

Appendix 1. Functions of Resistance and Virulence Genes in *Acinetobacter baumannii*

Gene Name	Functions of Genes	References
<i>blaOXA-24</i>	Class D β -lactamase; hydrolyzes penicillins and carbapenems; contributes to resistance against β -lactams.	[6]
<i>blaOXA-51</i>	Class D β -lactamase; intrinsic resistance; often used as a marker for <i>A. baumannii</i> identification.	[7]
<i>blaOXA-58</i>	Class D β -lactamase; provides resistance to carbapenems; significant in hospital outbreaks.	[6]
<i>blaOXA-143</i>	Class D β -lactamase; associated with multidrug resistance in clinical isolates.	[8]
<i>VIM</i>	Metallo- β -lactamase; hydrolyzes a broad range of β -lactams, including carbapenems.	[9]
<i>NDM</i>	New Delhi metallo- β -lactamase; confers resistance to all β -lactams except aztreonam.	[9]
<i>KPC</i>	Class A β -lactamase; hydrolyzes penicillins, cephalosporins, and carbapenems; prevalent in MDR strains.	[8]
<i>ompA</i>	Outer membrane protein; involved in adhesion to host cells and biofilm formation, enhancing virulence.	[10]
<i>bap</i>	Biofilm-associated protein; promotes biofilm formation, contributing to persistence and resistance.	[10]
<i>pbpG</i>	Penicillin-binding protein; involved in cell wall synthesis and antibiotic resistance.	[11]
<i>basD</i>	Regulates biofilm formation and enhances adherence to surfaces, increasing pathogenicity.	[2, 12]
<i>bfmR</i>	Regulator of biofilm formation; influences the expression of genes related to virulence.	[2, 12]
<i>recA</i>	Involved in DNA repair and recombination; contributes to genetic diversity and adaptation.	[2, 12]
<i>lipA</i>	Lipase gene associated with virulence and survival in host environments.	[2, 12]
<i>abeD</i>	Efflux pump gene contributing to antibiotic resistance by expelling harmful compounds.	[2, 12]
<i>surA</i>	Chaperone protein that assists in the proper folding of outer membrane proteins, influencing virulence.	[2, 12]
<i>csuA</i>	Involved in surface colonization and biofilm formation, enhancing pathogenic potential.	[2, 12]
<i>pld</i>	Plays a role in the regulation of virulence factors and stress response mechanisms.	[2, 12]

Appendix 2. Demographic Information of Patients Participating in the Current Study

Row	Sample Type	Age (Years)	Gender (Male:M, Female:F)	Row	Sample Type	Age (Years)	Gender (Male:M, Female:F)
1	Trachea	23	M	21	Urine	16	M
2	Urine	12	F	22	Urine	29	F
3	Blood	20	F	23	Blood	5	F
4	Trachea	13	F	24	Trachea	13	M
5	Trachea	26	M	25	Trachea	42	F
6	Trachea	9	M	26	Blood	9	F
7	Urine	21	F	27	Urine	6	F
8	Blood	5	M	28	Blood	22	M
9	Blood	36	M	29	Trachea	32	M
10	Blood	15	F	30	Urine	15	M
11	Blood	25	M	31	Blood	19	M
12	Urine	11	M	32	Blood	15	F
13	Blood	28	M	33	Trachea	8	M
14	Trachea	7	F	34	Urine	38	F
15	Trachea	41	M	35	Urine	13	F
16	Urine	8	F	36	Trachea	21	M
17	Blood	34	M	37	Blood	7	F
18	Blood	9	F	38	Urine	8	F
19	Urine	24	M	39	Blood	12	M
20	Trachea	12	M	40	Trachea	27	M

Appendix 3. Pattern of Antibiotic Resistance and Susceptibility of the Acinetobacter Isolates under Study

