Supplemental Figure 1: Separation of wild-type and non-wild-type populations

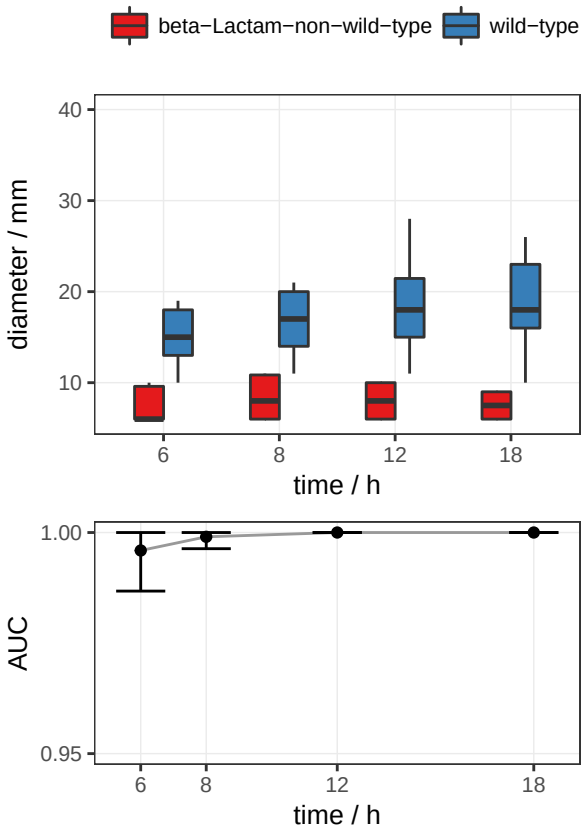
Contents

1 Ampicillin

1.1 Ampicillin, *E. faecalis*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
beta-Lactam-non-wild-type	4	75	100	100	100
wild-type	133	92	97	99	100

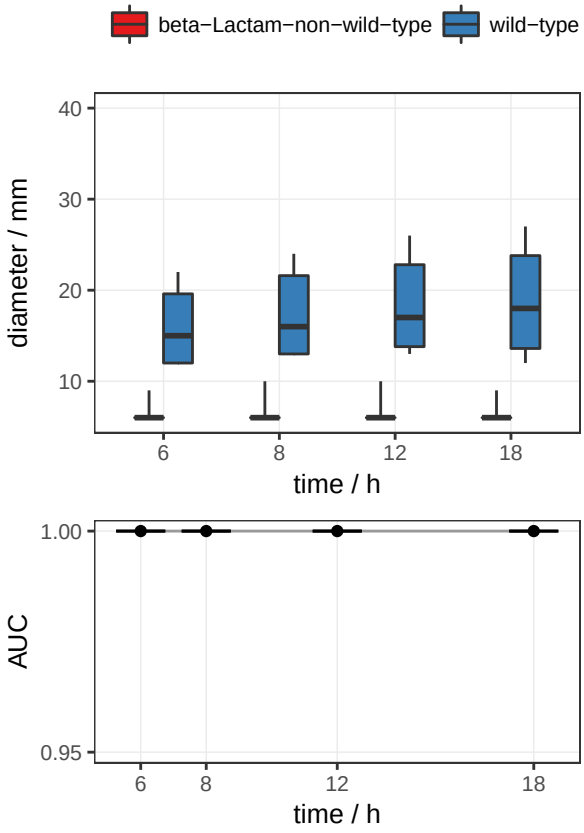


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

1.2 Ampicillin, *E. faecium*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
beta-Lactam-non-wild-type	210	100	100	100	100
wild-type	17	100	100	100	100



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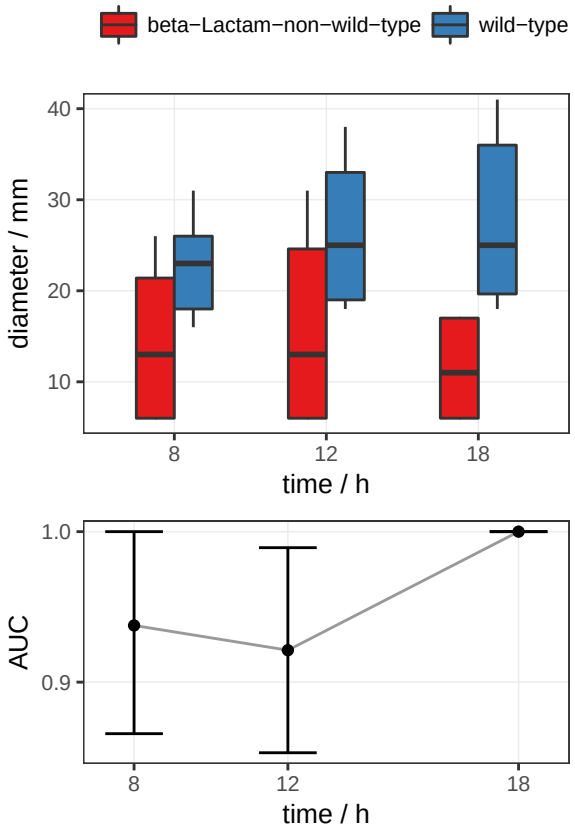
2 Piperacillin/Tazobactam

2.1 Piperacillin/Tazobactam, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
beta-Lactam-non-wild-type	41	66	93	100
wild-type	254	69	93	100



