

BASIC CONCEPTS TRANSPORT

OVERVIEW

ONLY SOLID MATERIALS ENTER & EXIT

SELECTIVE PERMEABLE

IONS WITH TRANSPORTERS

MBP FACILITATE TRANSPORT

TRANSPORT PASSIVE ACTIVE

ENVIRONMENTAL CONDITIONS SOLUTE TO BE TRANSPORTED

DIFFUSION

DISTRIBUTE PARTICLES IN SOLN VIA DIF

HIGHER []
↓
LOWER []

MANY MOLECULES

CONSIDERS ATP/PM

PL M BARRIERS

PM ALWAYS 9 ANCHORING w/ MBP

TRANSPORTERS

ION CHANNELS

FACILITATED

CATALYZED

PASSIVE TRANSPORT

RATES TRANSPORT

SATURABLE

MAX TRANSP CAP BY 200 BY TRANSPORTERS

ACTIVITY
PERMOASES
UNI PORT

SATURABLE GATED

CAN ADD CF & DEFERIVE CO² ION TRANSPORT

OSMOSIS

↑ VOLUME

HYPERTONIC
HYPO TONIC
ISOTONIC
HYDROSTATIC

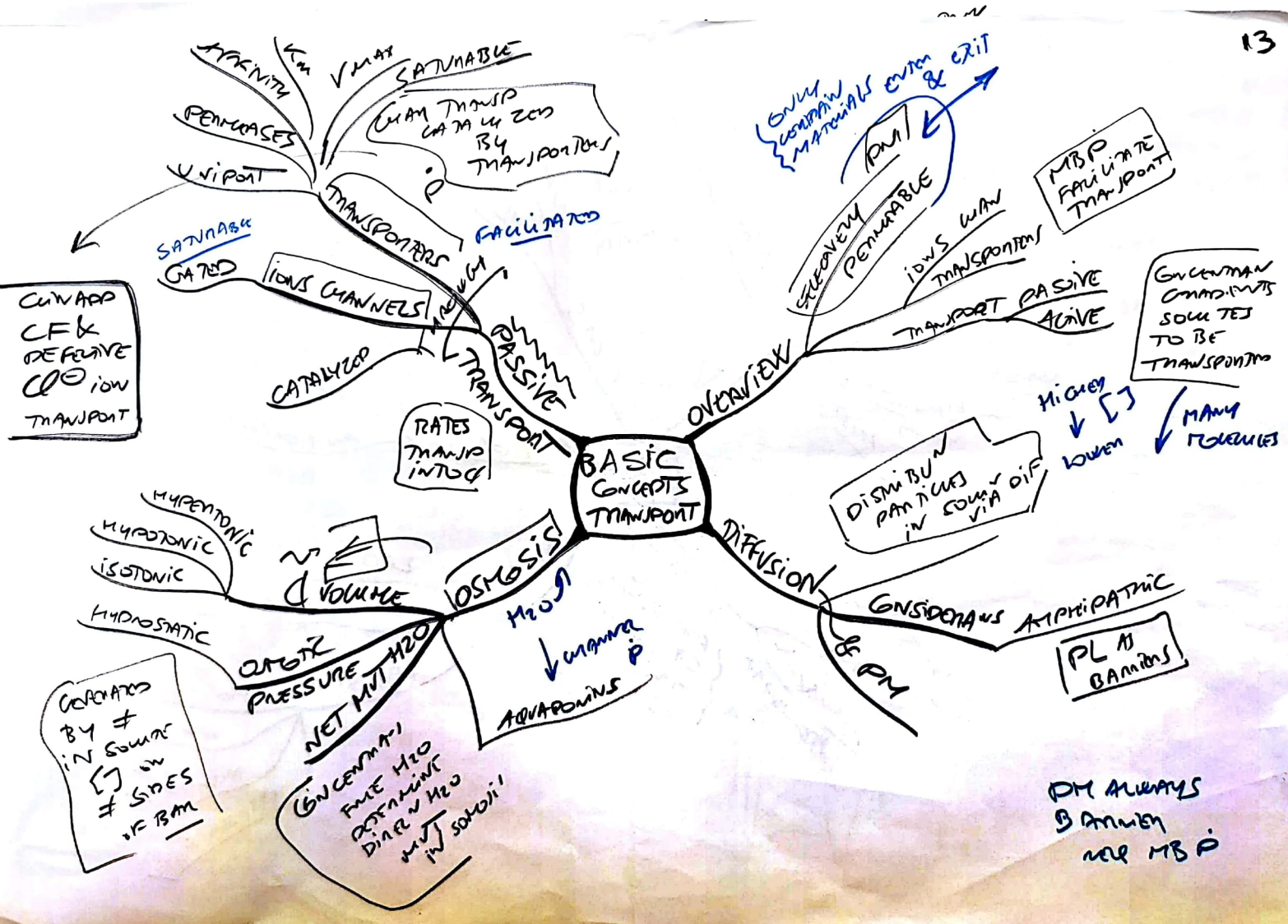
OSMOTIC PRESSURE

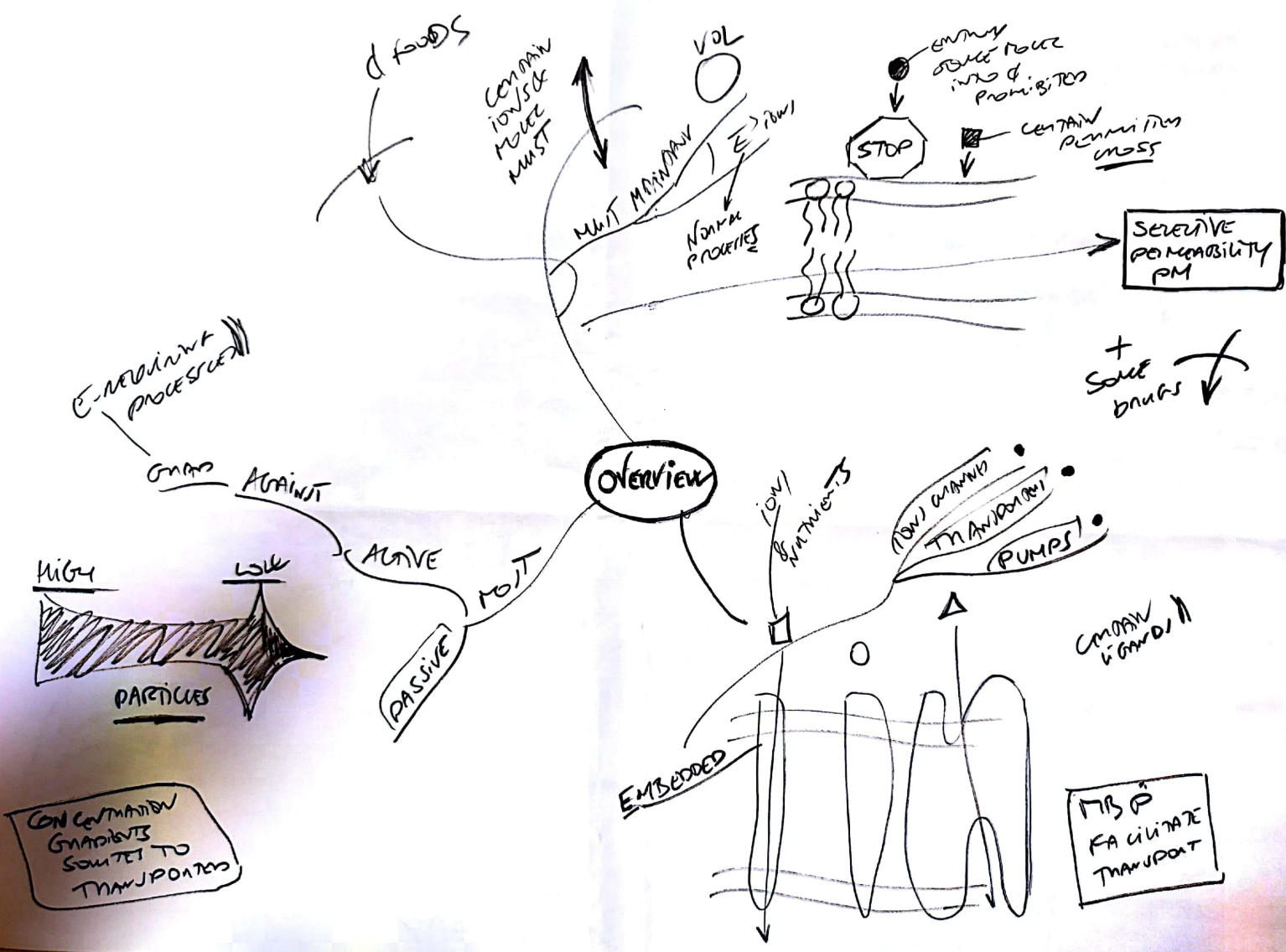
NET H₂O

CONCENTRATION DIFFERENCE
DIFER H₂O IN SOLN

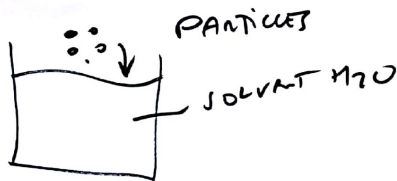
H₂O
↓
AQUAPORINS

GENERATED BY # IN SOLN ON # SIDES OF BM





DISTRIBUTE PARTICLES IN SOLUTION VIA DIFF



INITIAL DISTRIBUTION → RANDOM MOTION & DIFFUSION



