

Publication; presentation and other achievements

CONTACT INFORMATION

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PUBLICATIONS

1. Sarode, G.V., Mazi, T.A., Neier, K., Shibata, N.M., Jospin, G., Harder, N.H., Caceres, A., Heffern, M.C., **Sharma, A.K.**, More, S.K. and Dave, M., **2023**. The role of intestine in metabolic dysregulation in murine Wilson disease. **Hepatology Comm**, 7(10).
2. Guse, K., **Sharma, A.K.**, Weyenberg, E., Davison, S., Ma, Y., Choi, Y., Johnson, A.J., Chen, C. and Gomez, A., **2023**. Regular consumption of lacto-fermented vegetables has greater effects on the gut metabolome compared with the microbiome. **Gut Microbiome** , 4, p.e11.
3. Dina G. Moussa, **Sharma, A.K.**, Tamer Mansour, Bruce Witthuhn; Jorge Perdigao; Joel D. Rudney; Conrado Aparicio; Andres Gomez, **2022**. Functional Biomarkers of Ex-vivo Dental Caries Onset. **Journal of oral microbiology**, 14(1), p.2123624.
4. Rosa, F., **Sharma, A.K.**, Gurung, M., Casero, D., Matazel, K., Bode, L., Simecka, C., Elolimy, A.A., Tripp, P., Randolph, C. and Hand, T.W., **2022**. Human Milk Oligosaccharides Impact Cellular and Inflammatory Gene Expression and Immune Response. **Frontiers in Immunology**. 13: 907529. doi: 10.3389/fimmu.
5. Saxena, R., Prasoodanan PK, V., Gupta, S., Gupta, S., Waiker, P., Samaiya, A., **Sharma, A.K.** and Sharma, V.K., **2022**. Assessing the effect of smokeless tobacco-consumption on oral microbiome in healthy and oral cancer patients. **Frontiers in Cellular and Infection Microbiology**, p.331.
6. Omontese, B.O., **Sharma, A.K.**, Davison, S., Jacobson, E., DiConstanzo, A., Webb, M.J. and Gomez, A., **2022**. Microbiome network traits in the rumen predict average daily gain in beef cattle under different backgrounding systems. **Animal Microbiome**, 4(1), pp.1-15.
7. **Sharma, A.K.**, & Sam Davison; Barbora Pafco; Jonathan B. Clayton, Jessica M. Rothman, Matthew R. McLennan, Marie Cibot, Terence Fuh, Roman Vodicka, Carolyn Jost Robinson, Klara Petrzekova, and Andres Gomez, **2022**. The primate gut mycobiome bacteriome interface is impacted by environmental and subsistence factors. **npj Biofilms Microbiomes** 8(1), pp.1-11..
8. Vishnu Prasoodanan P K, & **Ashok K Sharma**, Shruti Mahajan, Darshan B Dhakan, Abhijit Maji, Joy Scaria, Vineet K Sharma, **2021**. Western and non-western gut microbiomes reveal new roles of Prevotella in carbohydrate metabolism and mouth-gut axis. **npj Biofilms Microbiomes**, Oct 7;7(1):77.
9. **Sharma, A.K.**, & Petrzekova, K., Pafco, B., Robinson, C.A.J., Fuh, T., Wilson, B.A., Stumpf, R.M., Torralba, M.G., Blekhan, R., White, B. and Nelson, K.E., Leigh S.R., Gomez A, **2020**. Traditional human and nonhuman primate populations show parallel gut microbiome adaptations to analogous dietary conditions. **mSystems**, 5(6).
10. Gomez, A., **Sharma, A.K.**, Grev, A., Sheaffer, C. and Martinson, K., **2020**. The horse gut microbiome responds in a highly individualized manner to forage lignification. **Journal of Equine Veterinary Science**, 96, p.103306.

