

Assignment: Detection of Vancomycin-resistant Enterococci (VRE)

Participant Name:



Assignment

- Write your **full name** on Title slide (Slide no 1)
- Please answer the questions related to **FOUR** clinical and laboratory cases described below.
- Write answer for each question on **separate slides**
- **Deadline: Thursday, 10th April 2025**
- **Email assignment to: fakh@food.dtu.dk**

Clinical case 1

- A 36 year-old male patient with myeloid leukemia presents in the ER with severe symptoms of pneumonia. He is admitted in the ICU. The sputum sample yields *E. faecium*.
- What AB treatment would you recommend?
- Would you consider recommending Daptomycin?
- Why? Why not?

Case 1

- What AB treatment would you recommend?

Case 1

- Would you consider recommending Daptomycin?

Case 1

- Why? Why not?

Case 2

antibiotic	MIC (mg/L)	CLSI	EUCAST
Ampicillin	> 16	R	R
Gentamicin	> 64	R	R
Gentamicin 120	> 500	R	R
Erythromycin	> 16	R	NA
Ciprofloxacin	> 16	R	NA
Moxifloxacin	> 8	R	NA
Linezolid	2	S	S
Tetracycline	8	I	NA
Teicoplanin	> 64	R	R
Vancomycin	> 64	R	R
Daptomycin	1	S	NA

- What is the type of resistance to vancomycin?

Case 2

- What is the type of resistance to vancomycin?

Case 3

- E. gallinarum* was isolated from a rectal swab with the following AB pattern:

antibiotic	MIC (mg/L)	CLSI	EUCAST
Ampicillin	1	S	S
Gentamicin	2	S	S
Gentamicin 120	< 128	S	S
Erythromycin	0.5	S	NA
Ciprofloxacin	1	S	NA
Moxifloxacin	0.5	S	NA
Linezolid	2	S	S
Tetracycline	1	S	NA
Teicoplanin	< 0.5	S	S
Vancomycin	8	I	R
Daptomycin	1	S	NA

What is the type of resistance to vancomycin?

Case 3

- What is the type of resistance to vancomycin?

Case 4

- An *Enterococcus* isolate is vancomycin-resistant (MIC = 32 µg/mL), L-arabinose (–), and non-motile.
- What is the MOST likely species?
- Why?
- What additional test is MOST useful to confirm Species?
- Why is PCR for *vanA/vanB* recommended after biochemical tests?

Case 4

- What is the **MOST** likely species?

Case 4

- Why?

Case 4

- **What additional test is MOST useful to confirm Species?**

Case 4

- Why is PCR for *vanA/vanB* recommended after biochemical tests?