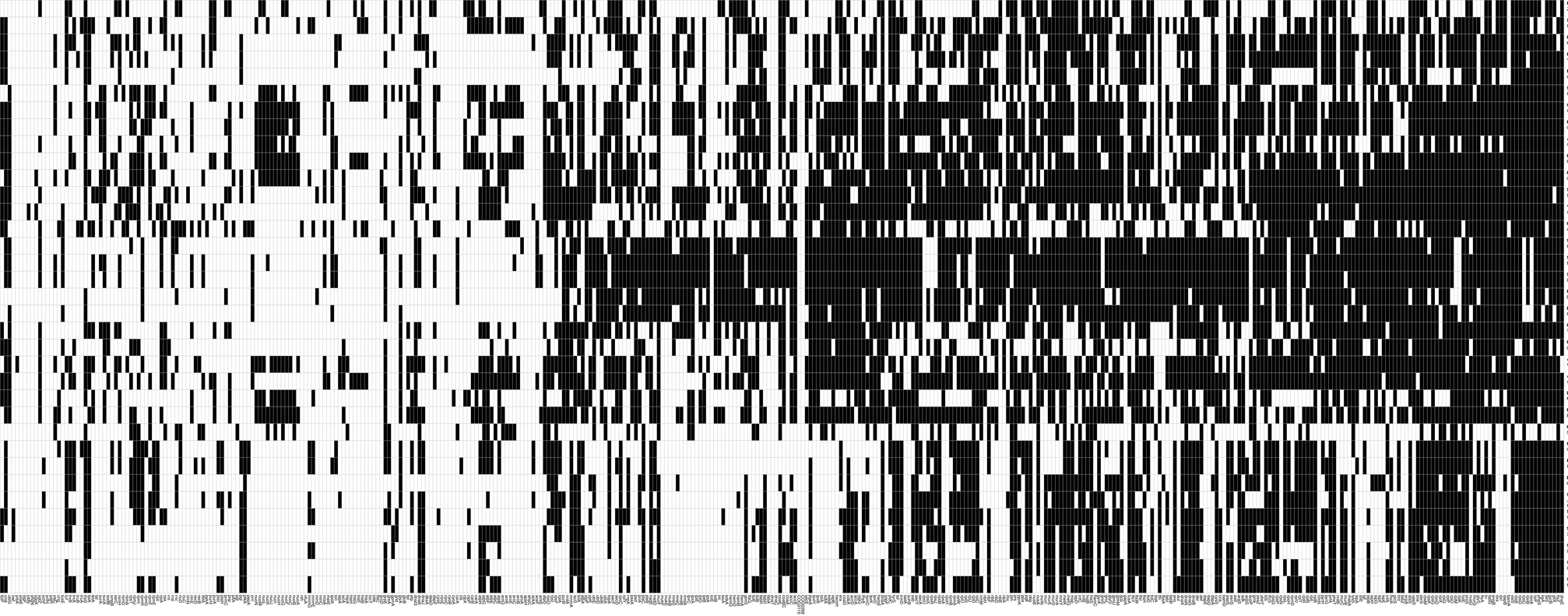

Mycobacterium tuberculosis H37Rv
Zhang, Yanjia J., et al. "Global assessment of genomic regions required for growth in Mycobacterium tuberculosis." PLoS pathogens 8.9 (2012): e1002946.

Synechococcus elongatus PCC 7942
Rubin, Benjamin E., et al. "The essential gene set of a photosynthetic organism." Proceedings of the National Academy of Sciences (2015): 201519220.

Porphyromonas gingivalis ATCC 33277
Klein BA, et al (2012). Identification of essential genes of the periodontal pathogen Porphyromonas. BMC Genomics, 13: 578.

Bacteroides fragilis 638R
Yalgara Veeranagouda, et al (2014). "Identification of genes required for the survival of B. fragilis using massive parallel sequencing of a saturated transposon mutant library". BMC Genomics, 15:429.

Bacteroides thetaiotaomicron VPI-5482
Goodman AL et al (2009). Identifying Genetic Determinants Needed to Establish a Human Gut Symbiont in Its Habitat. Cell Host & Microbe, 6: 279-289.

Sphingomonas wittichii RW1
Roggo, Clemence, et al. "Genome-wide transposon insertion scanning of environmental survival functions in the polycyclic aromatic hydrocarbon degrading bacterium Sphingomonas wittichii RW1." Environmental microbiology (2013).

Caulobacter crescentus
Christen B, et al (2011). The essential genome of a bacterium. Mol Syst Biol, 7:528.

Brevundimonas subvibrioides ATCC 15264
Curtis, P.D. and Brun, Y.V. (2014) Identification of essential alphaproteobacterial genes reveals operational variability in conserved developmental and cell cycle systems, Mol. Microbiol., 93, 713-735.

Agrobacterium fabrum str. C58
Curtis, P.D. and Brun, Y.V. (2014) Identification of essential alphaproteobacterial genes reveals operational variability in conserved developmental and cell cycle systems, Mol. Microbiol., 93, 713-735.

Rhodopseudomonas palustris CGA009
Pechter, Kieran B., et al. "The essential genome of the metabolically versatile alphaproteobacterium Rhodopseudomonas palustris." Journal of bacteriology (2015): JB-00771.

