**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