LIST OF PEER REVIEWED PUBLICATIONS (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. **Sen, P**.*, Emese, P.*, Honkanen, J.K., Chen, O., Yolken, R., Suvisaari, Jaana. (**2023**). Dysregulation of microbiota in first episode psychosis patients were associated with symptom severity and treatment response. **Biol. Psychiatry.**, (doi.org/10.1016/j.biopsych.2023.10.024).

2. 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.**, pg 1-11.

3. Lamichhane, S., **Sen, P**., Dickens, AM., Kråkström, Jorma, M., Johanna Lempainen, J., Hyoty, H., Lahesmaa, R., Veijola, K., Toppari, J., Hyötyläinen, T., Knip, M., Orešič, M. (**2023**). Circulating metabolic signatures of rapid and slow progression to type 1 diabetes in islet autoantibody-positive children. **Front. Endocrinol.**, 14, 1211015.

4. 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.**, 100762.

5. **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. **iScienc**e, 104949.

6. Ribeiro, H.C., **Sen, P**., 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.

7. 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**, 100409.

8. **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, 109973.

9. **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.

10. 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, 13252.

11. 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, 288-297.

12. 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.**, 46, 1, 160-169.

13. 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.

14. **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, 1017-1031.

15. 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.

16. 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, 269-278.

17. **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, 1-10.

18. 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.

19. 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.

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

21. 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.

22. 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, 320-331.

23. **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.

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

25. 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.**, 2023, 6.

26. 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.** (CSBJ), 21, 1372-1382.

27. **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, 1531-1542.

28. 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.

29. 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, 158857.

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

31. 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.

32. **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

33. Sabatini, S., **Sen, P.**, Carli, F., Samantha Pezzica, S., Rosso, C., Lembo, E., Verrastro, O., Daly, A., Govaere, O., Cockel, S., Hyötyläinen, T., Mingrone, G., Bugianesi, E., Orešič, M., Gastaldelli, A. (**2023**). Higher Hepatic Glucose Production and Gluconeogenesis are Features of Severe Metabolic Dysfunction-Associated Steatohepatitis Even in Absence of T2D. **Sneak Peek**.

34. 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. (**2023**). Dynamics of Gut Metabolome and Microbiome Maturation during Early Life. **medRxiv**, 2023.05.29.23290441.

35. Lamichhane, S.*, **Sen, P**.*, Dickens, A.M., Amaral Alves, M., Karkonen, T., Honkanen, J., Vatanen, T., Xavier, R.J., Hyotylainen, T., Knip, M., *et al.* (**2021**). Dynamics of gut microbiome - mediated bile acid metabolism in progression to islet autoimmunity. **medRxiv**, 2021.2008.2020.21262371.

36. **Sen, P**., Govaere, O., Sinioja, T., McGlinchey, A., Geng, D., Ratziu, V., Bugianesi, E., Schattenberg, J.M., Vidal-Puig, A., Allison, M., *et al.* (**2021**). Quantitative genome-scale analysis of human liver reveals dysregulation of glycosphingolipid pathways in progressive nonalcoholic fatty liver disease. **medRxiv**, 2021.2002.2009.21251354.

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37. **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**.

38. 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.

39. **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.

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

PhD Thesis

41. **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