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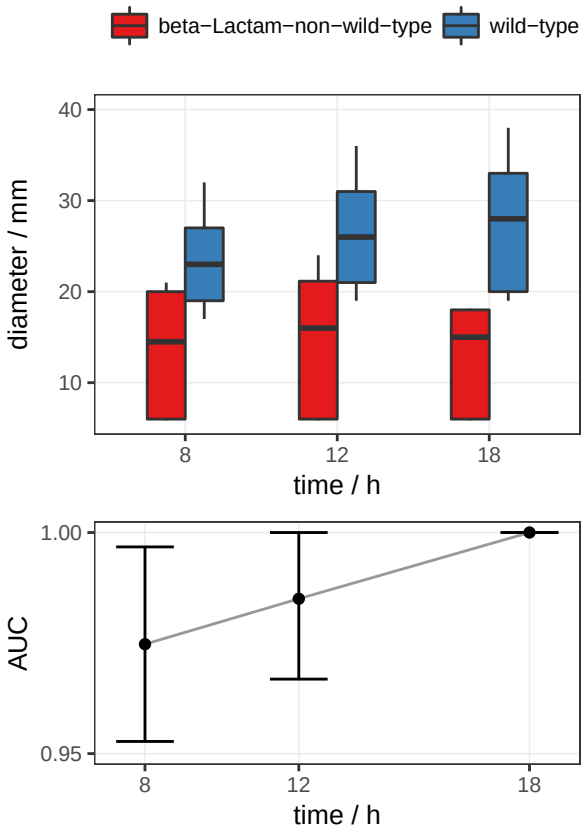
3 Cefepime

3.1 Cefepime, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
beta-Lactam-non-wild-type	41	54	93	100
wild-type	254	71	94	100



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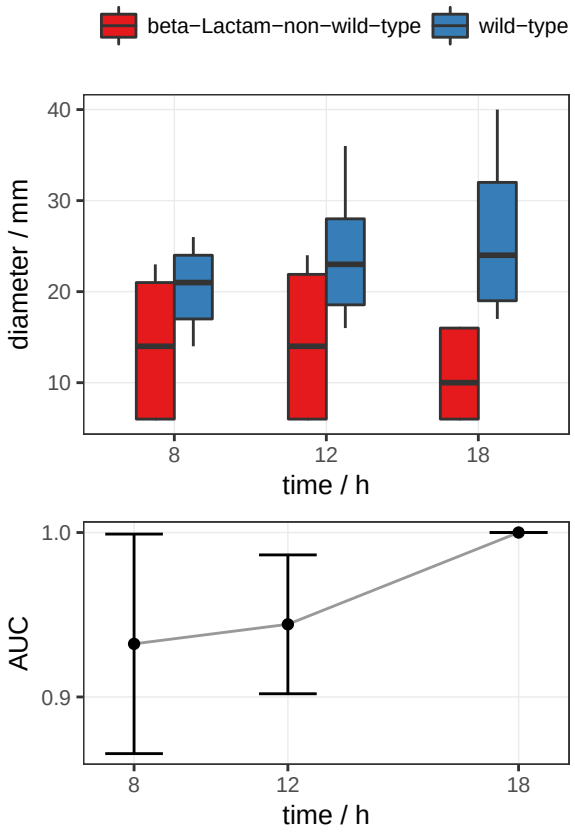
4 Ceftazidime

4.1 Ceftazidime, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
beta-Lactam-non-wild-type	47	66	91	100
wild-type	248	69	94	100



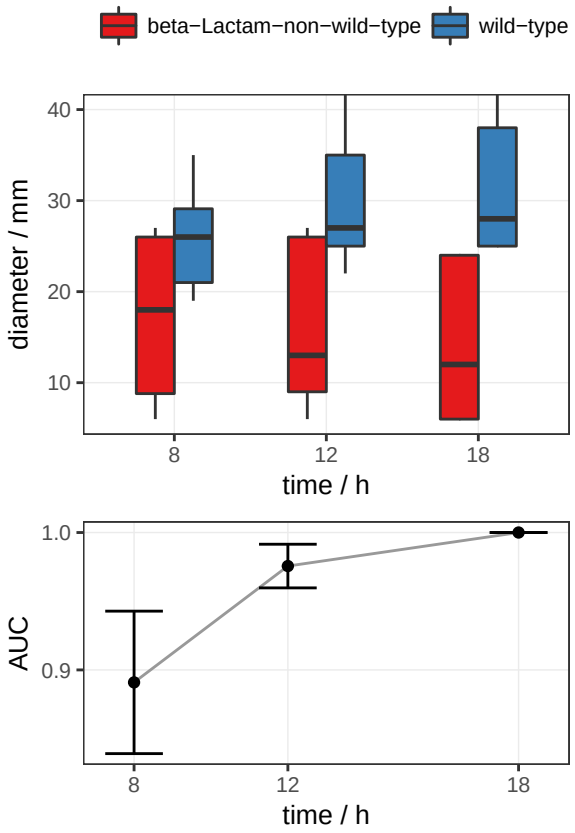
(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

5 Imipenem

5.1 Imipenem, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
beta-Lactam-non-wild-type	103	57	92	100
wild-type	192	73	94	100



