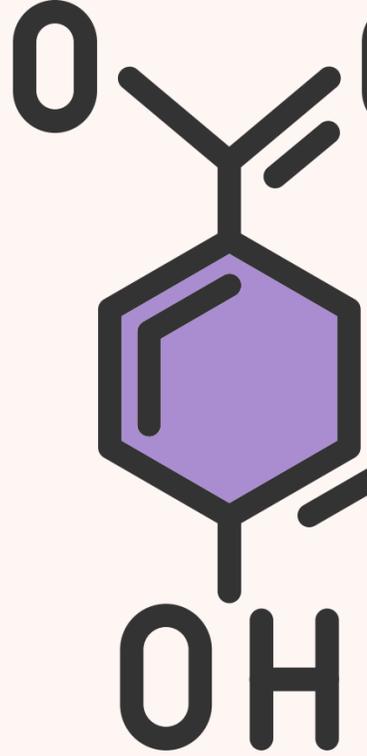


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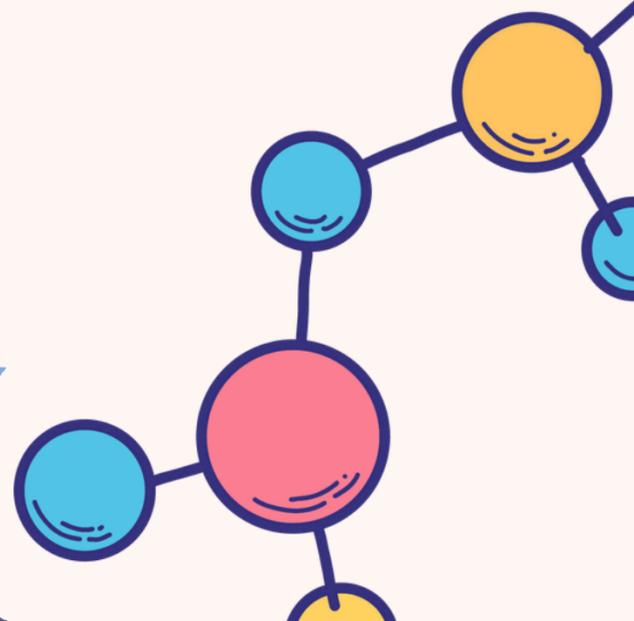
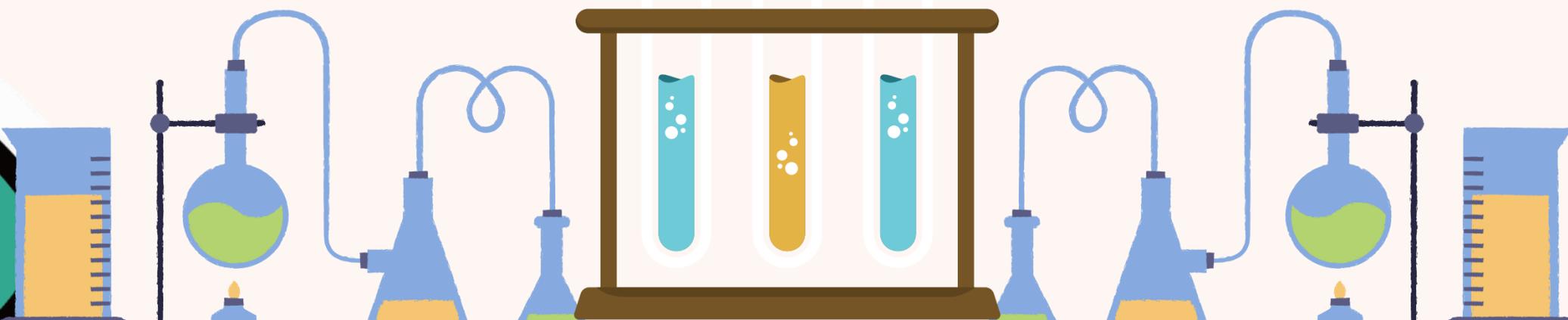
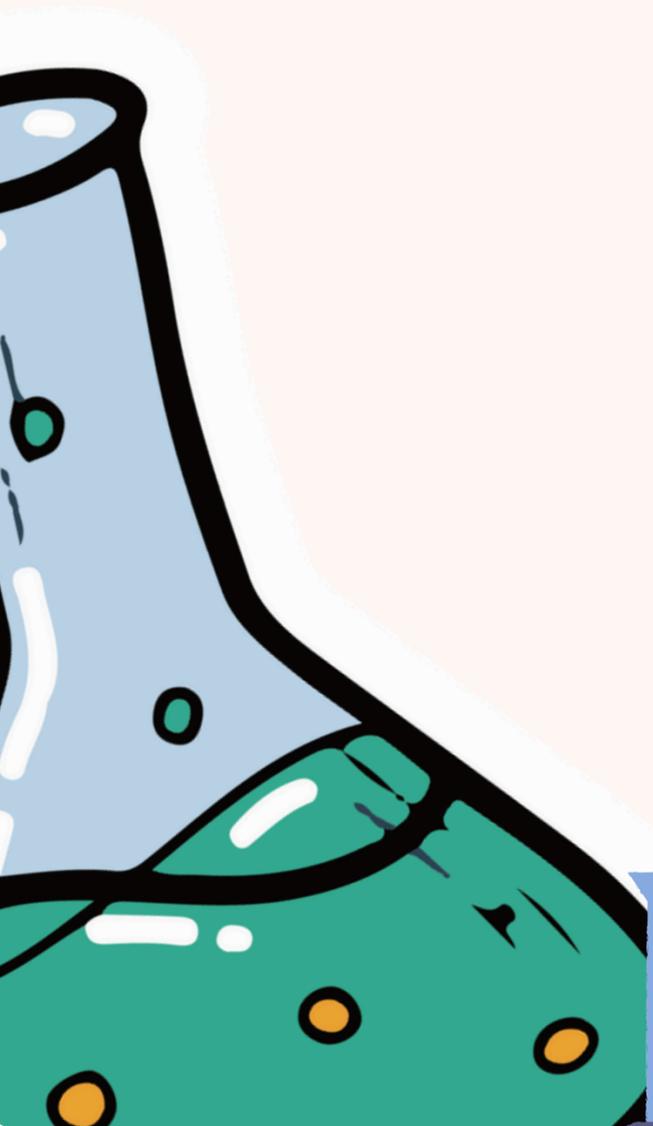


