



Abantika Ganguly

Basic Life Research Scientist, Rad/Pediatric Radiology

Bio

BIO

Dr. Abantika Ganguly is a researcher specializing in molecular biology and bioinformatics. She holds a Bachelors and Masters in Chemistry and earned her PhD in Molecular Biophysics from Indian Institute of Science, India where she explored the global transcriptional regulation governing switch ON/OFF of genes under various stress stimuli. Dr Ganguly went onto do her postdoctoral studies at The Scripps Research Institute, where she was further involved in using NGS based analysis to understand the role of different genes in conferring resistance/susceptibility against common oncogenic drugs. She has worked as scientific advisor to a genomic start-up in developing custom NGS pipelines based on client needs. She has also Currently she works with Avnesh Thakor to develop stem cell based cell therapies based on disease-etiology related to Inflammatory Diseases with no approved FDA biologics using multi-omics and translational approaches.

CURRENT ROLE AT STANFORD

Research Scientist

HONORS AND AWARDS

- Outstanding Thesis Award (Asia)- Second Prize, Eli Lilly (2012)
- Review Editor, Frontiers in Immunology (2024-present)
- Reviewer, BBA-Molecular Basis of Diseases (2023-present)
- Reviewer, Langmuir (2016)
- Reviewer, BMC Genomics (2016-present)
- Reviewer, BMC Genetics (2017-present)

EDUCATION AND CERTIFICATIONS

- BSc, Presidency College , Chemistry (2004)
- MSc, IIT, Kanpur , Chemistry (2006)
- PhD, Indian Institute of Science , Molecular Biophysics (2012)

PATENTS

- THAKOR. Avnesh S, GANGULY. Abantika, CHETTY. Shashank, REGMI. Shobha. "United States Patent WO2023077160 METHODS OF TREATING DISEASES ASSOCIATED WITH CELLULAR-ENERGY DEFICIENCY OR MITOCHONDRIAL DYSFUNCTION BY LOCOREGIONAL DELIVERY OF EXTRACELLULAR VESICLES THAT HAVE A CARGO WITH AN ENHANCED BIOENERGETIC PROFILE", THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, Apr 5, 2023

LINKS

- LinkedIn: <https://www.linkedin.com/in/abantika/>
- Google Scholar: <https://scholar.google.com/citations?user=F7s8U5AAAAAJ&hl=en>
- Lab Site: <https://www.stanfordiris.com/teamiris>

Professional

SKILLS AND EXPERTISE

Administrative Operations

- Microsoft Office
- Smartsheets
- Strategic Planning

Publications

PUBLICATIONS

- **Controlled Nutrient Delivery to Pancreatic Islets Using Polydopamine-Coated Mesoporous Silica Nanoparticles.** *Nano letters*
Primavera, R., Wang, J., Buchwald, P., Ganguly, A., Patel, S., Bettencourt, L., Chetty, S., Yarani, R., Regmi, S., Levitte, S., Kevadiya, B., Guindani, M., Decuzzi, et al
2025
- **Evaluating the therapeutic potential of different sources of mesenchymal stem cells in acute respiratory distress syndrome.** *Stem cell research & therapy*
Regmi, S., Ganguly, A., Pathak, S., Primavera, R., Chetty, S., Wang, J., Patel, S., Thakor, A. S.
2024; 15 (1): 385
- **Time-course analysis of cisplatin induced AKI in preclinical models: implications for testing different sources of MSCs.** *Journal of translational medicine*
Ganguly, A., Chetty, S., Primavera, R., Levitte, S., Regmi, S., Dulken, B. W., Sutherland, S. M., Angeles, W., Wang, J., Thakor, A. S.
2024; 22 (1): 789
- **Integrated transcriptome-proteome analyses of human stem cells reveal source-dependent differences in their regenerative signature.** *Stem cell reports*
Ganguly, A., Swaminathan, G., Garcia-Marques, F., Regmi, S., Yarani, R., Primavera, R., Chetty, S., Bermudez, A., Pitteri, S. J., Thakor, A. S.
2022
- **Global Fitness Profiling Identifies Arsenic and Cadmium Tolerance Mechanisms in Fission Yeast.** *G3 (Bethesda, Md.)*
Guo, L., Ganguly, A., Sun, L., Suo, F., Du, L. L., Russell, P.
2016; 6 (10): 3317-3333
- **A comparative kinetic and thermodynamic perspective of the σ -competition model in Escherichia coli.** *Biophysical journal*
Ganguly, A., Chatterji, D.
2012; 103 (6): 1325-33
- **Precision Delivery of Therapeutics to the Intestine: A Case Series of Superselective Steroid Administration in Pediatric Intestinal Transplant Recipients.** *Transplantation*
Levitte, S., Guevara-Tique, A. A., Ganguly, A., Syed, A., Gugig, R., Zhang, K. Y., Bonham, C. A., Thakor, A. S.
2024; 108 (8): e202-e203
- **Mesenchymal stem cell-derived extracellular vesicles for the treatment of acute rejection in pediatric and adult bowel transplant** *AMERICAN JOURNAL OF TRANSPLANTATION*
Levitte, S., Zhang, K., Guevara-Tique, A. A., Ganguly, A., Dulken, B. W., Nilkant, R., Rigmaiden, M., Kumari, R., Khlifi, K., Thakor, A. S., Bonham, C. A.
2024; 24 (4): 693-696