Bacteria NO.	Antibiotics												
	TIG	AZT	LEVO	TOB4	IMP5	POL6	COL6	PTZ	CAZ	MEM	CIP	GM	AMK
1	S(20)	S(22)	S(23)	S(20)	S(23)	S918	S(20)	S(22)	S(21)	S(20)	S(22)	S(16)	S(18)
2	S(19)	R(16)	R(10)	R(11)	R(0)	S(20)	S(15)	R(15)	R(17)	R(0)	R(0)	R(0)	R(0)
3	S(22)	R(17)	R(14)	R(12)	R(14)	S(20)	S(15)	R(10)	R(10)	R(0)	R(0)	R(0)	R(0)
4	S(23)	S(22)	S(22)	S(17)	S(24)	S(16)	S(17)	S(22)	S(25)	S(19)	S(23)	S(15)	S(19)
5	R(13)	R(14)	R(0)	R(0)	R(0)	S(19)	S(17)	R(0)	R(14)	R(13)	R(0)	R(10)	R(0)
6	R(12)	R(17)	R(11)	R(11)	R(18)	S(17)	S(19)	R(5)	R(0)	R(0)	R(0)	R(0)	R(0)
7	S(19)	R(15)	R(10)	R(12)	R(14)	S(15)	S(19)	R(0)	R(11)	R(0)	R(10)	R(0)	R(0)
8	S(22)	R(12)	R(5)	R(10)	R(11)	S(16)	S(21)	R(10)	R(14)	R(0)	R(0)	R(0)	R(12)
9	R(12)	R(17)	R(0)	R(0)	R(10)	S(18)	S(22)	R(17)	R(16)	R(0)	R(0)	R(0)	R(0)
10	S(19)	S(21)	S(24)	S(16)	S(25)	S(19)	S(18)	S(21)	S(22)	S(20)	S(22)	S(16)	S(18)
11	R(14)	R(16)	R(0)	R(10)	R(0)	S(17)	S(19)	R(0)	R(0)	R(0)	R(0)	R(0)	R(0)
12	S(21)	R(14)	R(11)	R(0)	R(15)	S(19)	S(16)	R(11)	R(5)	R(10)	R(0)	R(0)	R(0)
13	S(20)	S(24)	S(22)	S(15)	R(14)	S(15)	R(10)	R(17)	R(11)	R(0)	R(0)	R(0)	R(13)
14	S(19)	S(22)	S(25)	S(21)	R(11)	S(17)	S(20)	R(15)	R(15)	R(0)	R(13)	R(11)	R(10)
15	S(23)	R(14)	R(0)	R(12)	R(0)	S(15)	S(16)	R(0)	R(0)	R(0)	R(11)	R(0)	R(0)
16	S(22)	R(17)	R(10)	R(11)	R(17)	S(16)	S(18)	R(12)	R(12)	R(0)	R(0)	R(0)	R(0)
17	S(20)	R(15)	R(8)	R(11)	R(19)	S(15)	S(20)	R(10)	R(13)	R(12)	R(0)	R(0)	R(0)
18	S(20)	R(15)	R(0)	R(0)	R(13)	S(20)	S(21)	R(6)	R(10)	R(10)	R(0)	R(0)	R(0)
19	S(21)	R(13)	R(14)	R(12)	R(11)	S(18)	S(15)	R(11)	R(14)	R(0)	R(0)	R(0)	R(0)
20	S(19)	R(11)	R(12)	R(0)	R(12)	S(17)	S(18)	R(0)	R(0)	R(0)	R(0)	R(0)	R(10)
21	R(11)	R(17)	R(10)	R(5)	R(14)	S(16)	S(22)	R(15)	R(17)	R(0)	R(0)	R(12)	R(0)
22	S(22)	S(22)	S(22)	S(22)	R(14)	S(17)	S(18)	R(17)	R(15)	R(0)	R(0)	R(0)	R(0)

Appendix 4. Pattern of Antibiotic Resistance and Susceptibility of the Acinetobacter Isolates under Study
(continued)