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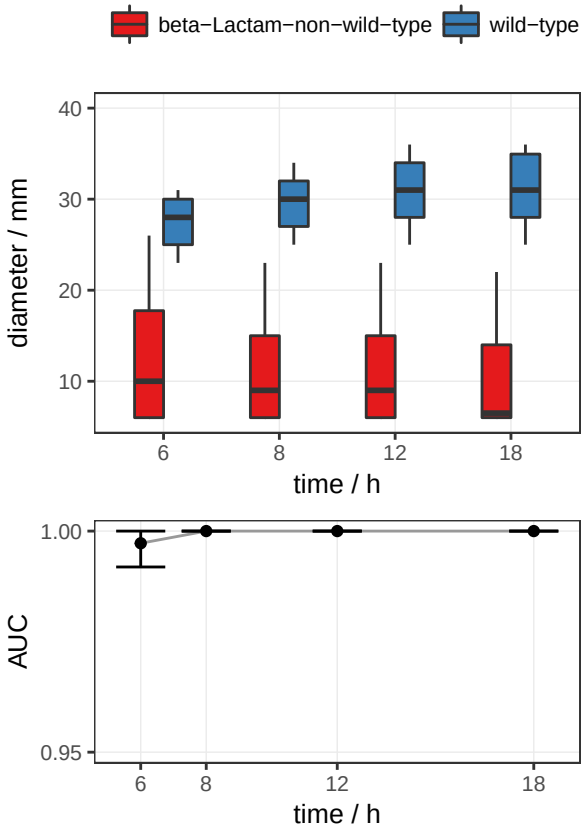
5.2 Imipenem, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
beta-Lactam-non-wild-type	36	100	100	100	100
wild-type	122	99	100	100	100



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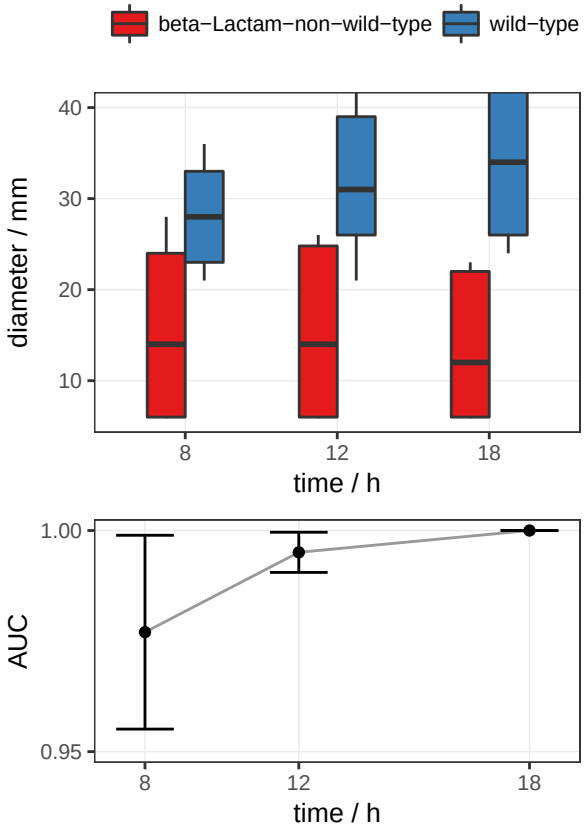
6 Meropenem

6.1 Meropenem, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
beta-Lactam-non-wild-type	72	62	90	100
wild-type	223	71	94	100

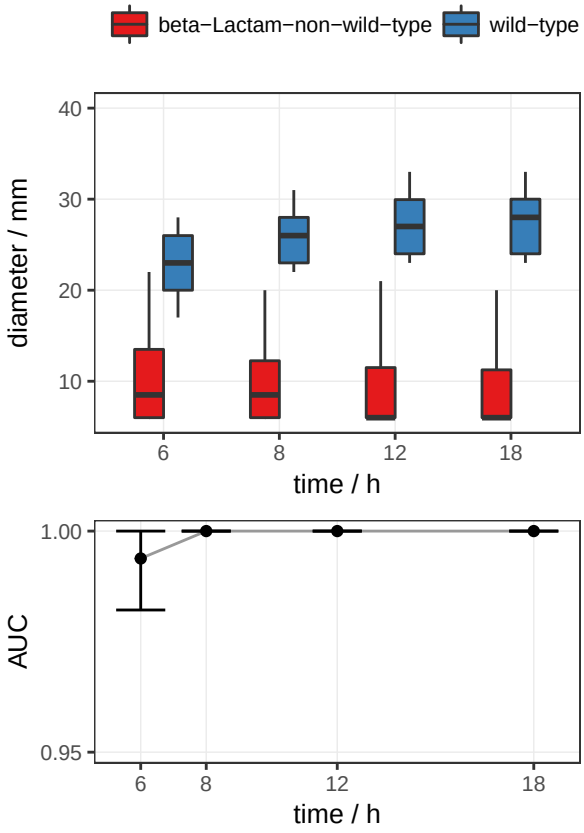


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

6.2 Meropenem, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
beta-Lactam-non-wild-type	36	100	100	100	100
wild-type	122	99	100	100	100



