Cards & Staff Introduction

Last Name, First, Nickname, Phone, e-mail Lab time

Major, Undeclared or Area of Interest?

Academic Status: Fr, So, Jr, Sr, PB, MS, CEP

Professional Objective

Hometown, Birthplace

Why enrolled? Required? Interest?...

Prior related coursework? A&P in high school, EMT,...

Prior Universities/Community Colleges?

Family/Special interests/Hobbies

Something unique about yourself/Secret we won't reveal!

<u>Thanks for printing your name & lab time on Lab notebook</u>.

BI 121 Lab 1, Histology = Microscopic Study of Tissues

I. ***Lab Roster*** Cards & Staff Introduction

II. ***Requirements*** Attendance, Participation, Worksheets

III. ***Histology for Beginners*** In Memory of Harry Howard

IV. ***Microscope Familiarity***

A. Objectives/nosepieces – power up!

B. Focus – coarse and fine

C. Movement – mechanical stage

D. How do I put a slide on the stage?

E. Adjusting for eye width

...My what fun it is to see –
hooray, hooray, his-tol-o-gy!!

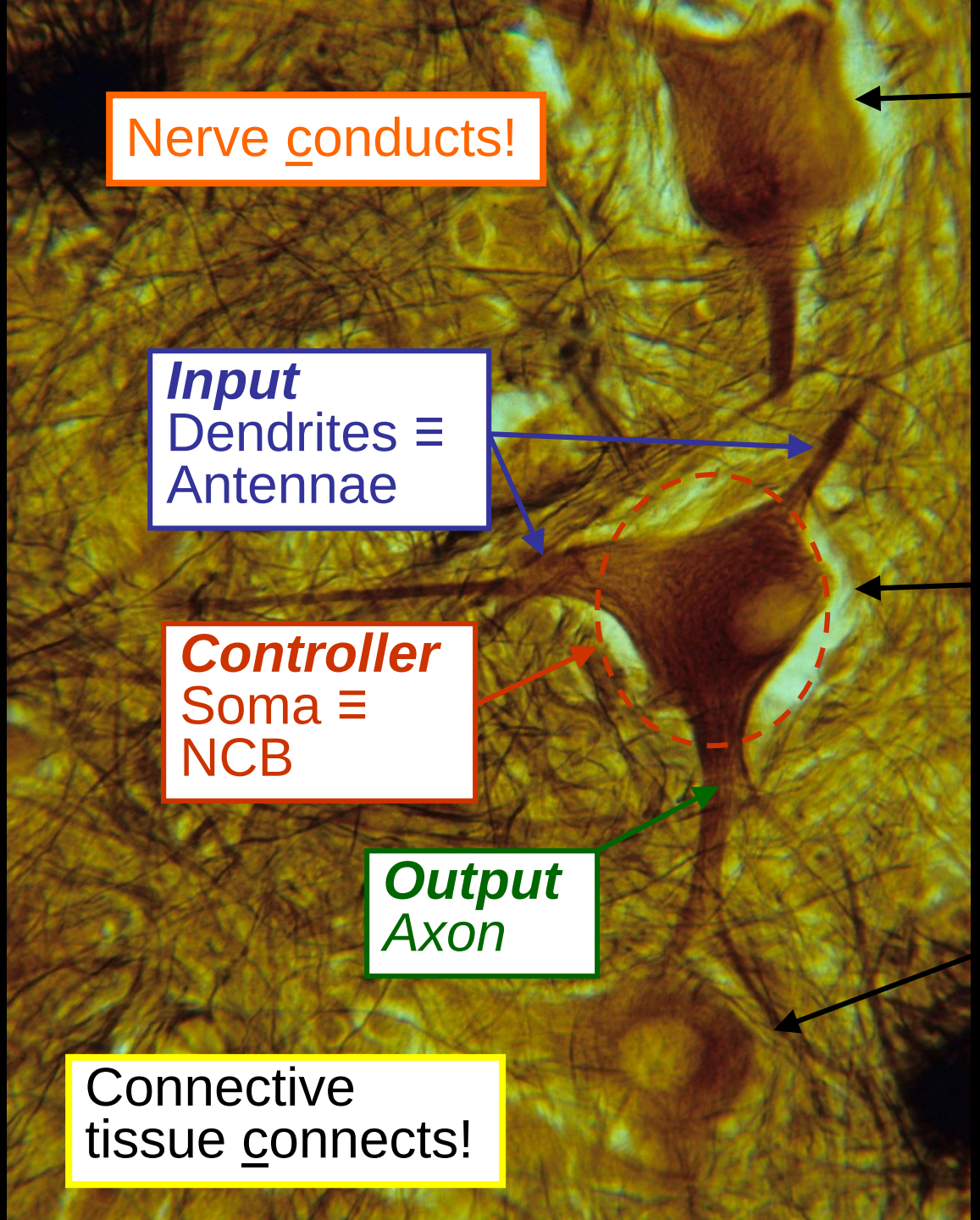
V. ***View & Have Fun!*** **See also photos @ front & scopes in back. Please ask questions & come see us!**

