

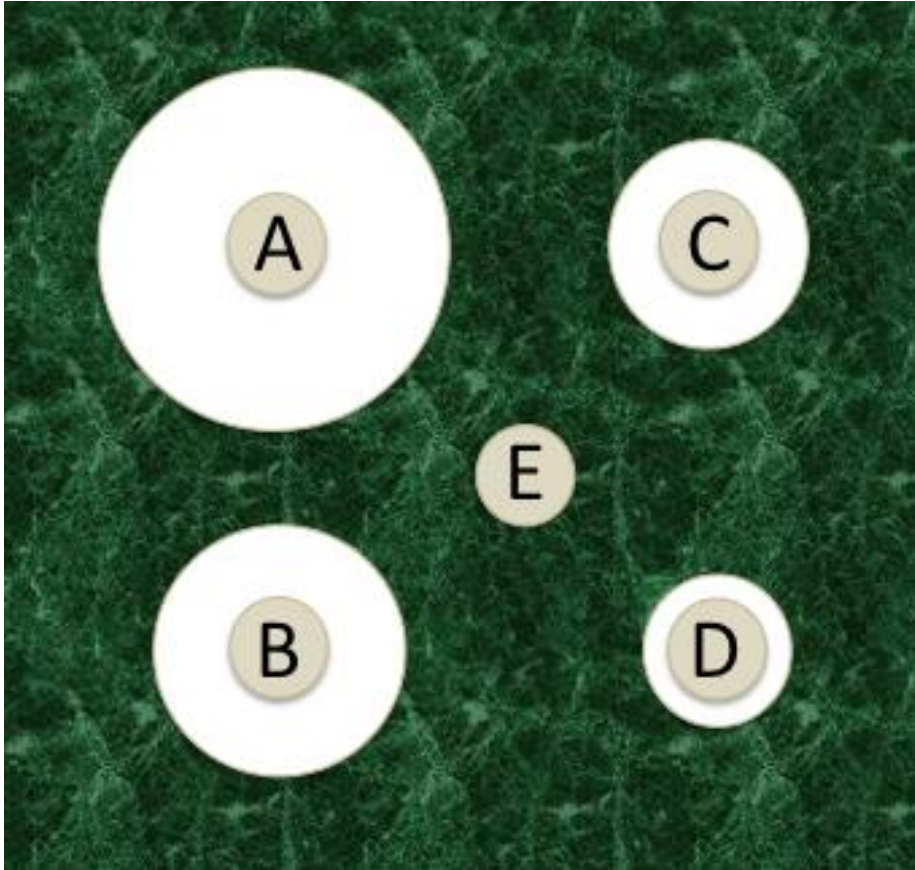
**M U N I**  
**P H A R M**

# **Chemotherapy of Infectious Diseases I**

## **– Seminar**

Pharmacology II  
Autumn 2023

# Task No. 1



<https://tmedweb.tulane.edu/pharmwiki/quizzes/abx1.htm>