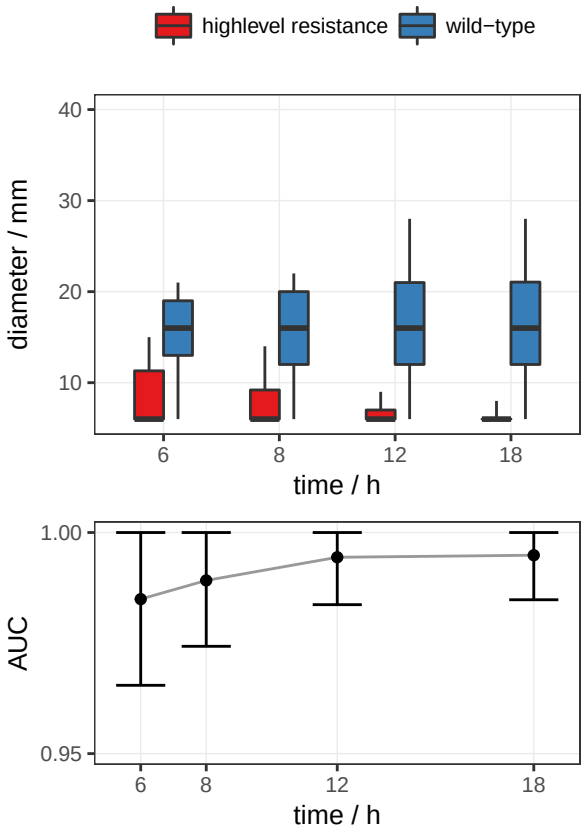
(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

7 Gentamicin

7.1 Gentamicin, *E. faecalis*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
highlevel resistance	37	95	100	100	100
wild-type	100	92	96	99	100

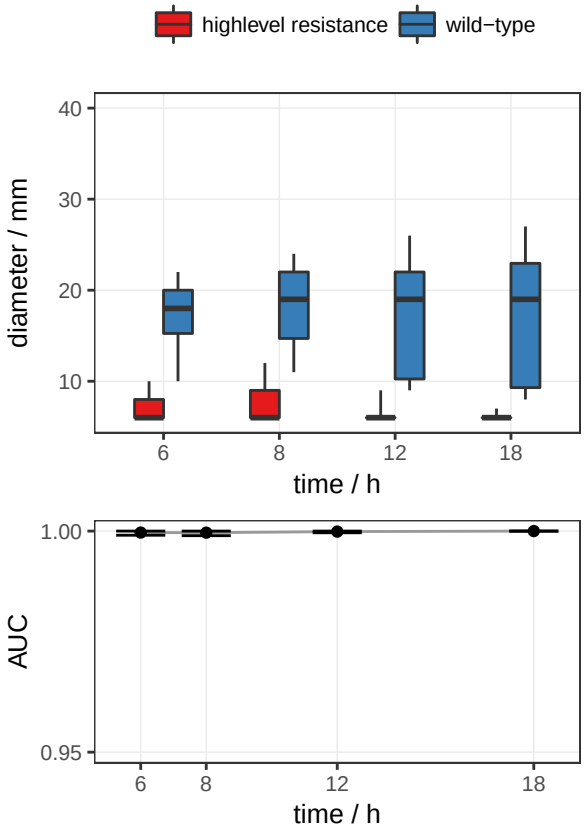


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

7.2 Gentamicin, *E. faecium*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
highlevel resistance	125	82	100	100	100
wild-type	102	84	97	100	100

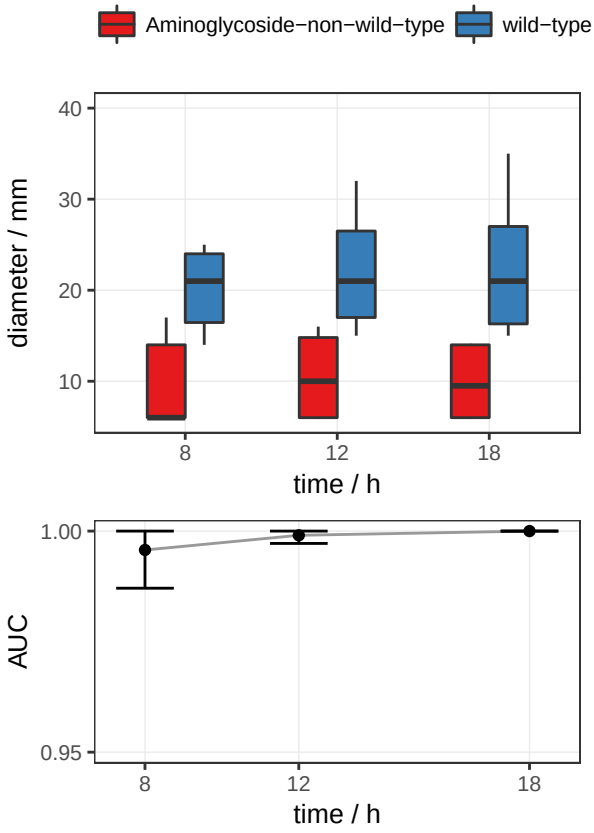


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

7.3 Gentamicin, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
Aminoglycoside-non-wild-type	28	57	89	100
wild-type	267	71	94	100