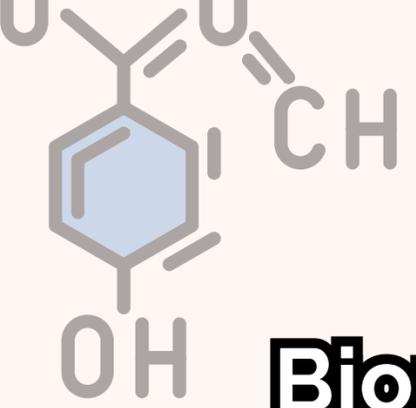
Biochemistry

M.S.c. Saja Jawad Abaid

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Biomolecules





Definition of Biomolecules



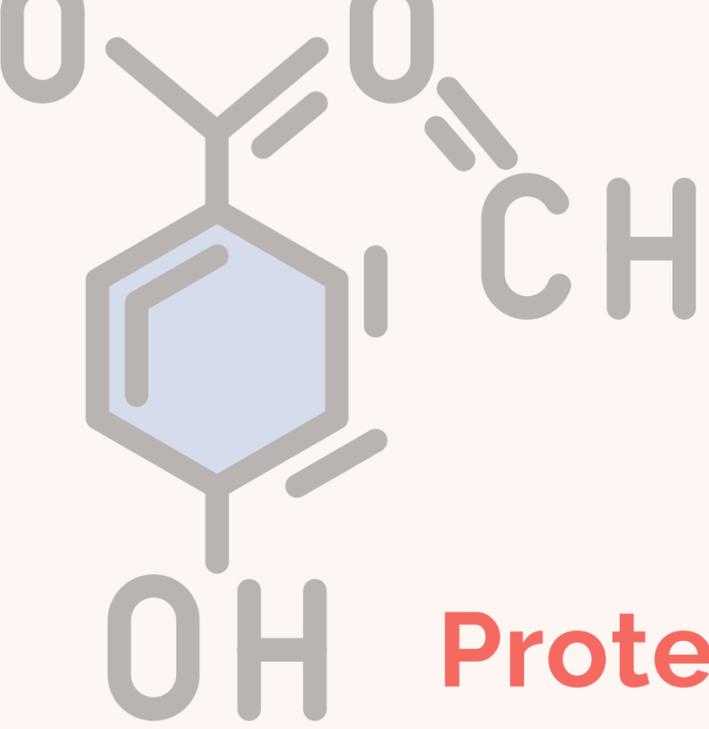
Biomolecules are organic compounds that are essential to life. They include carbohydrates, proteins, lipids, and nucleic acids.

Functions of Biomolecules

Biomolecules are organic compounds that are essential to life. They include carbohydrates, proteins, lipids, and nucleic acids.

