# Human Genetics Cells Part2

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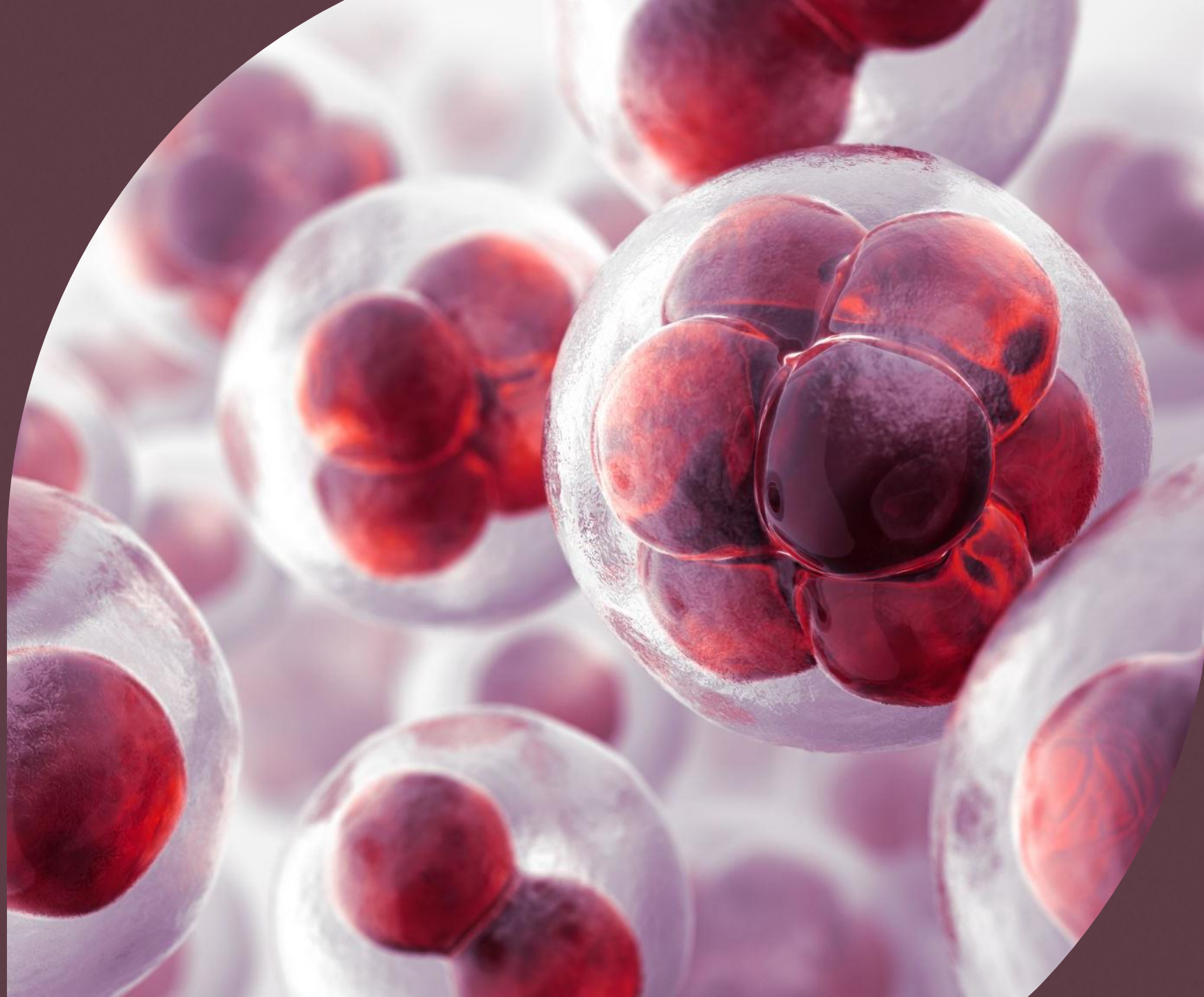
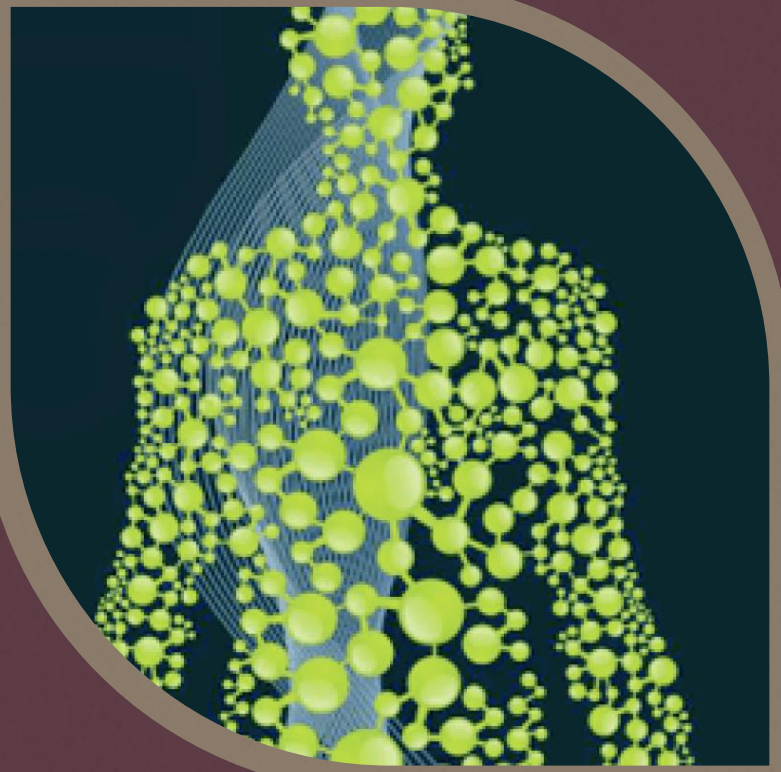
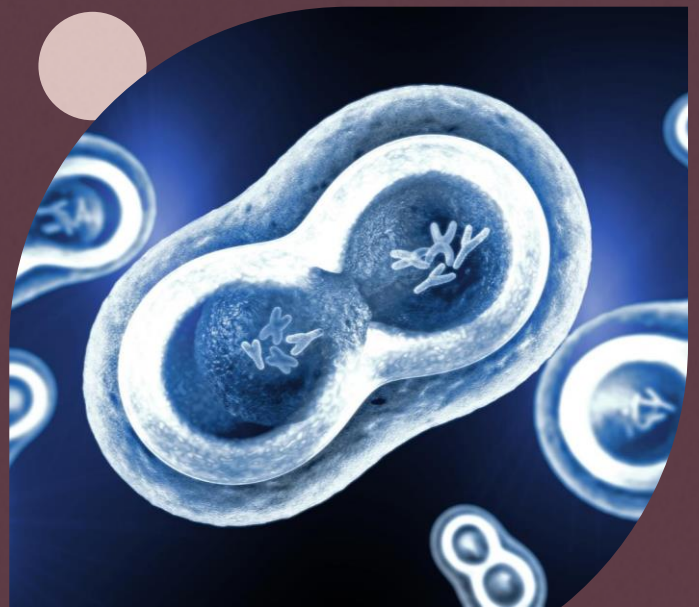


