

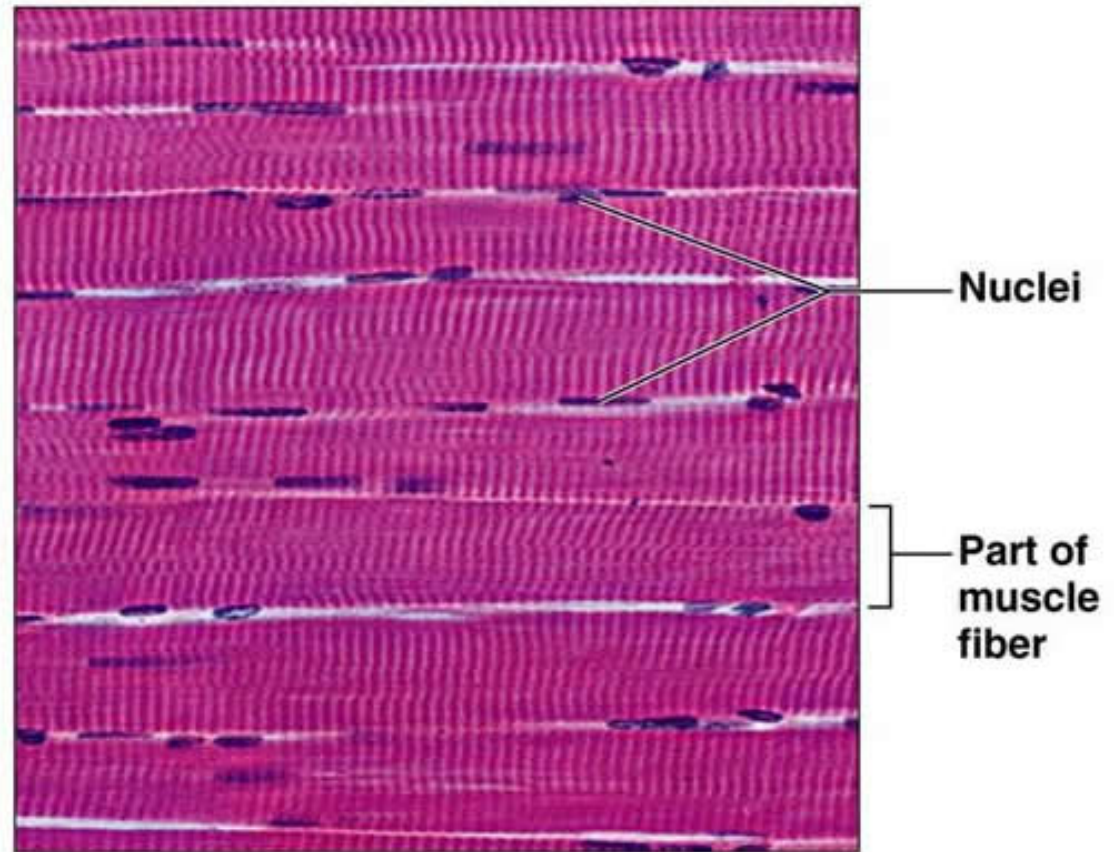
a) Skeletal muscle

Description: Long, cylindrical, multinucleate cells; obvious striations.



Function: Voluntary movement; locomotion; manipulation of the environment; facial expression; voluntary control.

Location: In skeletal muscles attached to bones or occasionally to skin.



Photomicrograph: Skeletal muscle (approx. 300 \times). Notice the obvious banding pattern and the fact that these large cells are multinucleate.