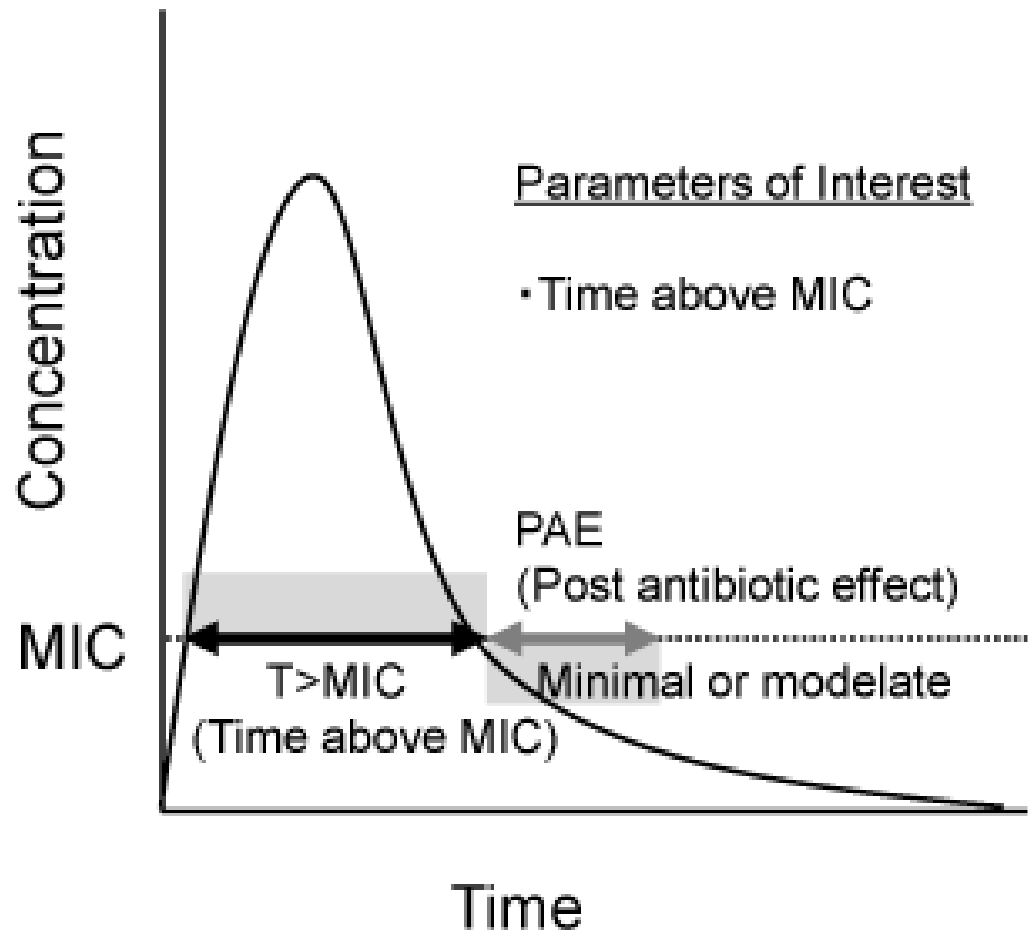
- Bacterial sensitivity to antibiotics evaluated by the disc-diffusion test
- To which antibiotic is this bacterial culture most sensitive?