# Cell Growth Vs. Cell Death

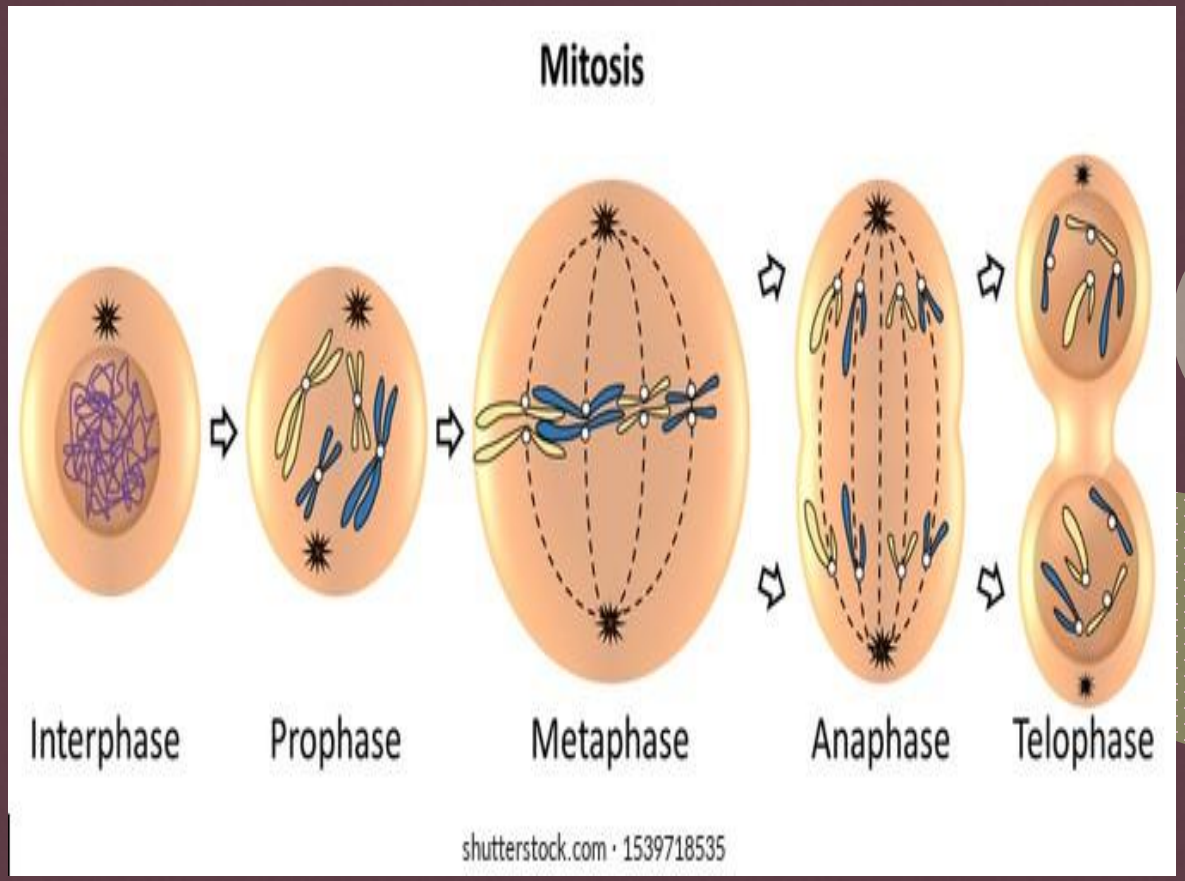
- The cells in the human body must be in balance to promote normal growth
- Cell Death: part of maintaining homeostasis