Bacteria NO.	Antibiotics												
	TIG	AZT	LEVO	TOB	IMI	POL	COL	PTZ	CAZ	MR	CP	GM	AN
23	S(22)	R(15)	R(4)	R(0)	R(18)	S(17)	S(15)	R(0)	R(0)	R(12)	R(0)	R(0)	R(0)
24	R(12)	R(13)	R(13)	R(5)	R(14)	R(0)	R(10)	R(11)	R(11)	R(0)	R(0)	R(0)	R(11)
25	S(20)	R(14)	R(0)	R(11)	R(15)	S(19)	S(17)	R(11)	R(11)	R(0)	R(0)	R(0)	R(0)
26	R(14)	R(14)	R(14)	R(0)	R(19)	S(20)	S(17)	R(10)	R(17)	R(9)	R(12)	R(0)	R(0)
27	S(21)	R(17)	R(11)	R(4)	R(9)	S(18)	S(15)	R(0)	R(15)	R(2)	R(14)	R(10)	R(0)
28	R(10)	R(16)	R(5)	R(0)	R(16)	S(16)	S(20)	R(12)	R(17)	R(0)	R(0)	R(10)	R(0)
29	S(21)	R(12)	R(0)	R(0)	R(16)	S(17)	S(18)	R(0)	R(0)	R(0)	R(0)	R(0)	R(0)
30	R(11)	R(14)	R(0)	R(10)	R(17)	S(15)	S(18)	R(0)	R(6)	R(0)	R(0)	R(11)	R(10)
31	R(11)	R(15)	R(10)	R(6)	R(13)	S(20)	S(19)	R(17)	R(11)	R(10)	R(0)	R(0)	R(0)
32	S(20)	R(17)	R(13)	R(0)	R(11)	S(19)	S(17)	R(15)	R(14)	R(0)	R(12)	R(0)	R(0)
33	S(22)	S(23)	S(24)	S(17)	S(23)	S(18)	S(20)	S(24)	S(22)	S(19)	S(24)	S(17)	S(18)
34	S(20)	R(17)	R(11)	R(10)	R(19)	S(20)	S(20)	R(11)	R(15)	R(0)	R(0)	R(0)	R(0)
35	S(19)	R(15)	R(0)	R(6)	R(14)	S(16)	S(22)	R(15)	R(16)	R(0)	R(0)	R(0)	R(0)
36	S(19)	S(21)	S(22)	S(15)	S(24)	S(21)	S(20)	S(22)	S(21)	S(20)	S(21)	S(18)	S(19)
37	R(13)	R(13)	R(10)	R(4)	R(0)	S(18)	S(18)	R(0)	R(0)	R(10)	R(0)	R(0)	R(0)
38	R(12)	R(15)	R(0)	R(12)	R(11)	S(16)	S(17)	R(10)	R(14)	R(0)	R(0)	R(0)	R(0)
39	S(21)	R(17)	R(14)	R(4)	R(16)	S(17)	S(16)	R(17)	R(10)	R(0)	R(0)	R(0)	R(0)
40	S(20)	R(17)	R(9)	R(7)	R(13)	S(19)	S(20)	R(0)	R(15)	R(0)	R(11)	R(0)	R(0)

Appendix 5. Results of the Presence of Virulence and Resistance Genes in Acinetobacter Isolates

Bacterial No.	Virulence genes											Resistance genes							
	<i>recA</i>	<i>bap</i>	<i>csuA</i>	<i>ompA</i>	<i>pld</i>	<i>abeD</i>	<i>pbpG</i>	<i>basD</i>	<i>bfmR</i>	<i>lipA</i>	<i>surA</i>	<i>oxa-24</i>	<i>oxa-51</i>	<i>oxa-58</i>	<i>SIM</i>	<i>VIM</i>	<i>NDM</i>	<i>KPC</i>	
1	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
2	+	+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-	-	
3	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
4	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
5	+	+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-	-	
6	+	+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-	-	
7	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
8	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
9	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
10	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
11	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
12	+	-	-	+	+	-	-	-	+	-	+	+	+	+	-	-	-	-	
13	+	+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-	-	
14	+	+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-	-	
15	+	+	+	+	+	-	-	-	-	+	+	+	+	-	-	-	-	-	
16	+	+	+	+	+	-	-	-	-	-	+	+	+	-	-	-	-	-	
17	+	-	-	+	+	-	-	-	+	-	+	+	+	+	-	-	-	-	
18	+	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	-	-	
19	+	-	-	+	+	-	-	-	+	-	-	+	+	+	-	-	-	-	
20	+	+	+	+	+	-	-	-	-	+	+	+	+	+	-	-	-	-	
21	+	+	-	+	-	-	-	-	-	+	-	+	+	-	-	-	-	-	
22	+	+	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-	
23	+	+	-	+	+	-	-	-	+	+	+	-	+	-	-	-	-	-	
24	+	+	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-	
25	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	
26	+	+	-	+	-	-	-	-	+	+	-	+	+	-	-	-	-	-	
27	+	+	-	+	-	-	-	-	+	+	-	+	+	+	-	-	-	-	
28	+	+	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-	
29	+	+	-	+	-	-	-	-	+	+	-	+	+	-	-	-	-	-	
30	+	+	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-	

