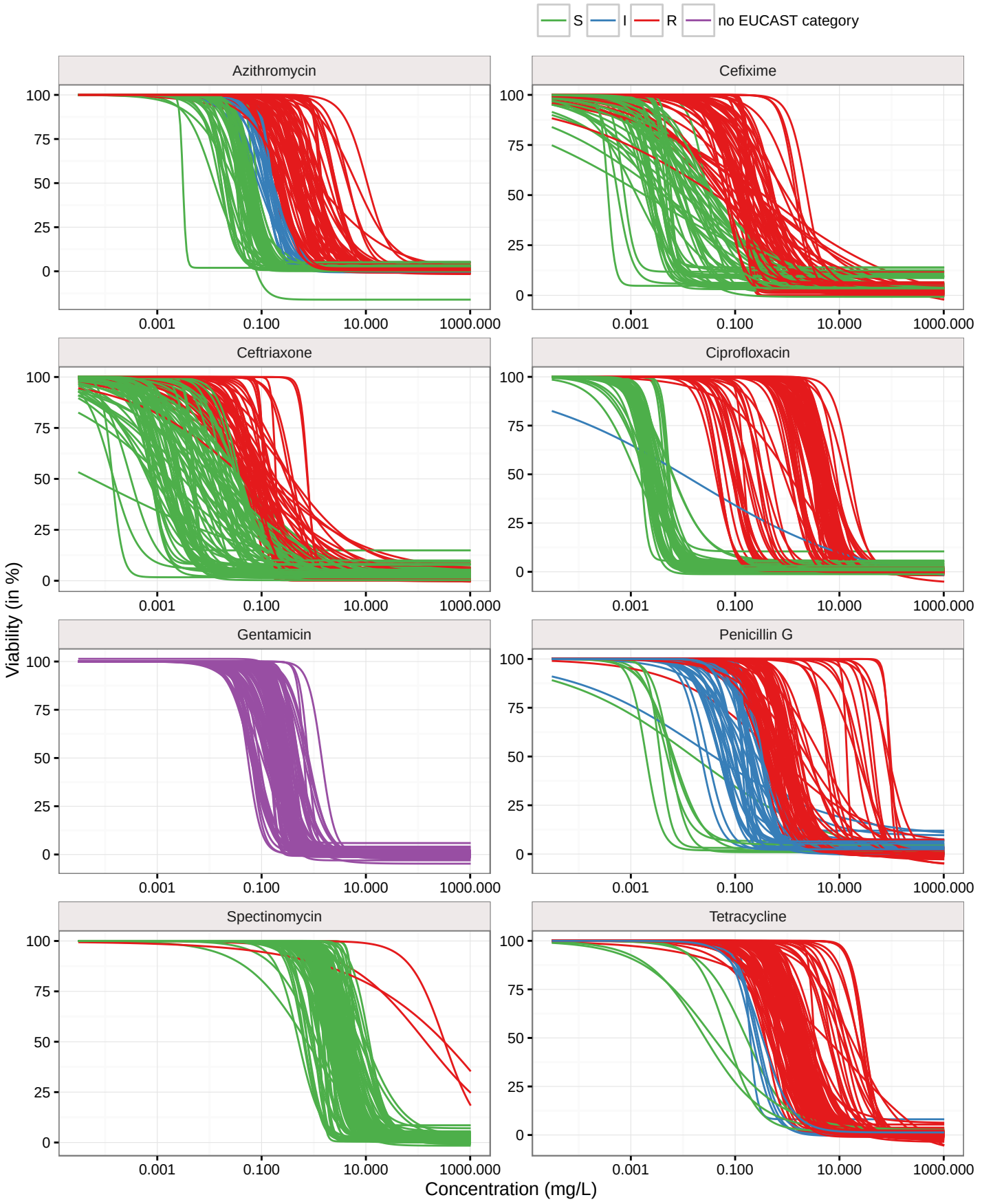
