

Supplementary

α -Amidoamids as New Replacements of Antibiotics—Research on the Chosen K12, R2–R4 *E. coli* Strains

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Below, the compounds **5a–5u** are numbered as 1–20, which corresponds to:

1 = **5b**, 2 = **5k**, 3 = **5a**, 4 = **5p**, 5 = **5j**, 6 = **5o**, 7 = **5g**, 8 = **5f**, 9 = **5d**, 10 = **5e**, 11 = **5c**, 12 = **5i**, 13 = **5m**, 14 = **5l**, 15 = **5h**, 16 = **5r**, 17 = **5s**, 18 = **5t**, 19 = **5n**, 20 = **5u**.

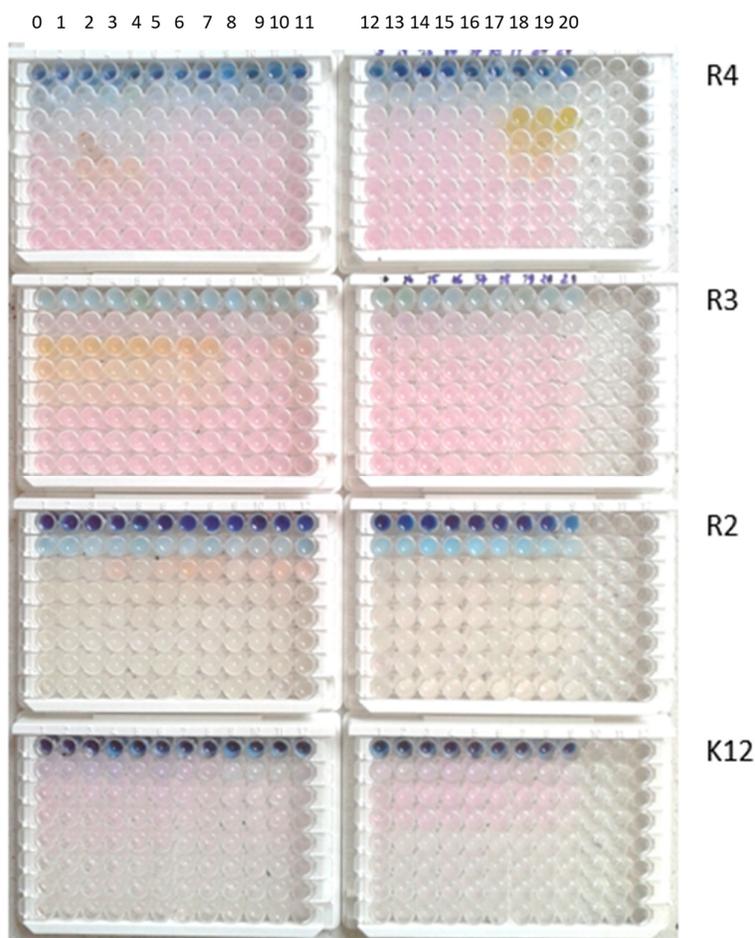


Figure S1. Examples of MIC (Minimum inhibitory concentration). R4 strains, R2 strains, R3 strains, K12 strains with the tested first 20 compounds (wells from 1–20). Wells estimated as 0- control of compounds with reference strain.