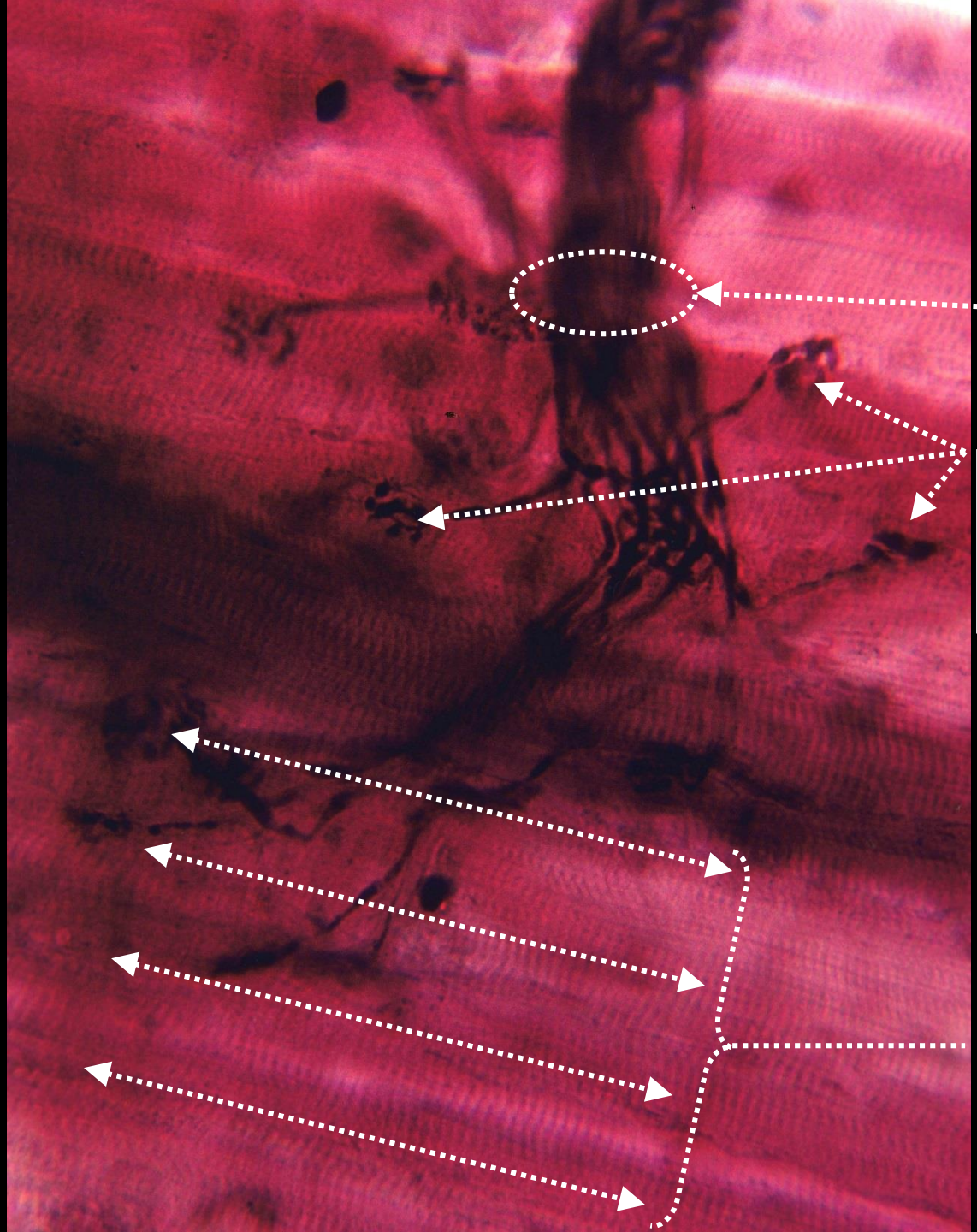
1. Put the e & i slide upright on the microscope tray so you can read it & see how looking through the scope changes what you see.