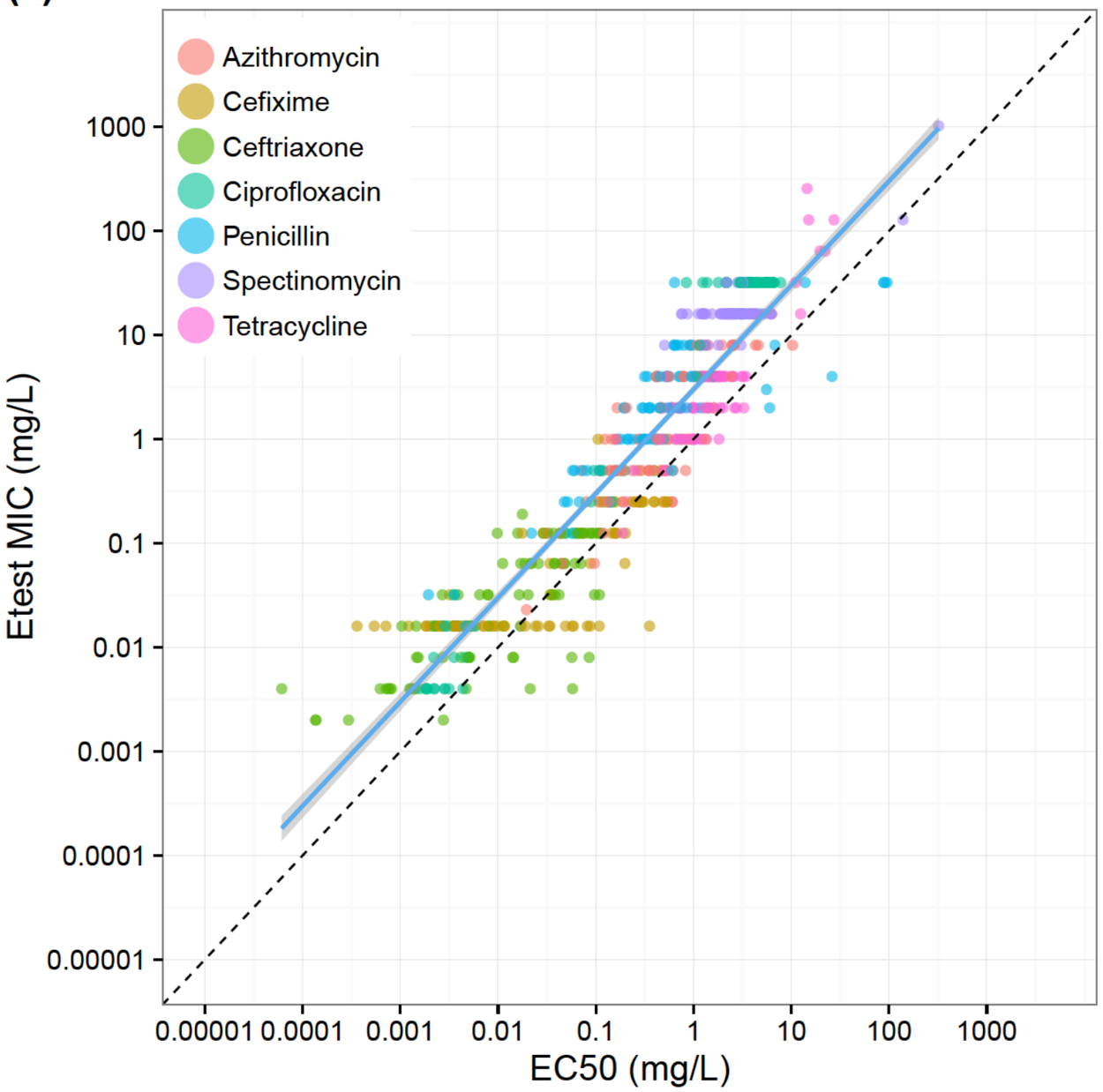
