

Vertebrate Histology

ZOO 415

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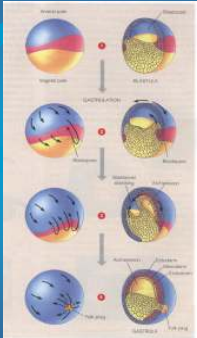
Monday, October 18, 2010 Vertebrate Histology (BISC 415) 1

General Introduction

- **Histology BISC 415 is a basic Science in Medicine, biomedical and Pharmaceutical Sciences.**
- **It constitutes the framework for the cellular basis of pathology, physiology, endocrinology, dermatology, neurology.....**
- **It will be presented as Lectures, Hand-outs and lab sessions with a back-up text (Histology: A text and Atlas).**
- **Revision questions will be presented at the end of each new topic.**
- **There will be three exams for the theory counting as 60% of the final grade, a continuous assessment (10%), active participation in class (10%) and the lab sessions will count for 20% of your final grade**

Monday, October 18, 2010 Vertebrate Histology (BISC 415) 2

Course Introduction



- **Fertilized cell (ovum) undergoes embryonic development to give a blastula which further differentiates to form a Gastrula having three germ layers (ectoderm, endoderm and mesoderm).**
- **This development is in response to the functional needs which results in an aggregation of cells related in structure and function constituting the **Tissues****

Monday, October 18, 2010 Vertebrate Histology (BISC 415) 3

All the tissues Types in the body can be classified as one of the four primary types, each with specific structural and functional attributes as follows

- **Epithelium**
- **Connective Tissues**
- **Muscle Tissues &**
- **Nerve Cells**

- **Structurally Organized tissues having one or several functions constitutes an Organ and a group of organs having a common purpose forms a System.**
- **The study of the microscopic anatomy of tissues and organ systems is called Histology. Specialized domains of Histology constitute **Histopathology**, and **Histophysiology** or Functional Histology**

Monday, October 18, 2010 Vertebrate Histology (BISC 415) 4


Microscopy

- **Light Microscope**
- **Techniques**
 - Fixation
 - Dehydration
 - Embedding
 - Sectioning
 - Staining
- **Histochemical methods**
- **Autoradiography**
- **Historadiography**



Monday, October 18, 2010 Vertebrate Histology (BISC 415) 5

Electron Microscope



Monday, October 18, 2010 Vertebrate Histology (BISC 415) 6