



Aravind Natarajan

Postdoctoral Scholar, Hematology

Bio

HONORS AND AWARDS

- Dean's Postdoctoral Fellowship, School of Medicine, Stanford University, USA (2021)
- JEDI Champion Award, Stanford University, USA (2021)
- Austin Hoey Graduate Research Excellence Recognition Award, Robert Frederick Smith School of Chemical and Biomolecular Engineering, Cornell University, USA (2019)
- Cornelia Ye Outstanding Teaching Assistant Award, Center for Teaching Innovation, Cornell University, USA (2018)
- Inductee, Edward A. Bouchet Honor Society, Howard and Yale Universities, USA (2018)
- Procter & Gamble Award, Procter & Gamble, USA (2018)
- Excellence in Leadership Award, Graduate School, Cornell University, USA (2017)
- Outstanding Graduate or Professional Student, Cornell Asian Pacific Islander Student Union, Cornell University, USA (2017)
- Second place, Biotechnology Entrepreneurship Students Team, Department of Biotechnology (Government of India) and ABLE (Association for Biotech Led Enterprises) (2010)
- Summer Research Fellowship, Indian Academy of Sciences, Indian National Science Academy, and National Academy of Sciences, India (2008)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Advisor, Telling Our Stories: A Public History of Belonging at Cornell, Cornell University, USA (2020 - present)
- Co-Lead, Diversity and Inclusion Program, Robert Frederick Smith School of Chemical and Biomolecular Engineering, Cornell University, USA (2018 - 2019)
- Founder, Science Blender Podcast, Robert Frederick Smith School of Chemical and Biomolecular Engineering, Cornell University, USA (2017 - present)

PROFESSIONAL EDUCATION

- Master of Science, Unlisted School (2012)
- Bachelor of Science, Unlisted School (2010)
- Doctor of Philosophy, Cornell University (2019)
- Doctor of Philosophy, Cornell University , Microbiology (2019)
- Master of Science, Madurai Kamaraj University , Genomics (2011)
- Bachelor of Science, Madras University , Biochemistry (2009)

STANFORD ADVISORS

- Ami Bhatt, Postdoctoral Research Mentor
- Ami Bhatt, Postdoctoral Faculty Sponsor

COMMUNITY AND INTERNATIONAL WORK

- ARISE: Amplifying Role models as Inspiration for STEM Education, New York
- Women's Outreach in Materials, Energy and Nanobiotechnology (W.O.M.E.N), Robert Frederick Smith School of Chemical and Biomolecular Engineering, Cornell University, USA

PATENTS

- Matthew P. Delisa, Aravind Natarajan. "United States Bacterial system for producing human O-glycoproteins", Cornell University, Oct 28, 2021

Research & Scholarship

LAB AFFILIATIONS

- Ami Bhatt, Bhatt lab (10/16/2019)