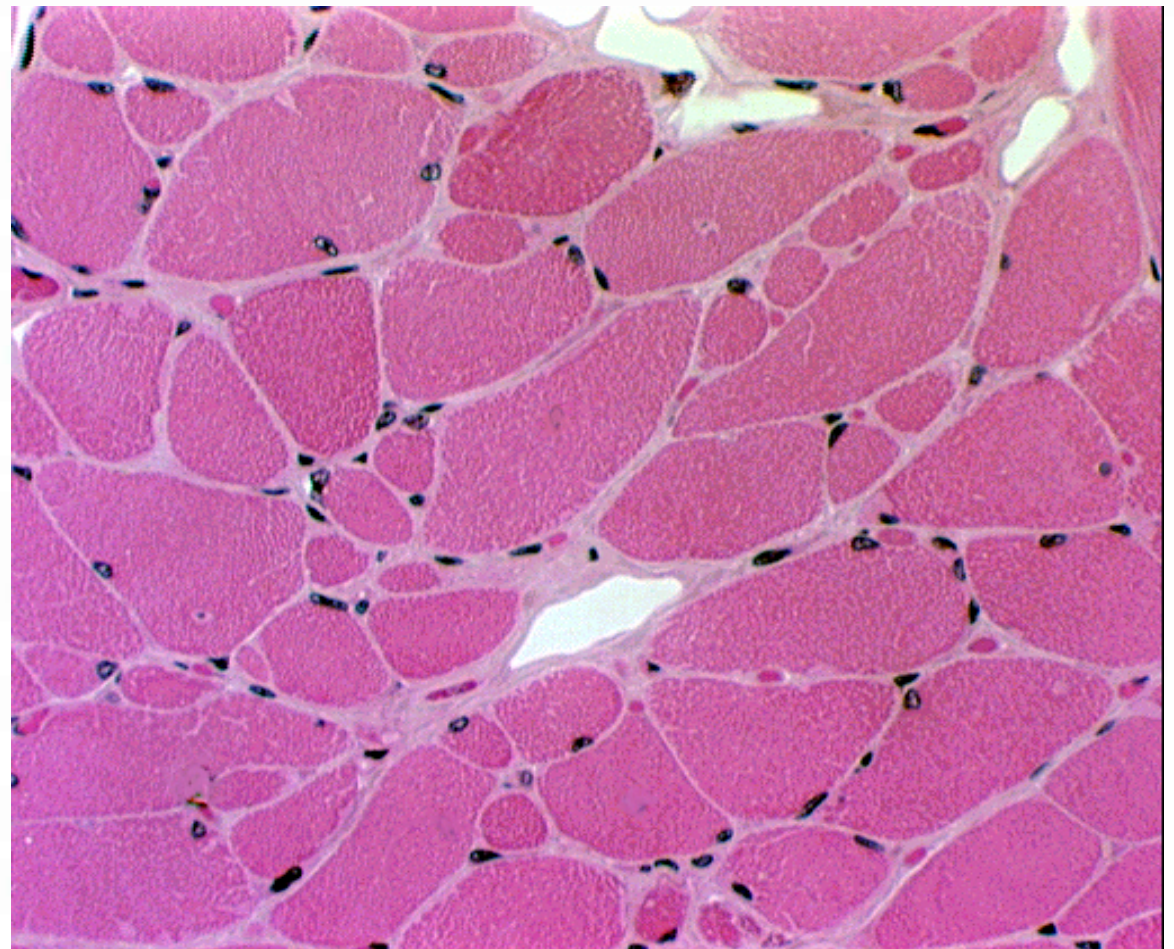
b) Skeletal muscle: cross-section

Description: same as above, but the muscle has been cut at a different angle



Function: Voluntary movement; locomotion; manipulation of the environment; facial expression; voluntary control.

Location: In skeletal muscles attached to bones or occasionally to skin.



Photomicrograph: Skeletal muscle (approx. 300 \times).
Cross-section view

<http://classes.midlandstech.edu/carterp/Courses/bio210/chap04/chap04.html>
<http://www.vetmed.vt.edu/education/curriculum/vm8054/labs/lab10/IMAGES/MUSCLE4.JPG>