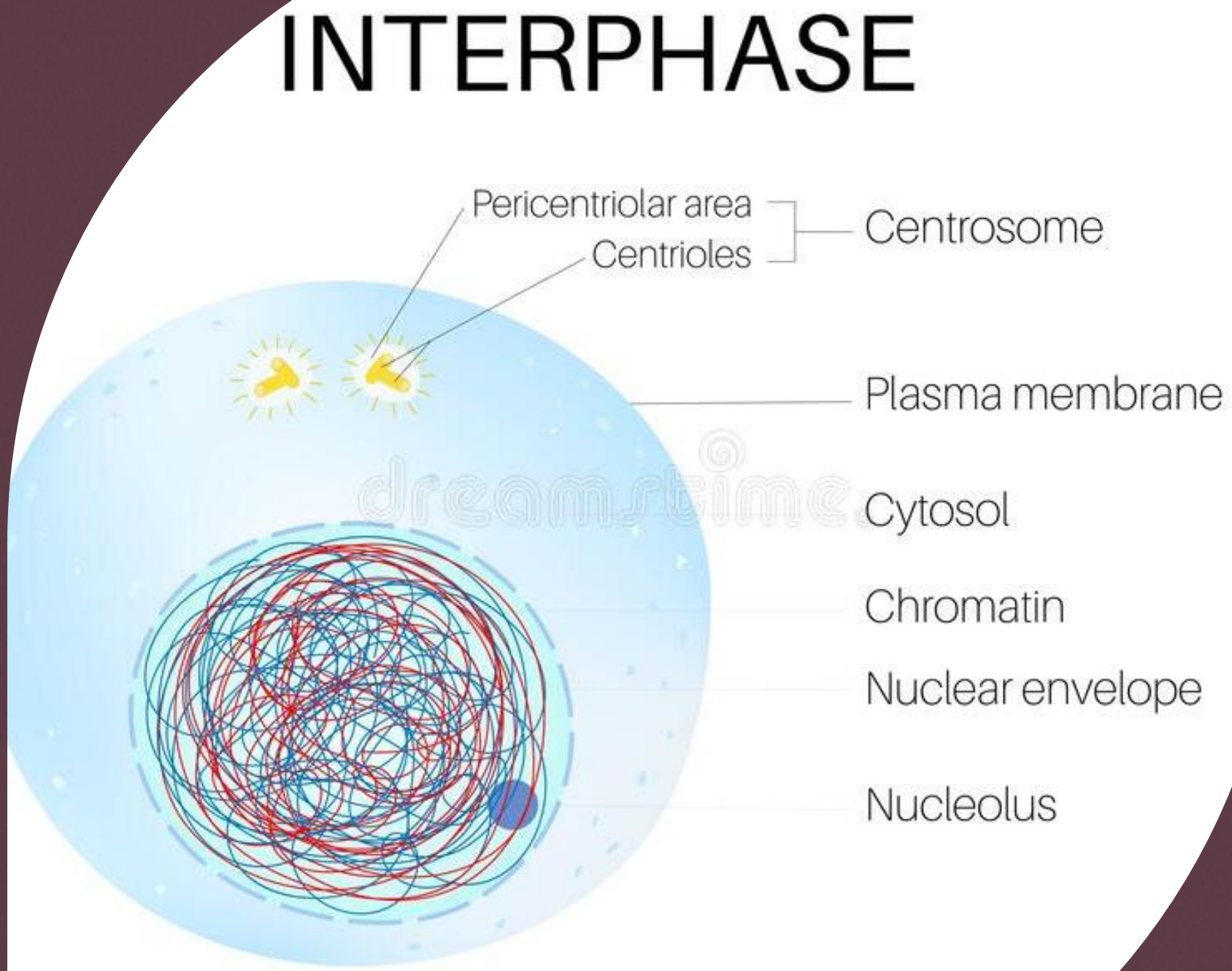
# Mitosis In Humans

- Interphase
- Prophase
- Metaphase
- Anaphase
- Telophase



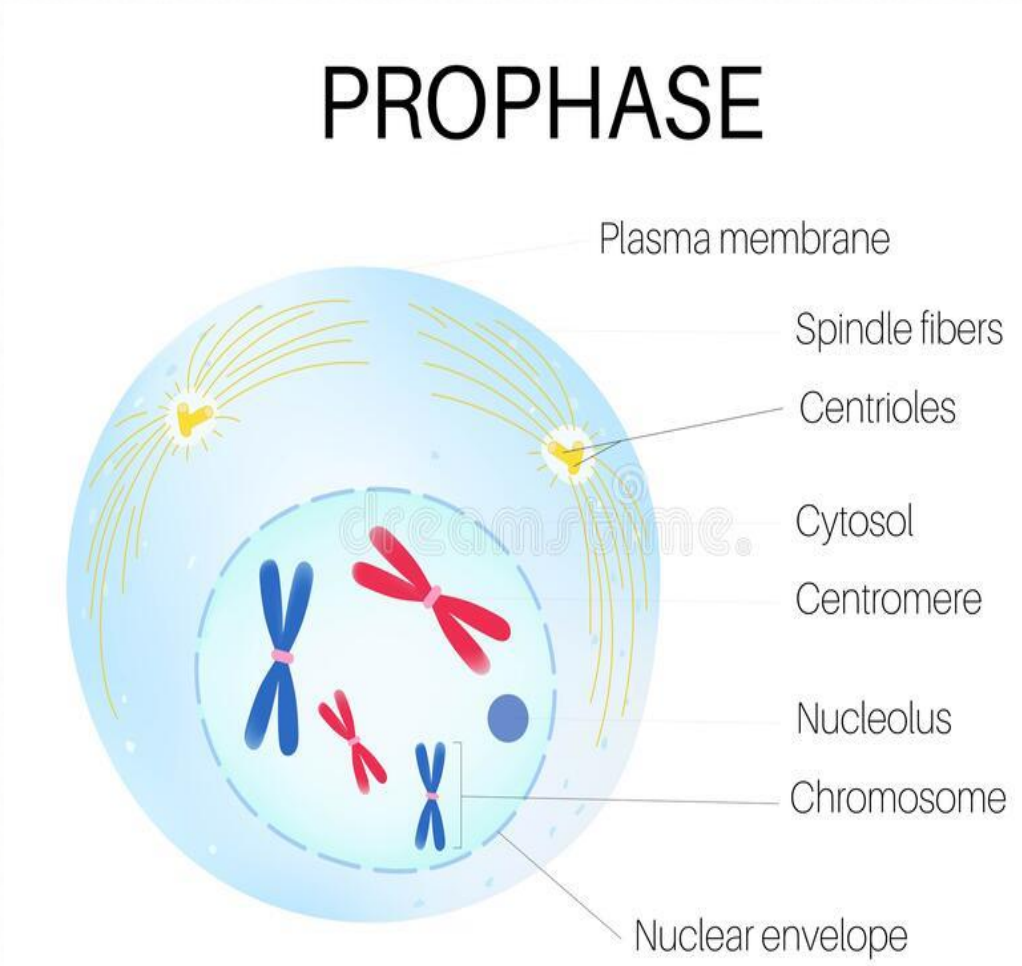
