

GENERAL BIOLOGY Lecture 5 - Cell structure & function

- I. The cell**
 - A. Cells are fundamental organizational units of all living things**
 - B. Types of cells**
 - 1. Prokaryotic**
 - 2. Eukaryotic**
 - a) Plant**
 - b) Animal**
- II. Protoplast**
 - A. Protoplasm within membrane / cell contents without the cell wall**
- III. Organelles**
 - A. Cell wall**
 - 1. Plants**
 - 2. Support, structure, & protection**
 - B. Nucleus**
 - 1. Genetic information - DNA**
 - 2. Cell regulation - "the brains"**
 - C. Chloroplasts**
 - 1. Plants**
 - 2. Photosynthesis**
 - a) Thylakoids - light capture**
 - b) Stroma - conversion to sugar**
 - 3. Contain some DNA**
 - D. Mitochondria**
 - 1. Energy from sugars**
 - 2. Contain some DNA**
 - E. Cytomembrane system**
 - 1. Packaging & transport**
 - a) Golgi apparatus (dictyosomes)**
 - b) Endoplasmic reticulum**
 - c) Ribosomes**
 - F. Microbodies**
 - 1. peroxisomes - photorespiration**
 - 2. glyoxisomes - conversion of fats into sugars**
 - G. Microtubules - movement & wall synthesis**
 - H. Ergastic materials**
 - 1. Starch grains - storage**
 - I. Vacuoles**
 - 1. Storage**
 - 2. Waste**
 - 3. Water regulation**