11. **Sharma, A.K.**, & Debusk, W.T., Stepanov, I., Gomez, A. and Khariwala, S.S, **2020**. Oral microbiome profiling in smokers with and without head and neck cancer reveals variations between health and disease. **Cancer Prevention Research**, 13(5), pp.463-474.
12. Srivastava, G.N., Malwe, A.S., **Sharma, A.K.**, Shastri, V., Hibare, K. and Sharma, V.K., **2020**. Molib: A machine learning based classification tool for the prediction of biofilm inhibitory molecules. **Genomics**, 112(4), pp.2823-2832.
13. Gupta, A., Dhakan, D.B., Maji, A., Saxena, R., PK, V.P., Mahajan, S., Pulikkan, J., Kurian, J., Gomez, A.M., Scaria, J. and Amato, K.R., **Sharma, A.K.** and Sharma V.K, **2019**, Association of Flavonifractor plautii, a flavonoid degrading bacterium, with the gut microbiome of colorectal cancer patients in India. **mSystems**, 4(6).
14. Gomez, A.*, **Sharma, A.K.***, Mallott, E.K., Petrzeltkova, K.J., Robinson, C.A.J., Yeoman, C.J., Carbonero, F., Pafco, B., Rothman, J.M., Ulanov, A. and Vlckova, K, **2019**. Plasticity in the human gut microbiome defies evolutionary constraints. **mSphere**, 4(4), pp.e00271-19.
15. **Sharma, A.K.**, Pafčo, B., Vlčková, K., Červená, B., Kreisinger, J., Davison, S., Beerli, K., Fuh, T., Leigh, S.R., Burns, M.B. and Blekman, R., Gomez, A, **2019**. Mapping gastrointestinal gene expression patterns in wild primates and humans via fecal RNA-seq. **BMC genomics**, 20(1), p.493.
16. Pafčo, B., **Sharma, A.K.**, Petrzeltková, K.J., Vlčková, K., Todd, A., Yeoman, C.J., Wilson, B.A., Stumpf, R., White, B.A., Nelson, K.E. and Leigh, S., 2019. Gut microbiome composition of wild western lowland gorillas is associated with individual age and sex factors. **American journal of physical anthropology**, 169(3), pp.575-585.
17. Dhakan, D.B., Maji, A., **Sharma, A.K.**, A.K., Saxena, R., Pulikkan, J., Grace, T., Gomez, A., Scaria, J., Amato, K.R. and Sharma, V.K, **2019**. The unique composition of Indian gut microbiome, gene catalogue, and associated fecal metabolome deciphered using multi-omics approaches. **GigaScience**, 8(3), p.giz004.
18. Kumar, K., Dhoke, G.V., **Sharma, A.K.**, Jaiswal, S.K. and Sharma, V.K., **2019**. Mechanistic elucidation of amphetamine metabolism by tyramine oxidase from human gut microbiota using molecular dynamics simulations. **Journal of cellular biochemistry**, 120(7), pp.11206-11215.
19. Kumar, K., Jaiswal, S.K., Dhoke, G.V., Srivastava, G.N., **Sharma, A.K.** and Sharma, V.K., **2018**. Mechanistic and structural insight into promiscuity based metabolism of cardiac drug digoxin by gut microbial enzyme. **Journal of cellular biochemistry**, 119(7), pp.5287-5296.
20. **Sharma, A.K.**, Jaiswal, S.K., Chaudhary, N. and Sharma, V.K., **2017**. A novel approach for the prediction of species-specific biotransformation of xenobiotic/drug molecules by the human gut microbiota. **Scientific reports**, 7(1), pp.1-13.
21. **Sharma, A.K.**, Srivastava, G.N., Roy, A. and Sharma, V.K., **2017**. ToxiM: A toxicity prediction tool for small molecules developed using machine learning and chemoinformatics approaches. **Frontiers in pharmacology**, 8, p.880.
22. Gupta, S., **Sharma, A.K.***, Shastri, V., Madhu, M.K. and Sharma, V.K., **2017**. Prediction of anti-inflammatory proteins/peptides: an insilico approach. **Journal of translational medicine**, 15(1), pp.1-11.