# Interphase

Chromosomes are uncondensed



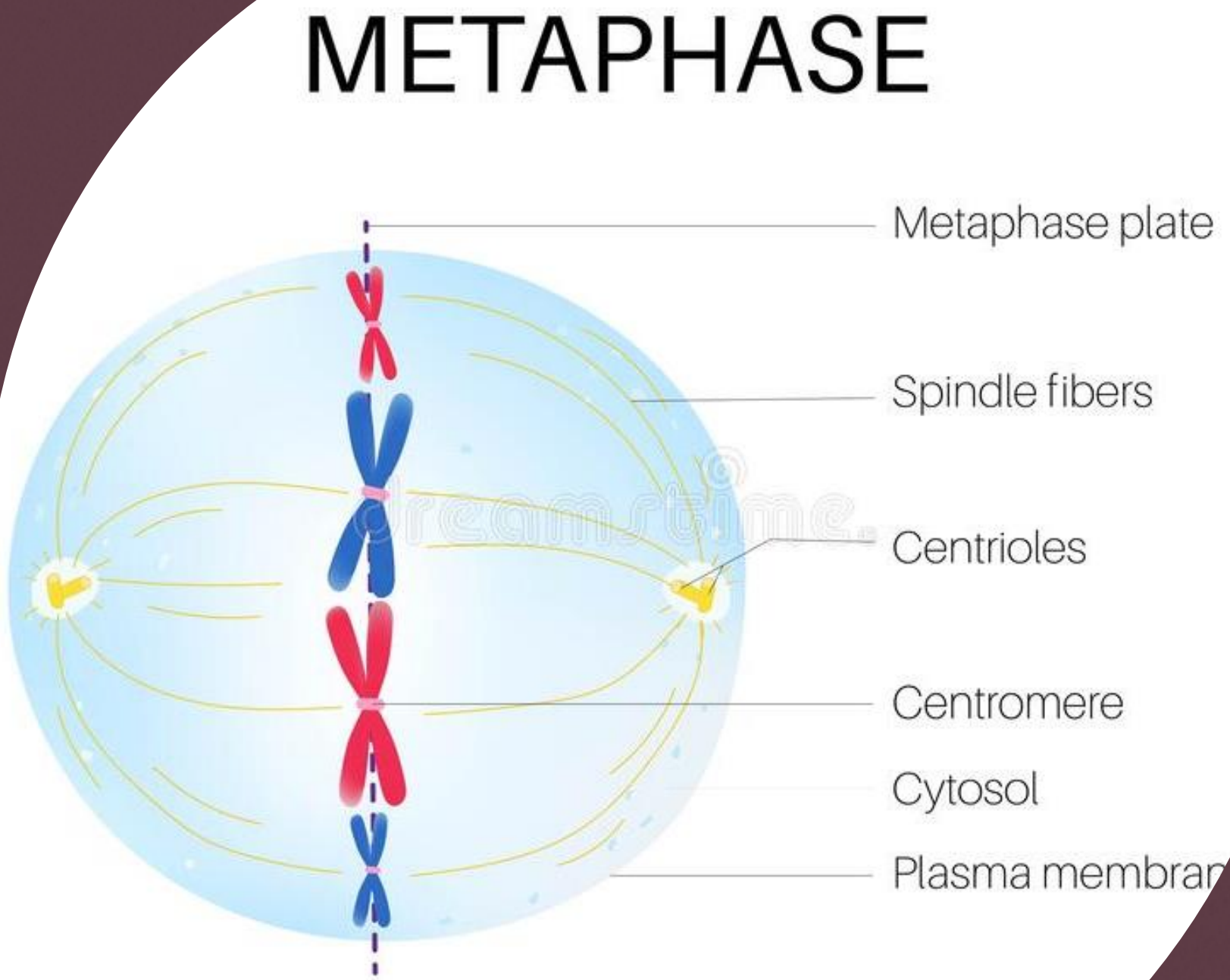
# Prophase

- The spindle fibers assemble
- Centrioles appear
- The nuclear envelope breaks down