- 1 Provide energy (e.g., glucose)•
- 2 Build cellular structures (e.g. phospholipids)
- 3 Store genetic information (e.g., DNA)•
- 4 Catalyze biological reactions (e.g. enzymes)

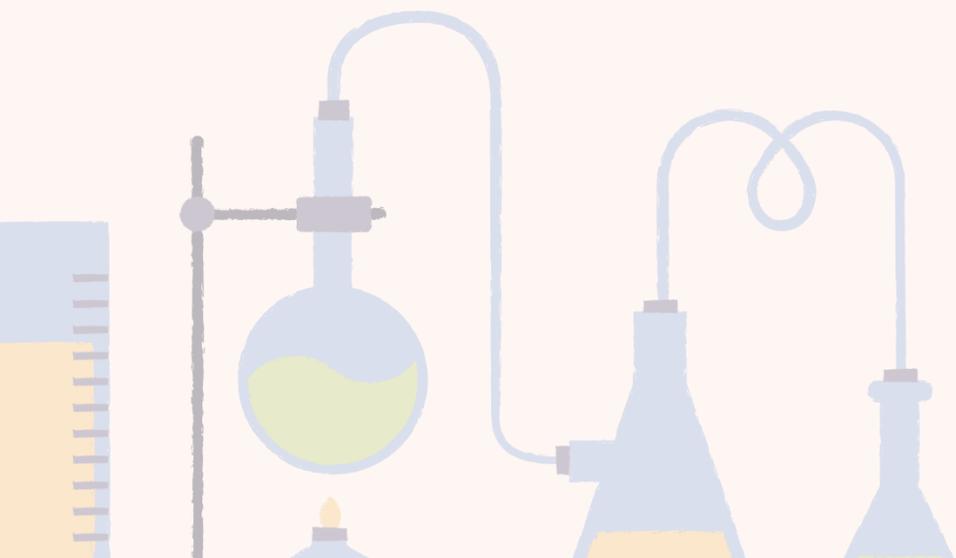
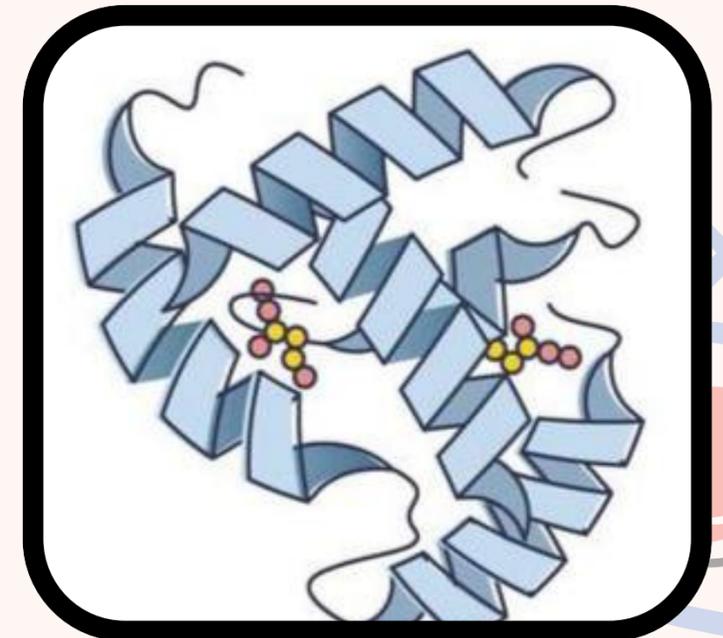