	<p>23. Gupta, A., Kumar, S., Prasoodanan, V.P., Harish, K., Sharma, A.K. and Sharma, V.K., 2016. Reconstruction of bacterial and viral genomes from multiple metagenomes. Frontiers in microbiology, 7, p.469.</p> <p>24. Gupta, S., Sharma, A.K.*, Jaiswal, S.K. and Sharma, V.K., 2016. Prediction of biofilm inhibiting peptides: an in silico approach. Frontiers in microbiology, 7, p.949.</p> <p>25. Gupta, S., Madhu, M.K., Sharma, A.K. and Sharma, V.K., 2016. ProInflam: a webserver for the prediction of proinflammatory antigenicity of peptides and proteins. Journal of translational medicine, 14(1), pp.1-10.</p> <p>26. Chaudhary, N., Sharma, A.K.*, Agarwal, P., Gupta, A. and Sharma, V.K., 2015. 16S classifier: a tool for fast and accurate taxonomic classification of 16S rRNA hypervariable regions in metagenomic datasets. PLOS One, 10(2), p.e0116106.</p>
CONFERENCE PUBLICATIONS	<p>1. Sharma, A.K., Martin, A., Moskowitz, J.E., Bora, S., Legree, K., Dorrestein, P., Underhill, D., Knight, R., Chen, P. and Devkota, S., 2022. 1166: In-patient antibiotic exposure promotes sars-cov-2 persistence in the gi tract in covid-19 admitted patients. Gastroenterology, 162(7), pp.S-279].</p> <p>2. Lahcene, N.L., Moskowitz, J.E., Sharma, A.K., Martin, A., Merchant, A., Fleshner, P. and Devkota, S., 2022. 1059: Spatial characterization of immune cells and bacterial co-localization in crohn's disease's creeping fat. Gastroenterology, 162(7), pp.S-241].</p>
BOOK CHAPTER	<p>1. Sharma, A.K. and Dubey, V.S., 2021. Metagenome Assembly for Gut Microbial Functional Diversity Associated with Xenobiotic Degradation. In Metagenomics and Microbial Ecology (pp. 79-87). CRC Press.</p>
ORAL/POSTER PRESENTATIONS	<ul style="list-style-type: none"> • Selected speaker, 2022 — 'In-Patient Antibiotic Exposure Promotes SARS-CoV-2 Persistence in the GI Tract in COVID-19 Admitted Patients' at <i>Digestive Disease Week (DDW) 2022</i>, at San Diego, CA. • Delivered a lecture, 2020 — 'Emergence of microbiome in therapeutics – Ongoing efforts, challenges, and future opportunities' at <i>Department of Pharmaceutical Sciences</i>, Dr. Hari Singh Gaur University Sagar, India. • Selected as one of the finalist's, 2019 in the Novartis – Academia Hackathon event held on event to be held August 12th – 23rd, 2019 on the Novartis Campus in Cambridge, MA, USA. • Selected speaker, 2018 — 'Mapping gastrointestinal gene expression patterns from fecal RNA-seq' at EpiQ (Quantitative Epidemiology) seminar series, UMN Seminar. • Selected speaker 2015 — 'Fast and Accurate Taxonomic Classification of 16S rRNA Hypervariable Regions in Metagenomic Datasets using 16S Classifier' in <i>The Human Microbiome conference</i>, at EMBL, Heidelberg, Germany.
EDITOR/REVIEWER FOR JOURNALS	<ul style="list-style-type: none"> • Associate Editor for Frontiers in Microbiology - Systems Microbiology; Guest Associate Editor for Frontiers in Microbiology - Microbiome in Health and Disease; Review Editor for Frontiers in Microbiology - Gastrointestinal Microbes

ACHIEVEMENTS

- **International Travel Grant, 2019** — Received \$1000 grant to present my work at Keystone Symposium on "Microbiome: Therapeutic Implications (T1)" *in October 2019 at Ireland.*
- **PBC Postdoctoral Fellowship, 2018** — Received a Israel government fellowship for three years to pursue postdoctoral research *at Bar-Ilan University, Israel.*
- **DST Travel Award, 2017** — Received travel award from Department of Science and Technology, India to present my doctoral research *in Symposium: NextGen Immunology at Rehovot, Israel.*
- **EMBL Grant, 2015** — Received €1000 grant to present my work *in The Human Microbiome Conference" at EMBL Germany.*
- **GATE, 2012** — Secured 376 All India Rank in *Graduate Aptitude Test in Engineering for Life Sciences* conducted by IIT Delhi