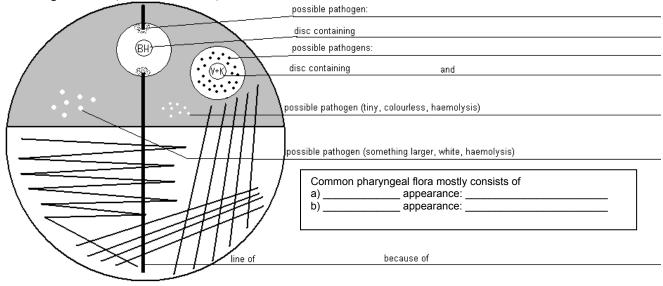
# P13 Clinical microbiology II

**Task 1: Search for respiratory pathogens in practical microbiology** With help of your teacher and the slideshow, describe following picture. Use the knowledge from this picture in following two tasks (Task 2 and Task 3)



# Task 2: Case A

For this casuistic, documented by a the order form, try to examine corresponding sample (sputum), to find a pathogen and to make a conclusion and interpretation. Step by step, fill in the individual fields in the "screen of laboratory information system" .

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Variabilní symbol	38.5 °C, heavy diabetes	Datum	Kód Poč.
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Patient: Linda Green *1932 Dg.: Pneumonia						
Specimen: Sputum Ordered by: Dr. Microbe Terrible						
Bacterium A: description	Conclu	usion:	Int	erpretation	Epithelial cells: WBCs:	
Bacterium B: description	Conclu	usion:	Int	erpretation	Bacteria (describe):	
Bacterium C: description	Cata- Iase	10 % NaCl	Hyaluronidase		Conclusion:	Interpretation
Antibiotic susceptibility test (bacterium	Ċ)		•	Final conc for treatme	lusion and reco nt:	mmendment

### a) Microscopy of sputum

Look at the smear prepared of your specimen. Try to find individual objects (bacteria, host cells). Fill in the field "Microscopy":

+++ = more than 10 in the observation area

++ = less than 10 in the observation area

+ = only rare (one or less per an observation area)

0 = none

### b) Description of bacteria

On blood agar, describe size, colour and haemolytical properties of given bacteria. Do not describe other characteristics. Take into account, that there was no growth visible on Endo agar. Bacteria A and B should be bacteria considered to be parts of normal flora. Bacterium C will be a pathogenic bacterium, that will be more tested in parts c) and d)

#### c) More tests

Fill in the results of catalase test, hyaluronidase test and growth on blood agar with 10 % NaCl for Bacterium C.

### d) Antibiotic susceptibility

Fill in the antibiotic susceptibility test for Bacterium C. Write down allways name of antibiotic and "S" or "R" (susceptible or resistant). Reference zones are written on your table.

#### e) Final conclusion

Try to formulate several words for general practicioner. Especially try to find out (with help of your teacher) what antibiotics among susceptible ones would be the best antibiotic of choice.

# Task 3: Case B

Also for this casuistic, documented by a the order form, try to examine corresponding sample (throat swab), to find a pathogen and to make a conclusion and interpretation. Step by step, fill in the individual fields in the "screen of laboratory information system". The way of doing it is like in previous task.

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Patient: Martin I	Blue	*1	99	1 Dg.	:Accute t	onsilitis	, ,
Specimen:Throat	t swab Or	dere	d by	y: Dr. ľ	Microbe T	errible	
Bacterium A: description	Conclu	ision:	Inter	pretation			
Bacterium B: description	Conclu	ision:	Inter	pretation			
Bacterium C: description	Cata- Iase	Bile- -aesc.	PYR	CAMP	Conclusion:	Interpretation	'n
Antibiotic susceptibility test (bacterium C) Final conclusion and recommendment							
			fo	or treatmer	nt:		

# Task 4: Case C

Only for General Medicine students

## Task 5: Case D

In case of cystitis, there is one difference: the urine is examined (semi)quantitativelly.

Before solving the problem, try to fill in the following table (for finding of one only species).

Number of	Number of bacteria in	Number of bacteria	Interpretation				
colonies on agar	one microliter (µl)	in one mililiter (ml)					
<10							
10-100							
>100							
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Results of Enterotest 16: E. coli, PP 99,9 %

Patient: Carolina Red *1952 Dg.: accute cystitis					
Specimen:normal urine Ordered by: Dr. Microbe Terrible					
Growth on Blood agar:	Growth on Endo agar:		Conclusion:	Interpretation	
Quantity:	Enterotest 16 result:				
Antibiotic susceptibility test		Final conclusion and recommendment for treatment:			