Proteins

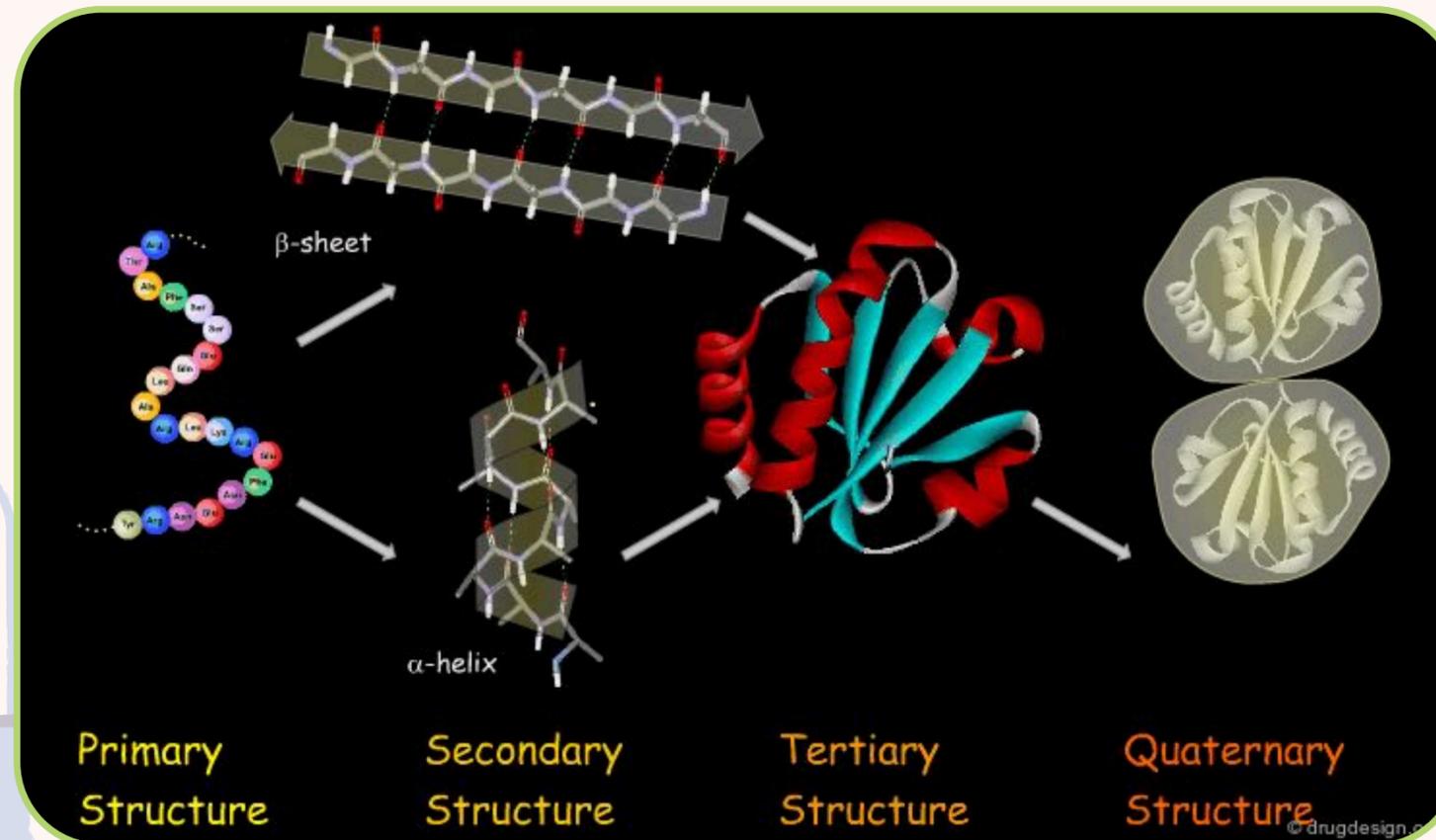
Proteins are made of amino acids. They function as enzymes, hormones, and structural components.

