



UNIVERSIDAD AUTÓNOMA DE SAN LUIS POTOSÍ

FACULTAD DE CIENCIAS QUÍMICAS

Laboratorio de Microbiología

Antibiotics for *Proteus vulgaris*

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Group: 8:00-9:00



Objectives:



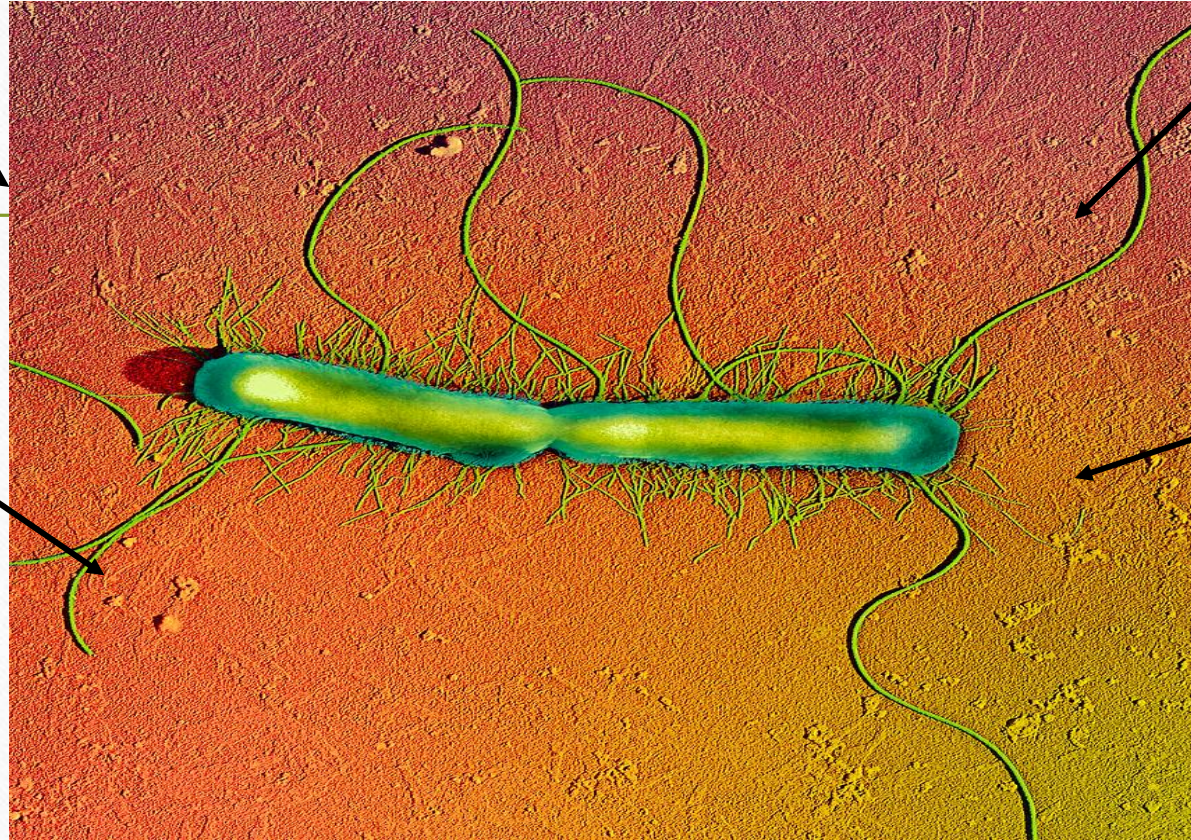
- The student will know the different mechanisms of action of commonly used antimicrobials used in the treatment of infectious diseases.
- That the student is able to apply different sowing techniques to inoculate the solid and liquid media in antimicrobial susceptibility tests.
- It will analyze and interpret the results of the susceptibility tests by the Kirby-Bauer method, CMI and CMB attached to the CLSI.

Proteus vulgaris

- *Proteus vulgaris* is a Gram-negative bacterium of the facultative anaerobic enterobacteria family in the form of a bacillus that lives in the intestinal tract of several animals. It can also be isolated from soil, water and fecal material.
- They do not have spores, they are very mobile, they do not have capsules.
- It is an opportunistic pathogen in humans, causing urinary infections, wounds and liver abscesses.

