

POST GRADUATE DEPARTMENT OF MICROBIOLOGY  
GOVERNMENT MEDICAL COLLEGE SRINAGAR  
10-Karangar Srinagar Kashmir, 190010.

Principal/Dean  
Govt. Medical College  
Srinagar.

NO:-HOD/Micro/2023/ 2088-89

Date:- 2/10/2023

Subject:- Antibigram for the period , January 2023to June 2023

Sir,

Kindly find herewith enclosed the Antibigram for the period  
January 2023 to June 2023 for your information & necessary action.

Yours faithfully

  
Head of the Department.

Encl:- 10 no's

Copy to:-

1. Incharge IT section GMC. Sgr for information & the  
remarks that the same should be uploaded in the  
College website.

# ANTIBIOGRAM FOR PUS SAMPLES JANUARY 2023 – JUNE 2023

Total no of samples	4378	
Total positives	1921	43.9%
Sterile samples	2355	53.7%
Contaminated samples	108	2.4%

## BREAKDOWN OF POSITIVE SAMPLES

GRAM POSITIVE ORGANISMS	508 (26.44%)
GRAM NEGATIVE ORGANISMS	1413(73.55%)

## GRAM POSITIVE COCCI

Staphylococcus aureus (95%) (479/508)	TYPE	NUMBER	PERCENTAGE
	MRSA	282	59
	MSSA	197	41
Enterococcus spp (5%) (29/508)			

## GRAM NEGATIVE BACILLI -1413

ORGANISM	POSITIVE SAMPLES	PERCENTAGE	TOTAL GNB
Escherichia coli	424	30%	1413
Klebsiella spp	343	24%	1413
Acinetobacter spp	280	20%	1413
Pseudomonas spp	237	17%	1413
Citrobacter	56	4%	1413

*h. m. m.*

Others (Enterobacter, Proteus, Burkholderia, Stenotrophomonas)	73	5%	1413

*Escherichia coli* sensitivity pattern

Tigecycline	97%
Levofloxacin	84%
Amikacin	75%
Cefoperazone-sulbactam	68%
Piperacillin-tazobactam	58%
Imipinem	45%
Ceftazidime-tazobactam	32%
Ceftriaxone	22%
Ampicillin-sulbactam	07%

*Klebsiella spp* sensitivity pattern

Tigecycline	94%
Levofloxacin	55%
Cefoperazone-sulbactam	54%
Piperacillin-tazobactam	31%
Ceftriaxone	28%
Imipinem	26%
Ceftazidime-tazobactam	28%
Amikacin	22%
Ampicillin-sulbactam	03%

*h. new*

*Acinetobacter spp* sensitivity pattern

Tigecycline	93%
Cefoperazone-sulbactam	71%
Levofloxacin	56%
Amikacin	37%
Imipenem	30%
Piperacillin-tazobactam	28%
Ceftriaxone	08%
Ceftazidime-tazobactam	05%

*Pseudomonas spp* sensitivity pattern

Cefipime	83%
Levofloxacin	77%
Piperacillin-tazobactam	72%
Ceftazidime-tazobactam	57%
Tobramycin	34%
Aztreonam	22%
Imipenem	18%

MRSA sensitivity pattern

Drug	sensitivity
Linezolid	100 %
Tetracycline	86%
Levofloxacin	81%
Erythromycin	27%
Clindamycin	24%



MSSA sensitivity pattern	
Drug	Sensitivity
Linezolid	100 %
Tetracycline	90%
Levofloxacin	88%
Erythromycin	64%
Clindamycin	69%

\*Vancomycin is the drug of choice for MRSA but CLSI recommends testing MIC for the drug which is not done in our lab.

Enterococcus spp sensitivity pattern	
Drug	Sensitivity
Linezolid	100%
Vancomycin	88 %
Tetracycline	50%
Levofloxacin	66%
Erythromycin	64%
High Level Gentamycin	55%
Ampicillin	28%
Penicillin	21%

*h. m. a. s.*

Antibiogram of Blood (Jan2023-June2023)		
Total Samples	3934	100%
Positive Specimens	827	21%
Negative Specimens	3107	79%
Total Gram Positive	459	55.5%
Total Gram Negative	313	37.8%
<i>Staphylococcus aureus</i>	174	37.9%
Coagulase Negative Staphylococci	201	43.79%
<i>Pseudomonas species</i>	108	34.5%
<i>Moraxella species</i>	31	9.9%
<i>Enterococcus species</i>	84	18.3%
<i>Burkholderia species</i>	33	10.54%
<i>Escherichia coli</i>	32	10.2%
<i>Proteus</i>	7	2.23%
<i>Acinetobacter species</i>	96	30.67%
<i>Citrobacter species</i>	6	1.91%
<i>Candida species</i>	55	6.6%

Note: An unexpectedly high yield of positive blood cultures has been primarily contributed by the isolation of large numbers of Coagulase negative staphylococcal species which are usually regarded as contaminants, unless specified otherwise. This in-turn reflects poor disinfection practices of venipuncture sites while drawing blood for cultures.

\* All MRSA and MR CONS are deemed to be resistant to all beta lactam drugs including Penicillins, Cephalosporins, (except Ceftaroline and Ceftbiprole), Monobactams and Carbapenems.



