Stanford



Gulshan Singh

Postdoctoral Scholar, Gastroenterology

Bio

HONORS AND AWARDS

- Best Oral Presentation Award, International Symposium on the Safe Use of Nanomaterials, Lucknow, India (2011)
- Best Poster Presentation Award, International Conference on New Horizons in Biotechnology ,Trivandrum, India (2011)
- Best Research Paper Award, Alumni Association of Department of Biochemistry, Lucknow University, India (2011)
- Travel Award for collaborative research with Uppsala University, Sweden, STINT-NRF South Africa and Sweden (2017)
- Travel award, STINT-NRF South Africa and Sweden (2016)
- Best Poster Presentation Award, XXXII Annual Meeting of Society of Toxicology, Lucknow, India (2012)
- Visiting Research Fellow at Institute of Photonic Technology, Germany: Aquatest project, New INDIGO, the Initiative for the Development and Integration of Indian and European Research (2012)

STANFORD ADVISORS

- Aida Habtezion, Postdoctoral Research Mentor
- Aida Habtezion, Postdoctoral Faculty Sponsor

LINKS

- My Linkedin profile: https://www.linkedin.com/in/gulshan-singh-3b665115/
- My Researchgate profile: https://www.researchgate.net/profile/Gulshan-Singh-2
- Google Scholar: https://scholar.google.com/citations?user=_iRYg_IAAAAJ&hl=en

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My current research interest is to understand the host-microbial pathways in intestinal inflammation. I am working to explore cellular heterogeneity at single immune cell level in systemic and local regions of the intestine that are associated with different Inflammatory bowel disease conditions.

LAB AFFILIATIONS

- Sidhartha Sinha, Sinha Lab (1/4/2021)

Publications

PUBLICATIONS

- **The effect of gastric acid suppression on probiotic colonization in a double blinded randomized clinical trial.** *Clinical nutrition ESPEN*
  Singh, G., Haileselassie, Y., Briscoe, L., Bai, L., Patel, A., Sanjines, E., Hendler, S., Singh, P. K., Garud, N. R., Limketkai, B. N., Habtezion, A.

1800; 47: 70-77

- **Novel circulating and tissue monocytes as well as macrophages in pancreatitis and recovery.** *Gastroenterology*
  Manohar, M., Jones, E. K., Rubin, S. J., Subrahmanyam, P. B., Swaminathan, G., Mikhail, D., Bai, L., Singh, G., Wei, Y., Sharma, V., Siebert, J. C., Maecker, H. T., Husain, et al
  2021

- **Protective Effect of Saffron in Mouse Colitis Models Through Immune Modulation.** *Digestive diseases and sciences*
  Singh, G., Haileselassie, Y., Ji, A. R., Maecker, H. T., Sinha, S. R., Brim, H., Habtezion, A., Ashktorab, H.
  2021

- **Dysbiosis-Induced Secondary Bile Acid Deficiency Promotes Intestinal Inflammation.** *Cell host & microbe*
  Sinha, S. R., Haileselassie, Y., Nguyen, L. P., Tropini, C., Wang, M., Becker, L. S., Sim, D., Jarr, K., Spear, E. T., Singh, G., Namkoong, H., Bittinger, K., Fischbach, et al
  2020

- **Saffron: The Golden Spice with Therapeutic Properties on Digestive Diseases** *NUTRIENTS*
  Ashktorab, H., Soleimani, A., Singh, G., Amin, A., Tabtabaei, S., Latella, G., Stein, U., Akhondzadeh, S., Solanki, N., Gondre-Lewis, M. C., Habtezion, A., Brim, H.
  2019; 11 (5)

- **Comparison of droplet digital PCR and quantitative PCR for the detection of Salmonella and its application for river sediments** *JOURNAL OF WATER AND HEALTH*
  Singh, G., Sithebe, A., Enitan, A. M., Kumari, S., Bux, F., StenstrM, T.
  2017; 15 (4): 505–8

- **Exploring the potential reservoirs of non specific TEM beta lactamase (bla(TEM)) gene in the Indo-Gangetic region: A risk assessment approach to predict health hazards** *JOURNAL OF HAZARDOUS MATERIALS*
  Singh, G., Vajpayee, P., Rani, N., Amoah, I., Stenstrom, T., Shanker, R.
  2016; 314: 121–28

