Stanford

Antara Chakravarty

Postdoctoral Scholar, Microbiology and Immunology

Bio

BIO

Antara Chakravarty is a postdoctoral scholar in the laboratory of Dr. Priscilla Yang at Stanford Medicine, where she develops small-molecule-based targeted protein degradation strategies against viral proteins. Her work focuses on understanding how viral proteins interface with host cellular pathways, including mechanisms that influence antiviral signaling responses. She is also interested in virus-induced remodeling of host membrane lipids and studies these processes using the hepatitis C virus replicase complex as a model system.

Antara received her doctoral training in molecular virology in the laboratory of Dr. A. L. N. Rao at the University of California, Riverside, where she discovered key roles for viral capsid dynamics in the pathogenicity and infectivity of multipartite bromoviruses. Her emerging research interests focus on developing chemically controllable tools to investigate host immune signaling pathways.

HONORS AND AWARDS

- Preparing Future Teaching Professors (PFTP) Fellowship, Stanford Office of Vice Provost for Graduate Education (2026)
- Postdoc Travel Award, American Society for Virology (2024, 2023)
- Calavan Award in Recognition of Excellence and Creative, Forward Thinking in Research, University of California, Riverside (2021)
- Charles W. Coggins Jr. Endowed Scholarship Award, University of California, Riverside (2021)
- CEPCEB Graduate Student Award for Outstanding Research, Center for Plant Cell Biology, University of California, Riverside (2020)
- Dissertation Year Program Award, University of California, Riverside (2019)
- Graduate Student Travel Award, American Society for Virology (2019)
- Klotz Memorial Fund Travel Award, University of California, Riverside (2019)
- NSF Innovation-Corps Fellowship, National Science Foundation (NSF) Innovat'R Program (2019)
- APS Foundation Mathre Education Endowment Award, American Phytopathological Society (2018)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of California, Riverside
- Master of Science, University of Hyderabad
- Bachelor of Science, Presidency College, University of Calcutta

STANFORD ADVISORS

- Priscilla Yang, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Degraders of the dengue virus capsid protein exhibit differentiated pharmacology relative to capsid inhibitors.** *Nature communications*
  Chakravarty, A., Wang, L. N., Golden, R. P., Li, Z., Donovan, K. A., Afanzar, O., Zhang, Y., Fischer, E. S., Gray, N. S., Yang, P. L.
  2026

- **Modulation of Capsid Dynamics in Bromoviruses by the Host and Heterologous Viral Replicase.** *Journal of virology*
  Chakravarty, A., Rao, A. L.
  2023: e0128422

- **Unravelling the Stability and Capsid Dynamics of the Three Virions of Brome Mosaic Virus Assembled Autonomously In Vivo** *JOURNAL OF VIROLOGY*
  Chakravarty, A., Reddy, V. S., Rao, A. N.
  2020; 94 (8)

- **Discovery of Potent Degraders of the Dengue Virus Envelope Protein.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
  Li, Z., Liu, H. Y., He, Z., Chakravarty, A., Golden, R. P., Jiang, Z., You, I., Yue, H., Donovan, K. A., Du, G., Che, J., Tse, J., Che, et al
  2024: e2405829

- **Targeted protein degradation as an antiviral approach.** *Antiviral research*
  Chakravarty, A., Yang, P. L.
  2022: 105480

- **Zebrafish twist2/dermo1 regulates scale shape and scale organization during skin development and regeneration** *CELLS & DEVELOPMENT*
  Jacob, T., Chakravarty, A., Panchal, A., Patil, M., Ghodadra, G., Sudhakaran, J., Nuesslein-Volhard, C.
  2021; 166: 203684

- **The interplay between capsid dynamics and pathogenesis in tripartite bromoviruses** *CURRENT OPINION IN VIROLOGY*
  Chakravarty, A., Rao, A. L. N.
  2021; 47: 45-51

- **Bromoviridae: A Family of Plant Viruses with Tripartite Genomes** *eLS*
  Chakravarty, A., Rao, A.
  2021; 2.2021 (2)

- **Genome organization and interaction with capsid protein in a multipartite RNA virus** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Beren, C., Cui, Y., Chakravarty, A., Yang, X., Rao, A. N., Knobler, C. M., Zhou, Z., Gelbart, W. M.
  2020; 117 (20): 10673-10680