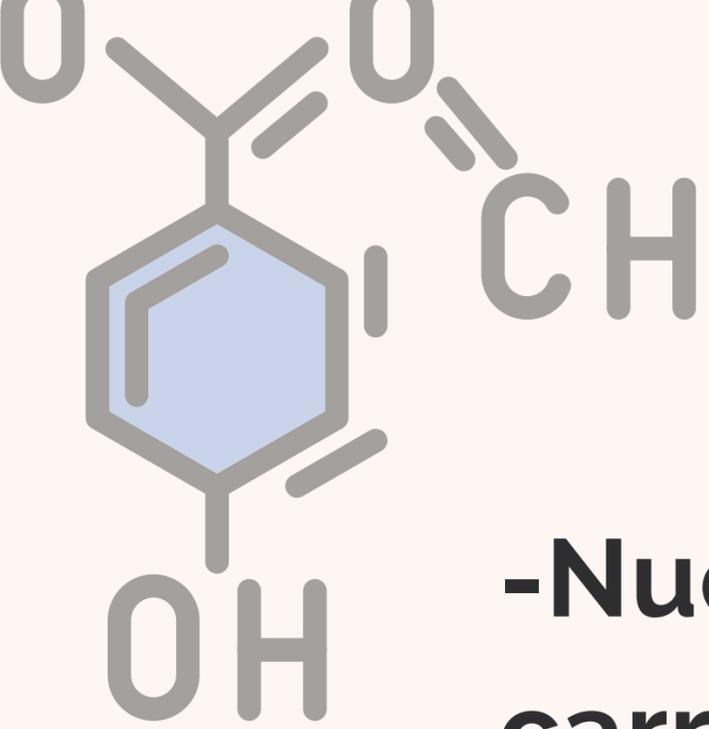
Examples: Hemoglobin, Enzymes, Insulin



Lipids

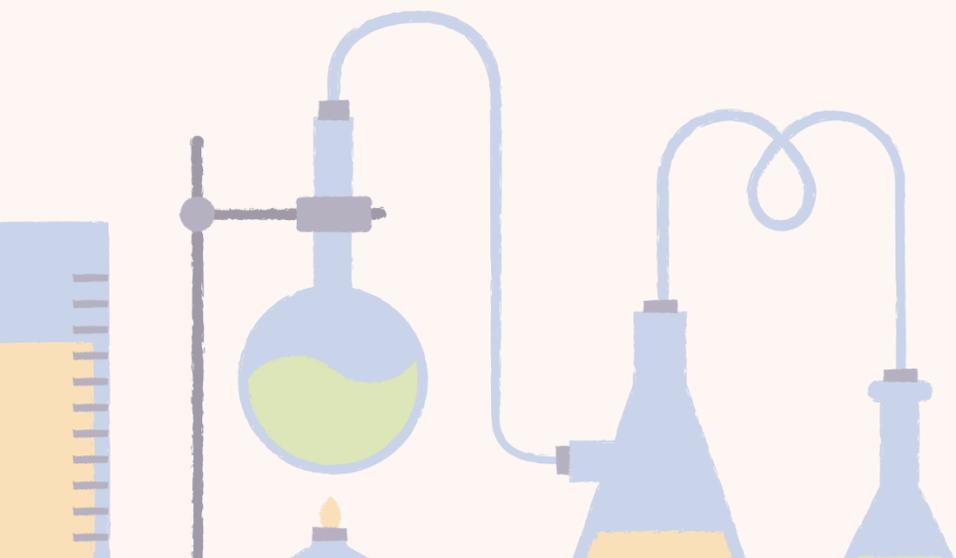
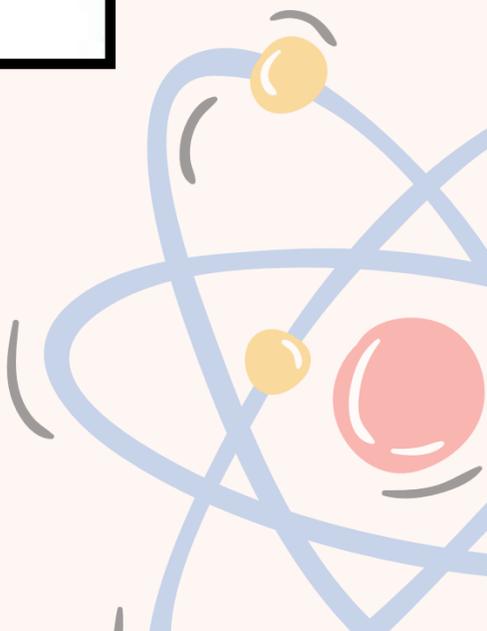
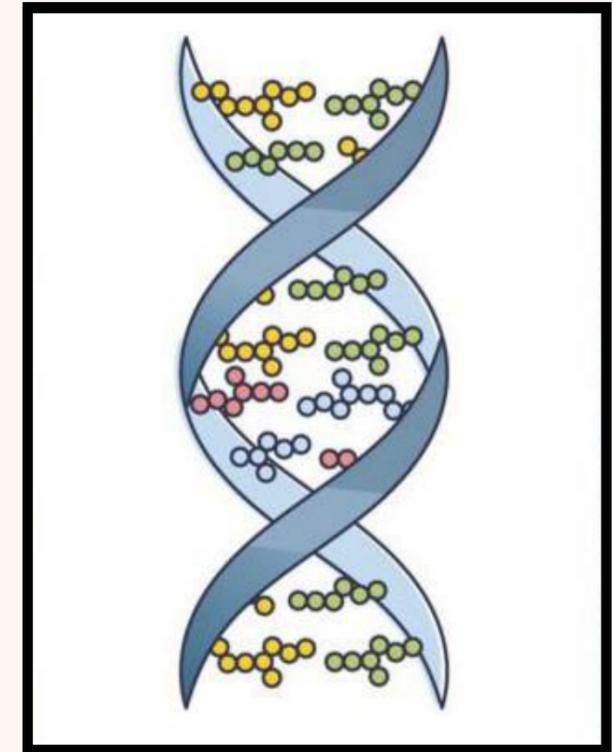
- **Lipids** are fats and oils used for long-term energy storage and cell membrane structure.
- **Examples:** Triglycerides, Phospholipids, Steroids

