

# LIST OF PEER REVIEWED PUBLICATIONS

## (PARTHO SEN: PUBMED & GOOGLE SCHOLAR)

The international peer-reviewed publications in the scientific journals can also be retrieve by clicking on the 'PubMed' and / or 'Google Scholar' link above.

### Original research articles in international peer-reviewed journals

1. Aatsinki, KA., Lamichhane, S., Isokääntä, H., **Sen, P.**, Kråkström, M., Alves, MA., Keskitalo, A., Munukka, E., Karlsson, H., Perasto, L., Lukkarinen, M., Oresic, M., Kailanto, HM., Karlsson, L., Lahti, L., Dickens, AM. (2025) Dynamics of Gut Metabolome and Microbiota Maturation during Early Life. **iScience.**, (<https://www.cell.com/iscience/fulltext/S2589-0042%2825%2901857-7>)
2. Balaya, RDA., **Sen, P.**, W Grant, CW., Zenka, R., Sappani, M., Lakshmanan, J., Athreya, PA., Kandasamy, RK., Pandey A., Byeon, SK. (2025) An integrative multi-omics analysis reveals a multi-analyte signature of pancreatic ductal adenocarcinoma in serum. **J. Gastroenterol.**, (<https://doi.org/10.1007/s00535-024-02197-6>)
3. Sabatini, S., **Sen, P.**, Carli, F., Pezzica, S., Rosso, C., Lembo, E., Verrastro, O., Daly, A., Govaere, O., Cockell, S., Hyötyläinen, T., Mingrone, G., Bugianesi, E., Anstee, QM., Orešič, M., Gastaldelli, A. (2024). Hepatic glucose production rises with the histological severity of metabolic dysfunction-associated steatohepatitis. **Cell Rep Med.**, 11(5), 2666-3791.
4. Andrabi, SBA., Kalim, UU., Palani, S., Khan, MM., Khan, MH., Fagersund, J., Orpana, J., Paulin, N., Batkulwar, K., Junttila, S., Buchacher, T., Grönroos, T., Toikka, L., Ammunet, T., **Sen, P.**, Orešič, M., Kumpulainen, V., Tuomisto, JEE., Sinha, R., Marson, A., Rasool, O., Elo, LL., Lahesmaa, R. (2024) Long Noncoding RNA LIRIL2R Modulates FOXP3 Levels and Suppressive Function of Human CD4+ Regulatory T Cells by Regulating IL2RA. **PNAS.**, 121(23), e2315363121.
5. **Sen, P.\***, Emese, P.\*, Honkanen, J.K., Chen, O., Yolken, R., Suvisaari, Jaana. (2024). Dysregulation of microbiota in first episode psychosis patients were associated with symptom severity and treatment response. **Biol. Psychiatry.**, 95(4), 370-379.
6. **Sen, P.**, Fan, Y., Schlezinger, J., Ehrlich, S., Webster, T., Hyötyläinen, T., Pedersen, O., Orešič, M. (2024) Exposure to environmental toxicants is associated with gut microbiome dysbiosis, insulin resistance and obesity. **Environ. Int.**, 186, 108569.
7. Scheidt, Wv., Reichart, B., Meiser, B., Scheidt, Mv., **Sen, P.**, Schwarz, F., Harmel, E., Bengel, FM., Dick, A., Ueberfuhr, P., Reichenspurner, H., Jaeckel, E., Schwinzer, R., Hagl, C. (2023). Unique 40-year survival after heart transplantation with normal graft function and spontaneous operational tolerance. **Clin. Res. Cardiol.**, 13(5), 661-671.
8. Lamichhane, S., **Sen, P.**, Dickens, AM., Kråkström, Jorma, M., Johanna Lempainen, J., Hyoty, H., Lahesmaa, R., Veijola, K., Toppari, J., Hyötyläinen, T., Knip, M., Matej Orešič, M. (2023). Circulating metabolic signatures of rapid and slow progression to type 1 diabetes in islet autoantibody-positive children. **Front Endocrinol.**, 14, 1211015.

