

# Chapter 4 – Tissue: The Living Fabric

## I. Epithelial tissue

### A. General forms

### B. General functions

### C. Special characteristics of epithelium

#### 1. Polarity

##### a. Apical surface

###### i. Microvilli

###### ii. Cilia

##### b. Basal surface

###### i. Basal lamina

#### 2. Specialized contacts

#### 3. Supported by Connective Tissue

##### a. Reticular lamina

##### b. Basement membrane

#### 4. Avascular but innervated

#### 5. Regeneration

## D. Classification

### 1. Covering and lining epithelia

#### a. General classification

##### i. Number of cell layers

###### A. Simple epithelia

###### B. Stratified epithelia

**ii. Cell shape**

**A. Squamous cells**

**B. Cuboidal cells**

**C. Columnar cells**

**b. Specific classification**

**i. Simple epithelia**

**A. Simple squamous epithelium**

**1. Description**

**2. Functions**

**3. Locations**

**a. Endothelium**

**b. Mesothelium**

**B. Simple cuboidal epithelium**

**1. Description**

**2. Functions**

**3. Locations**

**C. Simple columnar epithelium**

**1. Description**

**2. Functions**

**3. Locations**

**D. Pseudostratified columnar epithelium**

**1. Description**

**2. Functions**

**3. Locations**

**ii. Stratified epithelia**

**A. Stratified squamous epithelium**

**1. Description**

**2. Functions**

**3. Locations**

**a. Keratinized**

**b. Nonkeratinized**

**B. Stratified cuboidal epithelium**

**C. Stratified columnar epithelium**

**D. Transitional epithelium**

**1. Description**

**2. Functions**

**3. Locations**

**2. Glandular epithelia**

**a. Glands**

**b. General classification**

**i. Location of secretion**

**A. Endocrine**

**B. Exocrine**

**ii.** Number of cells

**A.** Unicellular

**B.** Multicellular

**c.** Specific classification

**i.** Endocrine glands

**ii.** Exocrine glands

**A.** Unicellular exocrine glands

**B.** Multicellular exocrine glands

**1.** Components

**a.** Duct

**i.** Simple

**ii.** Compound

**b.** Secretory unit

**i.** Tubular

**ii.** Alveolar

**iii.** Tubuloalveolar

**2.** Modes of secretion

**a.** Merocrine

**b.** Halocrine

**c.** Apocrine