

Name: Key

Scientists & Their Contributions to the History of Life - Ch 14

For each person listed, identify their research/experiment/theory and what information was gathered to contribute to the history of life. You can find this information on pages 401-407. Feel free to use a separate sheet of paper for this.

Francesco Redi Disproved spontaneous generation

2 flasks = one open, one closed, only maggots grew in the containers open to the flies (they laid their eggs on the meat!)

Louis Pasteur Biogenesis was true even for microorganisms
Used a swan necked flask, let nutrient broth sit had no growth, tilted swan neck flask allowing microorganisms in resulted in growth after returning flask upright again

Alexander Oparin & John Haldane "Primordial Soup" hypothesis
Explained that earth's early atmosphere allowed organic chemicals to be assembled from simple reactions with the ocean water, UV light & lightning. *These molecules eventually came together to form life!

Stanley Miller & Harold Urey Proved "Primordial Soup" hypothesis
Built a glass apparatus to simulate conditions of ancient earth. It contained water & gases from earth's atmosphere, water was boiled, exposed to gases & electric charge then molecules were collected * Amino acids produced (Protein precursors!)

Lynn Margulis "Endosymbiont" theory
ancestors of eukaryotes lived in close association with prokaryotic cells, living inside, becoming mutually beneficial for both thus becoming organelles. * Mitochondria & chloroplasts have their own DNA