

Stanford



Jakob Wirbel

Postdoctoral Scholar, Hematology

Bio

PROFESSIONAL EDUCATION

- Master of Science, University of Heidelberg (2017)
- Doctor of Philosophy, Eberhard Karls Universität Tübingen (2022)
- Bachelor of Science, University of Heidelberg (2014)
- Dr. rer. nat., European Molecular Biology Laboratory (EMBL) & Eberhard-Karls-Universität Tübingen, Bioinformatics (2022)
- Master of Science, Ruprecht-Karls-Universität Heidelberg, Molecular Biotechnology (2017)
- Bachelor of Science, Ruprecht-Karls-Universität Heidelberg, Molecular Biotechnology (2014)

STANFORD ADVISORS

- Ami Bhatt, Postdoctoral Faculty Sponsor
- Ami Bhatt, Postdoctoral Research Mentor

Publications

PUBLICATIONS

- **Microbiome meta-analysis and cross-disease comparison enabled by the SIAMCAT machine learning toolbox.** *Genome biology*
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- **Meta-analysis of fecal metagenomes reveals global microbial signatures that are specific for colorectal cancer.** *Nature medicine*
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- **Expanding the human gut microbiome atlas of Africa.** *bioRxiv: the preprint server for biology*
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- **The journey to understand previously unknown microbial genes.** *Nature*
Wirbel, J., Bhatt, A. S., Probst, A. J.
2024
- **Intragenic DNA inversions expand bacterial coding capacity.** *bioRxiv: the preprint server for biology*
Chanin, R. B., West, P. T., Park, R. M., Wirbel, J., Green, G. Z., Miklos, A. M., Gill, M. O., Hickey, A. S., Brooks, E. F., Bhatt, A. S.
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- **A faecal microbiota signature with high specificity for pancreatic cancer.** *Gut*
Kartal, E., Schmidt, T. S., Molina-Montes, E., Rodríguez-Perales, S., Wirbel, J., Maistrenko, O. M., Akanni, W. A., Alashkar Alhamwe, B., Alves, R. J., Carrato, A., Erasmus, H. P., Estudillo, L., Finkelmeier, et al
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- **Microbiota-dependent activation of the myeloid calcineurin-NFAT pathway inhibits B7H3- and B7H4-dependent anti-tumor immunity in colorectal cancer.** *Immunity*
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- **Calorie restriction improves metabolic state independently of gut microbiome composition: a randomized dietary intervention trial.** *Genome medicine*
Sowah, S. A., Milanese, A., Schübel, R., Wirbel, J., Kartal, E., Johnson, T. S., Hirche, F., Grafetstätter, M., Nonnenmacher, T., Kirsten, R., López-Nogueroles, M., Lahoz, A., Schwarz, et al
2022; 14 (1): 30
- **Identifying temporal and spatial patterns of variation from multimodal data using MEFISTO.** *Nature methods*
Velten, B., Braunger, J. M., Argelaguet, R., Arnol, D., Wirbel, J., Bredikhin, D., Zeller, G., Stegle, O.
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- **Unravelling the collateral damage of antibiotics on gut bacteria.** *Nature*
Maier, L., Goemans, C. V., Wirbel, J., Kuhn, M., Eberl, C., Pruteanu, M., Müller, P., Garcia-Santamarina, S., Cacace, E., Zhang, B., Gekeler, C., Banerjee, T., Anderson, et al
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- **Commensal Clostridiales strains mediate effective anti-cancer immune response against solid tumors.** *Cell host & microbe*
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- **Prediction of combination therapies based on topological modeling of the immune signaling network in multiple sclerosis.** *Genome medicine*
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- **Metabolic models predict bacterial passengers in colorectal cancer.** *Cancer & metabolism*
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- **Metagenomic analysis of colorectal cancer datasets identifies cross-cohort microbial diagnostic signatures and a link with choline degradation.** *Nature medicine*
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- **Extensive transmission of microbes along the gastrointestinal tract.** *eLife*
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- **Phosphoproteomics-Based Profiling of Kinase Activities in Cancer Cells.** *Methods in molecular biology (Clifton, N.J.)*
Wirbel, J., Cutillas, P., Saez-Rodriguez, J.
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- **Red Blood Cells Preconditioned with Hemin Are Less Permissive to Plasmodium Invasion In Vivo and In Vitro.** *PloS one*
Gaudreault, V., Wirbel, J., Jardim, A., Rohrbach, P., Scorza, T.
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