# Task No. 2

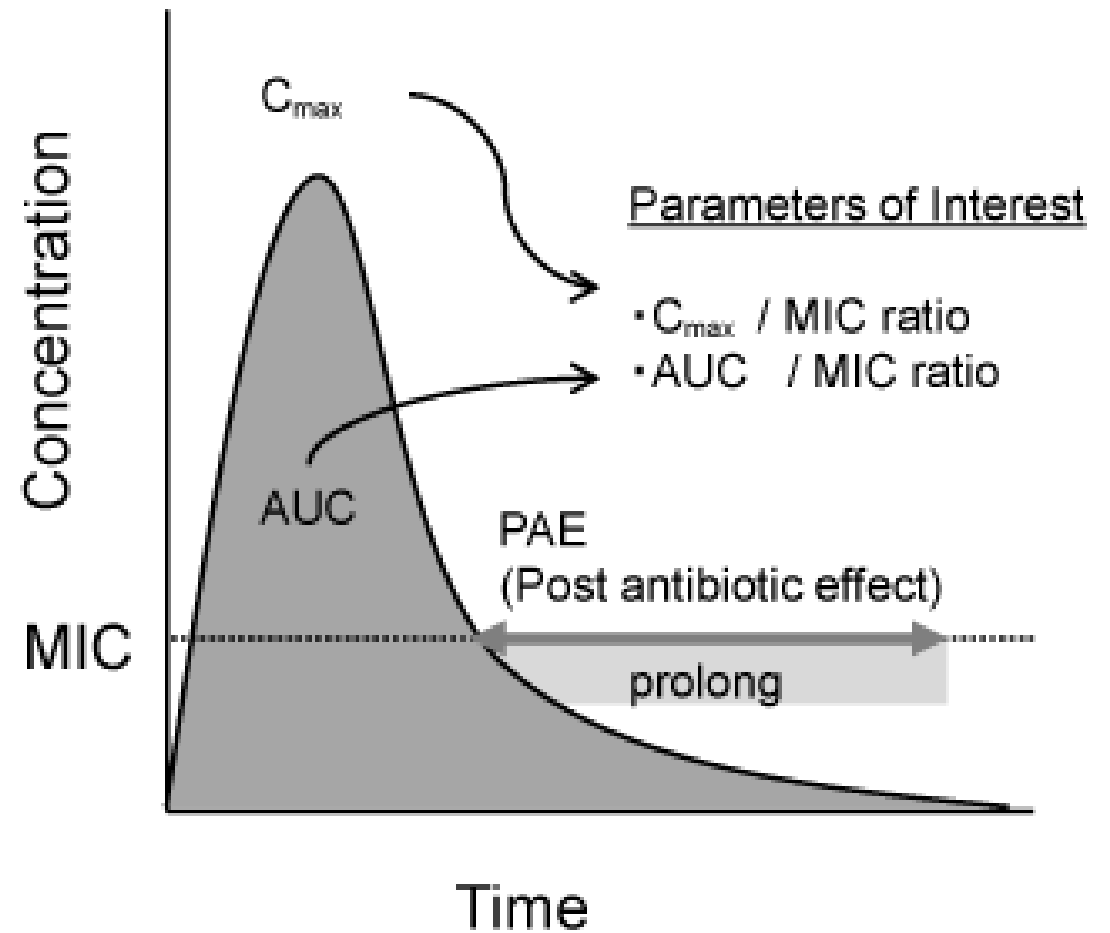
*Explain the difference and give examples of groups of antibiotics:*

- Concentration-Dependent vs. Time-Dependent Killing pattern

## Time-dependent antibiotics



## Concentration-dependent antibiotics



# Task No. 3

*Explain the difference:*

➤ Primary vs. Secondary Antibiotic Resistance

# Task No. 4: Side Effects of ATB

**Name groups of ATB with these typical side effects:**

- Nephrotoxicity
- Ototoxicity
- Neurotoxicity
- Allergic reaction

# Task No. 4: Side Effects of ATB

**Name groups of ATB with these typical side effects:**

- Haematotoxicity
- ↑ Photosensitivity
- Deposition in growing bones and teeth

# Task No. 5: ATB in Pregnancy

**Characterize the use of ATB during pregnancy:**

➤ **w/o restriction vs. CI during I./III. trimester/whole pregnancy**

- Tetracyclines
- Fluoroquinolones
- Penicillins
- Cephalosporins
- Macrolides
- Vankomycin
- Trimetoprim
- Sulfonamides
- Nitrofurantoin



# Decide whether the statements are true or false

- Cephalosporins are effective only in G+ infections **T/F**
- Aztreonam is the best option for treatment of G+ infections **T/F**
- Aminoglycosides could act synergistically in combination with PNC **T/F**
- Typical adverse effect of penicillins is disulfiram reaction **T/F**

# Question

- How resistance induced by antibiotic inactivation by beta-lactamases can be overcome?

# Question

- Patient has an infection caused by the Gram-negative bacteria *Pseudomonas aeruginosa*. Which of the following would be the best option for treatment?
- a. Ampicillin
  - b. Cephalexin
  - c. PhenoxymethylPNC
  - d. Piperacillin + Tazobactam

# Question

Which type of beta-lactam drugs remain effective in treating infections caused by gram-negative bacteria that produce Extended-Spectrum Beta-Lactamases (ESBLs)?

- a. Extended-spectrum penicillins
- b. First generation cephalosporins
- c. Carbapenems

# Thank you for your attention

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