Publications

PUBLICATIONS

- **The Tomato Brown Rugose Fruit Virus Movement Protein Gene Is a Novel Microbial Source Tracking Marker.** *Applied and environmental microbiology*
Natarajan, A., Fremin, B. J., Schmidtke, D. T., Wolfe, M. K., Zlitni, S., Graham, K. E., Brooks, E. F., Severyn, C. J., Sakamoto, K. M., Lacayo, N. J., Kuersten, S., Koble, J., Caves, et al
2023: e0058323
- **Tomato brown rugose fruit virus Mo gene is a novel microbial source tracking marker.** *bioRxiv : the preprint server for biology*
Natarajan, A., Fremin, B. J., Schmidtke, D. T., Wolfe, M. K., Zlitni, S., Graham, K. E., Brooks, E. F., Severyn, C. J., Sakamoto, K. M., Lacayo, N. J., Kuersten, S., Koble, J., Caves, et al
2023
- **Gastrointestinal symptoms and fecal shedding of SARS-CoV-2 RNA suggest prolonged gastrointestinal infection.** *Med (New York, N.Y.)*
Natarajan, A., Zlitni, S., Brooks, E. F., Vance, S. E., Dahlen, A., Hedlin, H., Park, R. M., Han, A., Schmidtke, D. T., Verma, R., Jacobson, K. B., Parsonnet, J., Bonilla, et al
2022
- **Standardized preservation, extraction and quantification techniques for detection of fecal SARS-CoV-2 RNA.** *Nature communications*
Natarajan, A., Han, A., Zlitni, S., Brooks, E. F., Vance, S. E., Wolfe, M., Singh, U., Jagannathan, P., Pinsky, B. A., Boehm, A., Bhatt, A. S.
2021; 12 (1): 5753
- **Engineering orthogonal human O-linked glycoprotein biosynthesis in bacteria.** *Nature chemical biology*
Natarajan, A. n., Jaroentomeechai, T. n., Cabrera-Sánchez, M. n., Mohammed, J. C., Cox, E. C., Young, O. n., Shajahan, A. n., Vilkhovoy, M. n., Vadhin, S. n., Varner, J. D., Azadi, P. n., DeLisa, M. P.
2020
- **Microbes and microbiomes in 2020 and beyond.** *Nature communications*
Natarajan, A. n., Bhatt, A. S.
2020; 11 (1): 4988
- **Glyco-recoded Escherichia coli: Recombineering-based genome editing of native polysaccharide biosynthesis gene clusters** *METABOLIC ENGINEERING*
Yates, L. E., Natarajan, A., Li, M., Hale, M. E., Mills, D. C., DeLisa, M. P.
2019; 53: 59–68
- **A cell-free biosynthesis platform for modular construction of protein glycosylation pathways.** *Nature communications*
Kightlinger, W. n., Duncker, K. E., Ramesh, A. n., Thames, A. H., Natarajan, A. n., Stark, J. C., Yang, A. n., Lin, L. n., Mrksich, M. n., DeLisa, M. P., Jewett, M. C.
2019; 10 (1): 5404
- **Metabolic engineering of glycoprotein biosynthesis in bacteria.** *Emerging topics in life sciences*
Natarajan, A., Jaroentomeechai, T., Li, M., Glasscock, C. J., DeLisa, M. P.
2018; 2 (3): 419-432

- **Single-pot glycoprotein biosynthesis using a cell-free transcription-translation system enriched with glycosylation machinery (vol 9, 2018) *NATURE COMMUNICATIONS***
Jaroentomeechai, T., Stark, J. C., Natarajan, A., Glasscock, C. J., Yates, L. E., Hsu, K. J., Mrksich, M., Jewett, M. C., DeLisa, M. P.
2018; 9: 3396
- **A cell-free platform for rapid synthesis and testing of active oligosaccharyltransferases *BIOTECHNOLOGY AND BIOENGINEERING***
Schoborg, J. A., Hershewe, J. M., Stark, J. C., Kightlinger, W., Kath, J. E., Jaroentomeechai, T., Natarajan, A., DeLisa, M. P., Jewett, M. C.
2018; 115 (3): 739–50
- **An Engineered Survival-Selection Assay for Extracellular Protein Expression Uncovers Hypersecretory Phenotypes in *Escherichia coli* *ACS SYNTHETIC BIOLOGY***
Natarajan, A., Haitjema, C. H., Lee, R., Boock, J. T., DeLisa, M. P.
2017; 6 (5): 875–83
- **Substitute sweeteners: diverse bacterial oligosaccharyltransferases with unique N-glycosylation site preferences *SCIENTIFIC REPORTS***
Ollis, A. A., Chai, Y., Natarajan, A., Perregaux, E., Jaroentomeechai, T., Guarino, C., Smith, J., Zhang, S., DeLisa, M. P.
2015; 5: 15237
- **Universal Genetic Assay for Engineering Extracellular Protein Expression *ACS SYNTHETIC BIOLOGY***
Haitjema, C. H., Boock, J. T., Natarajan, A., Dominguez, M. A., Gardner, J. G., Keating, D. H., Withers, S. T., DeLisa, M. P.
2014; 3 (2): 74–82