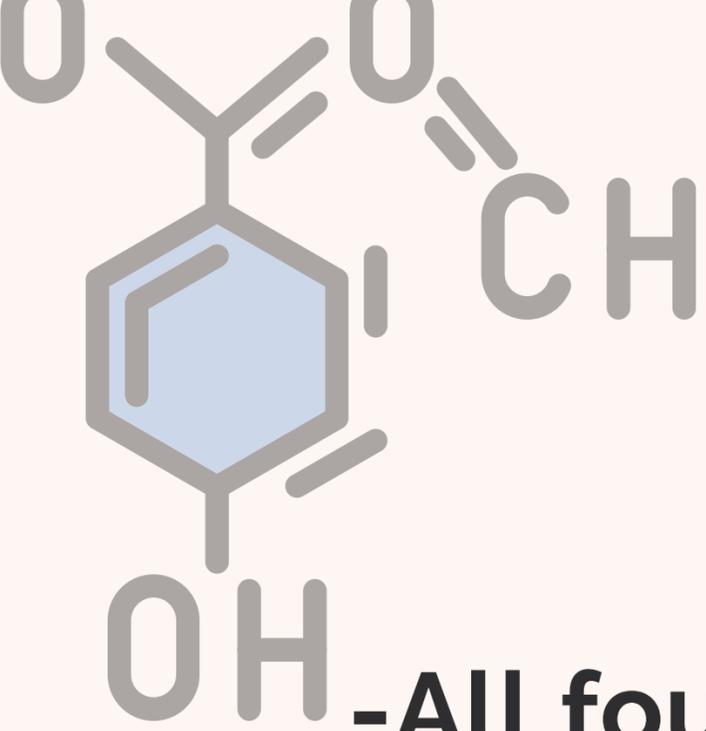




Nucleic Acids

- Nucleic acids (DNA and RNA) carry and transmit genetic information.
- DNA contains the genetic blueprint of organisms



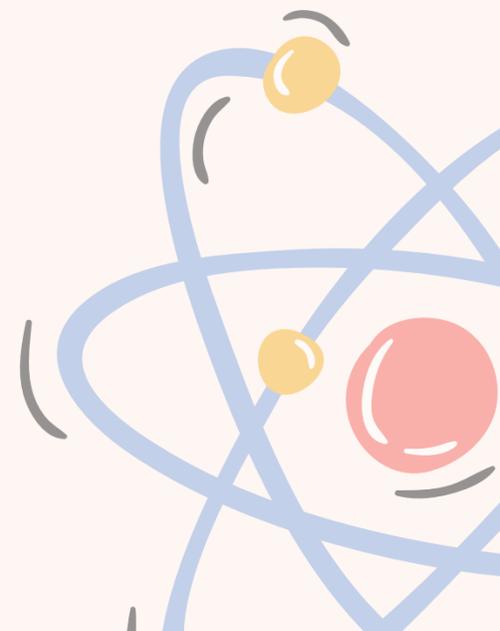
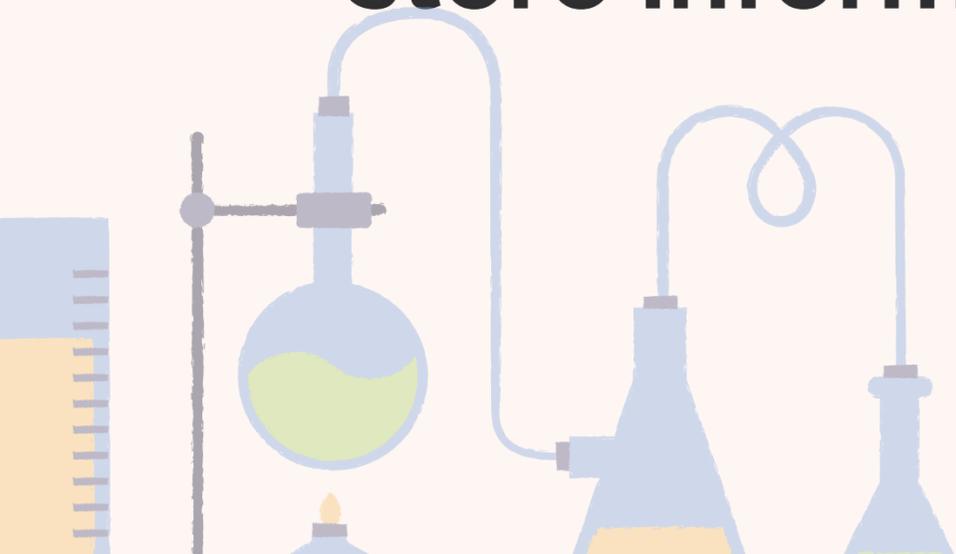