Indol:
Positive

It is presented in:
Ulcers
Infected
burns
Wounds



Ferment glucose

Citrate:
Negative

Clinical case

- A 31-year-old woman with several recurrent urinary tract infections (UTIs), classified as uncomplicated cystitis because she was a premenopausal woman with no pathology
- Or urinary tract anomalies. In the episodes of the last year he was treated with ciprofloxacin in one and cotrimoxazole in the other.
- Go back to your family doctor for dysuria, and frequency of 2 days of evolution. The test strip inserted into a urine sample in the office shows the presence of leukocytes and nitrites. The doctor requests a urine culture.

Methodology

- Uroculture
- Biochemical tests are performed
- Microbial susceptibility with different antibiotics
- Blood chemistry
- Results report

Medio de cultivo

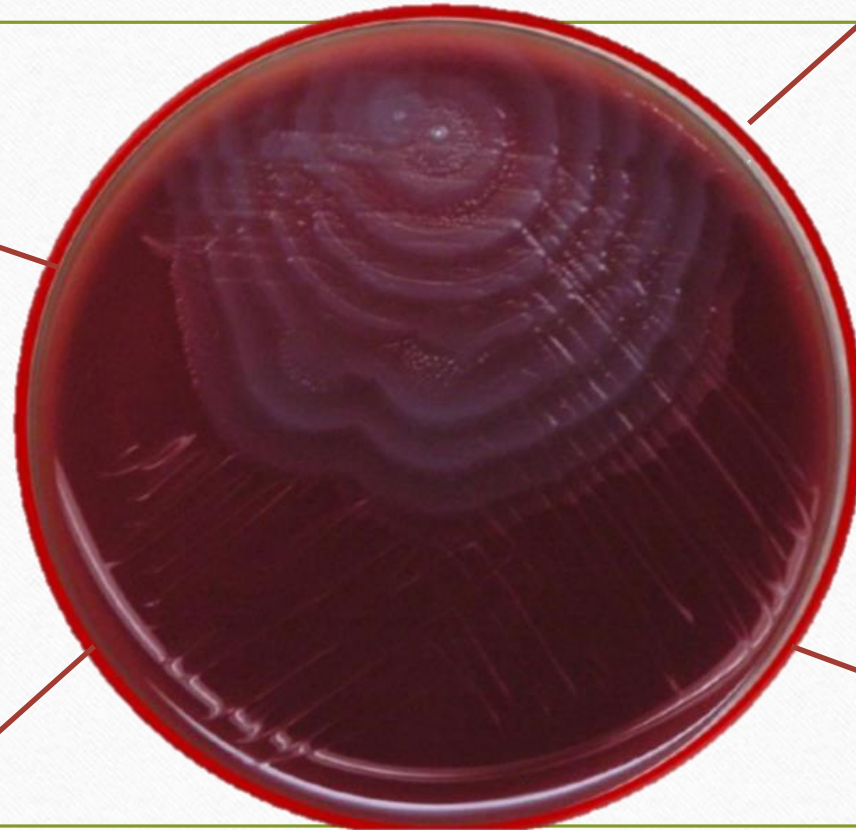
Temperature:
35°C-37°C

Glucose fermenting
microorganism

Incubation Time:
From 5 to 7 days.