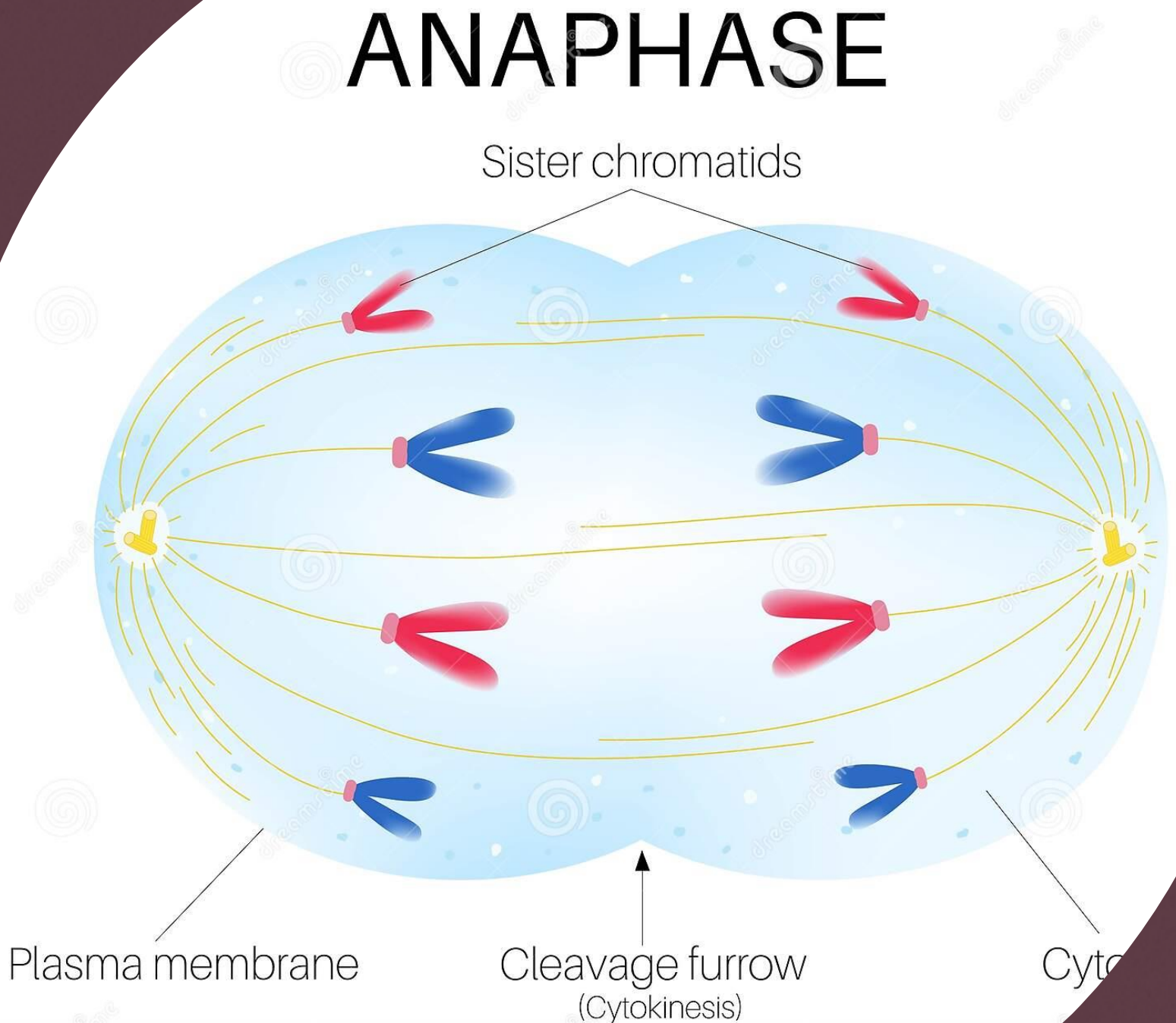
# Metaphase

Chromosomes align



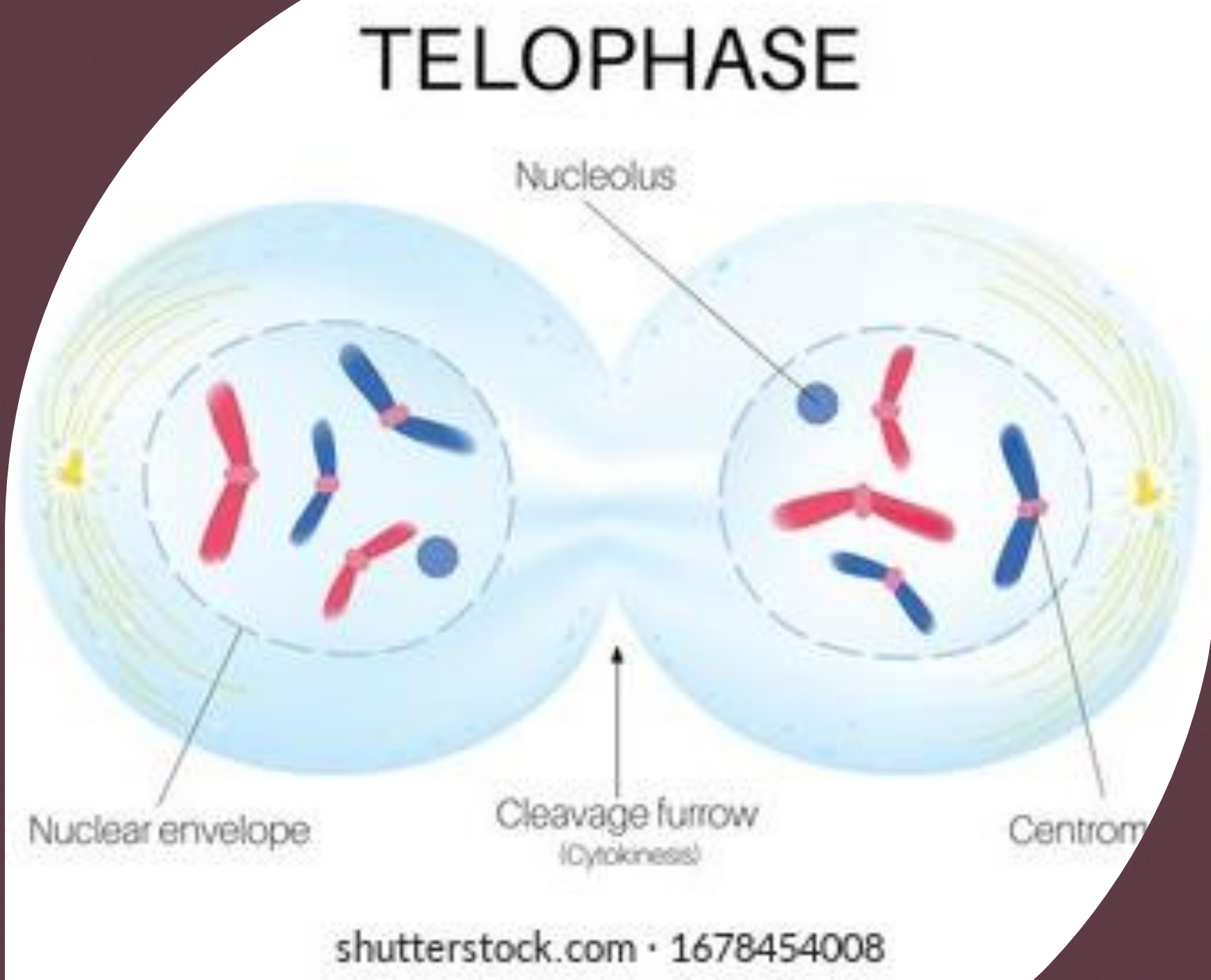
# Anaphase

Centromeres part and chromatids separate



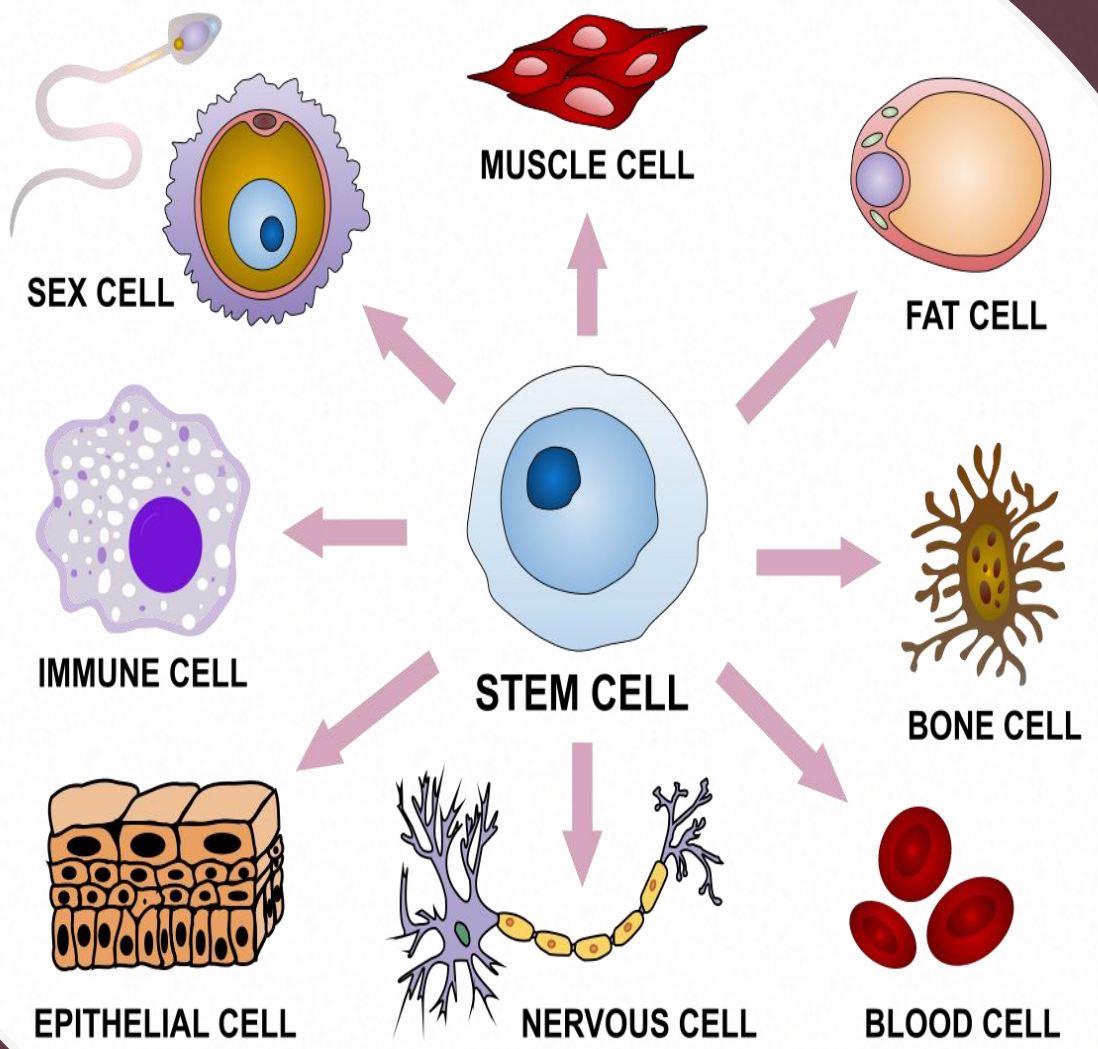
# Telophase

The spindles disassemble and the nuclear envelope reforms



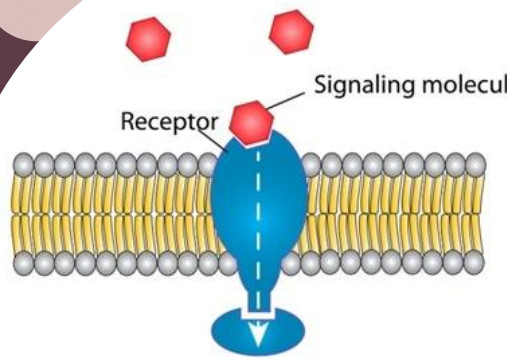
# Cell to Cell Interactions

- Communication is critical in life to be maintained and sustained
- Poor communication leads to illness, cancer, and death