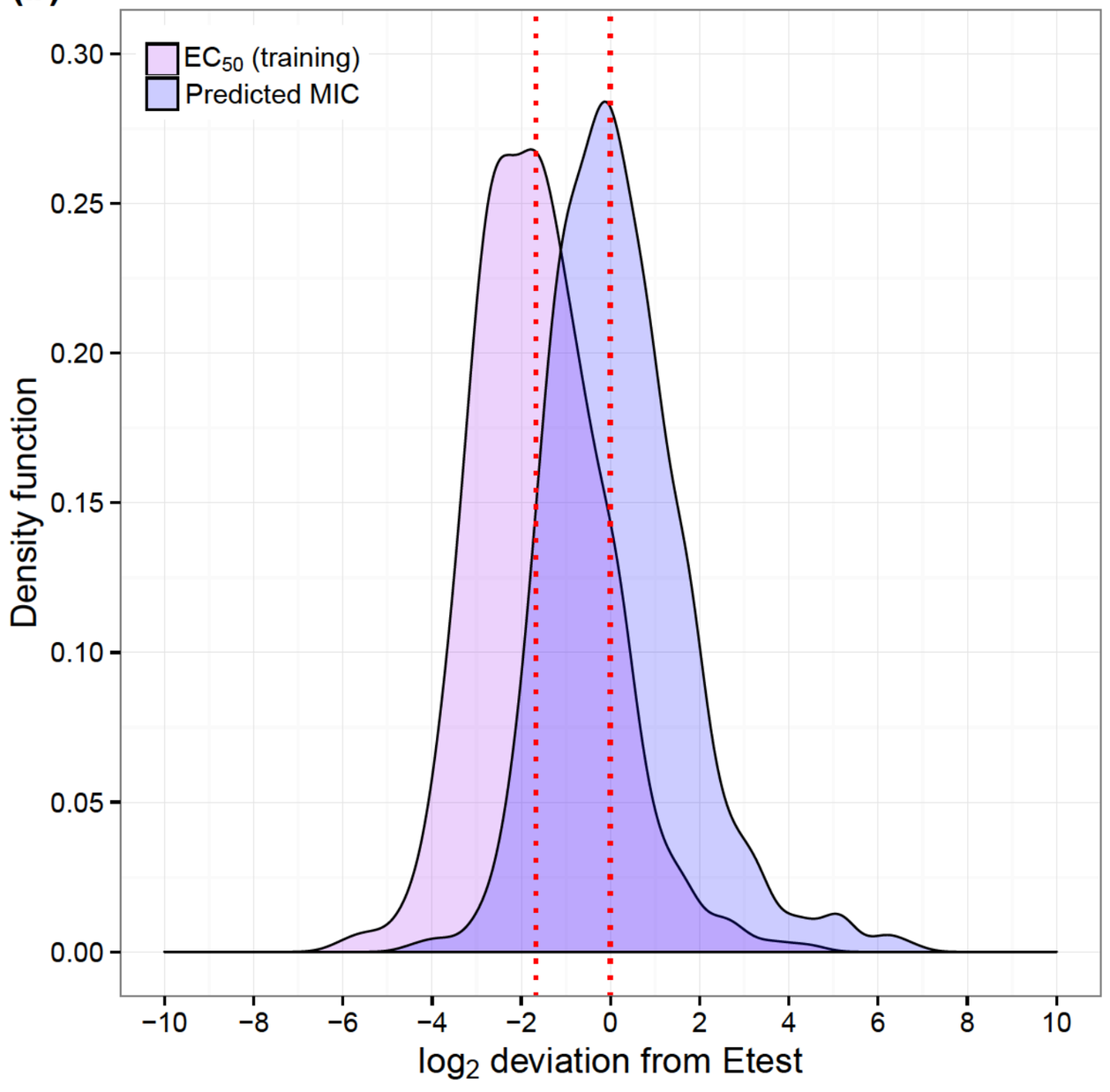