31	+	+	-	+	-	-	-	-	+	+	-	+	+	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-
33	+	+	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-
34	+	+	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-
35	-	-	-	+	-	-	-	-	+	-	-	+	+	-	-	-	-	-
36	+	-	-	+	-	-	-	-	+	+	-	-	+	-	-	-	-	-
37	+	-	-	+	-	-	-	-	+	+	-	-	+	-	-	-	-	-
38	+	-	-	+	-	-	-	-	+	+	-	+	+	-	-	-	-	-
39	+	+	-	+	+	-	-	-	+	+	+	-	+	-	-	-	-	-
40	+	+	-	+	+	-	-	-	+	+	+	-	+	-	-	-	-	-

Appendix 6. Frequency and Relative Frequency of Gene Presence in the Examined Samples

Gene	Status of Presence/Absence	Frequency	Relative Frequency (%)	95% Confidence Interval
<i>recA</i>	-	3	7.5	
	+	37	92.5	97.67-78.55
<i>Bap</i>	-	10	25	41.09-13.73
	+	30	75	86.26-58.90
<i>csuA</i>	-	24	60	74.23-73.84
	+	16	40	56.15-25.76
<i>ompA</i>	-	3	7.5	21.44-2.35
	+	37	92.5	97.76-78.55
<i>Pid</i>	-	12	30	46.27-17.57
	+	28	70	82.42-53.72
<i>abeD</i>	-	40	100	-
	+	0	0	-
<i>pbpG</i>	-	40	100	-
	+	0	0	-
<i>basD</i>	-	40	100	-
	+	0	0	-
<i>bfmR</i>	-	19	47.5	63.18-32.28
	+	21	52.5	67.71-36.81
<i>lipA</i>	-	8	20	35.73-10.10
	+	32	80	89.89-64.26
<i>surA</i>	-	13	32.5	48.79-19.56
	+	27	67.5	80.43-51.20

Appendix 7. MDR strains examined in this study

Bacteria NO.	Mulidrug Resstance (MDR)	Number of antibiotics	Resistance genes
2	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51- oxa-58</i>
3	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
5	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51- oxa-58</i>
6	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51- oxa-58</i>
7	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
8	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
9	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
11	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
12	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51- oxa-58</i>
13	IMI- COL- TZP - CAZ- MR- CP- GM- AN	8	<i>oxa-24 - oxa-51- oxa-58</i>
14	IMI- TZP - CAZ- MR- CP- GM- AN	7	<i>oxa-24 - oxa-51- oxa-58</i>
15	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
16	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
17	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51- oxa-58</i>
18	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-51- oxa-58</i>
19	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-51- oxa-58</i>
20	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51- oxa-58</i>
21	TIG -AZT- LEVO- TOB- IMI- TZP- CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
22	IMI- COL- TZP - CAZ- MR- CP- GM- AN	8	<i>oxa-24 - oxa-51</i>
23	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-51</i>

Appendix 8. MDR strains examined in this study (continued)

Bacteria NO.	Mulidrug Resstance (MDR)	Number of antibiotics	Resistance genes
24	POL- COL- TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	13	<i>oxa-24 - oxa-51</i>
25	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51 - oxa-58</i>
26	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
27	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51 - oxa-58</i>
28	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
29	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
30	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
31	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
32	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
34	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24 - oxa-51</i>
35	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-24</i>
37	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-51</i>
38	TIG -AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	11	<i>oxa-24 - oxa-51</i>
39	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-51</i>
40	AZT- LEVO- TOB- IMI- TZP - CAZ- MR- CP- GM- AN	10	<i>oxa-51</i>

Appendix 9. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic TIG

Gene			TIG		Total	P Value
			S	R		
KPC	.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
NDM	.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
VIM	.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
SIM	.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
oxa058	.00	Count	18	10	28	0.228
		%	64.3%	35.7%	100.0%	
	1.00	Count	10	2	12	
		%	83.3%	16.7%	100.0%	
oxa051	1.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
oxa024	.00	Count	3	0	3	0.238
		%	100.0%	0.0%	100.0%	
	1.00	Count	25	12	37	
		%	67.6%	32.4%	100.0%	
recA	.00	Count	3	0	3	0.238
		%	100.0%	0.0%	100.0%	
	1.00	Count	25	12	37	
		%	67.6%	32.4%	100.0%	
bap	.00	Count	8	2	10	0.426
		%	80.0%	20.0%	100.0%	
	1.00	Count	20	10	30	
		%	66.7%	33.3%	100.0%	
csuA	.00	Count	16	8	24	0.573
		%	66.7%	33.3%	100.0%	
	1.00	Count	12	4	16	
		%	75.0%	25.0%	100.0%	
ompA	.00	Count	3	0	3	0.238
		%	100.0%	0.0%	100.0%	
	1.00	Count	25	12	37	
		%	67.6%	32.4%	100.0%	
pld	.00	Count	7	5	12	0.292
		%	58.3%	41.7%	100.0%	
	1.00	Count	21	7	28	
		%	75.0%	25.0%	100.0%	
abeD	.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
nbnG	.00	Count	28	12	40	

