Stanford



Mahasish Shome

Postdoctoral Scholar, Genetics

Bio

BIO

My research interest revolves around understanding the underlying mechanism of disease progression. I utilize multi-omics profiling to identify biomarkers relevant to the disease. I study autoantibodies, metabolomics and proteomics to decipher the connection of disease with biomarkers. For studying these, I use protein microarrays and mass spectrometry. Connecting various omics provide a holistic overview of the disease profile and can help in early diagnosis, understanding disease state and drug/vaccine effectiveness.

STANFORD ADVISORS

- Michael Snyder, Postdoctoral Faculty Sponsor

PATENTS

- Mahasish Shome, Lusheng Song, Yunro Chung, Jonathan Leighton, Joshua Labaer, Ji Qiu. "United States Patent 18/448,685 Anti-microbial antibody signatures of inflammatory bowel disease and uses thereof", National Institutes of Health (NIH), US Dept. of Health and Human Services (DHHS), US Government, Feb 15, 2024
- Mahasish Shome, Yunro Chung, Ramani Chavan, Jin Park, Ji Qiu, Joshua Labaer. "United States Patent 18/326,837 Autoantibodies, kits and methods of verifying the accuracy of diagnostic results", Arizona Board of Regents on behalf of Arizona State University, Nov 30, 2023

Research & Scholarship

LAB AFFILIATIONS

- Michael Snyder (9/1/2022)

Publications

PUBLICATIONS

- **A distinct effector B cell population drives autoantibody production in SARS-CoV-2 infection.** *Immunity*
  Yuan, D., Li, S., Zhang, R., Ng, R. H., Su, Y., Lan, L., Shome, M., Smith, B., Troisch, P., Xie, J., Choi, J., Edmark, R., Chen, et al
  2026
- **Serological profiling of Crohn's disease and ulcerative colitis patients reveals anti-microbial antibody signatures** *WORLD JOURNAL OF GASTROENTEROLOGY*
  Shome, M., Song, L., Williams, S., Chung, Y., Murugan, V., Park, J. G., Faubion, W., Pasha, S. F., Leighton, J. A., LaBaer, J., Qiu, J.
  2022; 28 (30): 4089-4101
- **Serum autoantibodyome reveals that healthy individuals share common autoantibodies** *CELL REPORTS*
  Shome, M., Chung, Y., Chavan, R., Park, J. G., Qiu, J., LaBaer, J.
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- **The importance, challenges, and possible solutions for sharing proteomics data while safeguarding individuals' privacy.** *Molecular & cellular proteomics : MCP*
  Shome, M., MacKenzie, T. M., Subbareddy, S. R., Snyder, M. P.
  2024: 100731

- **Comparative Microbiomics Analysis of Antimicrobial Antibody Response between Patients with Lung Cancer and Control Subjects with Benign Pulmonary Nodules** *CANCER EPIDEMIOLOGY BIOMARKERS & PREVENTION*
  Shome, M., Gao, W., Engelbrektson, A., Song, L., Williams, S., Murugan, V., Park, J. G., Chung, Y., LaBaer, J., Qiu, J.
  2023; 32 (4): 496-504

- **Protein Microarrays and their Fabrication.** *Methods in molecular biology (Clifton, N.J.)*
  Shome, M., Labaer, J.
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- **Identification of anti-Helicobacter pylori antibody signatures in gastric intestinal metaplasia** *JOURNAL OF GASTROENTEROLOGY*
  Song, L., Song, M., Rabkin, C. S., Chung, Y., Williams, S., Torres, J., Corvalan, A. H., Gonzalez, R., Bellolio, E., Shome, M., LaBaer, J., Qiu, J., Camargo, et al
  2023; 58 (2): 112-124

- **Exploration of autoantibody responses in canine diabetes using protein arrays** *SCIENTIFIC REPORTS*
  O'Kell, A. L., Shome, M., Qiu, J., Williams, S., Chung, Y., LaBaer, J., Atkinson, M. A., Wasserfall, C.
  2022; 12 (1): 2490

- **Structure, Magnetic Behavior, and Anisotropy of Homoleptic Trinuclear Lanthanoid 8-Quinolinolate Complexes** *INORGANIC CHEMISTRY*
  Chilton, N. F., Deacon, G. B., Gazukin, O., Junk, P. C., Kersting, B., Langley, S. K., Moubaraki, B., Murray, K. S., Schleife, F., Shome, M., Turner, D. R., Walker, J. A.
  2014; 53 (5): 2528-2534