
- **Recent Advancements Towards the Use of Vitamin D Isoforms and the Development of Their Synthetic Analogues as New Therapeutics.** *Biomedicines*
Patel, R., , Kharkwal, H., Saha, M., Sankaranarayanan, M., Sharma, S., Chander, S.
2025; 13 (4)
- **The Utilisation of Mushroom Leftovers, Oats, and Lactose-Free Milk Powder for the Development of Geriatric Formulation.** *Foods (Basel, Switzerland)*

Paul, S., Kaushik, R., Upadhyay, S., Akhtar, A., Chawla, P., Kumar, N., Sharma, S., Rani, P.
2024; 13 (11)