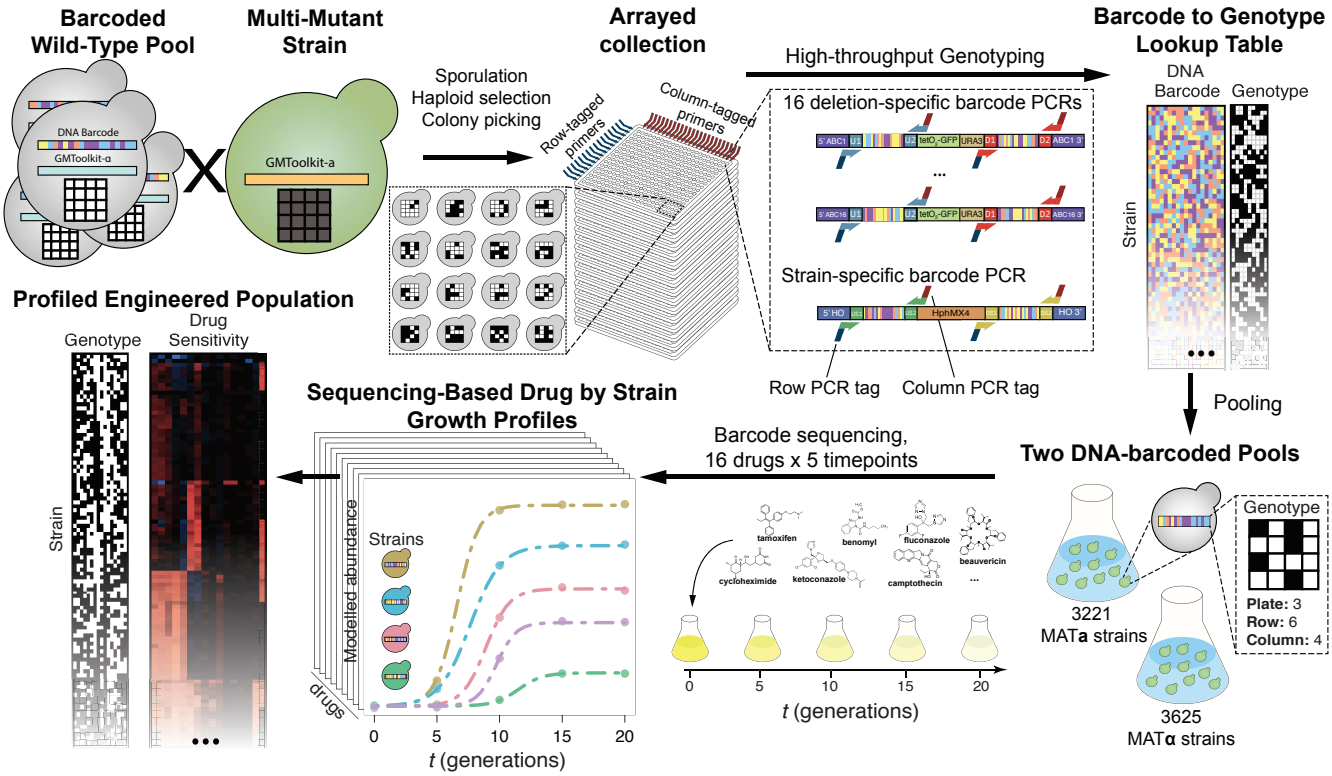
# Figure 1


Barcoded Wild-Type Pool
Multi-Mutant Strain
DNA Barcode
GMToolkit-α
GMToolkit-a
Sporulation
Haploid selection
Colony picking
Arrayed collection
Row-tagged primers
Column-tagged primers
High-throughput Genotyping
16 deletion-specific barcode PCRs
Strain-specific barcode PCR
Row PCR tag
Column PCR tag
Barcode to Genotype Lookup Table
DNA Barcode
Genotype
Strain
Pooling
Two DNA-barcoded Pools
Genotype
Plate: 3
Row: 6
Column: 4
3221 MATa strains
3625 MATα strains
Barcode sequencing, 16 drugs x 5 timepoints
tamoxifen
benomyl
fluconazole
beauvericin
cycloheximide
ketoconazole
camptothecin
t (generations)
Sequencing-Based Drug by Strain Growth Profiles
Modelled abundance
Strains
drugs
Profiled Engineered Population
Genotype
Drug Sensitivity
Strain