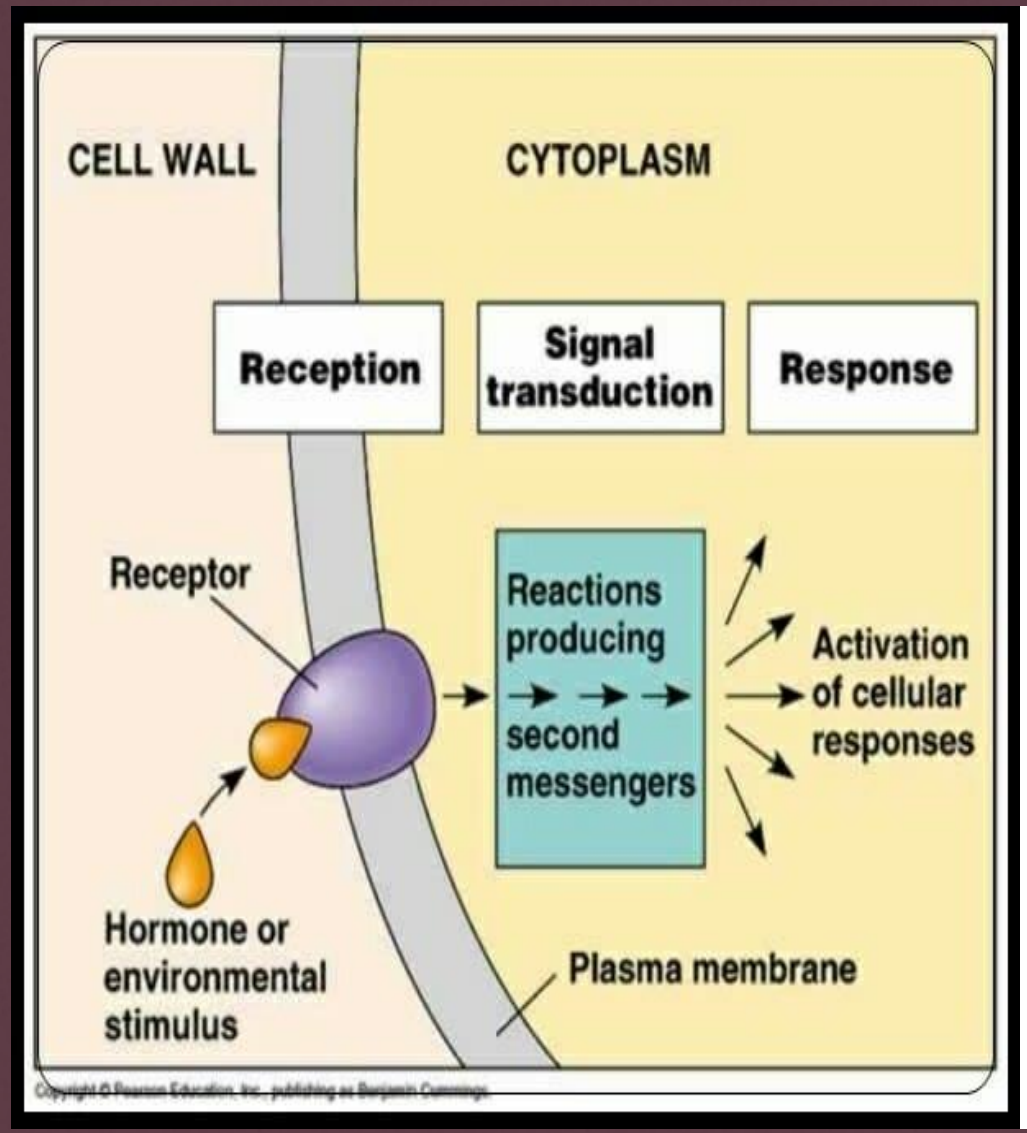
# Signal Transduction

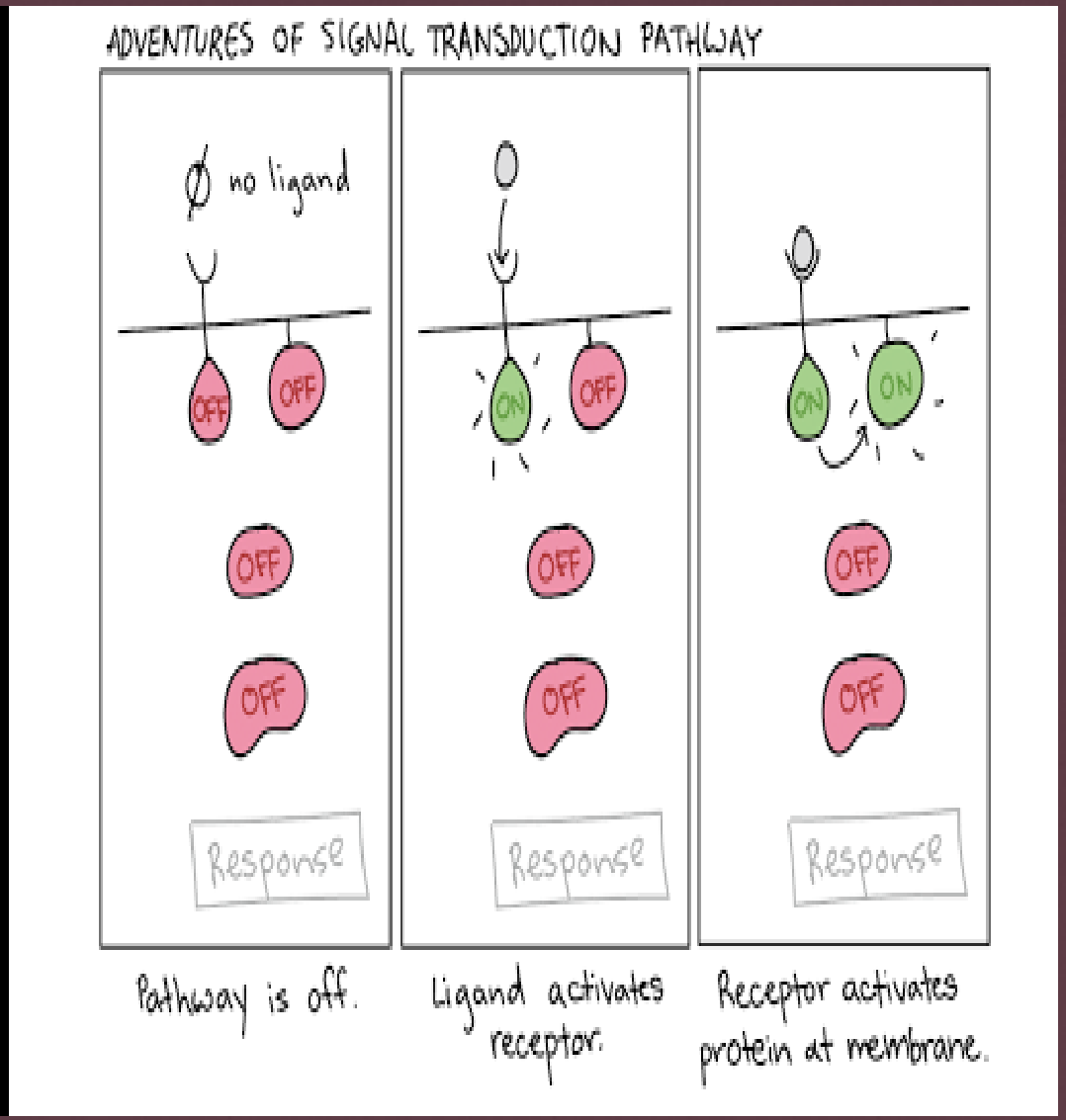
- Molecules on the plasma membrane that transmit and amplify incoming messages
- Send an action potential
- Release or hold release of hormones
- Control the rate of enzymes
- Defects in signal transduction underline many inherited disorders