- **Determination of viable Salmonellae from potable and source water through PMA assisted qPCR** *ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY*
  Singh, G., Vajpayee, P., Bhatti, S., Ronnie, N., Shah, N., McClure, P., Shanker, R.
  2013; 93: 121–27

- **Bio-capture of S. Typhimurium from surface water by aptamer for culture-free quantification** *ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY*
  Singh, G., Vajpayee, P., Rani, N., Jyoti, A., Gupta, K., Shanker, R.
  2012; 78: 320–26

- **Chromium Oxide Nano-Particles Induce Stress in Bacteria: Probing Cell Viability** *JOURNAL OF BIOMEDICAL NANOTECHNOLOGY*
  Singh, G., Vajpayee, P., Khatoon, I., Jyoti, A., Dhawan, A., Gupta, K. C., Shanker, R.
  2011; 7 (1): 166–67

- **Environmental Reservoirs for Enterotoxigenic Escherichia coli in South Asian Gangetic Riverine System** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Singh, G., Vajpayee, P., Ram, S., Shanker, R.
  2010; 44 (16): 6475–80

- **Preventive effects of saffron in a colitis mouse model.**
  Banskota, S., Khan, W., Singh, G., Habtezion, A., Brim, H., Ashktorab, H.
  AMER ASSOC CANCER RESEARCH.2021

- **Saffron Pre-Treatment Promotes Reduction in Tissue Inflammatory Profiles and Alters Microbiome Composition in Experimental Colitis Mice** *MOLECULES*
  Banskota, S., Brim, H., Kwon, Y., Singh, G., Sinha, S. R., Wang, H., Khan, W. I., Ashktorab, H.
  2021; 26 (11)

- **Identification, antibiotic resistance, and virulence profiling of Aeromonas and Pseudomonas species from wastewater and surface water.** *Environmental monitoring and assessment*
  Govender, R., Amoah, I. D., Adegoke, A. A., Singh, G., Kumari, S., Swalaha, F. M., Bux, F., Stenström, T. A.

2021; 193 (5): 294

- **Drinking water microbiology in a water-efficient building: stagnation, seasonality, and physicochemical effects on opportunistic pathogen and total bacteria proliferation** *ENVIRONMENTAL SCIENCE-WATER RESEARCH & TECHNOLOGY*
  Ley, C. J., Proctor, C. R., Singh, G., Ra, K., Noh, Y., Odimayomi, T., Salehi, M., Julien, R., Mitchell, J., Nejadhashemi, A., Whelton, A. J., Aw, T.
  2020; 6 (10): 2902–13

- **Eosinophilic pancreatitis: a rare or unexplored disease entity?** *Przeglad gastroenterologiczny*
  Manohar, M. n., Verma, A. K., Singh, G. n., Mishra, A. n.
  2020; 15 (1): 34–38

- **Comparative assessment of DNA extraction procedures for Ascaris spp. eggs** *JOURNAL OF HELMINTHOLOGY*
  Amoah, I. D., Singh, G., Troell, K., Reddy, P., Stenstrom, T. A., Bux, F.
  2020; 94: e78

- **Nanotechnology and detection of microbial pathogens** *Animal Biotechnology (Second Edition) Models in Discovery and Translation*
  Shanker, R., Singh, G., Jyoti, A., Dwivedi, P. D., Singh, S. P.
  2020: 593–611

- **Efficiency of chlorine and UV in the inactivation of Cryptosporidium and Giardia in wastewater** *PLOS ONE*
  Adeyemo, F., Singh, G., Reddy, P., Bux, F., Stenstrom, T.
  2019; 14 (5): e0216040

- **Detection of coliphages and human adenoviruses in a subtropical estuarine lake** *SCIENCE OF THE TOTAL ENVIRONMENT*
  Cooksey, E. M., Singh, G., Scott, L. C., Aw, T.
  2019; 649: 1514–21

- **Methods for the detection of Cryptosporidium and Giardia: From microscopy to nucleic acid based tools in clinical and environmental regimes** *ACTA TROPICA*
  Adeyemo, F., Singh, G., Reddy, P., Stenstrom, T.
  2018; 184: 15–28

- **Detection and quantification of soil-transmitted helminths in environmental samples: A review of current state-of-the-art and future perspectives** *ACTA TROPICA*
  Amoah, I., Singh, G., Stenstrom, T., Reddy, P.
  2017; 169: 187–201

