Lab Practical One

Week 1: Lab Methods and Organelles

Background	2
Microscopic Techniques	2
Organelles and Cytoplasmic Inclusions	2
Labeled Organelle Diagram	5
Mitotic Phases	5
Apoptosis Events	5
Features and Functions	6

Week 1: Lab Methods and Organelles

Background

,	i ination.			
(o Embedding:			
(o Staining:			
• \	What does H & E Stain?			
• \	What does PAS Stain?			
•	Describe Enzyme Histochemistry.			
•	How does Immunohistochemistry work?			
Microscopic Techniques				
•	Bright field:			
•	Phase contrast:			
•	Confocal:			

• Describe The steps in Tissue Preparation for microscopy:

Organelles and Cytoplasmic Inclusions

Nucleolus

0	Size:
0	Light Microscopic Features:

• Scanning Electron Microscopy:

• Transmission Electron Microscopy:

Nucleolus

• Fluorescent:

• Structure:

• Function:

o Structure:

- o Size:
- Light Microscopic Features:
- Function:

Plasma Membrane

- o Structure:
- o Size:

0	Light Microscopic Features.
0	Function:
rE	:R
0	Structure:
0	Size:
0	Light Microscopic Features:
0	Function:
sl	ER .
0	Structure:
0	Size:
0	Light Microscopic Features:
0	Function:
G	olgi Apparatus
0	Structure:
0	Size:
0	Light Microscopic Features:
0	Function:
S	ecretory Vesicles
0	Structure:
0	Size:
0	Light Microscopic Features:
0	Function:
M	litochondria
0	Structure:
0	Size:
0	Light Microscopic Features:
0	Function:
Eı	ndosomes
0	Structure:
0	Size:
0	Light Microscopic Features:

Function:
Lysosomes
Structure:
o Size:
o Light Microscopic Features:
Function:
Peroxisomes
Structure:
o Size:
o Light Microscopic Features:
Function:
Cytoskeletal Elements
Structure:
o Size:
Light Microscopic Features:
Function:
Ribosomes
Structure:
。 Size:
Light Microscopic Features:
Function:
Glycogen
Structure:
o Size:
 Light Microscopic Features:
Function:
Lipid Droplets
Structure:
o Size:
 Light Microscopic Features:

• Function:

Labeled Organelle Diagram

0

Mitotic Phases



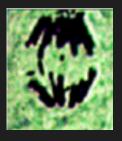
0



0



0



0



0

Apoptosis Events

- DNA fragmentation:
- Decrease of cell volume:
- Membrane Blebbing:
- Formation of apoptotic bodies:

Features and Functions

- Stratified squamous epithelium:
 - Features:
 - Functions:
- Simple cuboidal epithelium:
 - Features:
 - Functions:
- Skeletal muscle:
 - Features:
 - Functions:
- Cardiac muscle:
 - Features:
 - Functions:
- Smooth muscle: