Stanford

Stefan Oliver Bassler

Postdoctoral Scholar, Biology

Bio

BIO

Stefan is a Bridging Excellence Postdoctoral Fellow in the Petrov lab at Stanford University and in the Aulehla & Steinmetz labs at EMBL (2025-now). He is fascinated by how evolution can be used to probe the genomic plasticity of biological systems. During his PhD with Nassos Typas at EMBL supported by the Joachim Herz Add-on Fellowship, he mapped the Genomic landscape of resistance evolution by performing high-throughput resistance evolution of the genome-wide KO library in E. coli. He discovered that evolvability genes constrain resistance evolution through gene-gene and gene-gene-drug interactions. In his postdoctoral work, he will Assess the inter-kingdom conservation of lifespan variants evolved in yeast.

STANFORD ADVISORS

- Dmitri Petrov, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn: https://www.linkedin.com/in/stefan-oliver-bassler/
- X: https://twitter.com/StefanBassler
- Bluesky: https://bsky.app/profile/stefanbassler.bsky.social

Publications

PUBLICATIONS

- **Randomly barcoded transposon mutant libraries for gut commensals II: Applying libraries for functional genetics.** *Cell reports*
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  Tripathi, S., Voogdt, C. G., Bassler, S. O., Anderson, M., Huang, P. H., Sakenova, N., Capraz, T., Jain, S., Koumoutsi, A., Bravo, A. M., Trotter, V., Zimmerman, M., Sonnenburg, et al
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- **Bioactivity assessment of natural compounds using machine learning models trained on target similarity between drugs.** *PLoS computational biology*
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- **Species-specific activity of antibacterial drug combinations** *NATURE*
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