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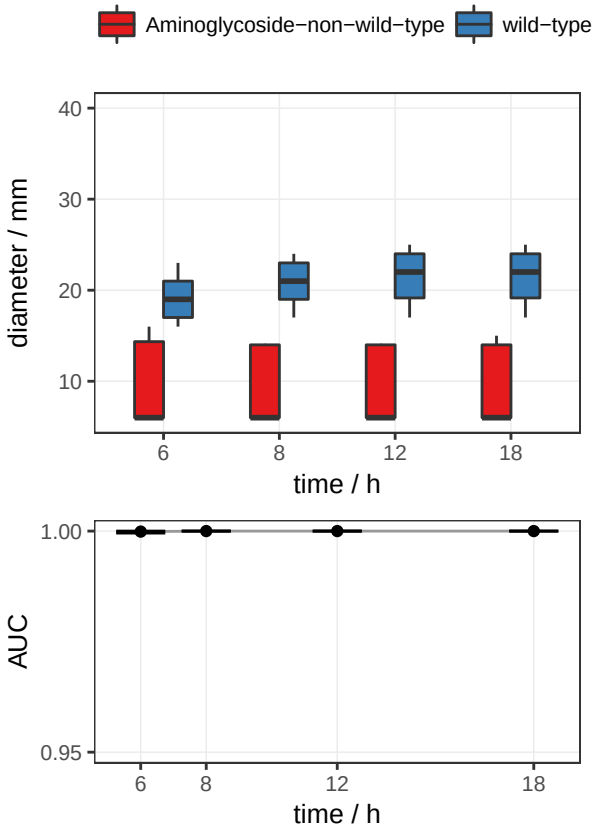
7.4 Gentamicin, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Aminoglycoside-non-wild-type	34	100	100	100	100
wild-type	124	99	100	100	100



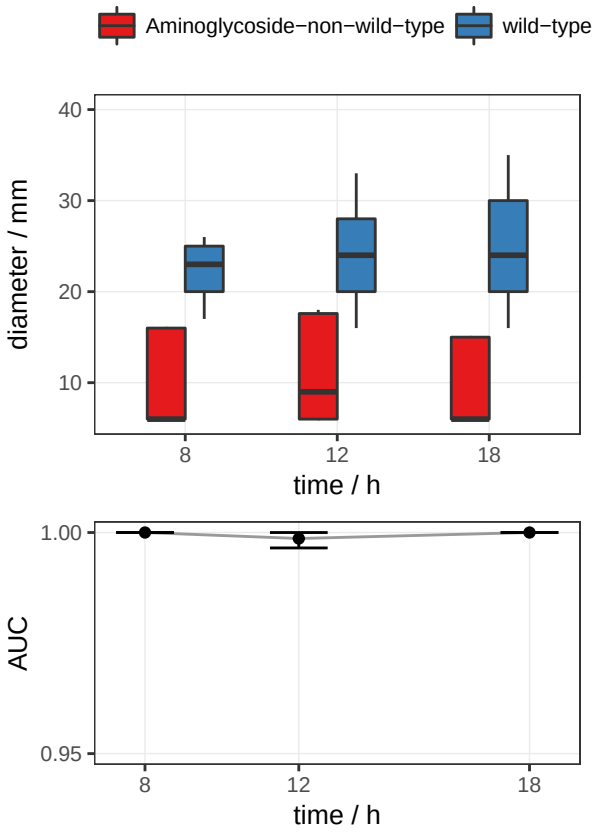
(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

8 Tobramycin

8.1 Tobramycin, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
Aminoglycoside-non-wild-type	27	74	93	100
wild-type	268	69	94	100



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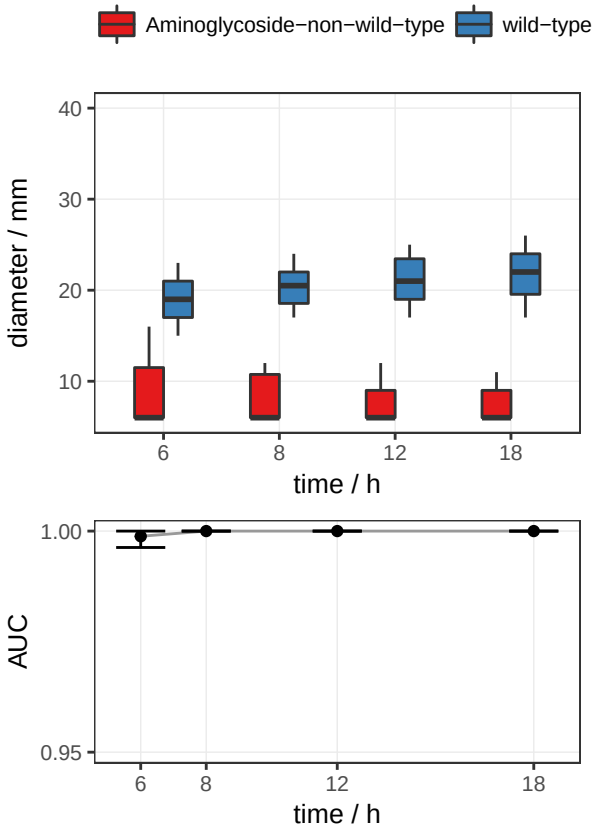
8.2 Tobramycin, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Aminoglycoside-non-wild-type	26	100	100	100	100
wild-type	132	99	100	100	100