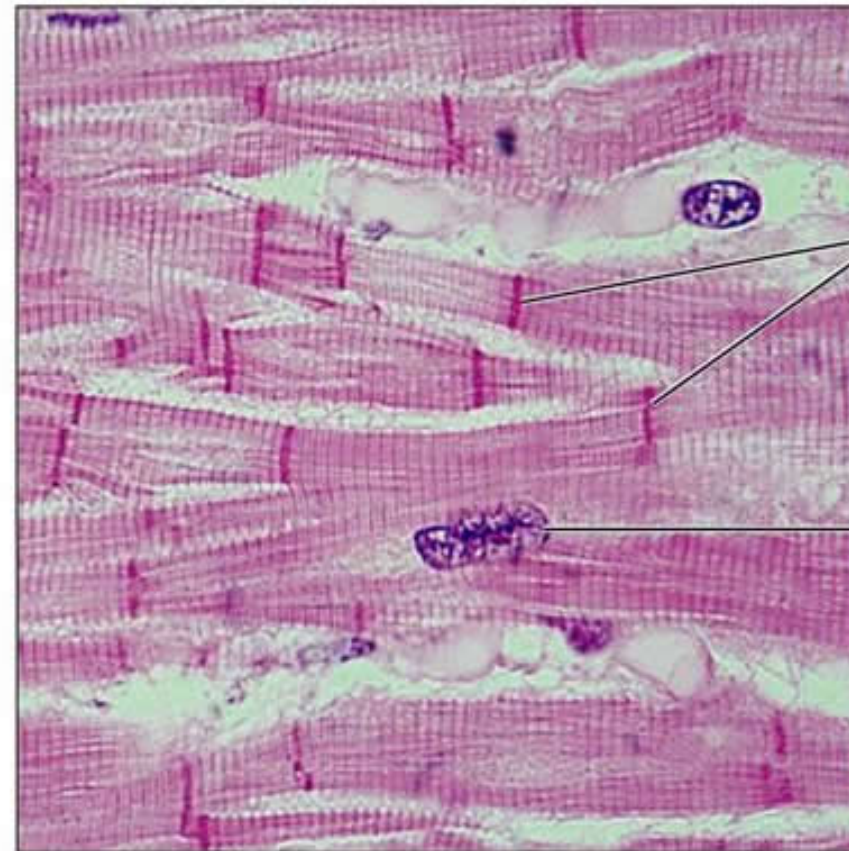
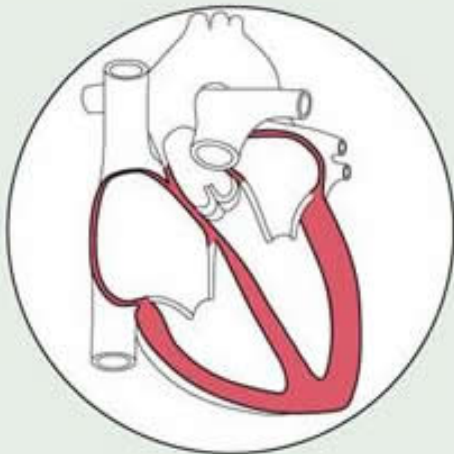
c) Cardiac muscle

Description: Branching, striated, generally uninucleate cells that interdigitate at specialized junctions (intercalated discs).



Function: As it contracts, it propels blood into the circulation; involuntary control.

Location: The walls of the heart.



Intercalated discs

Nucleus

Photomicrograph: Cardiac muscle (800 \times); notice the striations, branching of cells, and the intercalated discs.

