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. Lamichhane, S., Dickens, AM., Buchacher, T., Lou, T., Charron-Lamoureux, V., Kattelus, R., Karmacharya, P., Silva, LPD., Kråkström, M., Rasool, O., Sen, P., Walker, C., Patan, A., Gentry, EC., Zuffa, S., Arzoomand A., Lakshmikanth, T., Mikeš, J., Mebrahtu A., Vatanen, T., Raffatellu M., Zengler, K., Hyötyläinen, T., Xavier, RJ., Brodin, P., Lahesmaa, R., Dorrestein, PC., Knip, M., Orešič, M. (**2025**) Microbiome-derived bile acid signatures in early life and their association with islet autoimmunity. **Nat. Commun**., [Link]

2. 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.,** [Link]

3. 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**., [Link]

4. 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.

5. 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.

6. **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.

7. **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.

8. 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.

9. 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.

10. Lamichhane, S.*, **Sen, P.***, Dickens, AM., Alves, MA., Härkönen, T., Honkanen, J., Vatanen, T., Xavier, RJ., 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.

11. **Sen, P**., Govaere, O., Sinioja, T., McGlinchey, A., Geng D., Ratziu, V., Bugianesi, E., Schattenberg, JM., 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.

12. 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.

13. 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.

14. **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 $CD4^+$ T cell differentiation reveals subset-specific regulation of glycosphingolipid pathways. **Cell Rep**., 37(6), 109973.

15. **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.

16. 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.

17. Dickens, A.M.*, **Sen, P**.*, 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.

18. 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.

19. 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.

20. **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.

21. 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.

22. 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.

23. **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.

24. 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).

25. Thankaswamy-Kosalai, S.*, **Sen, P**.*, 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.

26. **Sen, P**., Mardinogulu, A., and Nielsen, J. (**2017**). Selection of complementary foods based on optimal nutritional values. **Sci Rep**., 7(1), 5413.

27. 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.

28. 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.

29. **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

30. **Sen, P.**, Orešič, M (**2023**). Integrating Omics Data in Genome-Scale Metabolic Modeling: A Methodological Perspective for Precision Medicine. **Metabolites**, 13(7), 855.

31. 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.

32. 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.

33. **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.

34. Lamichhane, S., **Sen, P**., Alves, M.A., Ribeiro, H.C., Raunioniemi, P., Hyotylainen, T., and Oresic, M. (**2021**). Linking Gut Microbiome and Lipid Metabolism: Moving beyond Associations. **Metabolites** 11(1), 55.

35. Alves, M.A., Lamichhane, S., Dickens, A., McGlinchey, A., Ribeiro, H.C., **Sen, P**., Wei, F., Hyotylainen, 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.

36. **Sen, P**., and Orešič, M. (**2019**). Metabolic Modelling of Human Gut Microbiota on a Genome Scale: An Overview. **Metabolites** 9(2), 22.

37. 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.

38. **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

39. 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

40. **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**.

41. 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.

42. **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

43. **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

44. **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*