9. Lamichhane, S.<sup>\*</sup>, **Sen, P.<sup>\*</sup>**, Dickens, A.M., Alves, M.A., Härkönen, T., Honkanen, J., Vatanen, T., Xavier, R.J., Hyötyläinen, T., Knip, M., Orešič, M. (2022). Dysregulation of secondary bile acid metabolism precedes islet autoimmunity and type 1 diabetes. **Cell Rep Med.**, 3(10), 100762.
10. **Sen, P.**, Govaere, O., Sinioja, T., McGlinchey, A., Geng D., Ratzl, V., Bugianesi, E., Schattenberg, J.M., Vidal-Puig, A., Allison, M., Cockell, S., Daly A.K., Hyötyläinen, T., Anstee, Q.M., Orešič, M. (2022). Quantitative modelling of human liver reveals dysregulation of glycosphingolipid pathways in nonalcoholic fatty liver disease. **iScience.**, 25(9), 104949.
11. Ribeiro, H.C., **Sen, P.**, Dickens, A., Cruz, E.C.S., Oresic, M., Sussulini, A. (2022). Metabolomic and proteomic profiling in bipolar disorder patients revealed potential molecular signatures related to hemostasis. **Metabolomics** 18 (8), 1-13.
12. Johnson, K., Leary J.P., Govaere, O., Barter J.M., Charlton, H.S., Cockell, J.S., Tiniakos, D., *et al.* (2021). Increased serum miR-193a-5p during non-alcoholic fatty liver disease progression: diagnostic and mechanistic relevance. **JHEP Reports.**, 4(2), 100409.
13. **Sen, P.**, Andrabi, S.B.A., Buchacher, T., Khan, M.M., Kalim, U.U., Lindeman, T.M., Alves, M.A., Hinkkanen, V., Kemppainen, E., Dickens, A.M., *et al.* (2021). Quantitative genome-scale metabolic modeling of human CD4<sup>+</sup> T cell differentiation reveals subset-specific regulation of glycosphingolipid pathways. **Cell Rep.**, 37(6), 109973.
14. **Sen, P.**, Qadri, S., Luukkonen, P.K., Ragnarsdottir, O., McGlinchey, A., Jantti, S., Juuti, A., Arola, J., Schlezinger, J.J., Webster, T.F., *et al.* (2021). Exposure to environmental contaminants is associated with altered hepatic lipid metabolism in non-alcoholic fatty liver disease. **J Hepatol.**, 76(2), 283-293.
15. Petersen, A.O., Julienne, H., Hyotylainen, T., **Sen, P.**, Fan, Y., Pedersen, H.K., Jantti, S., Hansen, T.H., Nielsen, T., Jorgensen, T., *et al.* (2021). Conjugated C-6 hydroxylated bile acids in serum relate to human metabolic health and gut Clostridia species. **Sci Rep.**, 11(1), 13252.
16. Dickens, A.M.<sup>\*</sup>, **Sen, P.<sup>\*</sup>**, Kempton, M.J., Barrantes-Vidal, N., Iyegbe, C., Nordentoft, M., Pollak, T., Riecher-Rossler, A., Ruhrmann, S., Sachs, G., *et al.* (2021). Dysregulated Lipid Metabolism Precedes Onset of Psychosis. **Biol Psychiatry.**, 89(3), 288-297.
17. Lamichhane, S., Dickens, A.M., **Sen, P.**, Laurikainen, H., Borgan, F., Suvisaari, J., Hyötyläinen, T., Howes, O., Hietala, J., and Orešič, M. (2021). Association Between Circulating Lipids and Future Weight Gain in Individuals With an At-Risk Mental State and in First-Episode Psychosis. **Schizophr Bull.**, 47(1):160-169.
18. Sinisalu, L., **Sen, P.**, Salihović, S., Virtanen, S.M., Hyöty, H., Ilonen, J., Toppari, J., Veijola, R., Orešič, M., Knip, M., *et al.* (2020). Early-life exposure to perfluorinated alkyl substances modulates lipid metabolism in progression to celiac disease. **Environ Res.**, 188, 109864.
19. **Sen, P.**, Dickens, A.M., López-Bascón, M.A., Lindeman, T., Kemppainen, E., Lamichhane, S., Rönkkö, T., Ilonen, J., Toppari, J., Veijola, R., Hyöty, H., Hyötyläinen, T., Knip, M., Orešič, M. (2020). Metabolic alterations in immune cells associate with progression to type 1 diabetes. **Diabetologia** 63 (5), 1017-1031.