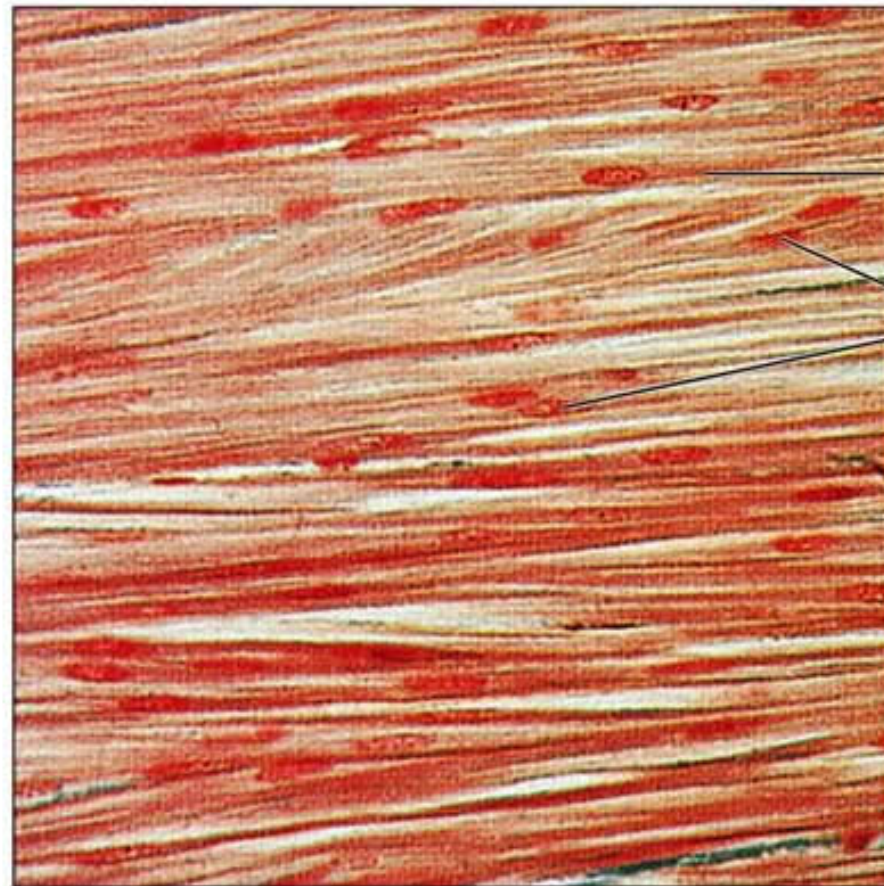
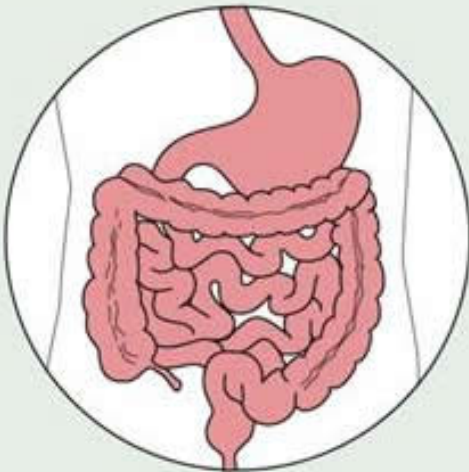
d) Smooth muscle

Description: Spindle-shaped cells with central nuclei; no striations; cells arranged closely to form sheets.



Function: Propels substances or objects (foodstuffs, urine, a baby) along internal passageways; involuntary control.

Location: Mostly in the walls of hollow organs.



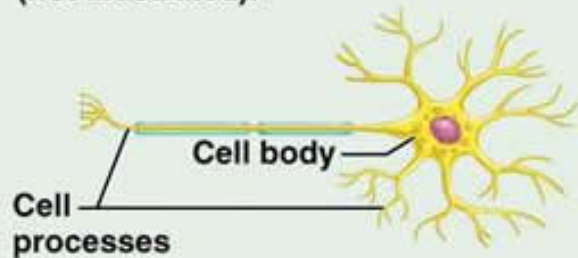
Smooth muscle cell

Nuclei

Photomicrograph: Sheet of smooth muscle (approx. 600 \times).