Biomolecules in Cells

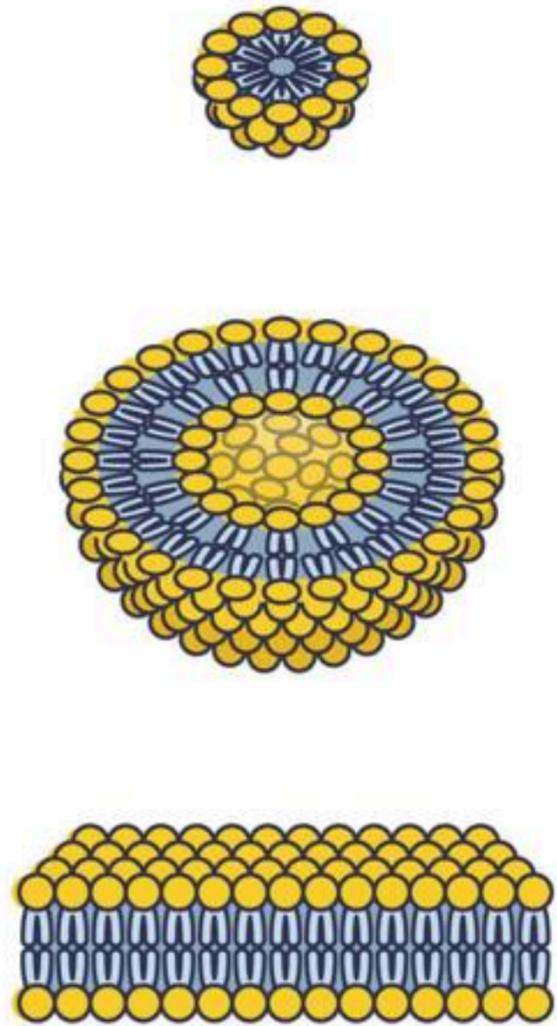


-All four types of biomolecules work together in cells to maintain life and enable biological processes.

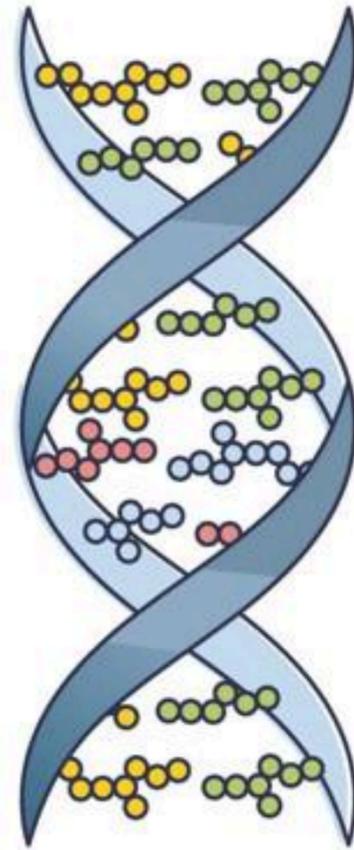
-They form cell structures, perform signaling, and store information



