7th LAB.:

Fungal Staining

Subtitle

Fungal Colonies

- Fungi, yeasts and molds are widespread throughout the environment.
- For healthy persons they are not a serious problem as long as certain standards of hygiene are maintained.
- If the **immune system** is **compromised**, however, through **chronic illness or tumor**, they may pose an infection risk or result in manifest illness.
- They can, for instance, **infect** the nails, hair, skin, lungs, kidneys or lymph nodes.

Detection of Fungi

- Detecting fungi is essential to institute targeted remedy.
- Detection of fungi with various stains is quick and simple, and can be optimized through the use of ready-to-use solutions.
- Depending on the consistency of the specimen material, it may be necessary to perform a simple pre-treatment step with **alkali** prior to staining.

For example, Lactophenol (Cotton) blue stain:

- Use of a ready-to-use lactophenol blue solution enables the specimen to be stained in a single step.
- The fungi are stained **dark blue** and stand out well against the **light blue background**.

Material

1- Fresh Pure Fungi Agar Culture such as; Aspergillus, Penicillium, Rhizopus, Saccharomyces (Yeast), Fusarium, and Alternaria).

2- Inoculating Needle.

3- Forceps.

4- Alcohol 70% - Dettol- Cotton- Bunsen Burner.

5- Lactophehol (cotton) blue Stain.

6- Microscopic Slides, covers, and Light Compound Microscope.

7- Alcohol pads.

Method:

1- Under aseptic conditions, label the needed clean slides.

2- Add a drop of the lactophenol (cotton) blue on the slide .

3- By a sterile needle and a sterile forceps, transfer a part of the mycelium (along with its sporangium or spores) to the surface of the slide and mix it together with the stain drop.

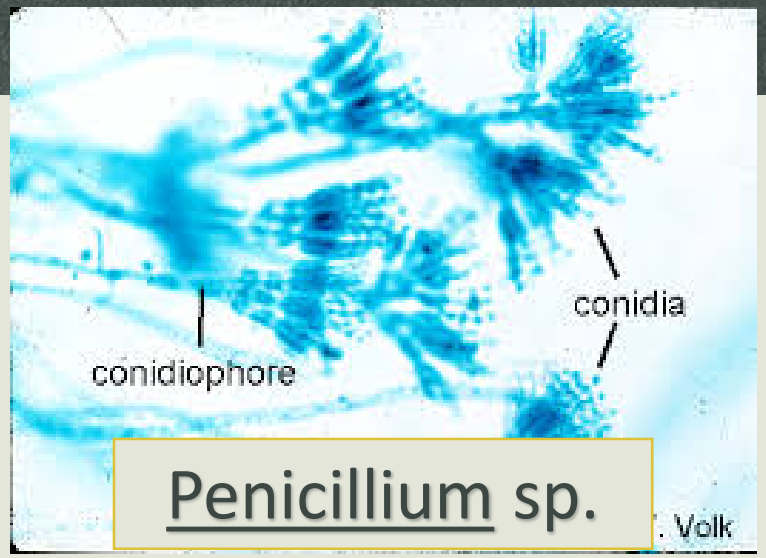
4- Press a cover on the top of the sample.

5- Examine the prepared silde under the microscope using the lower power (4x – 10x) then high power 40x.

6- Try to determine the type of mycelium (Sepetation and Branching) and the type of spores.

7- Draw a sketch of the microscopic field that identify your sample.

Results



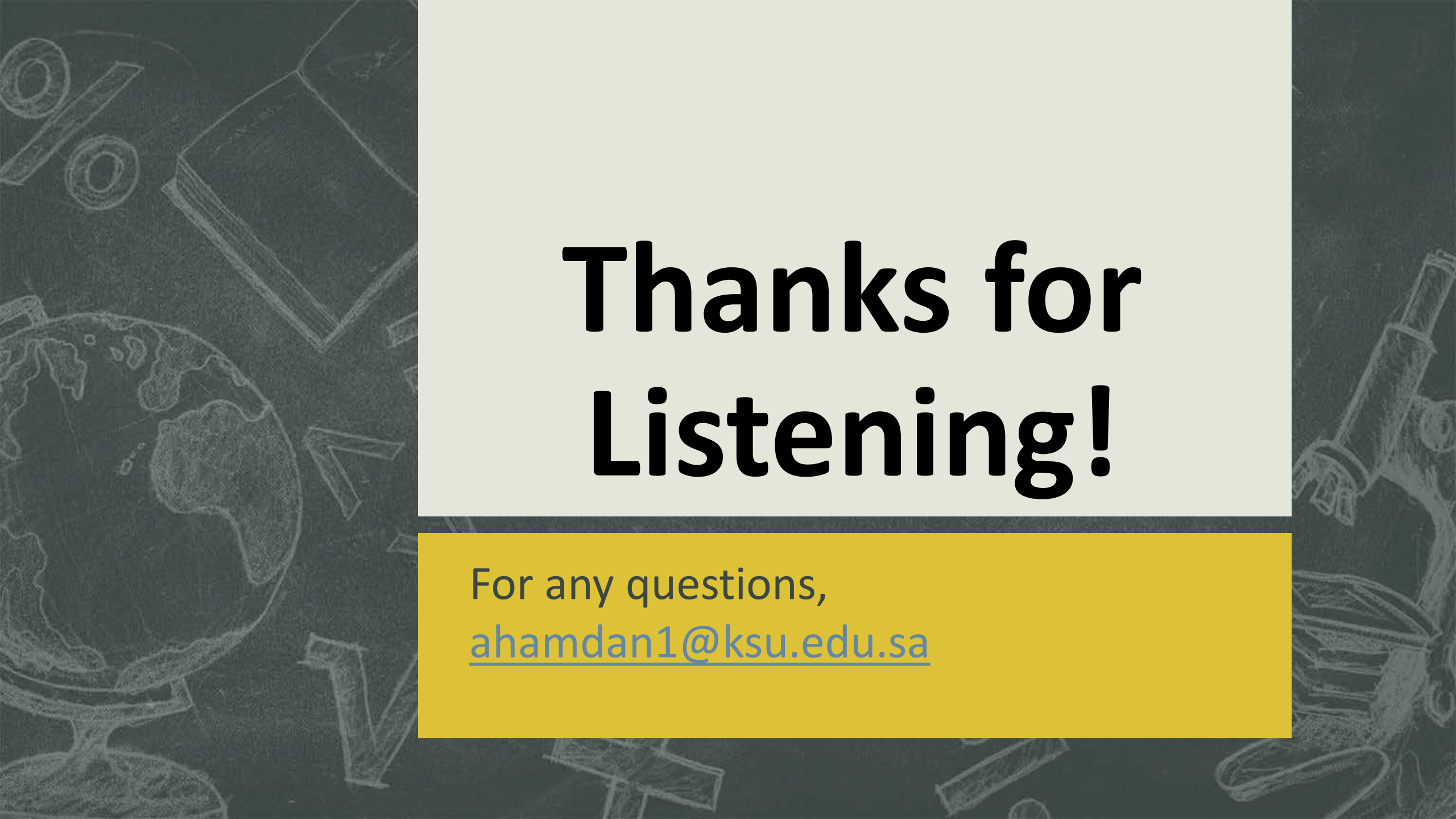
Penicillium sp.

Aspergillus sp.

Rhizopus sp.

Fusarium sp.

Alternaria sp.



Thanks for Listening!

For any questions,
ahamdan1@ksu.edu.sa