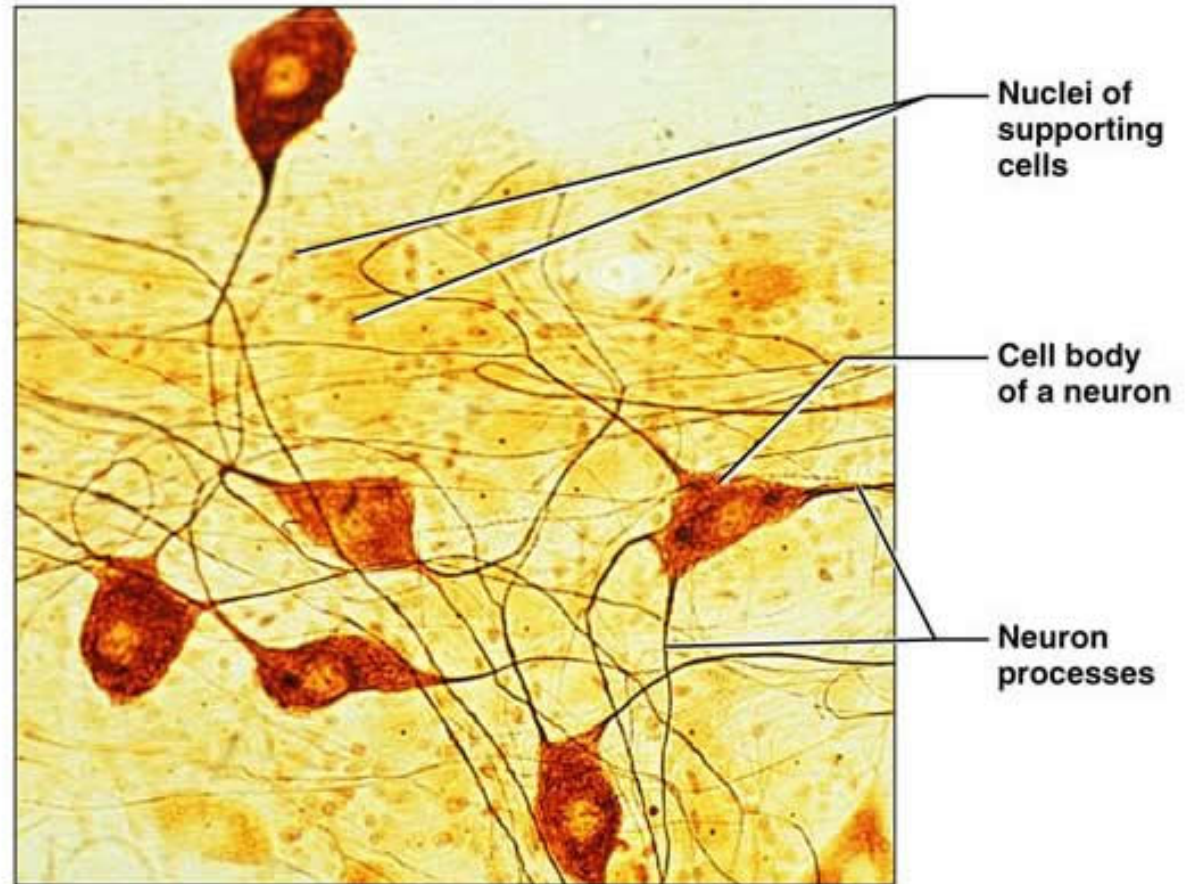
e) Nervous tissue: neurons

Description: Neurons are branching cells; cell processes that may be quite long extend from the nucleus-containing cell body; also contributing to nervous tissue are nonirritable supporting cells (not illustrated).



Function: Transmit electrical signals from sensory receptors and to effectors (muscles and glands) which control their activity.

Location: Brain, spinal cord, and nerves.



