

## Digestive System III

### I. Large Intestine

A. Supported by a peritoneal membrane = Mesocolon

B. 4 divisions to Large Intestine

1. Cecum - appendix attached here; ileocecal valve

2. Colon: 4 sections – Ascending, Transverse, Descending,

Sigmoid

3. Rectum

4. Anal canal

a. Internal sphincter = smooth muscle

b. External sphincter = skeletal muscle

C. Histology of Colon:

1. mucosa – simple columnar

2. submucosa - c.t.

3. muscularis – contains an inner circular layer; outer longitudinal layer of muscle is organized into 3 strips of smooth muscle called Teniae Coli

4. Serosa- simple squamous + connective tissue

D. Primary function = absorption of water

### II. Accessory organs

A. Liver - 4 lobes; right, left, caudate, & quadrate. Supported by a peritoneal

membrane = **Falciform Ligament**

1. Histology: Each lobe is divided into lobules;

a. Hepatic Triad – branches of hepatic artery, portal vein & bile duct. Liver pancreas produces bile (fat emulsifier)

b. Central Vein

2. Function in regard to the digestive system is to produce

bile (fat  
emulsifier)

B. Gall bladder – attached to liver; stores and concentrates bile

C. Pancreas: it has a population of cells referred to as **Acinar cells**. These cells secrete digestive enzymes (5 different ones) that collectively complete the digestion of carbohydrates, lipids, and proteins. These are transported to the duodenum via the pancreatic duct.