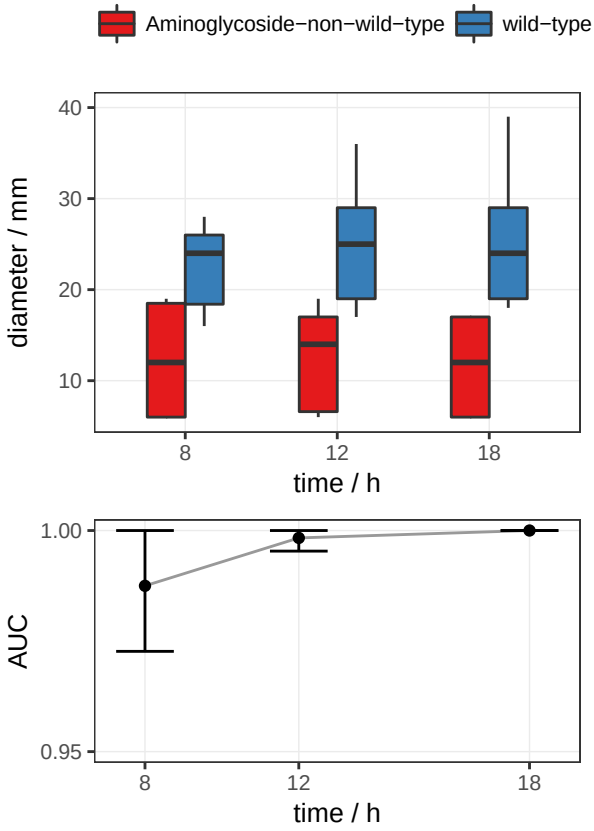
(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

9 Amikacin

9.1 Amikacin, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
Aminoglycoside-non-wild-type	30	37	83	100
wild-type	265	71	95	100



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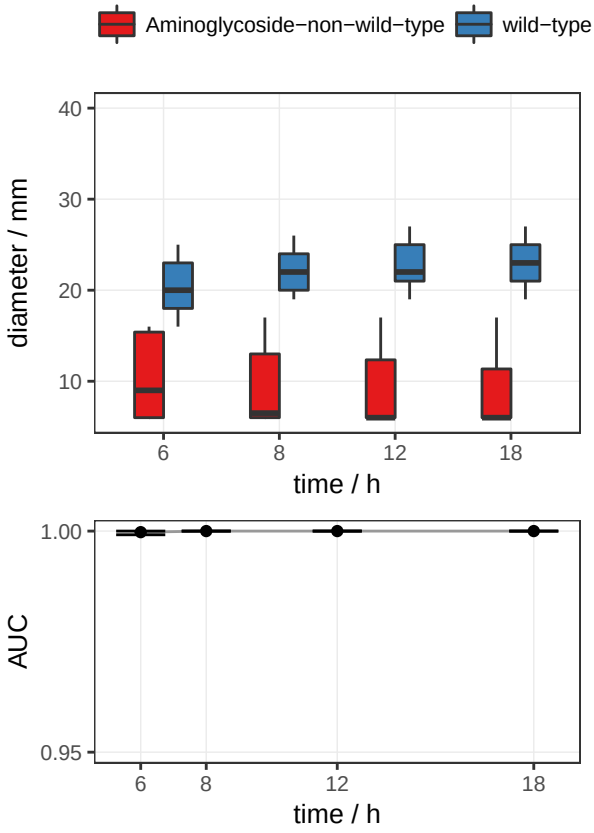
9.2 Amikacin, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Aminoglycoside-non-wild-type	34	97	100	100	100
wild-type	124	99	100	100	100



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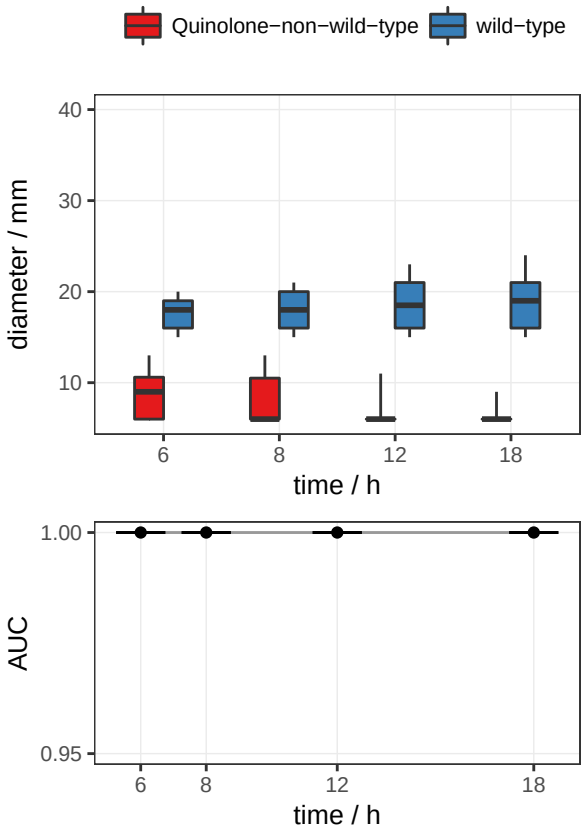
10 Norfloxacin

10.1 Norfloxacin, *E. faecalis*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Quinolone-non-wild-type	51	96	100	100	100
wild-type	86	92	97	100	100