2. Use the remaining time simply to explore nerve, muscle, epithelial & connective tissues – really anything you want – just be sure to keep the slides in the tray in order! Thanks!

Histology for Beginners

In Memory of Harrison Howard
Former Director, Bio-optical Lab


Nerve conducts!
Neuron 1
Input
Dendrites ≡
Antennae
Neuron 2
Controller
Soma ≡
NCB
Output
Axon
Neuron 3
Connective
tissue connects!

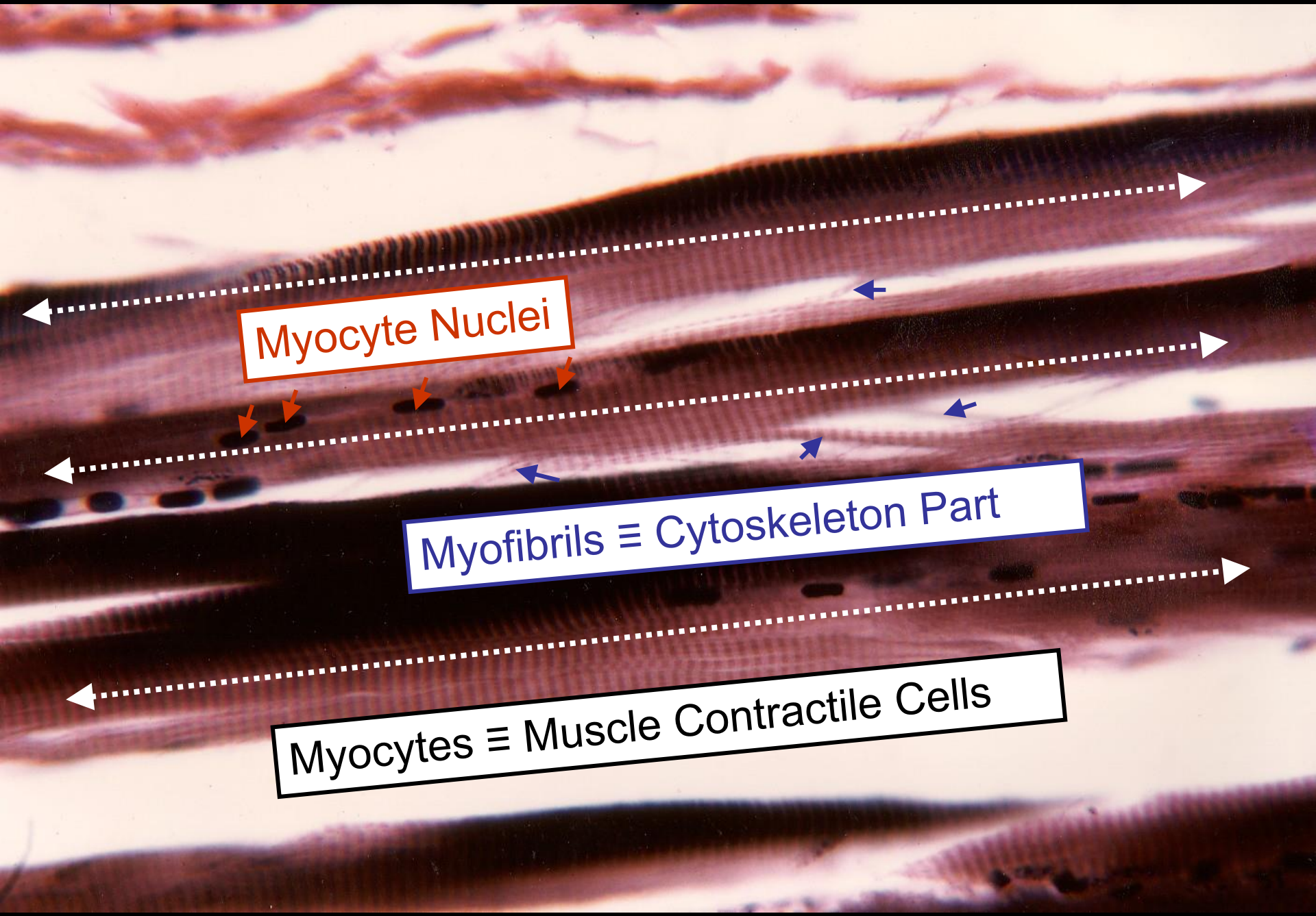


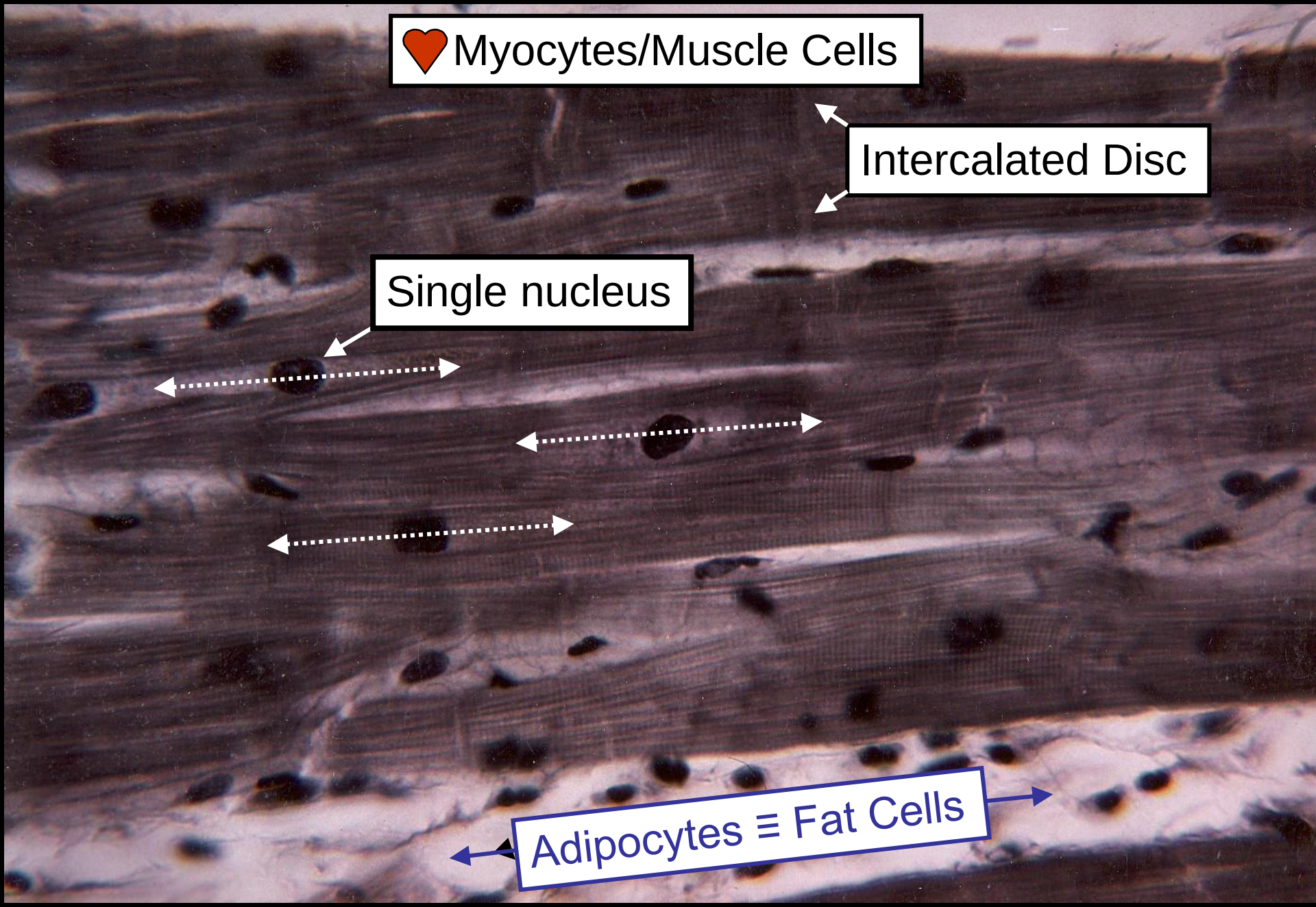
Controllers ≡ NCBs/somas not pictured → in spinal cord

