

S4 Table. Summary of prediction accuracy for 93 bacterial species and antibiotic drugs combinations using 10-fold outer cross validations.

Species	Antibiotics	Prediction Accuracy
<i>Acinetobacter baumannii</i>	amikacin	96.4%
<i>Acinetobacter baumannii</i>	ampicillin-sulbactam	94.8%
<i>Acinetobacter baumannii</i>	cefotaxime	91.0%
<i>Acinetobacter baumannii</i>	ciprofloxacin	95.4%
<i>Acinetobacter baumannii</i>	doripenem	97.6%
<i>Acinetobacter baumannii</i>	levofloxacin	93.5%
<i>Acinetobacter baumannii</i>	meropenem	94.8%
<i>Acinetobacter baumannii</i>	tetracycline	96.2%
<i>Acinetobacter baumannii</i>	tobramycin	94.8%
<i>Enterobacter cloacae</i>	cefepime	85.2%
<i>Enterobacter cloacae</i>	ciprofloxacin	86.8%
<i>Enterobacter cloacae</i>	doripenem	95.8%
<i>Enterobacter cloacae</i>	ertapenem	81.0%
<i>Enterobacter cloacae</i>	gentamicin	89.5%
<i>Enterobacter cloacae</i>	imipenem	78.3%
<i>Enterobacter cloacae</i>	levofloxacin	85.2%
<i>Enterobacter cloacae</i>	meropenem	79.0%
<i>Enterobacter cloacae</i>	tetracycline	76.0%
<i>Enterobacter cloacae</i>	tobramycin	95.2%
<i>Enterobacter cloacae</i>	trimethoprim-sulfamethoxazole	94.5%
<i>Escherichia coli</i>	amikacin	95.9%
<i>Escherichia coli</i>	amoxicillin-clavulanic acid	92.8%
<i>Escherichia coli</i>	ampicillin	95.1%
<i>Escherichia coli</i>	aztreonam	87.9%
<i>Escherichia coli</i>	cefazolin	88.8%
<i>Escherichia coli</i>	cefepime	77.7%
<i>Escherichia coli</i>	cefoxitin	89.1%
<i>Escherichia coli</i>	ceftazidime	77.8%
<i>Escherichia coli</i>	ceftiofur	93.7%
<i>Escherichia coli</i>	ceftriaxone	90.4%
<i>Escherichia coli</i>	chloramphenicol	90.9%
<i>Escherichia coli</i>	ciprofloxacin	89.1%
<i>Escherichia coli</i>	doripenem	78.9%
<i>Escherichia coli</i>	ertapenem	91.5%

<i>Escherichia coli</i>	gentamicin	94.7%
<i>Escherichia coli</i>	imipenem	95.8%
<i>Escherichia coli</i>	kanamycin	100.0%
<i>Escherichia coli</i>	levofloxacin	87.6%
<i>Escherichia coli</i>	meropenem	91.3%
<i>Escherichia coli</i>	piperacillin-tazobactam	90.3%
<i>Escherichia coli</i>	tetracycline	94.2%
<i>Escherichia coli</i>	tobramycin	93.3%
<i>Escherichia coli</i>	trimethoprim-sulfamethoxazole	93.7%
<i>Klebsiella aerogenes</i>	cefepime	92.3%
<i>Klebsiella aerogenes</i>	ceftazidime	90.5%
<i>Klebsiella aerogenes</i>	tobramycin	98.3%
<i>Klebsiella aerogenes</i>	trimethoprim-sulfamethoxazole	93.3%
<i>Klebsiella pneumoniae</i>	amikacin	87.6%
<i>Klebsiella pneumoniae</i>	cefepime	92.9%
<i>Klebsiella pneumoniae</i>	cefotaxime	97.6%
<i>Klebsiella pneumoniae</i>	cefoxitin	84.8%
<i>Klebsiella pneumoniae</i>	ceftazidime	94.9%
<i>Klebsiella pneumoniae</i>	ciprofloxacin	91.0%
<i>Klebsiella pneumoniae</i>	doripenem	87.0%
<i>Klebsiella pneumoniae</i>	ertapenem	95.0%
<i>Klebsiella pneumoniae</i>	gentamicin	93.6%
<i>Klebsiella pneumoniae</i>	imipenem	90.7%
<i>Klebsiella pneumoniae</i>	levofloxacin	92.2%
<i>Klebsiella pneumoniae</i>	meropenem	90.9%
<i>Klebsiella pneumoniae</i>	piperacillin-tazobactam	90.9%
<i>Klebsiella pneumoniae</i>	tetracycline	78.6%
<i>Klebsiella pneumoniae</i>	tobramycin	90.7%
<i>Klebsiella pneumoniae</i>	trimethoprim-sulfamethoxazole	89.7%
<i>Pseudomonas aeruginosa</i>	amikacin	83.4%
<i>Pseudomonas aeruginosa</i>	aztreonam	69.6%
<i>Pseudomonas aeruginosa</i>	cefepime	78.2%
<i>Pseudomonas aeruginosa</i>	ceftazidime	75.1%
<i>Pseudomonas aeruginosa</i>	doripenem	78.4%
<i>Pseudomonas aeruginosa</i>	gentamicin	81.1%
<i>Pseudomonas aeruginosa</i>	imipenem	87.6%
<i>Pseudomonas aeruginosa</i>	meropenem	79.8%
<i>Pseudomonas aeruginosa</i>	piperacillin-tazobactam	80.1%
<i>Pseudomonas aeruginosa</i>	tobramycin	85.3%

<i>Salmonella enterica</i>	amoxicillin-clavulanic acid	99.1%
<i>Salmonella enterica</i>	ampicillin	98.5%
<i>Salmonella enterica</i>	cefoxitin	99.3%
<i>Salmonella enterica</i>	ceftiofur	98.8%
<i>Salmonella enterica</i>	ceftriaxone	98.7%
<i>Salmonella enterica</i>	chloramphenicol	99.3%
<i>Salmonella enterica</i>	gentamicin	98.0%
<i>Salmonella enterica</i>	kanamycin	98.9%
<i>Salmonella enterica</i>	tetracycline	98.6%
<i>Salmonella enterica</i>	trimethoprim-sulfamethoxazole	99.6%
<i>Staphylococcus aureus</i>	clindamycin	100.0%
<i>Staphylococcus aureus</i>	levofloxacin	90.0%
<i>Staphylococcus aureus</i>	tetracycline	100.0%
<i>Streptococcus pneumoniae</i>	amoxicillin	100.0%
<i>Streptococcus pneumoniae</i>	cefuroxime	99.4%
<i>Streptococcus pneumoniae</i>	clindamycin	98.4%
<i>Streptococcus pneumoniae</i>	erythromycin	95.3%
<i>Streptococcus pneumoniae</i>	meropenem	100.0%
<i>Streptococcus pneumoniae</i>	tetracycline	100.0%
<i>Streptococcus pneumoniae</i>	trimethoprim-sulfamethoxazole	96.4%