



# LIFE: HISTORY AND ORIGIN

Dr. Ahmed Hasan Mohammed



# Properties of life

1. Organization: Being structurally composed of one or more cells, which are the basic units of life.

- prokaryote: no nucleus

- eukaryote: membrane bound nucleus.

2. Sensitivity: respond to stimuli.

3. Energy Processing

4. Growth and Development

5. Reproduction

- hereditary mechanisms to make more of self; DNA based.

6. Regulation, including homeostasis.

7. Evolution.

# Origin of life: hypotheses

1. Extraterrestrial origin (panspermia): meteor, comet borne from elsewhere in universe
  - evidence of amino acids and other organic material in space.
  - questionable bacterial fossils in Martian rock

2. Spontaneous origin on earth: primitive self-replicating macromolecules acted upon by natural selection ((macro)Evolution is one example of this).

3. Special creation: religious explanations (Intelligent Design is one popular example of this.) These explanations contend that life was created by God.