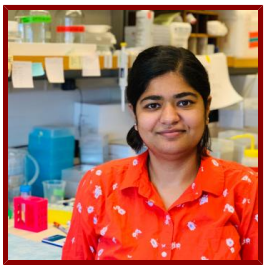
Stanford



Neha Nandwani

Research Scientist, Biochemistry, Biological Microfluidics Foundry

Bio

ACADEMIC APPOINTMENTS

- Research Scientist, Biochemistry, Biological Microfluidics Foundry
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- AHA Career Development Award, American Heart Association (2025-2028)
- AHA Postdoctoral Fellowship, American Heart Association (2022-2024)
- MCHRI Postdoctoral Fellowship, Stanford Maternal and Child Health Research Institute (2020-2022)
- Dean's Postdoctoral Fellowship, Stanford University School of Medicine (2020)

PROFESSIONAL EDUCATION

- Ph.D., National Centre for Biological Sciences, India , Biochemistry and Biophysics (2018)
- M.Sc., University of Delhi, India , Biochemistry (2009)
- B.Sc., University of Delhi, India , Biochemistry (2007)

Publications

PUBLICATIONS

- **A FRET assay to monitor different structural states of human β-cardiac myosin including the interacting-heads motif.** *Proceedings of the National Academy of Sciences of the United States of America*
  Goluguri, R. R., Guhathakurta, P., Nandwani, N., Dawood, A., Yokota, S., Roopnarine, O., Thomas, D. D., Ruppel, K. M., Spudich, J. A.
  2025; 122 (34): e2504562122

- **Reassessing the unifying hypothesis for hypercontractility caused by myosin mutations in hypertrophic cardiomyopathy.** *The EMBO journal*
  Spudich, J. A., Nandwani, N., Robert-Paganin, J., Houdusse, A., Ruppel, K. M.
  2024

- **Cryo-EM structure of the folded-back state of human β-cardiac myosin.** *Nature communications*
  Grinzato, A., Auguin, D., Kikuti, C., Nandwani, N., Moussaoui, D., Pathak, D., Kandiah, E., Ruppel, K. M., Spudich, J. A., Houdusse, A., Robert-Paganin, J.
  2023; 14 (1): 3166

- **Nanomechanical Phenotypes in Cardiac Myosin-Binding Protein C Mutants That Cause Hypertrophic Cardiomyopathy.** *ACS nano*
  Suay-Corredera, C., Pricolo, M. R., Velazquez-Carreras, D., Pathak, D., Nandwani, N., Pimenta-Lopes, C., Sanchez-Ortiz, D., Urrutia-Irazabal, I., Vilches, S., Dominguez, F., Frisso, G., Monserrat, L., Garcia-Pavia, et al
  2021

- **Study of Hcm Causing beta-Cardiac Myosin Mutations Located at Different Structurally Significant Regions of the Myosin-Head**
  Bhowmik, D., Nandwani, N., Ruppel, K., Liu, C., Spudich, J. A.
  CELL PRESS.2020: 435A

- **Uncovering the Molecular and Structural Basis of Hypertrophic Cardiomyopathy-Causing Mutations in Myosin and Myosin Binding Protein-C**
  Nandwani, N., Trivedi, D. V., Sarkar, S. S., Morck, M., Ruppel, K., Spudich, J. A.
  CELL PRESS.2020: 435A

- **A five-residue motif for the design of domain swapping in proteins** *NATURE COMMUNICATIONS*
  Nandwani, N., Surana, P., Negi, H., Mascarenhas, N. M., Udgaonkar, J. B., Das, R., Gosavi, S.
  2019; 10: 452

- **Amino-acid composition after loop deletion drives domain swapping** *PROTEIN SCIENCE*
  Nandwani, N., Surana, P., Udgaonkar, J. B., Das, R., Gosavi, S.
  2017; 26 (10): 1994–2002

- **Rapidly fatal myeloproliferative disorders in mice with deletion of Casitas B-cell lymphoma (Cbl) and Cbl-b in hematopoietic stem cells** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Naramura, M., Nandwani, N., Gu, H., Band, V., Band, H.
  2010; 107 (37): 16274–79

- **Reciprocal Regulation of AKT and MAP Kinase Dictates Virus-Host Cell Fusion** *JOURNAL OF VIROLOGY*
  Sharma, N. R., Mani, P., Nandwani, N., Mishra, R., Rana, A., Sarkar, D. P.
  2010; 84 (9): 4366-4382

PRESENTATIONS

- One drug does not fit all: HCM mutations differentially impact the inhibitory effect of two distinct small-molecule drugs targeting cardiac myosin - Stanford CVI Early Career Symposium