- **Potential Biomedical Applications of Chitosan – and Chitosan#Based Nanomaterials** *In Chitosan (eds S. Ahmed and S. Ikram)*
  Singh, G., Manohar, M., Arya, S. ., Siddiqui, W. A., Stenstrom, T. A.
  Scrivener Publishing LLC.2017

- **Antibiotic Resistant Superbugs: Assessment of the Interrelationship of Occurrence in Clinical Settings and Environmental Niches** *MOLECULES*
  Adegoke, A., Faleye, A., Singh, G., Stenstroem, T.
  2017; 22 (1)

- **Biosynthesis of ZnO nanoparticles using Jacaranda mimosifolia flowers extract: Synergistic antibacterial activity and molecular simulated facet specific adsorption studies** *JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B-BIOLOGY*
  Sharma, D., Sabela, M. I., Kanchi, S., Mdluli, P. S., Singh, G., Stenstrom, T. A., Bisetty, K.
  2016; 162: 199–207

- **Quantification of viable Enterococcus spp., and Psuedomonas aeruginosa through propidium monoazide dye assisted qPCR array in surface water and sediment** *Microbes in spotlight: recent progress in the understanding of beneficial and harmful microorganism."*
  Singh, G., Stenstrom, T. A., Shanker, R.
  Brown Walker Press.2016: 121–125

- **Nanotechnology and Detection of Microbial Pathogens** *First Edition: Animal Biotechnology: Models in Discovery and Translation,*
  Shanker, R., Singh, G., Jyoti, A., Dwivedi, P. D., Singh, S. P.
  2014: 525–539

- **Identification of Environmental Reservoirs of Nontyphoidal Salmonellosis: Aptamer-Assisted Bioconcentration and Subsequent Detection of Salmonella Typhimurium by Quantitative Polymerase Chain Reaction** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*

Jyoti, A., Vajpayee, P., Singh, G., Patel, C., Gupta, K., Shanker, R.
2011; 45 (20): 8996–9002

- **Determination of Internalization of Chromium Oxide Nano-Particles in Escherichia coli by Flow Cytometry** *JOURNAL OF BIOMEDICAL NANOTECHNOLOGY*
  Khatoon, I., Vajpayee, P., Singh, G., Pandey, A. K., Dhawan, A., Gupta, K. C., Shanker, R.
  2011; 7 (1): 168–69
- **Adverse Effects of Chromium Oxide Nano-Particles on Seed Germination and Growth in Triticum aestivum L.** *JOURNAL OF BIOMEDICAL NANOTECHNOLOGY*
  Vajpayee, P., Khatoon, I., Patel, C., Singh, G., Gupta, K., Shanker, R.
  2011; 7 (1): 205–6
- **Contamination of surface and potable water in South Asia by Salmonellae: Culture-independent quantification with molecular beacon real-time PCR** *SCIENCE OF THE TOTAL ENVIRONMENT*
  Jyoti, A., Ram, S., Vajpayee, P., Singh, G., Dwivedi, P. D., Jain, S. K., Shanker, R.
  2010; 408 (6): 1256–63

PRESENTATIONS

- Metagenomic and metabolomic analyses unveil the effect of gastric acid suppression on probiotic colonization - Digestive Diseases week DDW 2020 (5/2/2020 - 5/5/2020)
- Quantitative Detection of Opportunistic Pathogens in Premise Plumbing Water Systems Supplied by Municipal Water and Rainwate - Water Microbiology conference at UNC chapel Hill (5/22/2018 - 5/24/2018)
- Comparison of Droplet Digital PCR And Quantitative PCR For Detection of Salmonella in Sediments - SASM's 19th Biennial Congress (1/17/2016 - 1/20/2016)
- Quantification of viable Enterococcus spp., and Psuedomonas aeruginosa through propidium monoazide dye assisted qPCR array in surface water and sediments. - VI International Conference on Environmental, Industrial and Applied Microbiology, BioMicroworld 2015 (October 28, 2015 - 10/30/2015)
- Chromium oxide nanoparticles induce stress in bacteria: Probing cell viability - International Symposium on the Safe Use of Nanomaterials, Lucknow, India (2/1/2011 - 2/3/2011)
- Nanotechnology and microbial detection - International conference on translational medicine (T-Nano-2014) (December 15, 2014 - 12/17/2014)