

Lecture 11: The liver, kidneys, and the Endocrine System

1. The liver

- Surrounded by double membrane (the glisson capsule)
- The liver joins to the circulation after transport of proteins and large macromolecules to and from cells
  - Made of ~100,000 lobules
- The liver transports lipids

2. Kidneys

3. Endoplasmic Reticulum

- Continuous with nuclear envelope
  - Forms internal space
- Smooth ER
  - Ribosome-free
  - Rich in metabolic enzymes
  - Large proportion in specialised cells
  - Synthesis of lipids
  - Modification of carbohydrates
  - Detoxification of drugs and poisons
  - Calcium sequestration
- Rough ER
  - Ribosomes on outside
    - Secreted proteins