Signal transduction

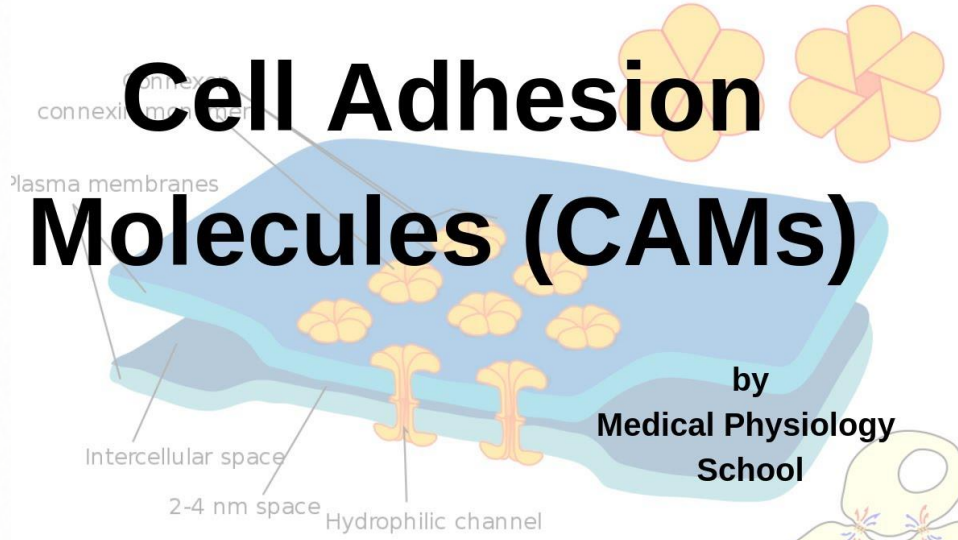
# Signal Transduction



# Cellular Adhesion

## Cell Adhesion Molecules (CAMs)

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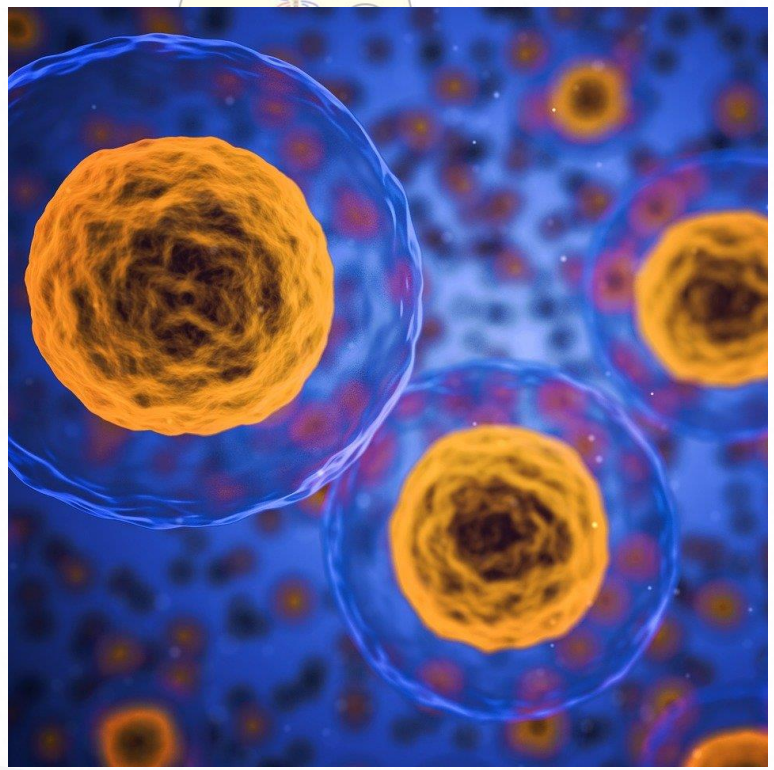
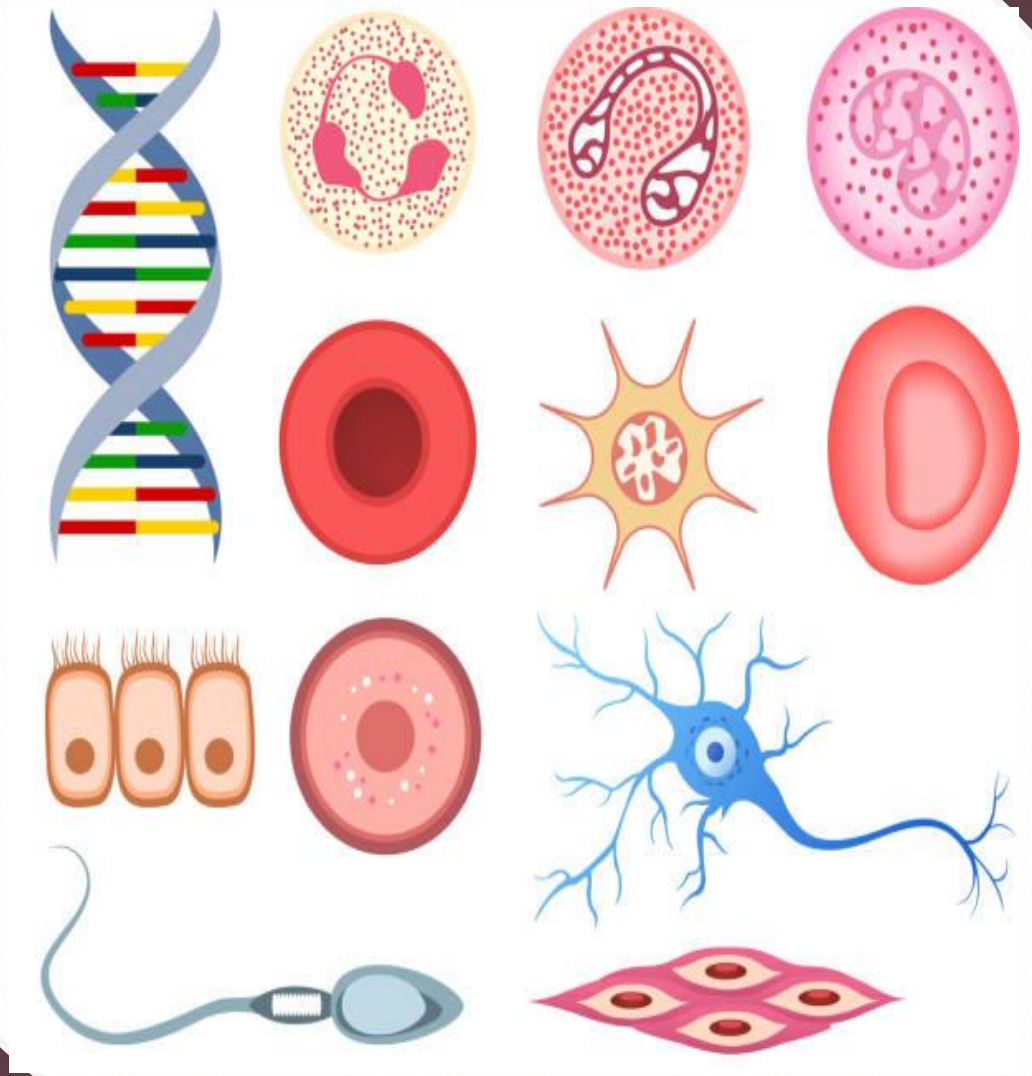


# In Summary

- In signal transduction, cell surface receptors receive information from first messages (stimuli) and pass to the second messenger therefore creating a cellular response
- In cellular adhesion molecules (CAMs) guide white blood cells "WBCs" to injury sites using a sequence of cell protein interactions



# Thank You!

## Comments and Questions