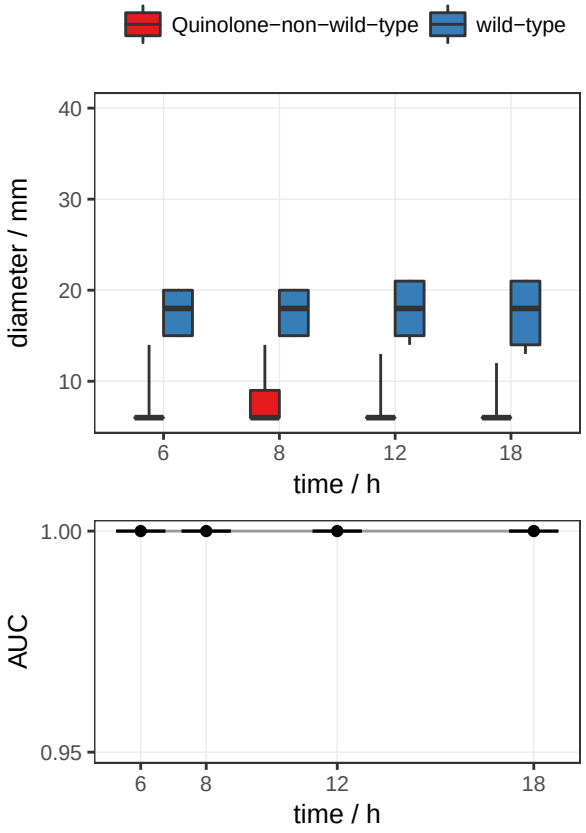


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

10.2 Norfloxacin, *E. faecium*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Quinolone-non-wild-type	196	93	99	100	100
wild-type	31	97	100	100	100



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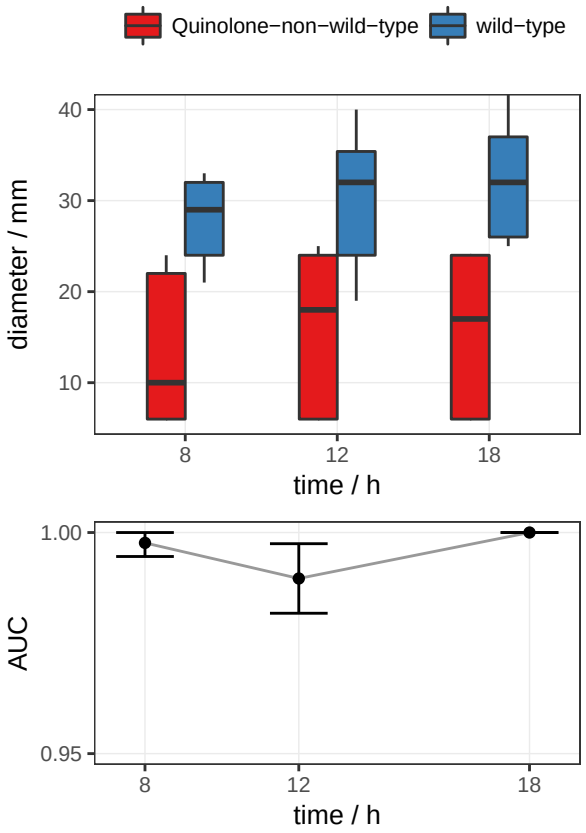
11 Ciprofloxacin

11.1 Ciprofloxacin, *P. aeruginosa*

Sample sizes and readabilities for different phenotypes.

		readability / %		
phenotype	n	8 h	12 h	18 h
Quinolone-non-wild-type	93	48	89	100
wild-type	202	80	96	100

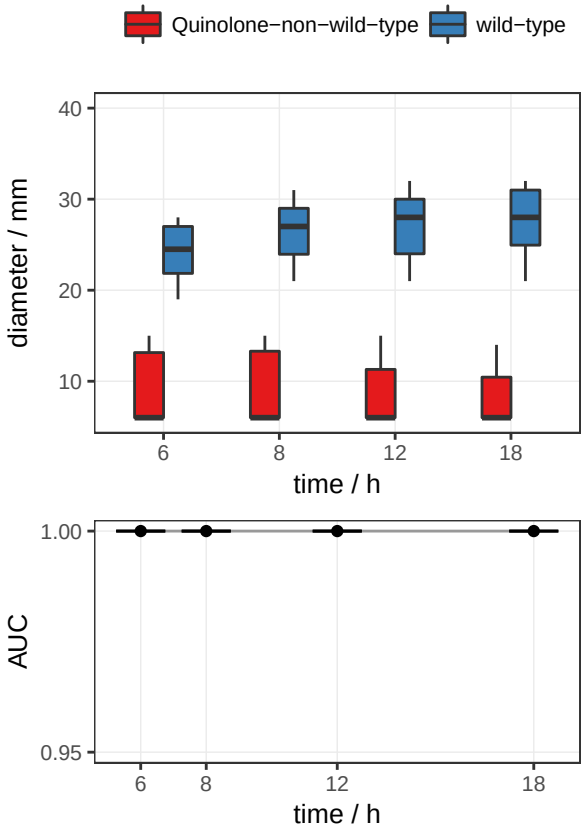


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

11.2 Ciprofloxacin, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Quinolone-non-wild-type	38	100	100	100	100
wild-type	120	98	100	100	100



