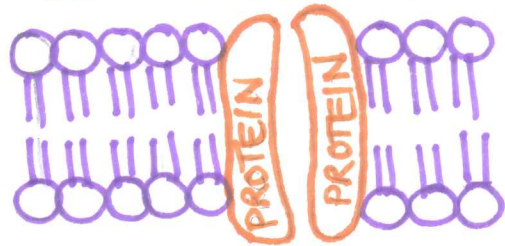


EXTERNAL ENVIRONMENT
(EXTRACELLULAR)



MADE OF DOUBLE
PHOSPHOLIPID LAYER
& PROTEINS

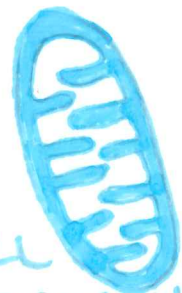
INTERNAL ENVIRONMENT
(INTRACELLULAR)

* BOUNDARY SEPARATING
CELLS FROM EACH OTHER
AND INTRA- AND EXTRACELLULAR
ENVIRONMENTS

MODIFY & PACKAGE
PROTEINS
SECRETED IN VESICLES

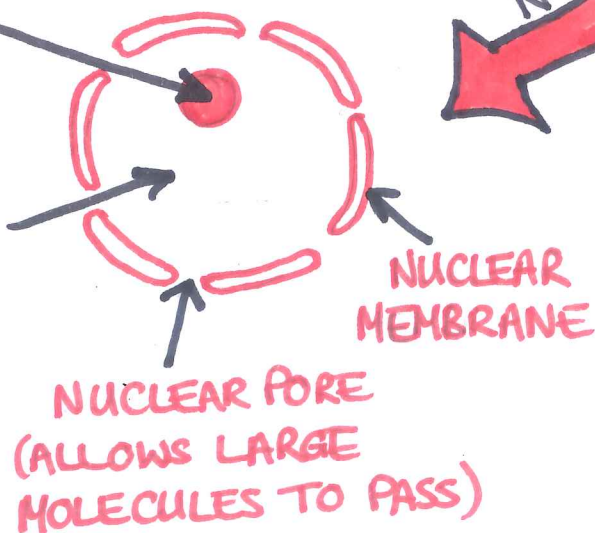


RELEASE
ENERGY
FOR THE CELL
THROUGH RESPIRATION



NUCLEOLUS -
MADE MOSTLY
OF RNA

CONTAINS
GENETIC
MATERIAL



NUCLEAR
MEMBRANE

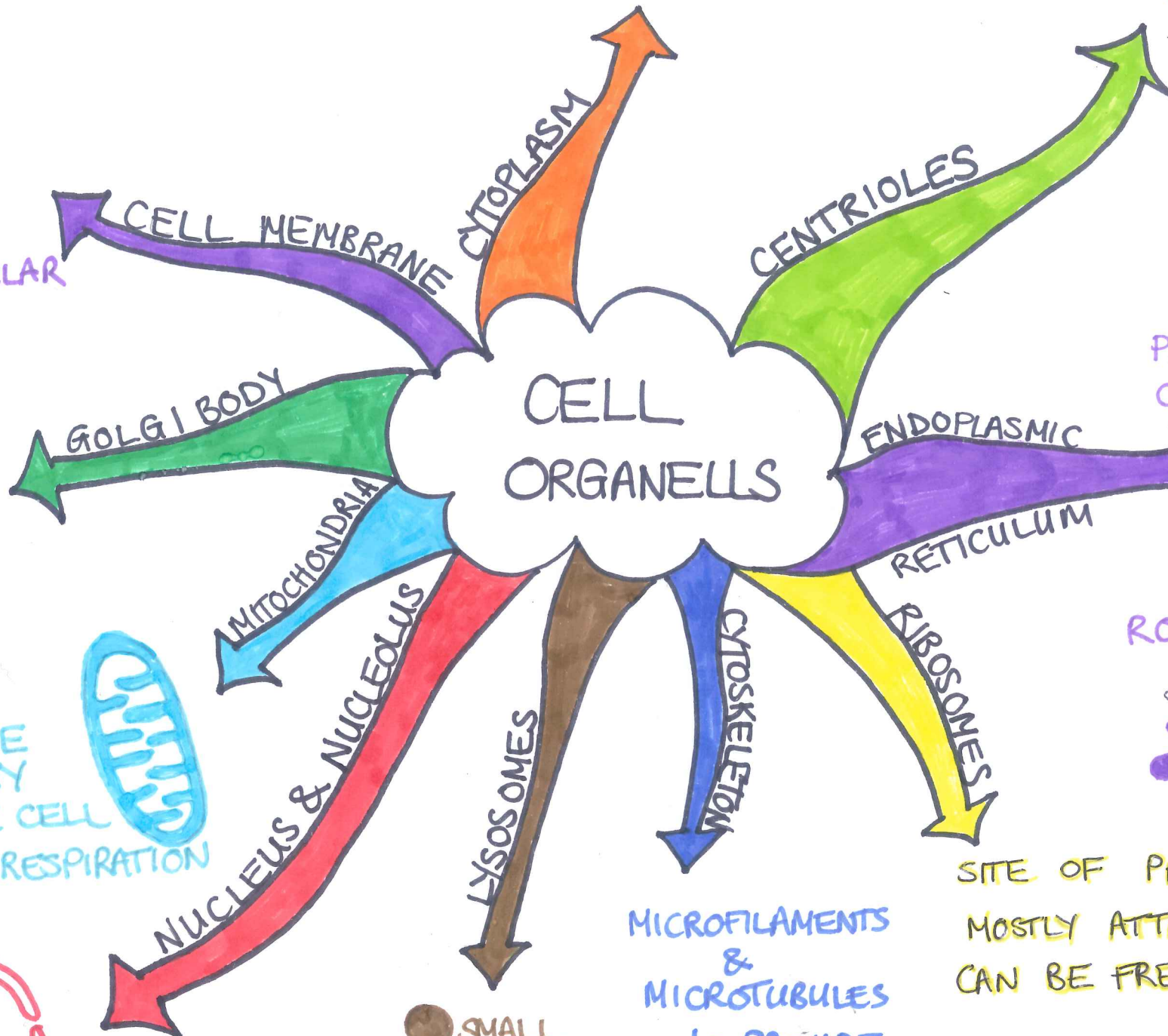
NUCLEAR PORE
(ALLOWS LARGE
MOLECULES TO PASS)

THICK FLUID WITHIN
CELL MEMBRANE - ORGANELLES
SUSPENDED IN IT
LIQUID PORTION = CYTOSOL