Francisella novicida U112
Gallagher LA, et al (2007). A comprehensive transposon mutant library of Francisella novicida, a bioweapon surrogate. Proc Natl Acad Sci U S A, 104:1009-14.

Shewanella oneidensis MR- 1
Deutschbauer, Adam, et al. "Evidence-based annotation of gene function in Shewanella oneidensis MR-1 using genome-wide fitness profiling across 121 conditions." PLoS genetics 7.11 (2011): e1002385.

Vibrio cholerae N16961
Cameron DE, Urbach MJ,Mekalanos JJ(2008). A defined transposon mutant library and its use in identifying motility genes in Vibrio cholerae. PNAS, 105(25):8736-8741.

Haemophilus influenzae Rd KW20
Akerley BJ, et al (2002). A genome-scale analysis for identification of genes required for growth or survival of Haemophilus influenzae. Proc Natl Acad Sci U S A, 99:966-71.

Salmonella enterica serovar Typhimurium SL1344
Barquist, Lars, et al. "A comparison of dense transposon insertion libraries in the Salmonella serovars Typhi and Typhimurium." Nucleic acids research 41.8 (2013): 4549-4564.

Salmonella enterica serovar Typhi Ty2
Barquist, Lars, et al. "A comparison of dense transposon insertion libraries in the Salmonella serovars Typhi and Typhimurium." Nucleic acids research 41.8 (2013): 4549-4564.

Salmonella enterica serovar Typhi
Langridge GC, et al (2009). Simultaneous assay of every Salmonella Typhi gene using one million transposon mutants. Genome Res, 19:2308-16.

Escherichia coli MG1655
Baba T, et al (2006). Construction of Escherichia coli K-12 in-frame, single-gene knockout mutants: the Keio collection. Mol Syst Biol.

Escherichia coli ST131 strain EC958
Phan, M.D., et al. (2013) The serum resistome of a globally disseminated multidrug resistant uropathogenic Escherichia coli clone, PLoS Genet., 9, e1003834.

Pseudomonas aeruginosa PAO1
Turner, K.H., Wessel, A.K., Palmer, G.C., Murray, J.L. and Whiteley, M. (2015) Essential genome of Pseudomonas aeruginosa in cystic fibrosis sputum. Proc. Natl. Acad. Sci. U. S. A.

Pseudomonas aeruginosa UCBPP-PA14
Liberati NT, et al (2006). An ordered, nonredundant library of Pseudomonas aeruginosa strain PA14 transposon insertion mutants. Proc Natl Acad Sci U S A, 103:2833-8.

Acinetobacter baumannii ATCC 17978
Wang, N., et al. (2014) Genome-wide identification of Acinetobacter baumannii genes necessary for persistence in the lung, MBio, 5, e01163-01114.

Acinetobacter baylyi ADP1
de Berardinis V, et al (2008). A complete collection of single-gene deletion mutants of Acinetobacter baylyi ADP1. Mol Syst Biol.

Burkholderia pseudomallei K96243
Moule, M.G., et al. (2014) Genome-Wide Saturation Mutagenesis of Burkholderia pseudomallei K96243 Predicts Essential Genes and Novel Targets for Antimicrobial Development. MBio 5, e00926-00913

Burkholderia thailandensis E264
Baugh, Loren, et al. "Combining Functional and Structural Genomics to Sample the Essential Burkholderia Structome." PloS one 8.1 (2013): e53851.

Helicobacter pylori 26695
Salama NR, et al (2004). Global transposon mutagenesis and essential gene analysis of Helicobacter pylori. J Bacteriol, 186:7926-35.

Mycoplasma genitalium G37
Glass JI, et al (2006). Essential genes of a minimal bacterium. Proc Natl Acad Sci U S A, 103:425-30.

Mycoplasma pulmonis UAB CTIP
French CT, et al (2008). Large-scale transposon mutagenesis of Mycoplasma pulmonis. Mol Microbiol.

Bacillus subtilis 168
Kobayashi K, et al (2003). Essential Bacillus subtilis genes. Proc Natl Acad Sci U S A, 100:4678-83.

Staphylococcus aureus N315
Ji Y, et al (2001). Identification of critical staphylococcal genes using conditional phenotypes generated by antisense RNA. Science, 293:2266-9.
Forsyth RA, et al (2002). A genome-wide strategy for the identification of essential genes in Staphylococcus aureus. Mol Microbiol, 43:1387-400.

Staphylococcus aureus RCTC 8325
Chaudhuri RR, et al (2009). Comprehensive identification of essential Staphylococcus aureus genes using Transposon-Mediated Differential Hybridisation (TMDH). BMC Genomics, 10:291.

Streptococcus sanguinis
Xu, P et al(2011). Genome-wide essential gene identification in Streptococcus sanguinis. Sci. Rep. 1, 125; DOI:10.1038/srep00125.

Streptococcus pyogenes NZ131
Le Breton Y, et al (2015). Essential Genes in the Core Genome of the Human Pathogen Streptococcus pyogenes. Sci. Rep. 5, 9838.

Streptococcus pyogenes MGAS5448
Le Breton Y, et al (2015). Essential Genes in the Core Genome of the Human Pathogen Streptococcus pyogenes. Sci. Rep. 5, 9838.

Streptococcus agalactiae A909
Hooven, T.A, et al. The Essential Genome of Streptococcus Agalactiae.BMC Genomics, 17, 406, 2016.

■ Essentiality
■ Essential
■ Essential