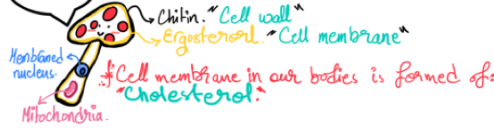
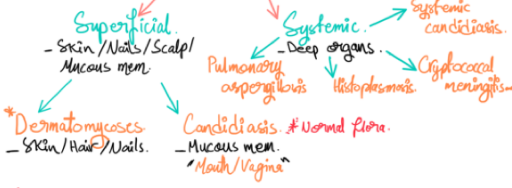


# \* Anti fungal drugs \*

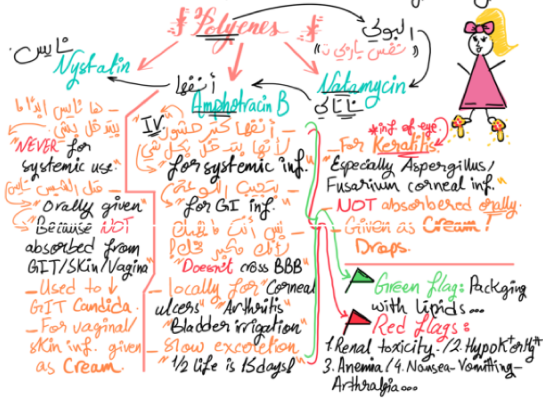
I AM AN EUKARYOTIC.



## \* Fungal infections \* Ycoses \*

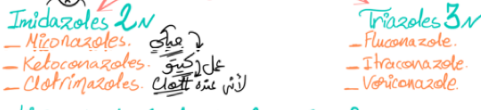


\* More common in patients with weak immune sys.  
 - Let's start with the first class of Antifungal drugs:



\* They bind to the ergosterol cell mem. and forms pores to ↑ the permeability of the mem. So loss of ions especially  $K^+$  causing DEATH

## \* Azoles \*



\* Can treat Systemic fungal inf.  
 \* They inhibit Cyt P450 Demethylase imp. for the formation of Ergosterol

## \* Allylamines \*



- Line (Allylamine) -  
 \* Inhibit fungal Squalene Epoxidase so ↓ the synthesis of Ergosterol.  
 \* ↑ Accumulation of toxic amount of Squalene lead to the fungal cell DEATH.

## \* Echinocandins \*



\* Inhibit the synthesis of D-glucan thus inhibiting the of the cell wall.

## \* Griseofulvine \*

NO rising! (Rise/Fall)  
 \* Inhibits fungal mitosis by inhibiting mitotic spindle formation.

## \* Flucytosine \*

فلوسين (أهم شيء)

بأنه يثبط نفس الـ DNA



Enters the DNA by Permease.

\* False nucleotide inhibits Thymidylate synthase = ↓ of Fungus Thymidylate acid \*

\* Essential DNA component. \*

\* The false nucleotide is further metabolized to a trinucleotide which incorporated to the fungal RNA thus, disrupting Protein syn. \*

\* Flucytosine + Amphotericin B are Synergistic \*

- To treat Cryptococcosis.

## \* Amphotericin B

\* ↑ the cell permeability allowing more of Flucytosine to enter the cell.

\* Flucytosine + Itraconazole.

- To treat Chromoblastomycosis.

\* Highly effective in AIDS pts. \* To treat Cryptococcal meningitis \*

\* Widely distributed \* Even the CSF \*

\* Rapidly absorbed \* القوي يمتص بسرعة \*



## Red flags:

- 1- Reversible neutropenia / thrombocytopenia / bone marrow depression.
- 2- Nausea / Vomiting / Diarrhea...
- 3- Reversible hepatic enzymes.

Sham Alsalim ~~~~~ GoD luck!!