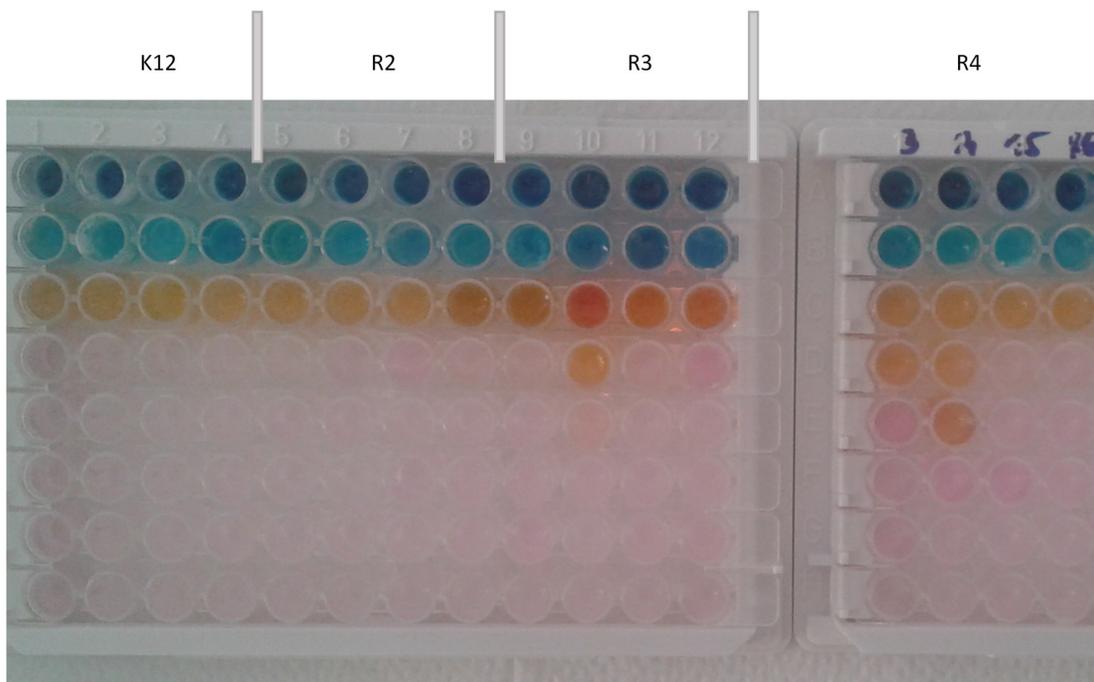


Figure S2. Examples of MIC for investigated K12, R2, R3, R4 strains of *E. coli*. on microplates with different concentration of studied antibiotic kanamycine (well 1, 5, 9, 13), bleomycine (well 2, 6, 10, 14), streptomycine (well 3, 7, 11, 15), and ciprofloxacin (well 4, 8, 12, 14) (mg L^{-1}).

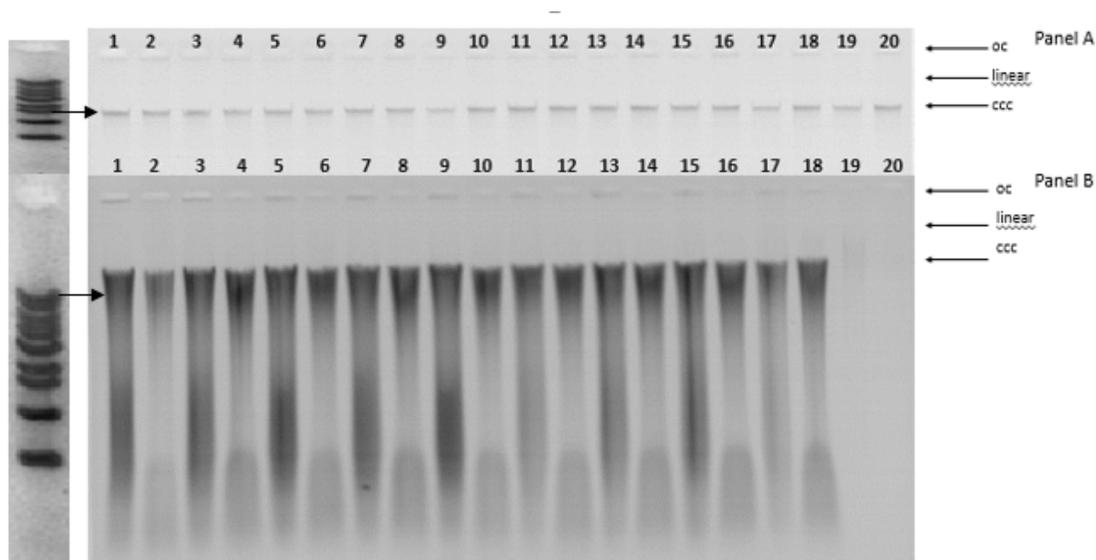


Figure. S3. An example of agarose gel electrophoresis separation of isolated from R4 strains unmodified and modified plasmid with α -amidoamids solution and digested (or not) with repair enzymes Fpg. Lanes: 1–20 (control R4 modified plasmid- (Panel A), modified plasmid (panel B): F- digested with Fpg protein. An additional well contains a Quick-Load® 1 kb Extend DNA Ladder (New England Biolabs, Ipswich, MA, United States).