		%	70.0%	30.0%	100.0%	
basD	.00	Count	28	12	40	
		%	70.0%	30.0%	100.0%	
bfmR	.00	Count	14	5	19	0.629
		%	73.7%	26.3%	100.0%	
	1.00	Count	14	7	21	
		%	66.7%	33.3%	100.0%	
lipA	.00	Count	8	0	8	0.038
		%	100.0%	0.0%	100.0%	
	1.00	Count	20	12	32	
		%	62.5%	37.5%	100.0%	
surA	.00	Count	8	5	13	0.418
		%	61.5%	38.5%	100.0%	
	1.00	Count	20	7	27	
		%	74.1%	25.9%	100.0%	

Appendix 10. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic AZT

Gene			AZT		Total	P Value
			S	R		
KPC	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
NDM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
VIM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
SIM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
oxa058	.00	Count	6	22	28	0.730
		%	21.4%	78.6%	100.0%	
	1.00	Count	2	10	12	
		%	16.7%	83.3%	100.0%	
oxa051	1.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
oxa024	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
recA	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
bap	.00	Count	1	9	10	0.361
		%	10.0%	90.0%	100.0%	
	1.00	Count	7	23	30	
		%	23.3%	76.7%	100.0%	
csuA	.00	Count	3	21	24	0.146
		%	12.5%	87.5%	100.0%	
	1.00	Count	5	11	16	
		%	31.3%	68.8%	100.0%	
ompA	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
pld	.00	Count	1	11	12	0.227
		%	8.3%	91.7%	100.0%	
	1.00	Count	7	21	28	
		%	25.0%	75.0%	100.0%	
abeD	.00	Count	8	32	40	

		%	20.0%	80.0%	100.0%	
<i>pbpG</i>	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
<i>basD</i>	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
<i>bfmR</i>	.00	Count	5	14	19	0.342
		%	26.3%	73.7%	100.0%	
	1.00	Count	3	18	21	
		%	14.3%	85.7%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.114
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	24	32	
		%	25.0%	75.0%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.177
		%	7.7%	92.3%	100.0%	
	1.00	Count	7	20	27	
		%	25.9%	74.1%	100.0%	

Appendix 11. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic LEVO

Gene			LEVO		Total	P Value
			S	R		
KPC	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
NDM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
VIM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
SIM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
oxa058	.00	Count	6	22	28	0.730
		%	21.4%	78.6%	100.0%	
	1.00	Count	2	10	12	
		%	16.7%	83.3%	100.0%	
oxa051	1.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
oxa024	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
recA	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
bap	.00	Count	1	9	10	0.361
		%	10.0%	90.0%	100.0%	
	1.00	Count	7	23	30	
		%	23.3%	76.7%	100.0%	
csuA	.00	Count	3	21	24	0.146
		%	12.5%	87.5%	100.0%	
	1.00	Count	5	11	16	
		%	31.3%	68.8%	100.0%	
ompA	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
pld	.00	Count	1	11	12	0.227
		%	8.3%	91.7%	100.0%	
	1.00	Count	7	21	28	
		%	25.0%	75.0%	100.0%	
abeD	.00	Count	8	32	40	

		%	20.0%	80.0%	100.0%	
<i>pbpG</i>	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
<i>basD</i>	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
<i>bfmR</i>	.00	Count	5	14	19	0.342
		%	26.3%	73.7%	100.0%	
	1.00	Count	3	18	21	
		%	14.3%	85.7%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.114
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	24	32	
		%	25.0%	75.0%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.177
		%	7.7%	92.3%	100.0%	
	1.00	Count	7	20	27	
		%	25.9%	74.1%	100.0%	