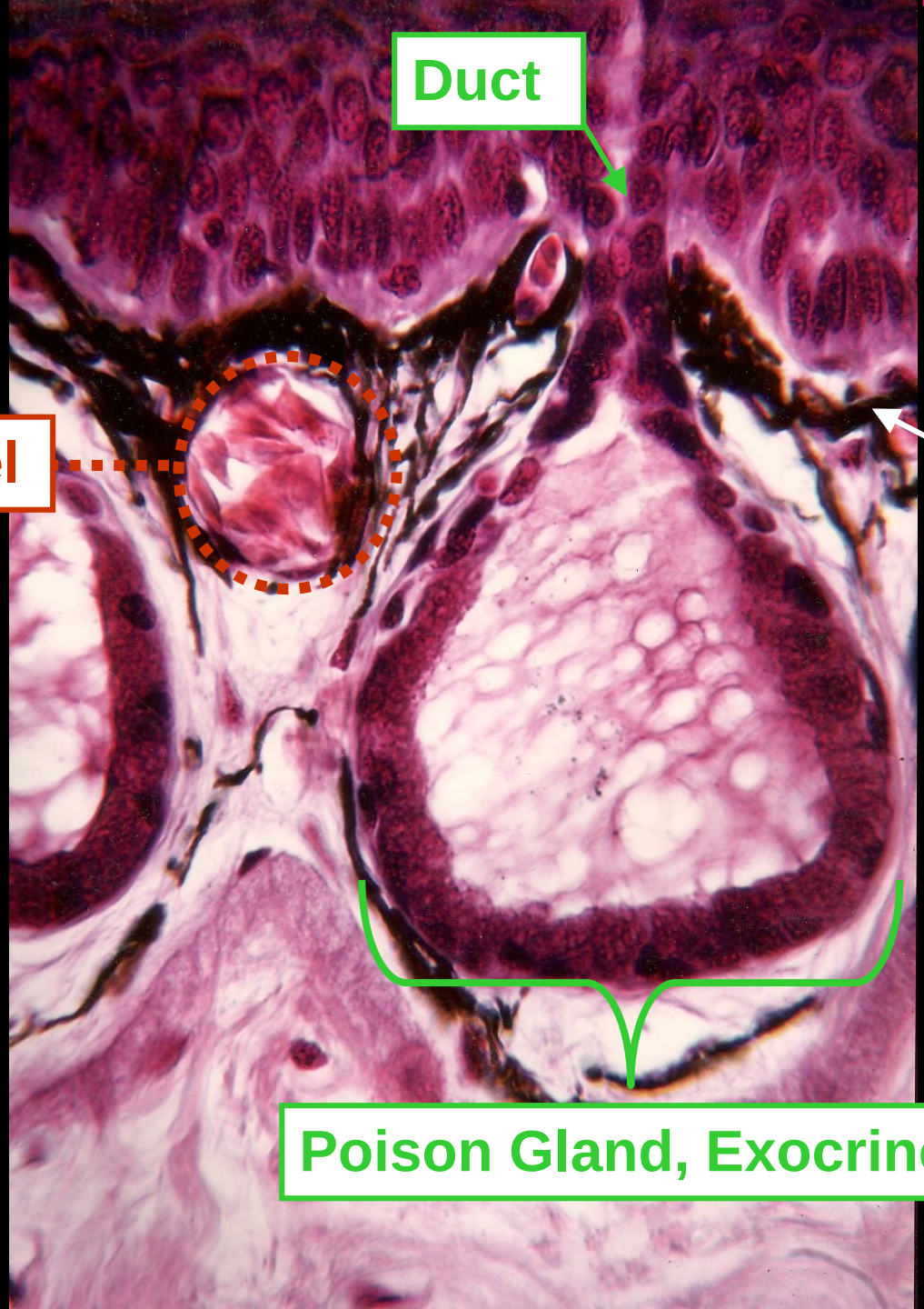
Output ≡ Axons

Bouton with Neurotransmitter Vesicles

Effectors ≡ Target Organs Voluntary Skeletal Muscle Fibers