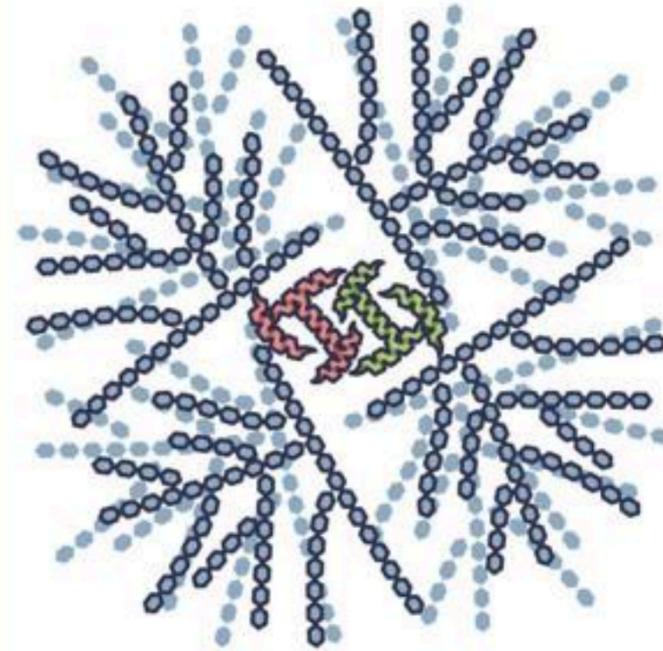
BIOMOLECULES



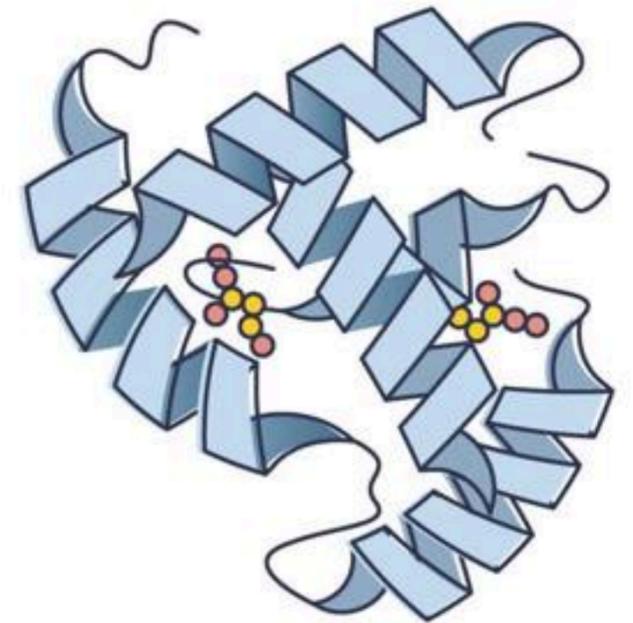
LIPIDS



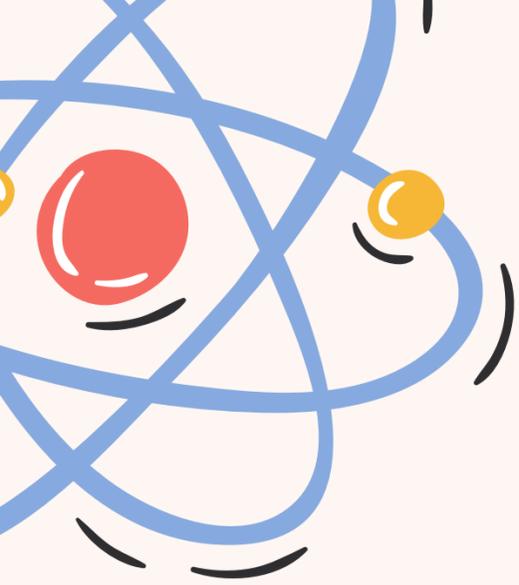
NUCLEIC ACIDS



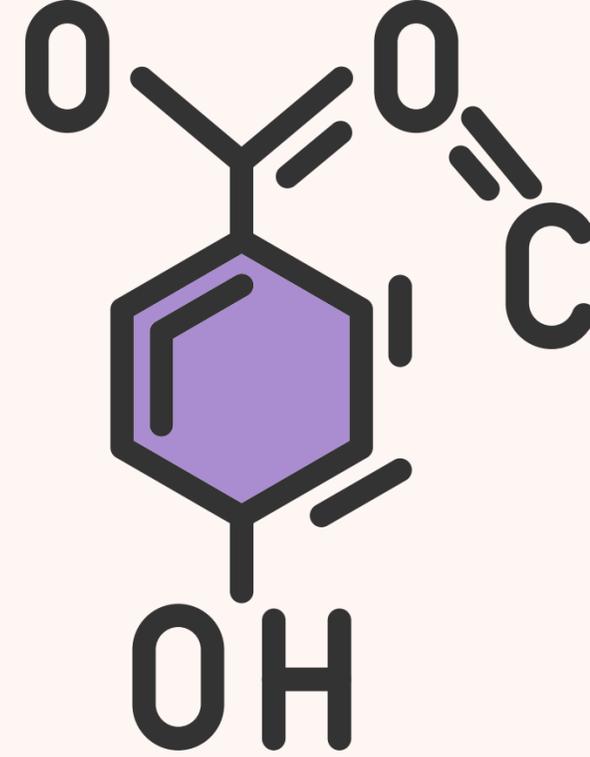
CARBOHYDRATES



PROTEINS



Thank You



يجب أن نكون قادرين على تحمل كل ما تخبئه
لنا الحياة من آلام وأحزان، فالوصول إلى السلام
الداخلي يتطلب شجاعة عظيمة لنستقبل
الظلمات كما نستقبل النور.