Appendix 12. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic TOB

Gene			TOB		Total	P Value
			S	R		
KPC	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
NDM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
VIM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
SIM	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
oxa058	.00	Count	6	22	28	0.730
		%	21.4%	78.6%	100.0%	
	1.00	Count	2	10	12	
		%	16.7%	83.3%	100.0%	
oxa051	1.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
oxa024	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
recA	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
bap	.00	Count	1	9	10	0.361
		%	10.0%	90.0%	100.0%	
	1.00	Count	7	23	30	
		%	23.3%	76.7%	100.0%	
csuA	.00	Count	3	21	24	0.146
		%	12.5%	87.5%	100.0%	
	1.00	Count	5	11	16	
		%	31.3%	68.8%	100.0%	
ompA	.00	Count	0	3	3	0.368
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	29	37	
		%	21.6%	78.4%	100.0%	
pld	.00	Count	1	11	12	0.227
		%	8.3%	91.7%	100.0%	
	1.00	Count	7	21	28	
		%	25.0%	75.0%	100.0%	
abeD	.00	Count	8	32	40	

		%	20.0%	80.0%	100.0%	
<i>pbpG</i>	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
<i>basD</i>	.00	Count	8	32	40	
		%	20.0%	80.0%	100.0%	
<i>bfmR</i>	.00	Count	5	14	19	0.342
		%	26.3%	73.7%	100.0%	
	1.00	Count	3	18	21	
		%	14.3%	85.7%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.114
		%	0.0%	100.0%	100.0%	
	1.00	Count	8	24	32	
		%	25.0%	75.0%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.177
		%	7.7%	92.3%	100.0%	
	1.00	Count	7	20	27	
		%	25.9%	74.1%	100.0%	

Appendix 13. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic IMP

Gene			IMP		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
nbnG	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
basD	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
bfmR	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
lipA	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
surA	.00	Count	1	12	13	0.523
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	

Appendix 14. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic POL

Gene			POL		Total	P Value
			S	R		
KPC	.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
NDM	.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
VIM	.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
SIM	.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
oxa058	.00	Count	27	1	28	0.507
		%	96.4%	3.6%	100.0%	
	1.00	Count	12	0	12	
		%	100.0%	0.0%	100.0%	
oxa051	1.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
oxa024	.00	Count	3	0	3	0.773
		%	100.0%	0.0%	100.0%	
	1.00	Count	36	1	37	
		%	97.3%	2.7%	100.0%	
recA	.00	Count	3	0	3	0.773
		%	100.0%	0.0%	100.0%	
	1.00	Count	36	1	37	
		%	97.3%	2.7%	100.0%	
bap	.00	Count	10	0	10	0.559
		%	100.0%	0.0%	100.0%	
	1.00	Count	29	1	30	
		%	96.7%	3.3%	100.0%	
csuA	.00	Count	23	1	24	0.408
		%	95.8%	4.2%	100.0%	
	1.00	Count	16	0	16	
		%	100.0%	0.0%	100.0%	
ompA	.00	Count	3	0	3	0.773
		%	100.0%	0.0%	100.0%	
	1.00	Count	36	1	37	
		%	97.3%	2.7%	100.0%	
pld	.00	Count	12	0	12	0.507
		%	100.0%	0.0%	100.0%	
	1.00	Count	27	1	28	
		%	96.4%	3.6%	100.0%	
abeD	.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
nbnG	.00	Count	39	1	40	

		%	97.5%	2.5%	100.0%	
basD	.00	Count	39	1	40	
		%	97.5%	2.5%	100.0%	
bfmR	.00	Count	19	0	19	0.335
		%	100.0%	0.0%	100.0%	
	1.00	Count	20	1	21	
		%	95.2%	4.8%	100.0%	
lipA	.00	Count	8	0	8	0.613
		%	100.0%	0.0%	100.0%	
	1.00	Count	31	1	32	
		%	96.9%	3.1%	100.0%	
surA	.00	Count	13	0	13	0.482
		%	100.0%	0.0%	100.0%	
	1.00	Count	26	1	27	
		%	96.3%	3.7%	100.0%	

