

Stanford



Pavan Yadav

Postdoctoral Scholar, Chemistry

Bio

BIO

I am a Postdoctoral Researcher at Stanford University in the laboratory of Professor Paul A. Wender, where I work on the development of delivery technologies for RNA therapeutics, including mRNA, circular RNA (circRNA), and oligonucleotide-based medicines. My current research focuses on lipid nanoparticles (LNPs) and transporter-based systems for targeted nucleic acid delivery, with the goal of advancing the translation of genetic medicines.

I received my Ph.D. in Pharmaceutical Sciences from CSIR–Central Drug Research Institute (CSIR-CDRI), India. During my doctoral training, I specialized in nanomedicine, drug delivery, pharmacokinetics, and bioanalytical method development, with a particular focus on developing nanocarrier-based therapeutic strategies for cancer treatment. Prior to my Ph.D., I earned both my Bachelor of Pharmacy and Master of Pharmacy degrees from Mahatma Jyotiba Phule Rohilkhand University, India.

My research interests span RNA therapeutics, drug delivery, nanomedicine, lipid nanoparticle engineering, pharmacokinetics, and translational pharmaceutical sciences. I have experience in the design, formulation, and biological evaluation of diverse delivery systems, including lipid nanoparticles, liposomes, nanoemulsions, polymeric carriers, and other nanomaterial-based therapeutic platforms. My work integrates formulation science, biological evaluation, and preclinical studies to improve the delivery and performance of therapeutic agents.

I have authored more than 35 peer-reviewed publications in journals such as Nature Communications, ACS Applied Materials & Interfaces, International Journal of Pharmaceutics, Nanomedicine, and Bioanalysis. I am particularly interested in developing innovative delivery approaches that bridge fundamental research and clinical translation, with the ultimate goal of improving treatment options for patients.

HONORS AND AWARDS

- DST Inspire Fellow, Department of Science and Technology, New Delhi, India

STANFORD ADVISORS

- Paul Wender, Postdoctoral Faculty Sponsor

LINKS

- Google Scholar: <https://scholar.google.com/citations?user=1Uqi0fkAAAAJ&hl=en>

Publications

PUBLICATIONS

- **Discrete Immolative Guanidinium Transporters deliver mRNA to specific organs and red blood cells.** *Nature communications*
Li, Z., Ee, A., Amaya, L., Hamad, J. L., Yadav, P. K., Wang, S. K., Chang, H. Y., Wender, P. A.
2025; 16 (1): 7055