Media:
Blood Agar
Chocolate Agar

Sensitivity to:
ciprofloxacin,
Ceftazidime, sulbactam,
Piperacil

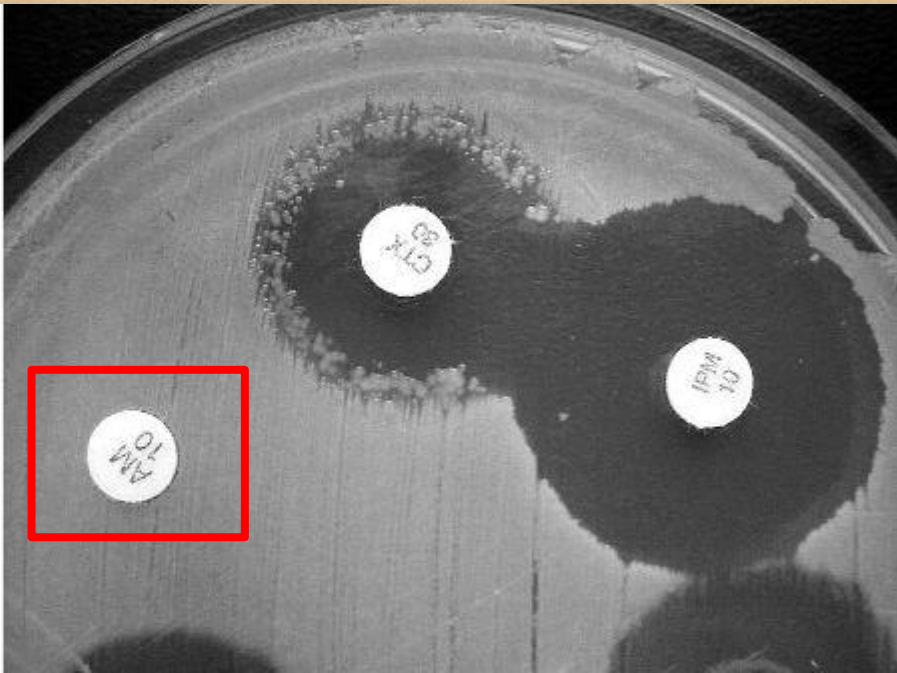




Biochemical Tests

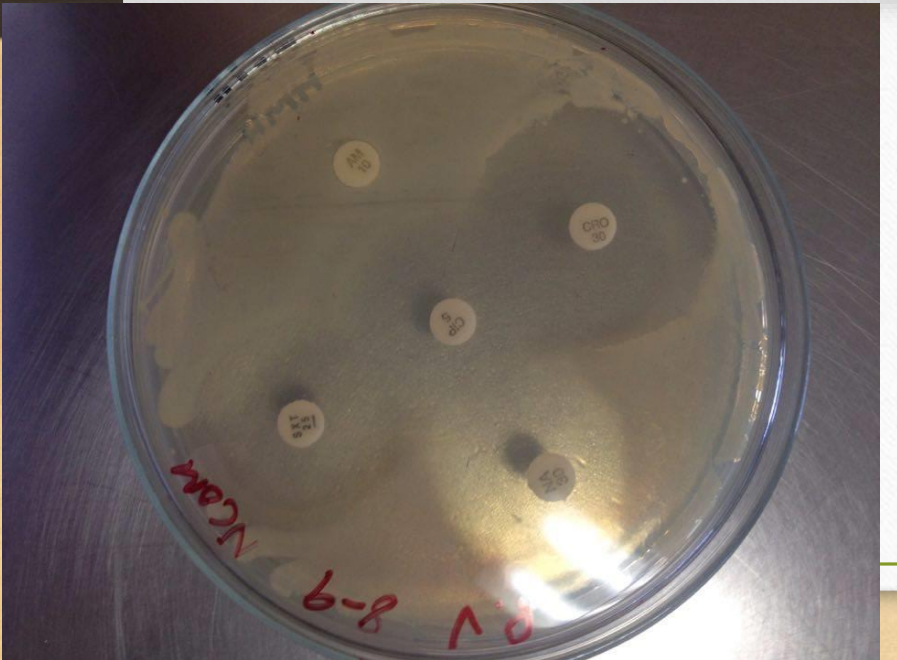
Proteus vulgaris

CIT	TSI	LIA	URE	RM	VP	MAL	IND	MOT	GAS:+
-	K/A	R/A	+	+	-	-	+	+	H ₂ S: +



Clinical case

Sensidiscos:
Ipm: imipenem
AM: Ampicillin



Laboratory Testing

Sensidiscos:
AM: Ampicillin
CIP: ciprofloxacin
SXT: trimethoprim sulfamethoxazole

Conclusions:

- The objective of the antibiogram is to follow the evolution of bacterial resistance. Thanks to this epidemiological monitoring, at the scale of a service, a health center, a region or a country.
- QFB should know how to give a good interpretation of both the biochemical tests and the antibiogram to give an effective treatment to the patient.

Bibliography:

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