REACH EQUILIBRIUM DISTRIBUTION WITHIN SPACE THEY OCCUPY

GRADIENT AT SAME RATE AS LOW AS AS GIVE GRADIENT

DIFFUSION

DIFF ONE SUBSTANCE INTO ANOTHER WITHIN SAME SOLN

METHOD ACROSS BARRIER UNIDIRECTIONAL

- 1 CONCENTRATION GRAD
- 2 SIZE MOLEC
- 3 PERMEABILITY OF SUBSTANCE IN BARRIER

DIFFUSION

CONSIDERATIONS

PERMEABILITY IN A MS

PMs

HYDROPHILIC

HYDROPHOBIC ARE STOPPED BY POLAR HEAD GROUPS

CAN GET POLAR BUT STOPPED GRAD

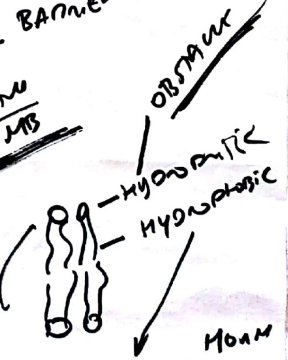
HYDROPHILIC POLAR HEAD GROUPS HYDROPHOBIC CORE



STOPPED

AMPHIPHILIC PL AS BARRIERS TO MS DIFFUSION

AMPHIPHILIC PL



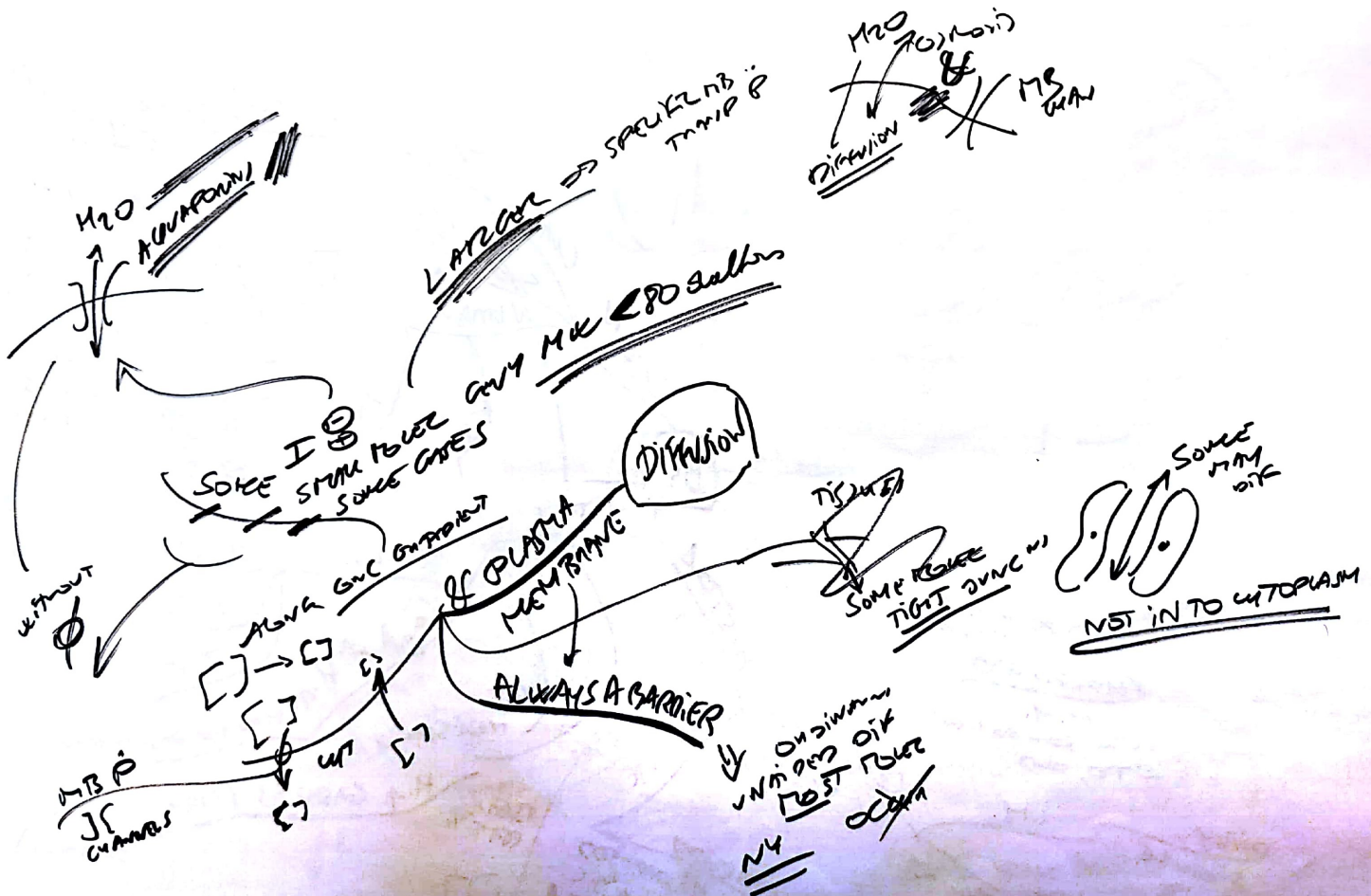
DISSOLVE IN HYDROPHILIC HEAD

STERIODS

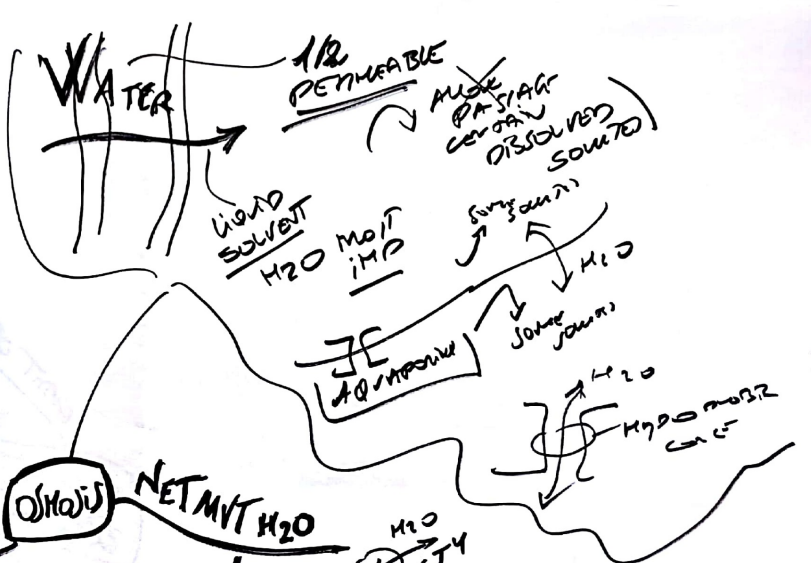
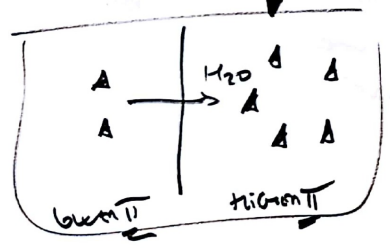
HYDROPHILIC

HYDROPHOBIC

OBSTACLE

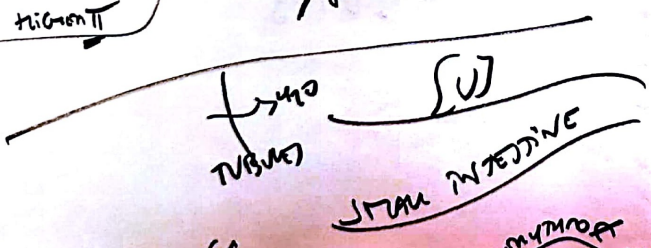


H₂O OSMOTIC
= WATER - STOPPING
PRESSURE → F → H₂O FOR H₂O

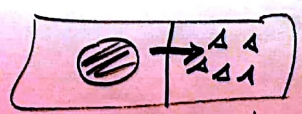
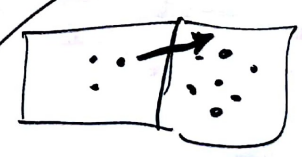
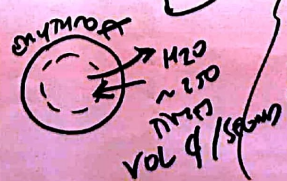


