

Lecture #5 – Animal Ancestors & Sponges

I. Choanoflagellates + Animalia

- A. Collar cells with **flagella**
- B. Advantages of **multicellular** life
- C. Collagen

II. Porifera

- A. Most ancestral of the Animalia radiations
 - 1. Lack mouth and gut
 - 2. Sessile
- B. **Synapomorphies**
 - 1. Spicules
 - 2. Aquiferous system
 - a. Organization (asconoid, syconoid, leuconoid)
 - b. Cell types
 - i. **Pinocytes** (epidermal cells)
 - ii. **Porocytes** (pore cells)
 - iii. **Choanocytes** (collar cells)
 - iv. **Archeocytes** (matrix cells)
- C. Evolutionary Diversity
 - 1. **Calcarea** (Calcareous Sponges)
 - 2. **Hexactinellida** (Glass Sponges)
 - 3. **Demospongiae** (Majority of Sponges)

Reading: Chapter 6 – pages 112-122

Questions: Page 121 – 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, and 13.