20. McGlinchey, A., Sinioja, T., Lamichhane, S., **Sen, P.**, Bodin, J., Siljander, H., Dickens, A.M., Geng, D., Carlsson, C., Duberg, D., et al. (2020). Prenatal exposure to perfluoroalkyl substances modulates neonatal serum phospholipids, increasing risk of type 1 diabetes. **Environ Int.**, 143, 105935.
21. Khoomrung, S., Nookaew, I., **Sen, P.**, Olafsdottir, T.A., Persson, J., Moritz, T., Andersen, P., Harandi, A.M., and Nielsen, J. (2020). Metabolic Profiling and Compound-Class Identification Reveal Alterations in Serum Triglyceride Levels in Mice Immunized with Human Vaccine Adjuvant Alum. **J Proteome Res.**, 19(1), 269-278.
22. **Sen, P.**, Carlsson, C., Virtanen, S.M., Simell, S., Hyöty, H., Ilonen, J., Toppari, J., Veijola, R., Hyötyläinen, T., Knip, M., et al. (2019). Persistent Alterations in Plasma Lipid Profiles Before Introduction of Gluten in the Diet Associated With Progression to Celiac Disease. **Clin Transl Gastroenterol.**, 10(5), 1-10.
23. Vincent, A., Savolainen, O.I., **Sen, P.**, Carlsson, N.G., Almgren, A., Lindqvist, H., Lind, M.V., Undeland, I., Sandberg, A.S., and Ross, A.B. (2017). Herring and chicken/pork meals lead to differences in plasma levels of TCA intermediates and arginine metabolites in overweight and obese men and women. **Mol Nutr Food Res.**, 61(3).
24. Thankaswamy-Kosalai, S.<sup>\*</sup>, **Sen, P.**<sup>\*</sup>, and Nookaew, I. (2017). Evaluation and assessment of read-mapping by multiple next-generation sequencing aligners based on genome-wide characteristics. **Genomics** 109, 186-191.
25. **Sen, P.**, Mardinogulu, A., and Nielsen, J. (2017). Selection of complementary foods based on optimal nutritional values. **Sci Rep.**, 7(1), 5413.
26. Olafsdottir, T.A., Lindqvist, M., Nookaew, I., Andersen, P., Maertzdorf, J., Persson, J., Christensen, D., Zhang, Y., Anderson, J., Khoomrung, S., **Sen, P.**, et al. (2016). Comparative Systems Analyses Reveal Molecular Signatures of Clinically tested Vaccine Adjuvants. **Sci Rep.**, 6, 39097.
27. Shoaie, S., Ghaffari, P., Kovatcheva-Datchary, P., Mardinoglu, A., **Sen, P.**, Pujos-Guillot, E., de Wouters, T., Juste, C., Rizkalla, S., Chilloux, J., et al. (2015). Quantifying Diet-Induced Metabolic Changes of the Human Gut Microbiome. **Cell Metab.**, 22(2), 320-331.
28. **Sen, P.**, Vial, H.J., and Radulescu, O. (2013). Kinetic modelling of phospholipid synthesis in *Plasmodium knowlesi* unravels crucial steps and relative importance of multiple pathways. **BMC Syst Biol.**, 7, 123.

## Review articles in international peer-reviewed scientific journals

29. **Sen, P.**, Orešič, M (2023). Integrating Omics Data in Genome-Scale Metabolic Modeling: A Methodological Perspective for Precision Medicine. **Metabolites**, 13(7), 855.
30. Krefting, J., **Sen, P.**, David-Rus, D., Güldener, U., Hawe, J.S., Scheidt M.V., 2, Cassese, S., and Schunkert, H (2023). Use of big data from health insurance for assessment of cardiovascular outcomes. **Front. Artif. Intell.**, 3(6), 1155404.

