

Varun Shanker

- MD Student, expected graduation Spring 2026
- Ph.D. Student in Biophysics, admitted Autumn 2023
- MSTP Student

Publications

PUBLICATIONS

- **Utilizing Machine Learning to Improve Neutralization Potency of an HIV-1 Antibody Targeting the gp41 N-Heptad Repeat.** *ACS chemical biology*
Filsinger Interrante, M. V., Tang, S., Kim, S., Shanker, V. R., Hie, B. L., Bruun, T. U., Wu, W., Pak, J. E., Fernandez, D., Kim, P. S.
2025
- **Identification of Covalent Cyclic Peptide Inhibitors Targeting Protein-Protein Interactions Using Phage Display.** *Journal of the American Chemical Society*
Wang, S., Faucher, F. F., Bertolini, M., Kim, H., Yu, B., Cao, L., Roeltgen, K., Lovell, S., Shanker, V., Boyd, S. D., Wang, L., Bartenschlager, R., Bogoyo, et al
2025
- **Identification of Covalent Cyclic Peptide Inhibitors Targeting Protein-Protein Interactions Using Phage Display.** *bioRxiv : the preprint server for biology*
Wang, S., Faucher, F. F., Bertolini, M., Kim, H., Yu, B., Cao, L., Roeltgen, K., Lovell, S., Shanker, V., Boyd, S. D., Wang, L., Bartenschlager, R., Bogoyo, et al
2024
- **Unsupervised evolution of protein and antibody complexes with a structure-informed language model.** *Science (New York, N.Y.)*
Shanker, V. R., Bruun, T. U., Hie, B. L., Kim, P. S.
2024; 385 (6704): 46-53
- **Inverse folding of protein complexes with a structure-informed language model enables unsupervised antibody evolution.** *bioRxiv : the preprint server for biology*
Shanker, V. R., Bruun, T. U., Hie, B. L., Kim, P. S.
2023
- **Efficient evolution of human antibodies from general protein language models.** *Nature biotechnology*
Hie, B. L., Shanker, V. R., Xu, D., Bruun, T. U., Weidenbacher, P. A., Tang, S., Wu, W., Pak, J. E., Kim, P. S.
2023
- **PROTEASOME REARRANGED PEPTIDES ARE A NOVEL SOURCE OF ANTIGENS FOR THE PEPTIDE VACCINE IMMUNOTHERAPY OF GLIOBLASTOMAS**
Fidanza, M., Gupta, P., Shanker, V., Wong, N., Skirboll, S., Lim, M., Wong, A.
OXFORD UNIV PRESS INC.2022: 138
- **Enhancing proteasomal processing improves survival for a peptide vaccine used to treat glioblastoma.** *Science translational medicine*
Fidanza, M., Gupta, P., Sayana, A., Shanker, V., Pahlke, S., Vu, B., Krantz, F., Azameera, A., Wong, N., Anne, N., Xia, Y., Rong, J., Anne, et al
2021; 13 (598)