PAIR OF CYLINDRICAL STRUCTURES
LOCATED NEAR THE NUCLEUS
→ USED IN MITOSIS/MEIOSIS
(CELL REPRODUCTION)



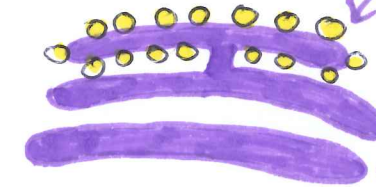
CELL ORGANELLES



PAIRED MEMBRANES IN WHICH
CHEMICAL REACTIONS OCCUR

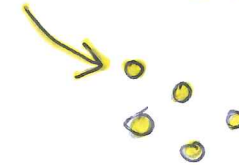
CHANNELS BETWEEN
MEMBRANES → STORAGE/
TRANSPORT OF MATERIALS

ROUGH E.R. = RIBOSOMES
ATTACHED



SMOOTH E.R.
= NO RIBOSOMES

SITE OF PROTEIN SYNTHESIS
MOSTLY ATTACHED TO E.R. MEMBRANE BUT
CAN BE FREE IN CYTOPLASM



MICROFILAMENTS
&
MICROTUBULES
→ PROVIDE
STRUCTURAL
SUPPORT

→ HELP TO MOVE
MATERIALS / ORGANELLES

SMALL
SPHERES THAT
CONTAIN DIGESTIVE
ENZYMES
→ BREAK DOWN WORN-OUT
ORGANELLES
→ BREAK DOWN MATERIALS
BROUGHT INTO THE CELL