

Funded by Wellcome

Designing a new 96-well microtiter plate for MIC to 13 drugs

Validating the plate
AAC 2018

Automated reading of the plate
Microbiology 2018

Citizen science – crowd sourcing plate reading
eLife 2022

Setting ECOFFs for the plate
ERJ 2022

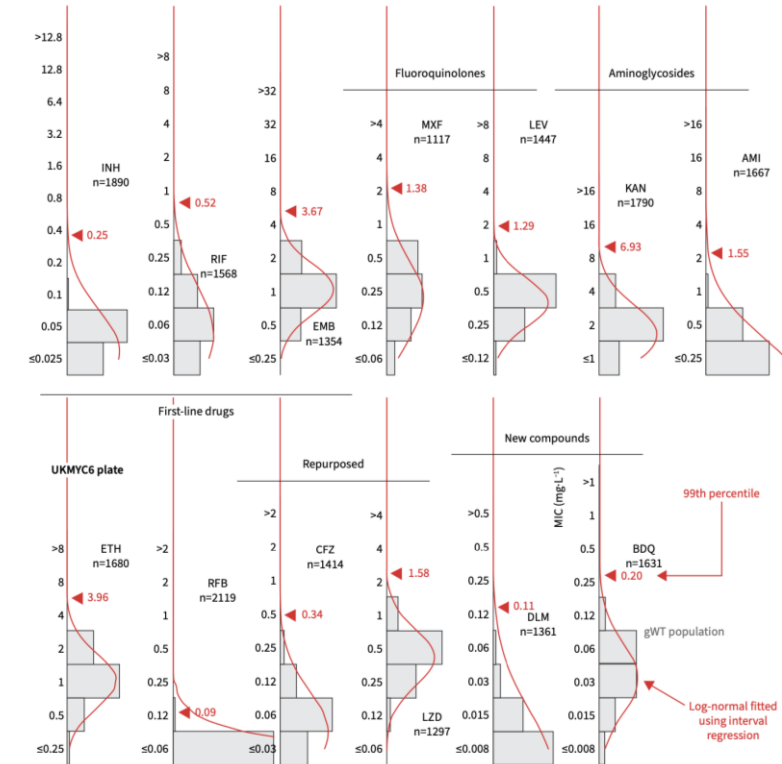
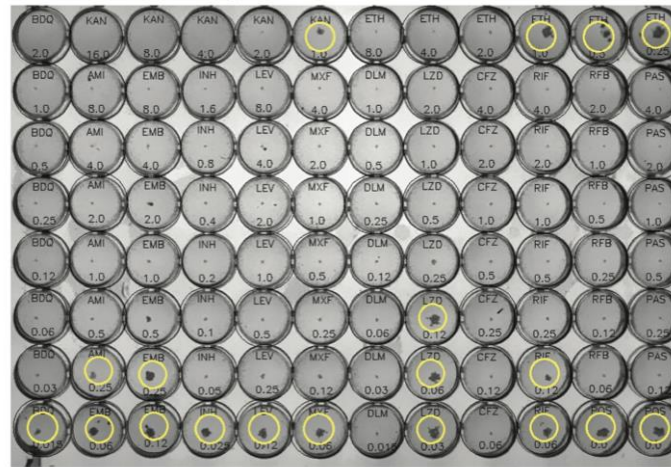