- **Precision Delivery of Human Bone Marrow-Derived Mesenchymal Stem Cells Into the Pancreas Via Intra-arterial Injection Prevents the Onset of Diabetes.** *Stem cells translational medicine*
Primavera, R., Regmi, S., Yarani, R., Levitte, S., Wang, J., Ganguly, A., Chetty, S., Guindani, M., Ricordi, C., Meyer, E., Thakor, A. S.
2024
- **Mesenchymal stem cell-derived extracellular vesicles for the treatment of acute rejection in pediatric and adult bowel transplant.** *American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*
Levitte, S., Zhang, K. Y., Guevara-Tique, A. A., Ganguly, A., Dulken, B. W., Nilkant, R., Rigmaiden, M., Kumari, R., Khlifi, K., Thakor, A. S., Bonham, C. A.
2023
- **Precision Delivery of Steroids as a Rescue Therapy for Gastrointestinal Graft-versus-Host Disease in Pediatric Stem Cell Transplant Recipients.** *Journal of clinical medicine*
Levitte, S., Ganguly, A., Frolik, S., Guevara-Tique, A. A., Patel, S., Tadas, A., Klein, O., Shyr, D., Agarwal-Hashmi, R., Beach, L., Callard, E., Weinacht, K., Bertaina, et al
2023; 12 (13)
- **β Cell and Autophagy: What Do We Know?** *Biomolecules*
Mohammadi-Motlagh, H. R., Sadeghalvad, M., Yavari, N., Primavera, R., Soltani, S., Chetty, S., Ganguly, A., Regmi, S., Fløyel, T., Kaur, S., Mirza, A. H., Thakor, A. S., Pociot, et al
2023; 13 (4)
- **Case Series of Precision Delivery of Methylprednisolone in Pediatric Inflammatory Bowel Disease: Feasibility, Clinical Outcomes, and Identification of a Vasculitic Transcriptional Program.** *Journal of clinical medicine*
Levitte, S., Yarani, R., Ganguly, A., Martin, L., Gubatan, J., Nadel, H. R., Franc, B., Gugig, R., Syed, A., Goyal, A., Park, K. T., Thakor, A. S.
2023; 12 (6)
- **Precision Delivery of Steroids as a Rescue Therapy for Gastrointestinal Graft-versus-Host Disease in Pediatric Stem Cell Transplant Recipients** *Journal of Clinical Medicine*
Levitte, s., Ganguly, A., Frolik, S., Guevara-Tique, A., et al
2023; 12 (4229)
- **Umbilical cord mesenchymal stromal cells-from bench to bedside.** *Frontiers in cell and developmental biology*
Chetty, S., Yarani, R., Swaminathan, G., Primavera, R., Regmi, S., Rai, S., Zhong, J., Ganguly, A., Thakor, A. S.
2022; 10: 1006295
- **Mesenchymal stromal cells for the treatment of Alzheimer's disease: Strategies and limitations.** *Frontiers in molecular neuroscience*
Regmi, S., Liu, D. D., Shen, M., Kevadiya, B. D., Ganguly, A., Primavera, R., Chetty, S., Yarani, R., Thakor, A. S.
2022; 15: 1011225
- **Tdp1 processes chromate-induced single-strand DNA breaks that collapse replication forks.** *PLoS genetics*
Ganguly, A., Guo, L., Sun, L., Suo, F., Du, L. L., Russell, P.
2018; 14 (8): e1007595
- **Nonspecific interaction between DNA and protein allows for cooperativity: a case study with mycobacterium DNA binding protein.** *The journal of physical chemistry. B*
Ganguly, A., Rajdev, P., Williams, S. M., Chatterji, D.
2012; 116 (1): 621-32
- **Sequential assembly of an active RNA polymerase molecule at the air-water interface.** *Langmuir : the ACS journal of surfaces and colloids*
Ganguly, A., Chatterji, D.
2011; 27 (7): 3808-14
- **Sequence specific interaction between promoter DNA and Escherichia coli RNA polymerase: comparative thermodynamic analysis with one immobilized partner.** *The journal of physical chemistry. B*
Ganguly, A., Rajdev, P., Chatterji, D.
2009; 113 (46): 15399-408