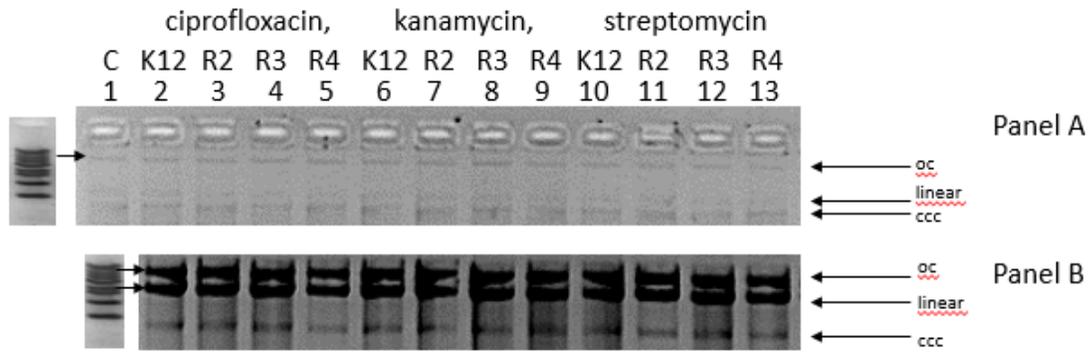


Figure S4. Example of agarose gel electrophoresis separation of plasmids (lanes 2–13) isolated from K12, R2, R3, and R4 strains and reacted with antibiotics: ciprofloxacin, kanamycin, streptomycin, and not digested by repair enzyme Fpg (Panel A) and (panel B): plasmid reacted with antibiotics digested with Fpg protein. Lanes: C –control plasmid (not reacted with antibiotics). An additional well contains a Quick-Load® 1 kb Extend DNA Ladder.

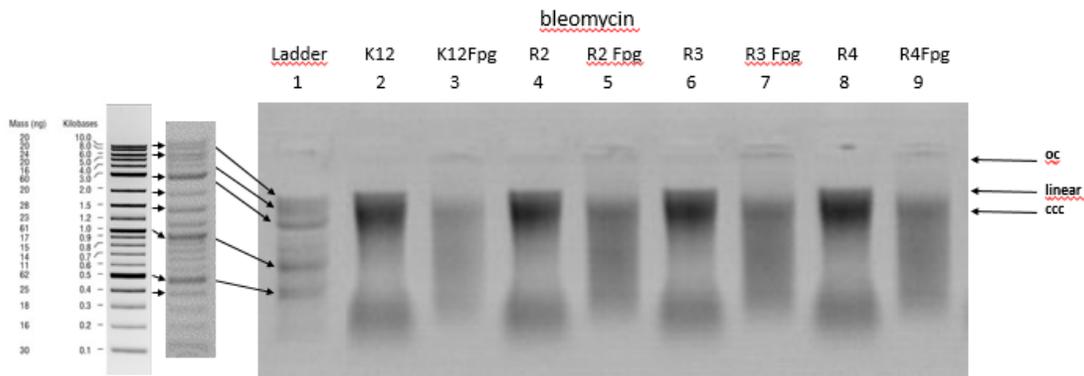


Figure S5. Example of agarose gel electrophoresis separation of plasmids (lanes 2, 4, 6, 8) isolated from K12, R2, R3, and R4 strains and reacted with antibiotic: bleomycin and digested by repair enzyme Fpg (lanes 3,5,7,9) Lanes 1kb-ladder, NEB, Cat. No. (N0559S), (the size of the five mainly bold bands on the DNA ladder from bottom to top are 400, 500, 1000, 1500 and 2000 bp, respectively).



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