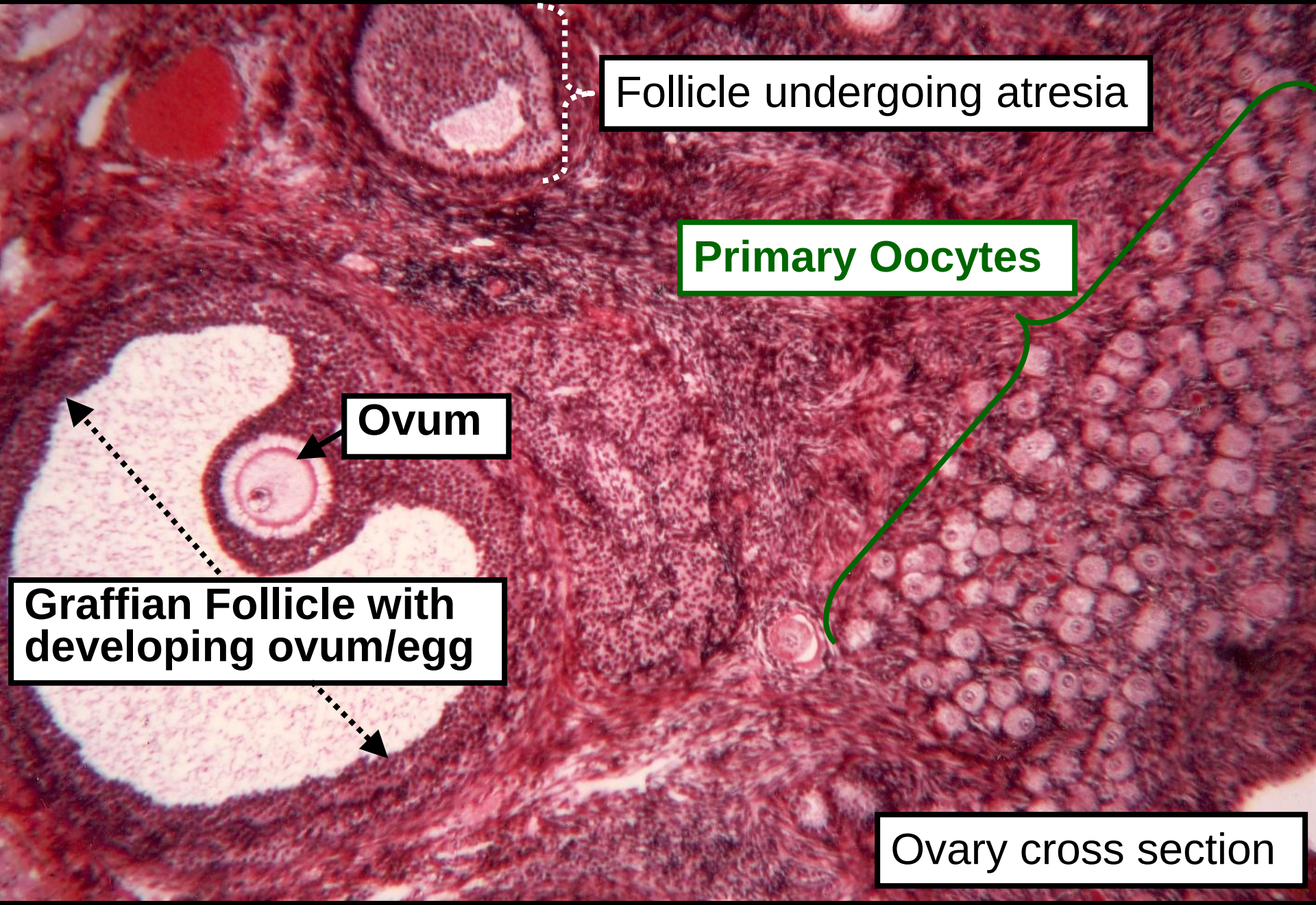

Myocyte Nuclei
Myofibrils ≡ Cytoskeleton Part
Myocytes ≡ Muscle Contractile Cells