OSMOTIC PRESSURE

USUALLY NEGATIVE MOTIVATION

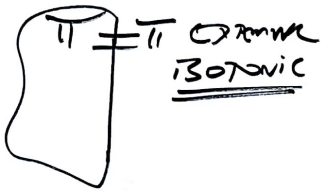


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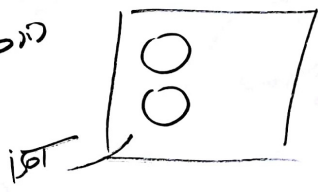


[FREE H₂O] INDOO PARTIAL STIC

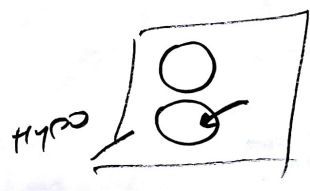
[] FREE H₂O DETERMINE DIRECT H₂O MVT IN OSMOTIC



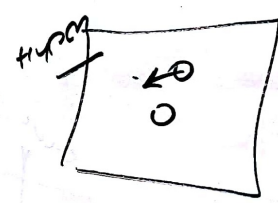
↓ VOL →
↑ OSMOSIS



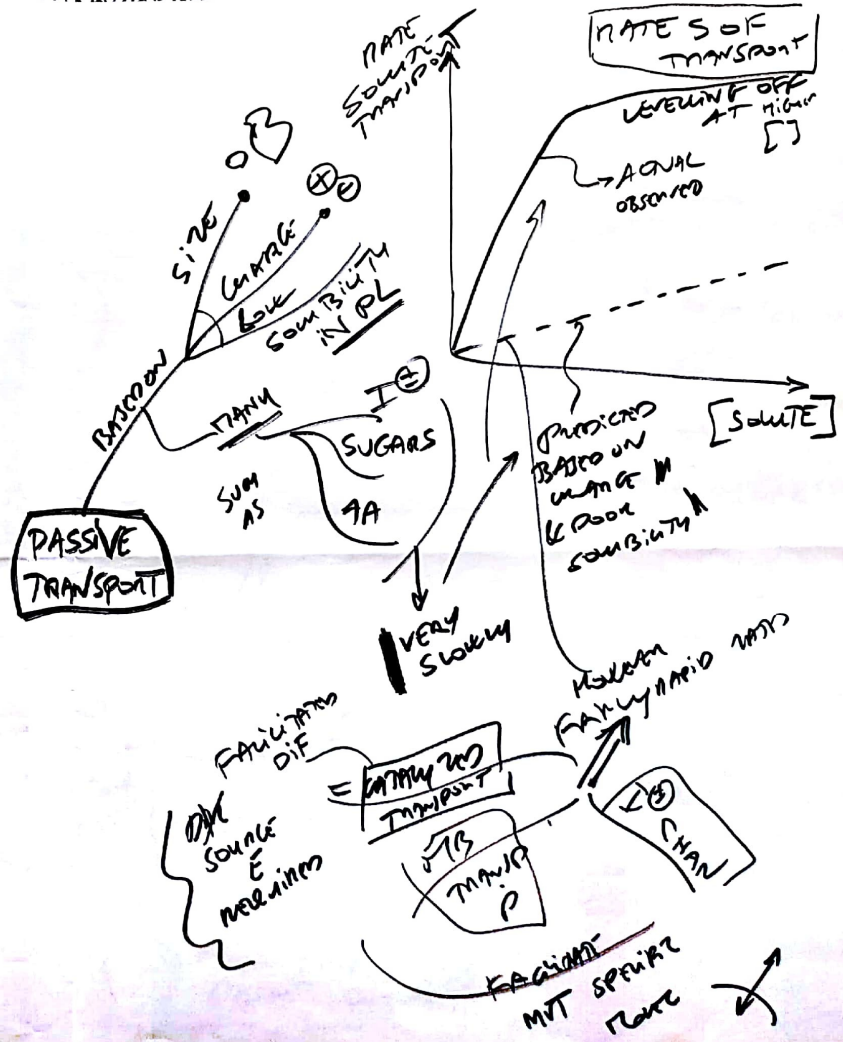
↑ VOL →
↓ OSMOSIS

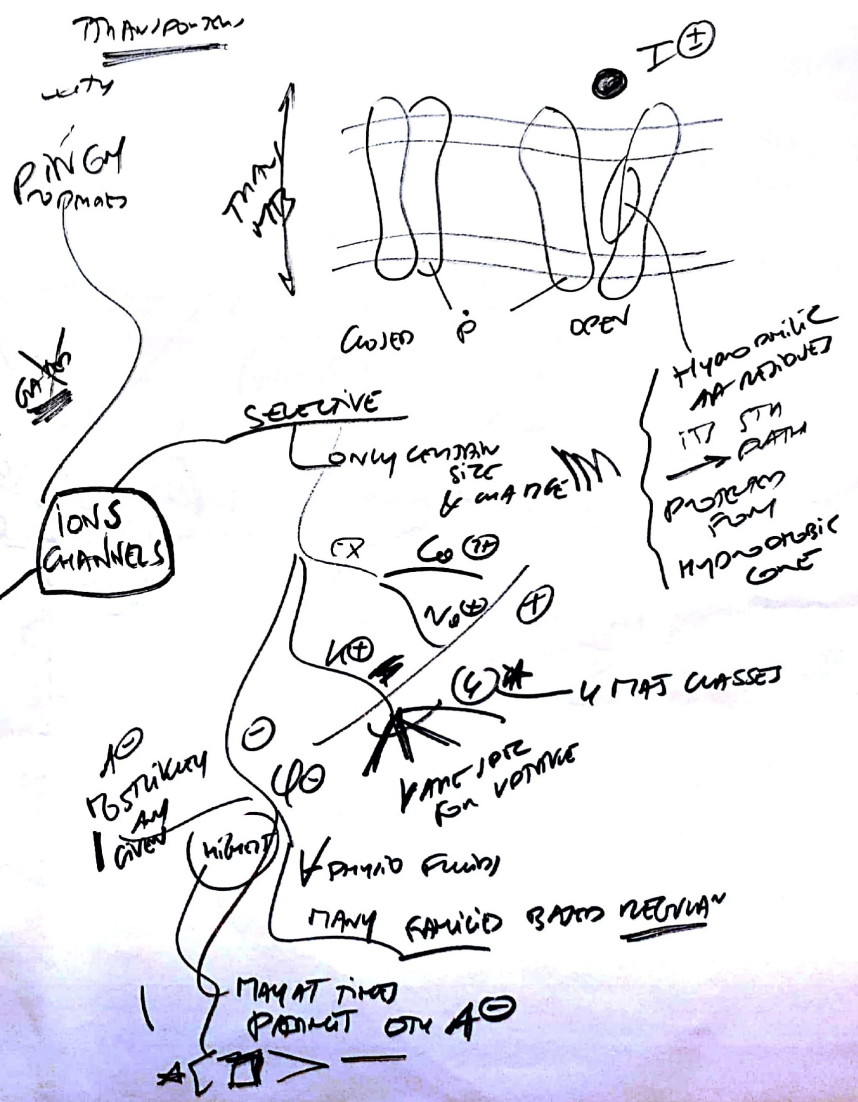


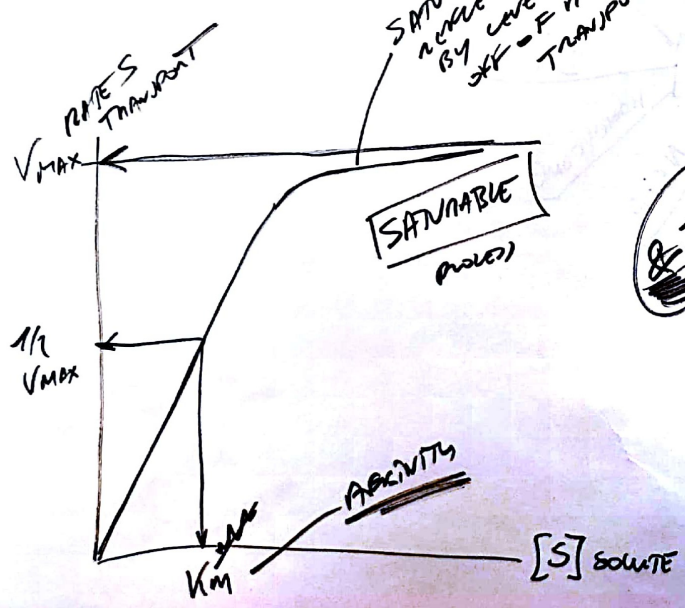
↓ VOLUME
(OSMOSIS)



20.11.2020







SATURABLE
 REACTION
 BY COVERING
 ALL OF RATE
 TRANSPORT