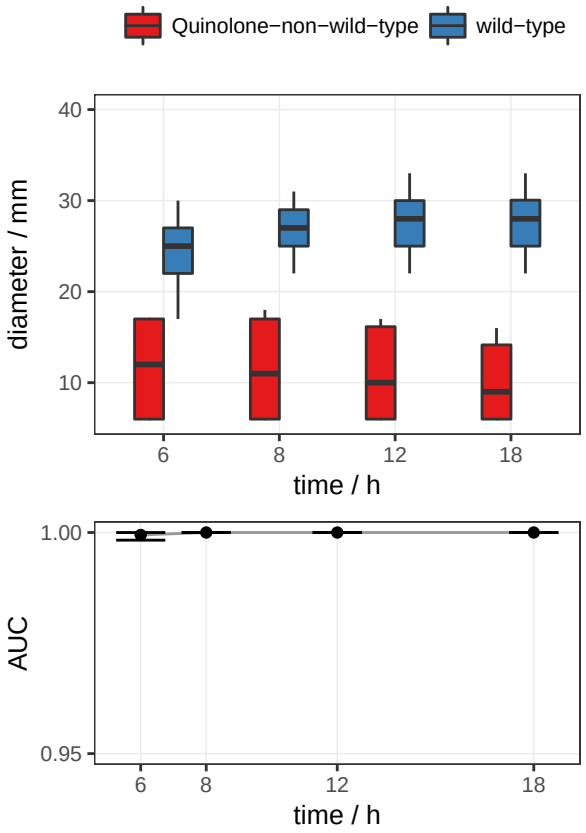
(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

12 Levofloxacin

12.1 Levofloxacin, *A. baumanii*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Quinolone-non-wild-type	38	100	100	100	100
wild-type	120	99	100	100	100



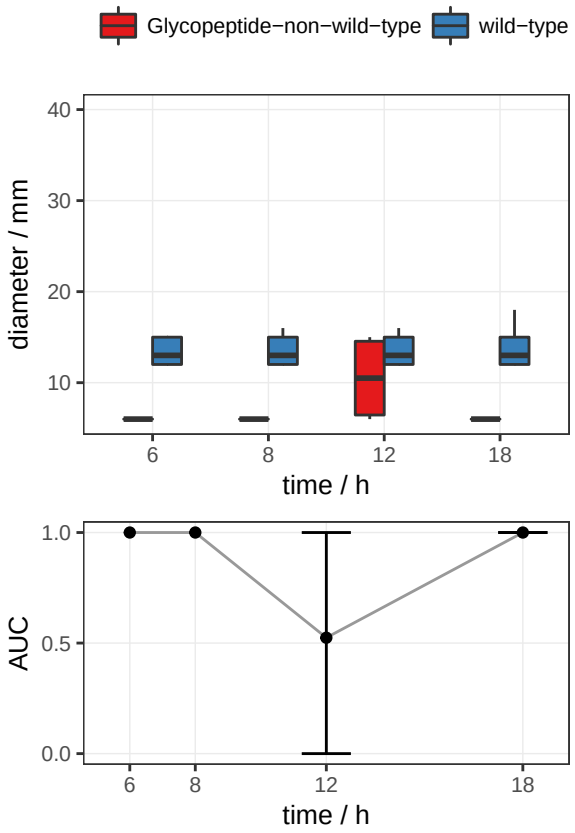
(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

13 Vancomycin

13.1 Vancomycin, *E. faecalis*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Glycopeptide-non-wild-type	2	50	50	100	100
wild-type	135	93	98	99	100

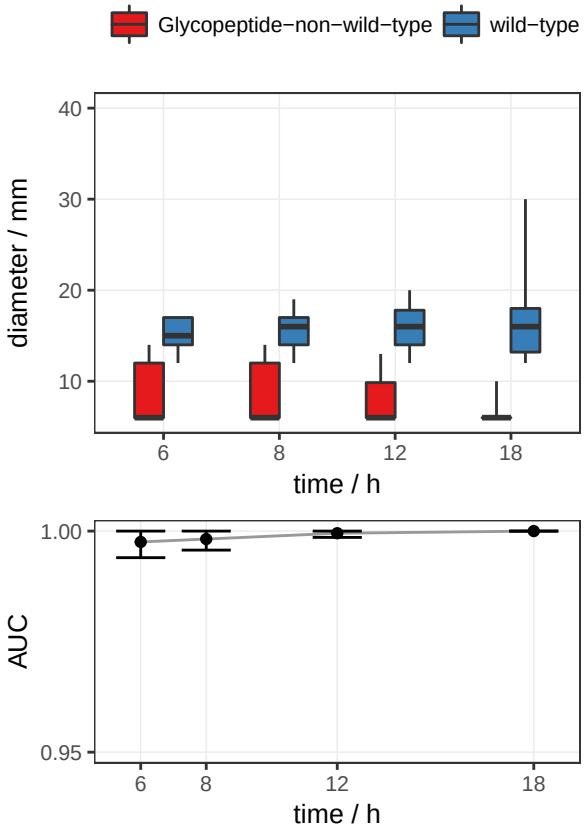


(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.

13.2 Vancomycin, *E. faecium*

Sample sizes and readabilities for different phenotypes.

		readability / %			
phenotype	n	6 h	8 h	12 h	18 h
Glycopeptide-non-wild-type	62	89	100	100	100
wild-type	165	90	98	100	100



(Top) Boxes represent diameter ranges from the 5th to the 95th percentile, whiskers represent the full range of diameters, and bold lines indicate median diameter values. **(Bottom)** The area under the receiver operating characteristic curve (AUC) quantifies how well a phenotype is separated from the wild type. An AUC of 1 indicates perfect separation while an AUC of 0.5 corresponds to complete overlap of the two populations. Error bars display 95% confidence intervals.