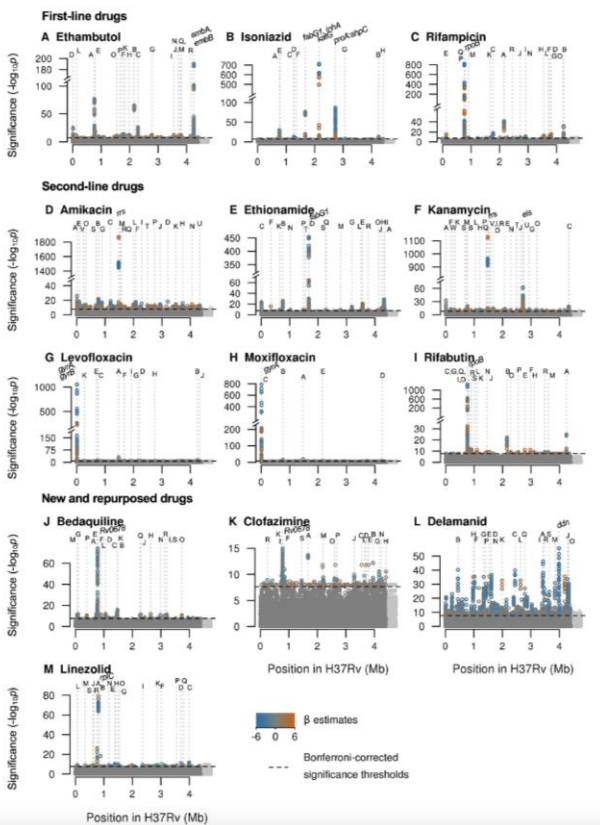
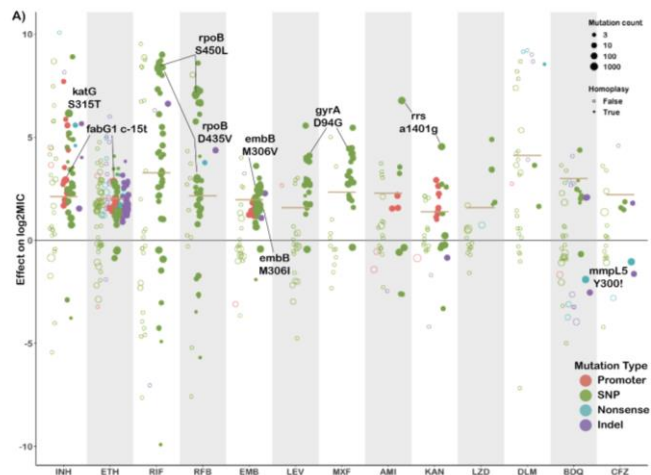
FIGURE 4 Interval regression is able to fit a log-normal distribution to the minimum inhibitory concentration (MIC) histograms of the genotypically wild-type (gWT) isolates for all 13 drugs on the UKMYC6 plate. Data from both plate designs were considered simultaneously, hence the resulting distributions are those the algorithm considers to best describe both the UKMYC5 (supplementary figure S10) and UKMYC6 datasets. See figure 1 for drug abbreviations. See the TSV file in the supplementary material for the numerical data. The data can be reproduced online [21].

Designing a new bioinformatics pipeline

Zamin Iqbal and team at EBI
Genome Biology 2022

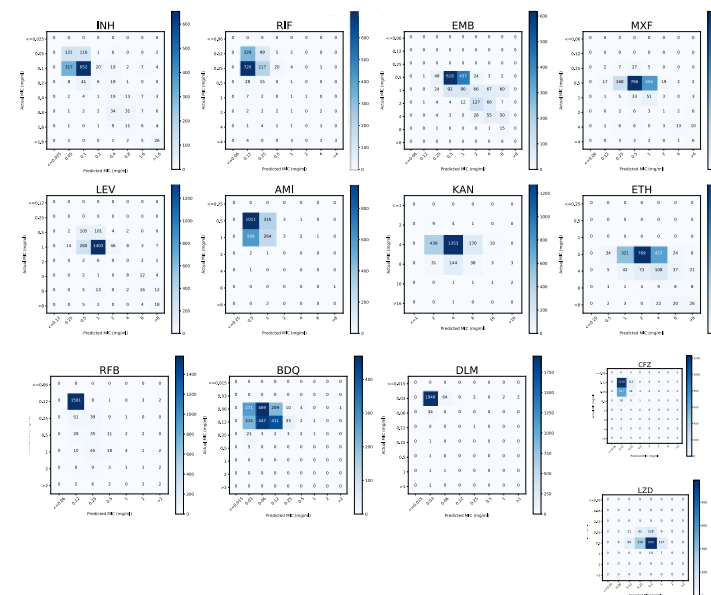
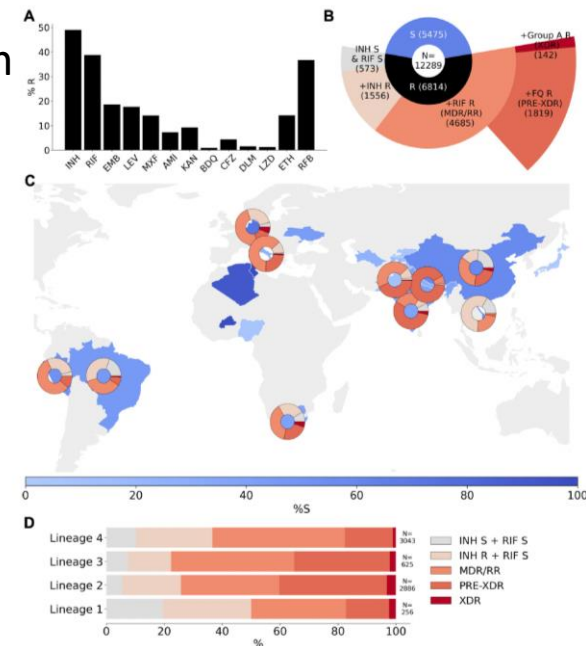
The science

