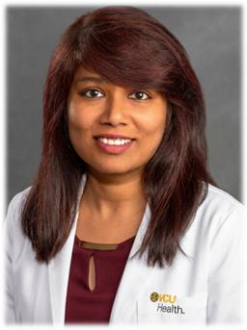
Piyusha Pagare, PhD



Assistant Professor
Cellular & Molecular Pathogenesis
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Education

2020 - 2024 Postdoctoral Fellow, Virginia Commonwealth University, Richmond, VA

2018 - 2019 Research Scholar, Sloan Kettering Cancer Center, New York, NY

2018 Ph.D., Pharmaceutical Sciences, Virginia Commonwealth University, Richmond, VA

2012 M.Sc., Organic Chemistry, Mumbai University, India

2009 B.Sc., Chemistry, Mumbai University, India

Awards

2026 International Narcotics Research Conference (INRC) Young Investigators Award nominee

Grants

Current Funded

NIH/NIDA
1DP1DA063098 Avenir Award Program for Chemistry and Pharmacology of Substance Use Disorders (PI: Pagare) 2025 - 2030
Novel Mu Opioid Receptor Modulators to Counteract Synthetic Opioids

Past Funded

PhRMA Foundation
Postdoctoral Fellowship in Drug Discovery (PI: Pagare) 2023 - 2024
Mu Opioid Receptor Modulators to Counteract Synthetic Opioids

Selected Publications

Peer Reviewed Papers

Upadhyay, N.; Neel, L. T.; Li, E.; Silte, A. A.; Lyu, R.; Selley, D. E.; Dewey, W. L.; Zhang, Y.; **Pagare, P. P.** Landscaping the nitazene scaffold to identify novel mu opioid receptor modulators: from molecular design, chemical synthesis to pharmacological profiling. *J. Med. Chem.* **2026**, *69,* 16658-16676.

Elshazly, A. M.; Hosseini, N.; Vangala, J.; Shen, S.; Neely, V.; Hu, X.; **Pagare, P. P.**; Harada, H.; Grant, S.; Radhakrishnan, S. K. Proteasome inhibition enhances lysosome-mediated targeted protein degradation. *Cell Death Dis.* **2026**, *17,* 614.

Neel, L. T.; Ma, H.; Reda, A.; Li, M.; Flammia, R.; Woodard, S.; Gillespie, J.; Selley, D. E.; Dewey, W. L.; **Pagare, P. P.**; Zhang, Y. Investigating the landscape of C6-azaindole sidechain on the epoxymorphinan skeleton via the nitrogen walk concept: a strategy to enhance drug-like properties. *J. Med. Chem.* **2026**, *69,* 2330-2348.

Silte, A. A.; Li, E.; Kale, B. S.; Neel, L. T.; Upadhyay, N.; Flammia, R.; Lyu, R.; St. Onge, C. M.; Reda, A.; Woodard, S.; Gillespie, J. C.; Kim, D. C.; Selley, D. E.; **Pagare, P. P.**; Zhang, Y. Design, synthesis and pharmacological evaluation of core ring expanded fentanyl analogs as potential counteracting agents against fentanyl induced respiratory depression. *J. Med. Chem.* **2025**, *68,* 22170- 22195.

Zaman, S. U.*; **Pagare, P. P.***; Ma, H.; Hoyle, R. G.; Zhang, Y.; Li, J. Novel PROTAC probes targeting KDM3 degradation to eliminate colorectal cancer stem cells through inhibition of Wnt/β-catenin signaling. *RSC Med. Chem.* **2024**, *15*, 3746-3758.

Zaman, S. U.*; **Pagare, P. P.***; Huang, B.; Rilee, G.; Ma, Z.; Zhang, Y.; Li, J. Novel PROTAC probes targeting FOSL1 degradation to eliminate head and neck squamous cell carcinoma stem cells. *Bioorg. Chem.* **2024**, *151*, 107613.

St. Onge, C. M.; **Pagare, P. P.**; Zheng, Y.; Arriaga, M.; Stevens, D. L.; Mendez, R. E.; Poklis, J. L.; Halquist, M. L.; Selley, D. E.; Dewey, W. L.; Banks, M. L.; Zhang, Y. Systematic structure-activity relationship study of nalfurafine analogues toward development of potentially non addictive pain management treatments. *J. Med. Chem.* **2024**, *67*, 9552-9574.

Book Chapters and Monographs

Pagare, P. P.; Upadhyay, N.; Zhang, Y. Advancing pain management: Dual-targeting strategies in opioid receptor modulation. In *Pain Management: A Review and Directions for Future Research;* Theofilou, P. *Ed.; Nova Science Publishers, NY,* ***2026****; pp. 79-126.*

Patents

Martin K. Safo, Yan Zhang, **Piyusha P. Pagare**, Guoyan Xu, Mohini Ghatge, Jurgen Venitz, Osheiza Abdulmalik. Aromatic Aldehydes with sustained and enhanced in vitro and in vivo pharmacologic activity to treat sickle cell disease. WO2019182938A1

Martin K. Safo, Yan Zhang, **Piyusha P. Pagare**, Guoyan Xu, Mohini Ghatge, Jurgen Venitz, Osheiza Abdulmalik. Aromatic Aldehydes with sustained and enhanced in vitro and in vivo pharmacologic activity to treat sickle cell disease. US11401241B2

Complete List of Published Work in MyBibliography: https://www.ncbi.nlm.nih.gov/myncbi/piyusha.pagare.1/bibliography/public/