## Percentage Sensitivity of Gram-Positive organisms

Organism	Clindamycin	Gentamicin	High Dose Gentamicin	Ciprofloxacin	Erythromycin	Linezolid	Tetracycline	Ampicillin	Penicillin	Vancomycin	Amikacin	Levofloxacin
Methicillin Resistant <i>Staphylococcus aureus</i> (55.17%)	15.6%	21.87%	-	6.25%	21.87%	100%	59.37%				37.5%	31.25%
Methicillin Sensitive <i>Staphylococcus aureus</i> (44.8%)	73%	38.4%	-	7.69%	38.4%	100%	61.5%	-	-		42.3%	19.23%
Methicillin Resistant <i>Staphylococcus aureus</i> (52%)	28.8%	15.3%	-	5.76%	17.3%	100%	50%	-	-		44.23%	17.3%
Methicillin Sensitive <i>Staphylococcus aureus</i> (48%)	44.4%	28.8%	-	6.6%	42.2%	100%	60%	-	-		35.5%	40%
<i>Enterococcus faecalis</i> (15.1%)	-	-	25%	7.14%	-	99%	28.57%	21.42%	7.14%	92%	7.14%	25%

Note: As Vancomycin is to be tested by MIC only, we have excluded vancomycin

*Handwritten signature*

## Percentage Sensitivity of Gram-Negative Organisms

Organisms	Ceftriaxone	Ceftazidime+ Tazobactam	Cefepime	Ampicillin + Sulbactam	Piperacillin + Tazobactam	Ciprofloxacin	Gentamicin	Amikacin	Imipenem	Tigecycline	Levofloxacin	Cefoperazone + Sulbactam	Cotrimoxazole	Tobramycin
<i>Escherichia coli</i>	12.5%	-	-	53.1%	59.3%	28.1%	21.8%	46.8%	65.6%	78.12%	25%	71.8%	18.7%	-
<i>Klebsiella species</i>	16.1%	9.6%	35.4%	-	54.8%	-	-	19.3%	12.9%	61.2%	19.3%	64.5%	16.1%	-
<i>Pseudomonas species</i>	-	27.7%	55.5%	-	83.3%	19.4%	13.8%	27.7%	11.1%	-	44.4%	69.4%	-	36.1%
<i>Acinetobacter species</i>	12.5%	35.4%	10.41%	-	45.83%	12.5%	21.87%	28.12%	43.75%	60.41%	12.5%	80.2%	-	-
<i>Burkholderia species</i>	-	22.72%	-	-	-	18.1%	-	-	-	18.1%	45.4%	54.5	-	-

Notes: As Colistin and other Polymyxins are to be tested by MIC only, we have excluded Polymyxins

*Handwritten signature*



Antibiogram of Urine (Jan 2023- June 2023)

TOTAL SAMPLES	3278
TOTAL POSITIVES	806
GRAM POSITIVE GROWTHS	293
GRAM NEGATIVE GROWTHS	431
YEAST	89
NO GROWTHS	2392

Percentage of Gram Negative organisms:

Escherichia coli	64.5%
Klebsiella spp.	16%
Pseudomonas spp.	15%
Acinetobacter spp.	1.8%
Proteus spp.	1.1%
Citrobacter spp.	1.3%
Enterobacter spp.	0.2%

Percentage of Gram Positive organisms:

Enterococcus spp.	78.4%
Staphylococcus aureus	21.5%
Methicillin resistant Staphylococcus aureus	49.2%
Methicillin sensitive Staphylococcus aureus	50.7%

*h. n. ali*

# Percentage Sensitivity

**GNB**

	No. of Isolates	Fosfomycin	Piperacillin + Tazobactam	Cefoperazone + Sulbactam	Ceftriaxone	Amikacin	Levofloxacin	Cefepime	Cefazolin	Ciprofloxacin	Imipenem	Aztreonam	Tobramycin
<b>Escherichia coli</b>	278(65%)	83	74	77	27	78	70	15	12.5	30	27	-	-
<b>Klebsiella spp.</b>	69(16%)	38	58	64	19	33	65	-	-	32	23	-	-
<b>Pseudomonas spp.</b>	65(15%)	-	85	68	-	32	31	72	-	70	6	31	9
<b>Acinetobacter spp.</b>	8(1.8%)	-	88	63	62.5	75	50	50	-	52	-	-	-
<b>Proteus spp.</b>	5(1.16%)	80	100	100	40	100	-	20	-	-	20	-	-
<b>Citrobacter spp.</b>	6(1.3%)	50	83	83	50	50	83	-	-	-	33	-	-
<b>Enterobacter spp.</b>	1(0.2%)	100	100	100	-	100	-	-	-	-	-	-	-

**Note:** The drugs nitrofurantoin, norfloxacin are not available in the department, so these could not be included in the antibiogram.

*Handwritten signature*

# Percentage Sensitivity



Percentage of Isolates

	Penicillin	Vancomycin	Ciprofloxacin	Levofloxacin	Linezolid	Tetracycline	Fosfomycin	Amikacin	Ampicillin	Ofloxacin
ENTEROCOCCUS spp.	78.4%	35.6	84	19	61	100	28	85	17	1.3
STAPHYLOCOCCUS AUREUS	21.5%									
MRSA	49.2%	-	-	19.3	74	100	68	-	77.4	-
MSSA	50.7%	-	-	40.6	66	100	69	-	91	-

**NOTE:**All MRSA are deemed to be resistant to all beta lactam drugs including Penicillins, Cephalosporins, (except Cefotetan and Ceftbiprole), Monobactams and Carbapenems.

The CLSI recommends MIC method for determining AST of vancomycin which is not done in the department.

*Handwritten signature*