

LIST OF FIGURES

Figure No.	Caption	Page No.
1.	Carbapenem Resistance in GNB on First Testing	77
2.	Difference in results of carbapenem-resistance testing when using carbapenem discs from different manufacturer	78
3.	Confirmed carbapenem resistance in studied GNB isolates	79
4.	Carbapenem resistance in Enterobacteriaceae, <i>Acinetobacter</i> & <i>P. aeruginosa</i>	80
5.	Species distribution of CRE	81
6.	Types of specimens positive for CRE	82
7.	Ward-wise source of CRE	83
8.	Antibiotic sensitivity profile of CRE	84
9.	Imipenem MICs in Carbapenem-resistant Enterobacteriaceae	85
10.	Meropenem MICs in Carbapenem-resistant Enterobacteriaceae	86
11.	Ertapenem MICs in Carbapenem-resistant Enterobacteriaceae	86
12.	Specimen types positive for carbapenem-resistant ACBC	87
13.	Ward-wise source of carbapenem-resistant ACBC	88
14.	Antibiotic sensitivity profile of carbapenem-resistant ACBC	89
15.	Imipenem MIC in Carbapenem-resistant ACBC	90
16.	Meropenem MIC in Carbapenem-resistant ACBC	90
17.	Specimen types positive for carbapenem-resistant <i>P. aeruginosa</i>	91
18.	Ward-wise distribution of carbapenem-resistant <i>P. aeruginosa</i>	92
19.	Antibiotic sensitivity of carbapenem-resistant <i>P. aeruginosa</i>	93
20.	Meropenem MIC in Carbapenem-resistant <i>P. aeruginosa</i>	94
21.	Results of E-test with the quality-control strains	95
22.	Results of E-test with test strains	95
23.	Results of Modified Hodge test with the control strain	96
24.	Results of Modified Hodge test with the test strains	97

25. Modified Hodge Test Results	97
26. Results of KPC/MBL detection kit with the control strains	98
27. Results of KPC/MBL detection kit with the test strains	99
28. Distribution of KPC and MBL	99
29. Results of Rapid CARB Blue Test with control strains	100
30. Results of Rapid CARB Blue Test with test strains	101
31. Distribution of results by Rapid CARB Blue Kit	101
32. Results of Neo-Rapid CARB Test with control strains	102
33. Results of Neo-Rapid CARB Test with test strains	103
34. Distribution of results by Neo Rapid CARB Kit	103
35. Enhancement of sensitivity of carbapenemase detection in Enterobacteriaceae caused by enzyme induction in bacteria growing adjacent to imipenem disc	105
36. No induction of carbapenemase in Acinetobacter growing adjacent to imipenem disc, with no enhancement of test sensitivity for carbapenemase detection	105
37. Inhibition zones on carbapenem-inactivation testing	106
38. Distribution of results on CIM	107
39. Gel showing primer dimer on multiplexing	108
40. Gel showing single band	109
41. Gel showing the presence of amplicons of the blaNDM-1 gene	111
42. Gel showing the presence of amplicons of the blaVIM gene	112
43. Gel showing the presence of amplicons of the blaOXA-48 gene	113
44. Gel showing the presence of amplicon of blaKPC gene from a quality- control strain, along with kit control	114
45. Demonstration of Efflux Pump Activity by the Ethidium bromide Concentration Method	115