S
I
R
no EUCAST category
Azithromycin
Cefixime
Ceftriaxone
Ciprofloxacin
Gentamicin
Penicillin G
Spectinomycin
Tetracycline
Viability (in %)
Concentration (mg/L)
0
25
50
75
100
0.001
0.100
10.000
1000.000

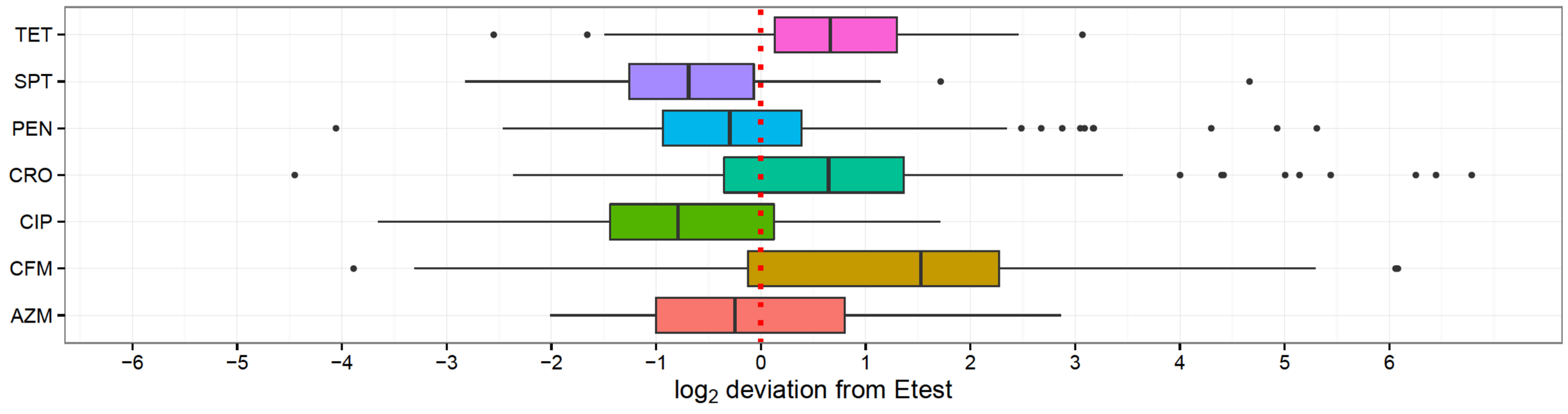
(a)

