**Items to Identify: Cell Structure I (Membranes and Receptors)**

**Slides to Identify**

* Slide 148: Ileum
  + Tall, columnar intestinal absorptive cells
  + Mucus-secreting goblet cells
  + Brush border- eosinophilic
  + Mucous droplets, erythrocytes – eosinophilic
  + Borders between adjacent cells
  + Compare size of absorptive cells, nuclei, and brush border
* Slide 153: Colon (monkey)
  + Goblet cells
  + Intestinal absorptive cells
  + Brush border- eosinophilic
  + Mucous droplets, erythrocytes – eosinophilic
  + Borders between adjacent cells
  + Compare size of absorptive cells, nuclei, and brush border
* Slide 249: Ileum (PAS)
  + PAS stains carbohydrates pink/purple
  + Glycocalyx of brush border and mucus droplets of goblet cells – PAS+
* Slide 447: Duodenum and Slide 32409: Rat Intestine (toluidine blue)
  + Toluidine blue stain most proteins and nucleic acid- density, shape, size
  + Lightly stained – brush border, basement membrane, mucus droplets, erythrocytes
  + Darkly stained – cytoplasm, mitochondria, nuclei (have both light and dark regions)
  + Nuclei- nucleoli, heterochromatin (inactive chromatin) dark, and light euchromatin (active chromatin) regions

**EM’s to Identify**

* EM 3: Intestinal absorptive cell, basal end (18,400x)
  + Basement membrane region- acidophilic
  + Basal lamina- grey, fuzzy – separates cell from basement membrane
  + Interdigitations of plasma membrane
* EM 4: Intestinal absorptive cells and goblet cell, apical end (18,400x)
  + Brush border- composed of microvilli which are covered in glycocalyx, terminal web
  + Interdigitations of plasma membrane
  + Secretory droplets
* EM 4b: Intestinal absorptive cell, apex (60,000x)
  + Brush border- composed of microvilli
  + Actin filaments that support microvilli
  + Terminal web of actin filaments in apex of cell cytoplasm
  + Cell junctions
  + Microvilli, glycocalyx, microfilaments, terminal web
  + Interdigitations of plasma membrane
* EM 4c: Intestinal absorptive cell, super nuclear region (60,000x)
  + Interdigitations of plasma membrane
  + Golgi