Appendix 15. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic COL

Gene			COL		Total	P Value
			S	R		
KPC	.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
NDM	.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
VIM	.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
SIM	.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
oxa058	.00	Count	27	1	28	0.527
		%	96.4%	3.6%	100.0%	
	1.00	Count	11	1	12	
		%	91.7%	8.3%	100.0%	
oxa051	1.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
oxa024	.00	Count	3	0	3	0.679
		%	100.0%	0.0%	100.0%	
	1.00	Count	35	2	37	
		%	94.6%	5.4%	100.0%	
recA	.00	Count	3	0	3	0.679
		%	100.0%	0.0%	100.0%	
	1.00	Count	35	2	37	
		%	94.6%	5.4%	100.0%	
bap	.00	Count	10	0	10	0.402
		%	100.0%	0.0%	100.0%	
	1.00	Count	28	2	30	
		%	93.3%	6.7%	100.0%	
csuA	.00	Count	23	1	24	0.767
		%	95.8%	4.2%	100.0%	
	1.00	Count	15	1	16	
		%	93.8%	6.3%	100.0%	
ompA	.00	Count	3	0	3	0.679
		%	100.0%	0.0%	100.0%	
	1.00	Count	35	2	37	
		%	94.6%	5.4%	100.0%	
pld	.00	Count	12	0	12	0.342
		%	100.0%	0.0%	100.0%	
	1.00	Count	26	2	28	
		%	92.9%	7.1%	100.0%	
abeD	.00	Count	38	2	40	

		%	95.0%	5.0%	100.0%	
<i>pbpG</i>	.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
<i>basD</i>	.00	Count	38	2	40	
		%	95.0%	5.0%	100.0%	
<i>bfmR</i>	.00	Count	18	1	19	0.942
		%	94.7%	5.3%	100.0%	
	1.00	Count	20	1	21	
		%	95.2%	4.8%	100.0%	
<i>lipA</i>	.00	Count	8	0	8	0.468
		%	100.0%	0.0%	100.0%	
	1.00	Count	30	2	32	
		%	93.8%	6.3%	100.0%	
<i>surA</i>	.00	Count	13	0	13	0.314
		%	100.0%	0.0%	100.0%	
	1.00	Count	25	2	27	
		%	92.6%	7.4%	100.0%	

Appendix 16. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic PTZ

Gene			PTZ		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
<i>pbpG</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>basD</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>bfmR</i>	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.523
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	

Appendix 17. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic CAZ

Gene			CAZ		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
<i>pbpG</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>basD</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>bfmR</i>	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.532
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	

Appendix 18. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic MEM

Gene			MEM		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
<i>pbpG</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>basD</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>bfmR</i>	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.523
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	

Appendix 19. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic CIP

Gene			CIP		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
<i>pbpG</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>basD</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>bfmR</i>	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.523
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	

Appendix 20. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic

Gene			GM		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
<i>pbpG</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>basD</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>bfmR</i>	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.523
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	

Appendix 21. The relationship between the presence or absence of the gene and the status of resistance/sensitivity to the antibiotic

Gene			AMK		Total	P Value
			S	R		
KPC	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
NDM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
VIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
SIM	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa058	.00	Count	5	23	28	0.118
		%	17.9%	82.1%	100.0%	
	1.00	Count	0	12	12	
		%	0.0%	100.0%	100.0%	
oxa051	1.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
oxa024	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
recA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
bap	.00	Count	1	9	10	0.783
		%	10.0%	90.0%	100.0%	
	1.00	Count	4	26	30	
		%	13.3%	86.7%	100.0%	
csuA	.00	Count	2	22	24	0.329
		%	8.3%	91.7%	100.0%	
	1.00	Count	3	13	16	
		%	18.8%	81.3%	100.0%	
ompA	.00	Count	0	3	3	0.496
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	32	37	
		%	13.5%	86.5%	100.0%	
pld	.00	Count	1	11	12	0.602
		%	8.3%	91.7%	100.0%	
	1.00	Count	4	24	28	
		%	14.3%	85.7%	100.0%	
abeD	.00	Count	5	35	40	

		%	12.5%	87.5%	100.0%	
<i>pbpG</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>basD</i>	.00	Count	5	35	40	
		%	12.5%	87.5%	100.0%	
<i>bfmR</i>	.00	Count	3	16	19	0.550
		%	15.8%	84.2%	100.0%	
	1.00	Count	2	19	21	
		%	9.5%	90.5%	100.0%	
<i>lipA</i>	.00	Count	0	8	8	0.232
		%	0.0%	100.0%	100.0%	
	1.00	Count	5	27	32	
		%	15.6%	84.4%	100.0%	
<i>surA</i>	.00	Count	1	12	13	0.523
		%	7.7%	92.3%	100.0%	
	1.00	Count	4	23	27	
		%	14.8%	85.2%	100.0%	