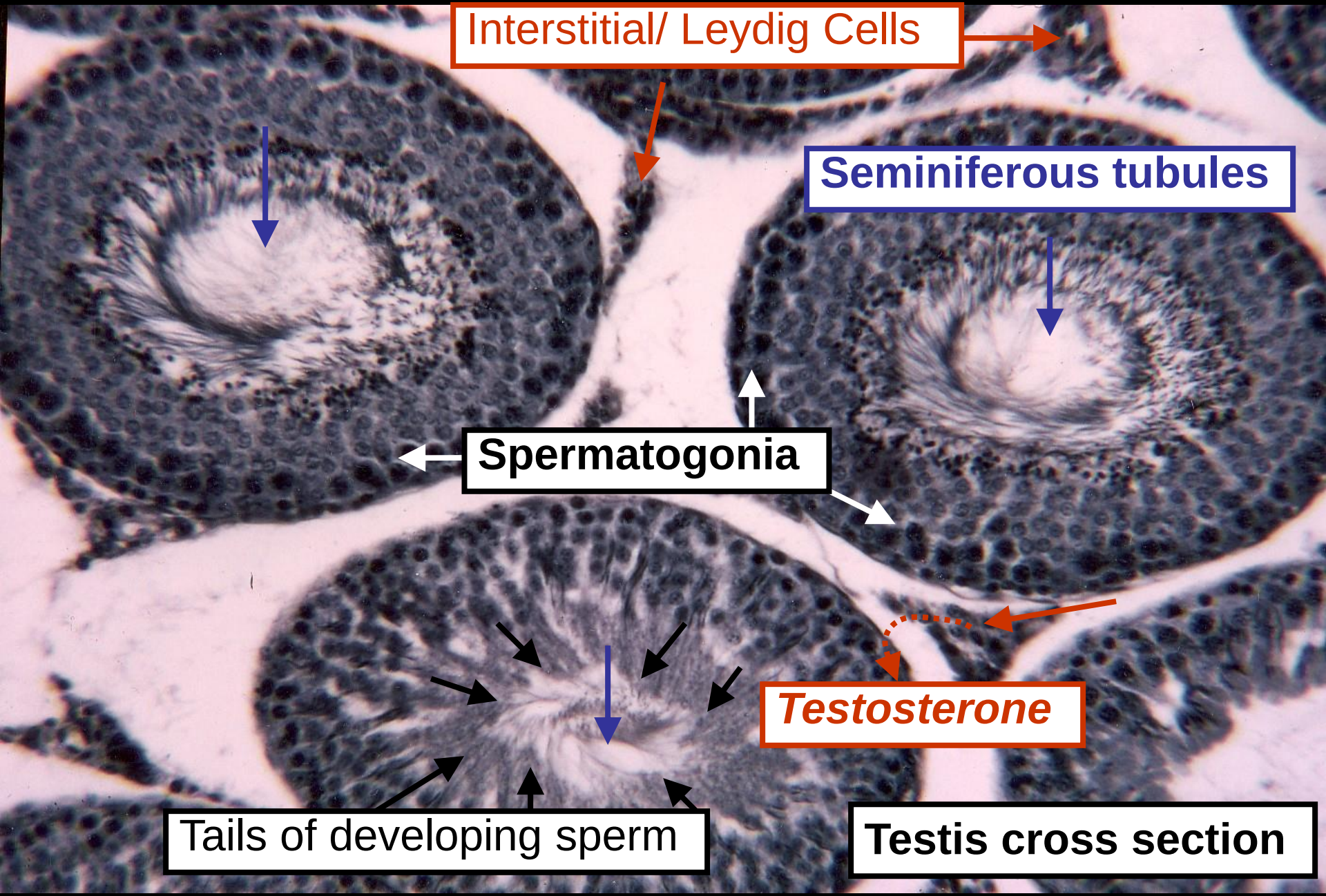

Myocytes/Muscle Cells
Intercalated Disc
Single nucleus
Adipocytes ≡ Fat Cells

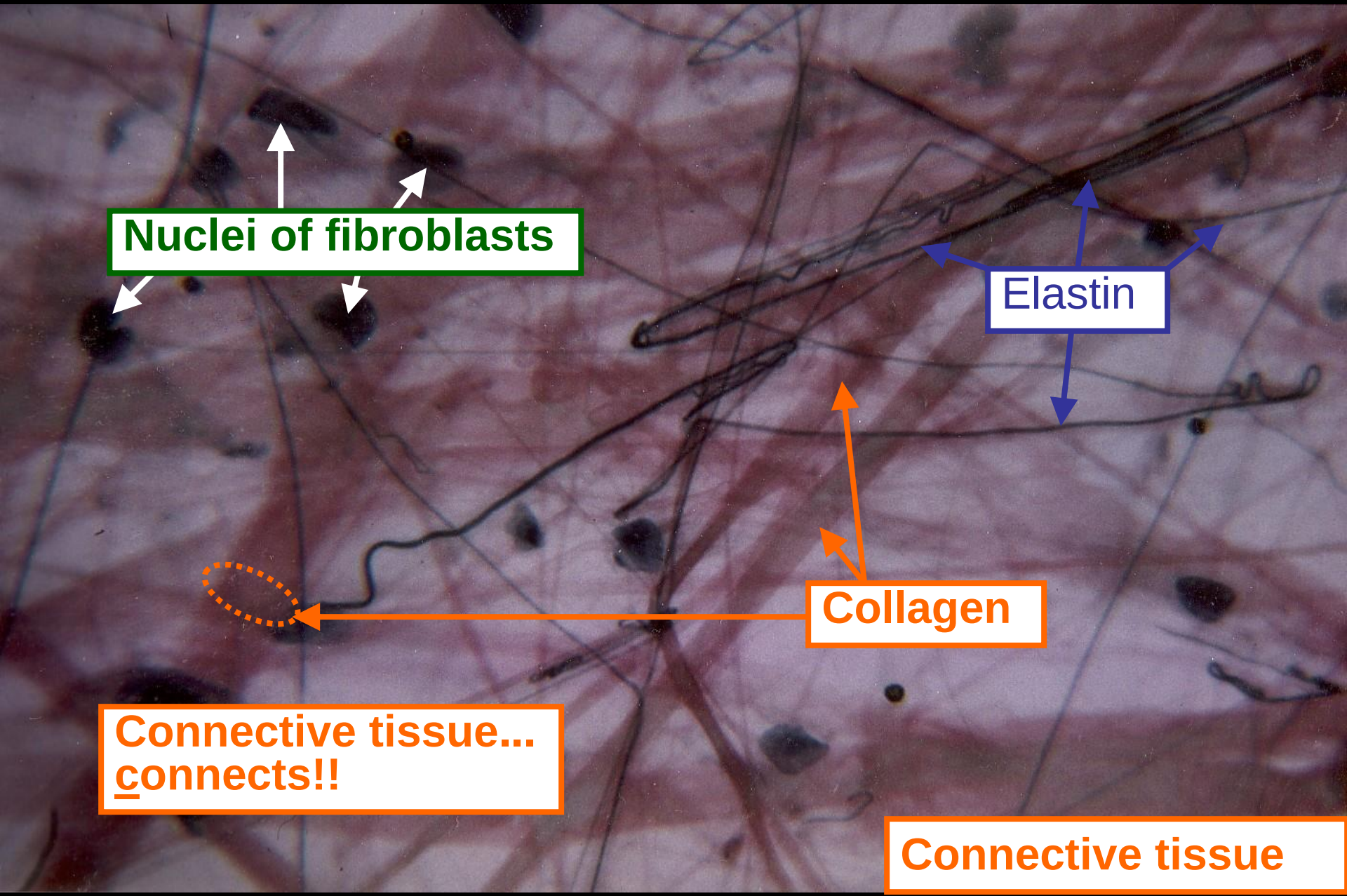

Frog Skin
Duct
Columnar Epithelium
Blood Vessel
Melanin Pigment layer
Poison Gland, Exocrine

Columnar Epithelium, Gall Bladder

Epithelial tissue covers & is specialized for transport!


Follicle undergoing atresia
Primary Oocytes
Ovum
Graffian Follicle with developing ovum/egg
Ovary cross section


Interstitial/ Leydig Cells
Seminiferous tubules
Spermatogonia
Testosterone
Tails of developing sperm
Testis cross section


Nuclei of fibroblasts
Elastin
Collagen
Connective tissue... connects!!
Connective tissue


Now, try to identify anatomical site & tissues!