31. Mathema, V., **Sen, P.**, Lamichhane, S., Khoomrung, S., Orešič, M. (2023). Deep learning facilitates multi-data type analysis and predictive biomarker discovery in cancer precision medicine. **Comput Struct Biotechnol J.**, 21, 1372-1382.
32. **Sen, P.**, Lamichhane, S., Mathema, V.B., McGlinchey, A., Dickens, A.M., Khoomrung, S., and Oresic, M. (2021). Deep learning meets metabolomics: a methodological perspective. **Brief Bioinform.**, 22(2), 1531-1542.
33. Lamichhane, S., **Sen, P.**, Alves, M.A., Ribeiro, H.C., Raunio, P., Hyötyläinen, T., and Oresic, M. (2021). Linking Gut Microbiome and Lipid Metabolism: Moving beyond Associations. **Metabolites** 11(1), 55.
34. Alves, M.A., Lamichhane, S., Dickens, A., McGlinchey, A., Ribeiro, H.C., **Sen, P.**, Wei, F., Hyötyläinen, T., and Oresic, M. (2021). Systems biology approaches to study lipidomes in health and disease. **Biochim Biophys Acta., Mol Cell Biol Lipids** 1866(2), 158857.
35. **Sen, P.**, and Orešič, M. (2019). Metabolic Modelling of Human Gut Microbiota on a Genome Scale: An Overview. **Metabolites** 9(2), 22.
36. Lamichhane, S., **Sen, P.**, Dickens, A.M., Oresic, M., and Bertram, H.C. (2018). Gut metabolome meets microbiome: A methodological perspective to understand the relationship between host and microbe. **Methods** 149, 3-12.
37. **Sen, P.**, Kemppainen, E., and Orešič, M. (2017). Perspectives on Systems Modelling of Human Peripheral Blood Mononuclear Cells. **Front Mol Biosci.**, 4, 96.

### Manuscripts available as preprints and under peer-review in scientific journals

38. Aatsinki, A.-K., Lamichhane, S. Isokääntä, H., **Sen, P.**, Kråkström, M., Alves, M. A., Keskitalo, A., Munukka, E., Karlsson, H., Perasto, L., Lukkarinen, M., Oresic, M., Kailanto, H.-M.; Karlsson, L., Lahti, L., Dickens, A. M. (2024). Dynamics of Gut Metabolome and Microbiome Maturation during Early Life. medRxiv, 2023.05.29.23290441. *Under review in **Microbiome***

### Books and chapters

39. **Sen, P.**, Lamichhane, S., Dickens, A., and Oresic, M. (2019). The Role of Omic Technologies in the Study of the Human Gut Microbiome. **Reference Module in Food Science.**
40. Lamichhane, S., **Sen, P.**, Dickens, A.M., Hyötyläinen, T., and Orešič, M. (2018). An Overview of Metabolomics Data Analysis: Current Tools and Future Perspectives. **Comprehensive analytical chemistry** 82, 387-413.
41. **Sen, P.**, Vial, H.J., and Radulescu, O. (2016). Mathematical modelling and omic data integration to understand dynamic adaptation of Apicomplexan parasites and identify pharmaceutical targets. **Comprehensive Analysis of Parasite Biology: From Metabolism to Drug Discovery** 7, 457.

### Editorials in peer-reviewed scientific journals

42. **Sen, P.**, Hyotylainen, T., and Oresic, M. (2021). 1-deoxyceramides - key players in lipotoxicity and progression to type 2 diabetes? **Acta Physiol.**, 232(1), e13635.

## PhD Thesis

43. **Sen, P.** (2013). Integrated modelling of lipid metabolism in Plasmodium, the causative parasite of malaria (Université Montpellier II-Sciences et Techniques du Languedoc) [[weblink](#)].

*\*Signifies equal contributions*