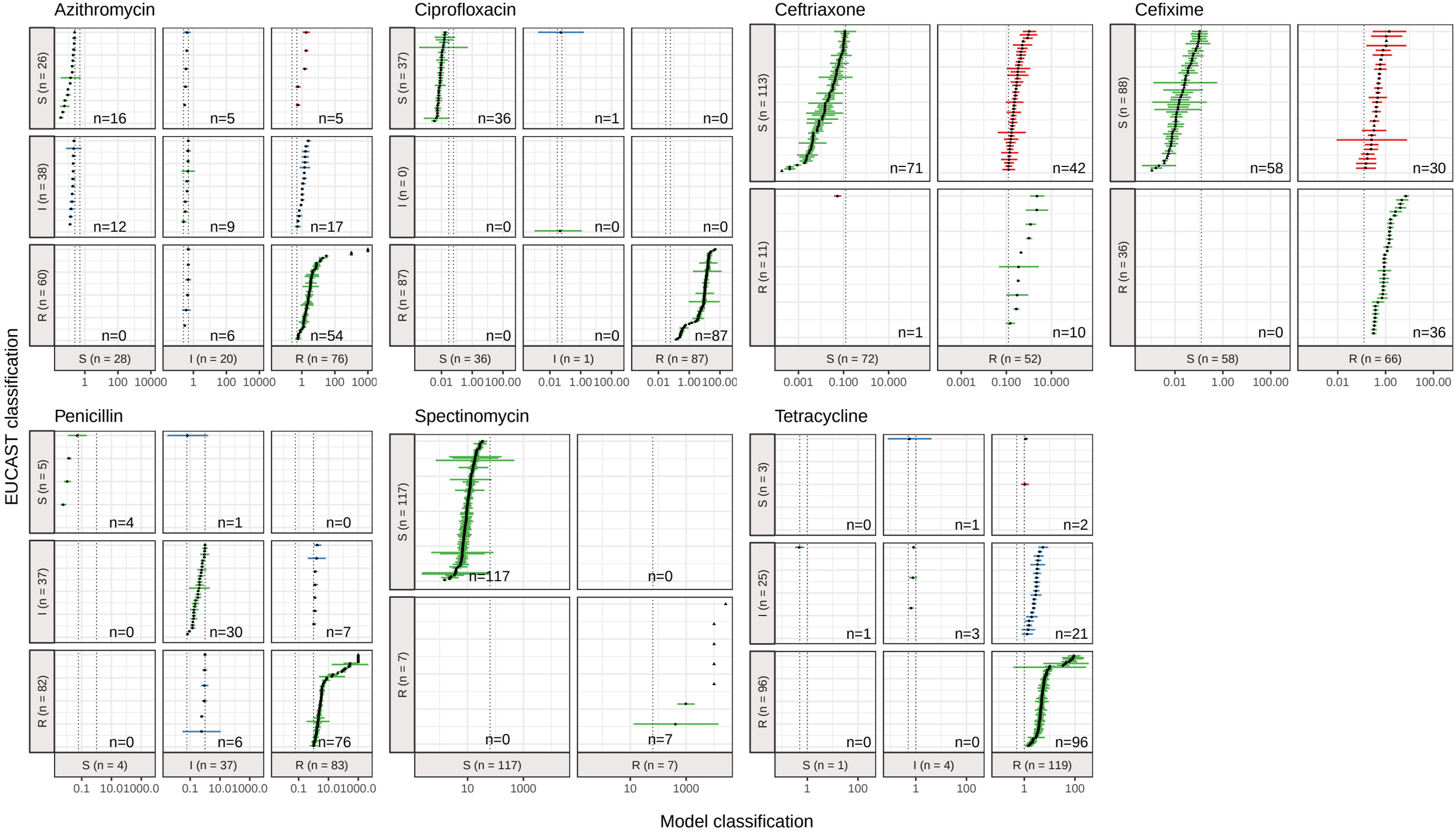

Azithromycin
Cefixime
Ceftriaxone
Ciprofloxacin
Penicillin
Spectinomycin
Tetracycline
Etest MIC (mg/L)
1000
100
10
1
0.1
0.01
0.001
0.0001
0.00001
0.00001 0.0001 0.001 0.01 0.1 1 10 100 1000
EC50 (mg/L)

(b)


EC50 (training)
Predicted MIC
Density function
0.30
0.25
0.20
0.15
0.10
0.05
0.00
−10 −8 −6 −4 −2 0 2 4 6 8 10
log2 deviation from Etest

(c)


TET
SPT
PEN
CRO
CIP
CFM
AZM
−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6
log2 deviation from Etest


Azithromycin
Ciprofloxacin
Ceftriaxone
Cefixime
Penicillin
Spectinomycin
Tetracycline
EUCAST classification
Model classification
S (n = 26)
I (n = 38)
R (n = 60)
S (n = 28)
I (n = 20)
R (n = 76)
n=16
n=5
n=5
n=12
n=9
n=17
n=0
n=6
n=54
S (n = 37)
I (n = 0)
R (n = 87)
S (n = 36)
I (n = 1)
R (n = 87)
n=36
n=1
n=0
n=0
n=0
n=0
n=0
n=0
n=87
S (n = 113)
R (n = 11)
S (n = 72)
R (n = 52)
n=71
n=42
n=1
n=10
S (n = 88)
R (n = 36)
S (n = 58)
R (n = 66)
n=58
n=30
n=0
n=36
S (n = 5)
I (n = 37)
R (n = 82)
S (n = 4)
I (n = 37)
R (n = 83)
n=4
n=1
n=0
n=0
n=30
n=7
n=0
n=6
n=76
S (n = 117)
R (n = 7)
S (n = 117)
R (n = 7)
n=117
n=0
n=0
n=7
S (n = 3)
I (n = 25)
R (n = 96)
S (n = 1)
I (n = 4)
R (n = 119)
n=0
n=1
n=2
n=1
n=3
n=21
n=0
n=0
n=96
0.1
10.0
1000.0
1
100
10000
0.01
1.00
100.00
0.001
0.100
10.000
10
1000
1
100