Predicting MIC using interval regression on mutations in candidate genes
Nature Communications 2024



GWAS
PLOS Biology 2022

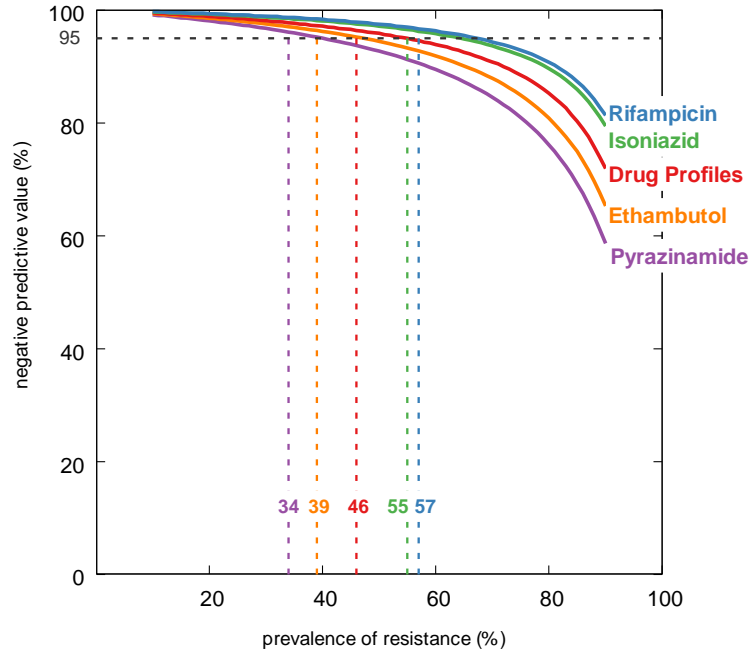
A data compendium
PLOS Biology 2022



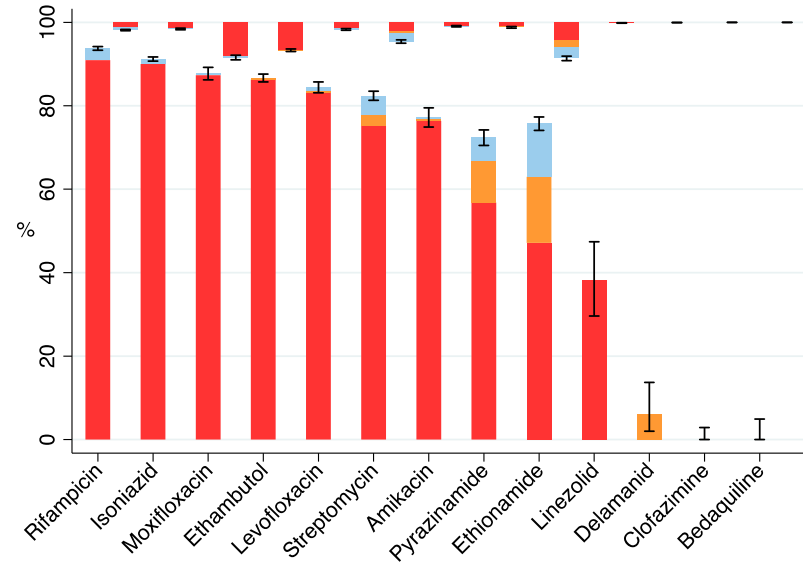
Supervised machine learning predicting MIC
Post-review, PLOS Computational Biology 2024



Translational impact



WGS for 1st line drugs and discontinuing pDST
NEJM 2018



WHO catalogue of mutations associated with DR
Lancet Microbe 2022

Still to come: A CRYPTIC catalogue linked to GPAS (www.gpas.org)