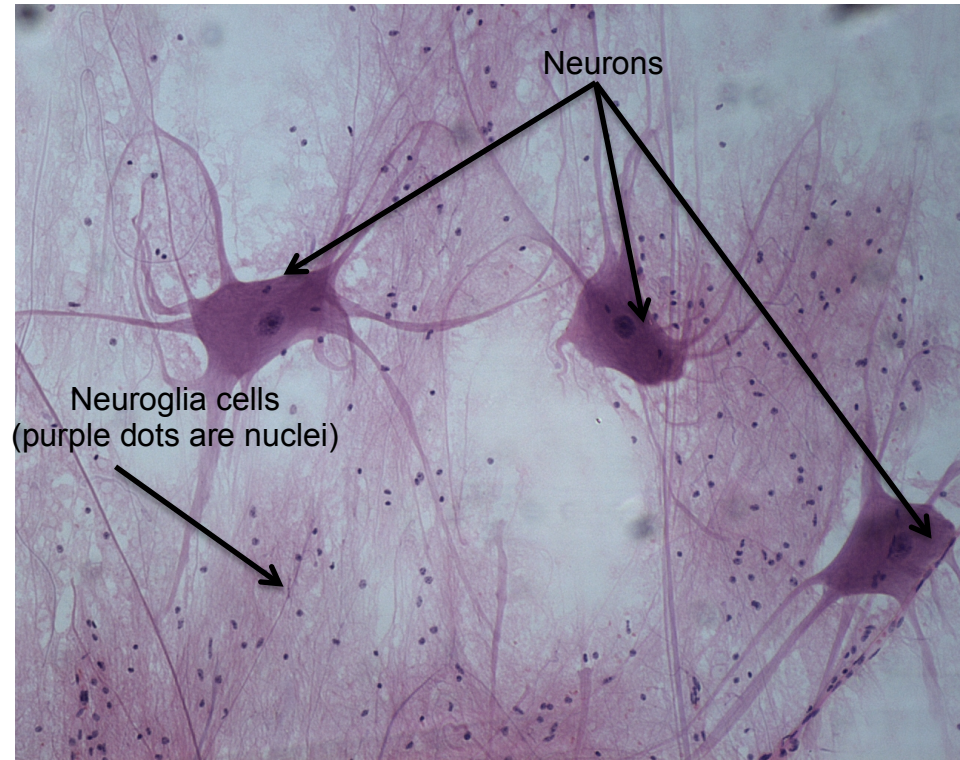
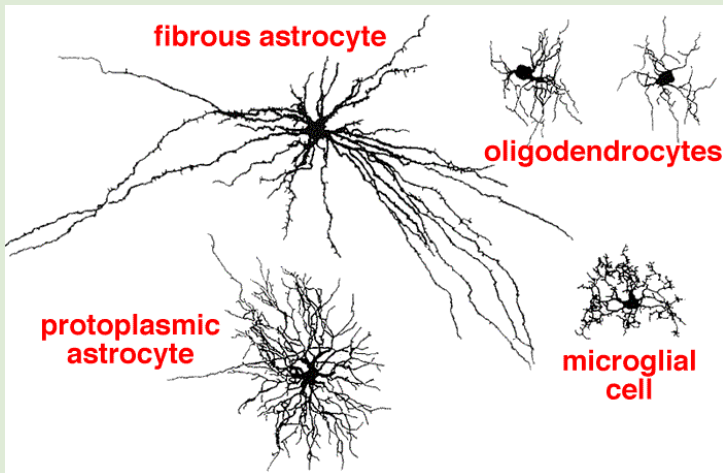
Photomicrograph: Neurons (100x)

f) Nervous tissue: neuroglia

Description: neuroglia support and hold neurons together. Essentially, they are the glue that holds the nervous system together. Different types of neuroglia cells are diagrammed below.

Function: Support of neurons

Location: Nervous system; brain, spinal cord, and nerves



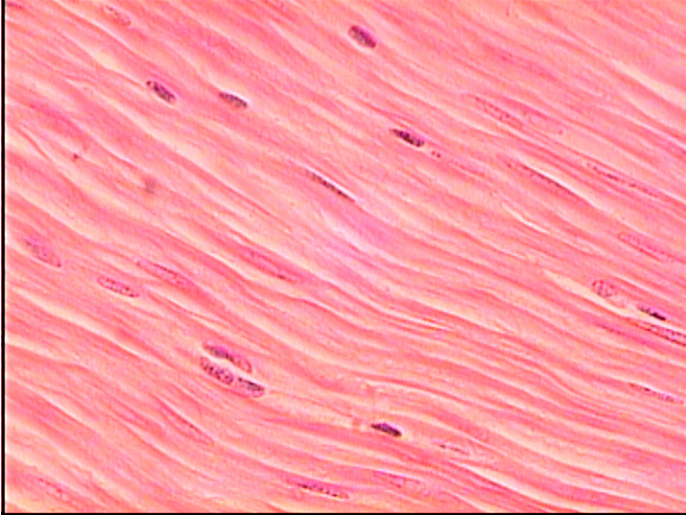
Photomicrograph: Nervous tissue (400x)

http://washington.uwc.edu/about/wayne.schaefer/TISSUES/nervous_tissue2.jpg

<http://vanat.cvm.umn.edu/neurHistAtls/pages/images/Glia1.gif>

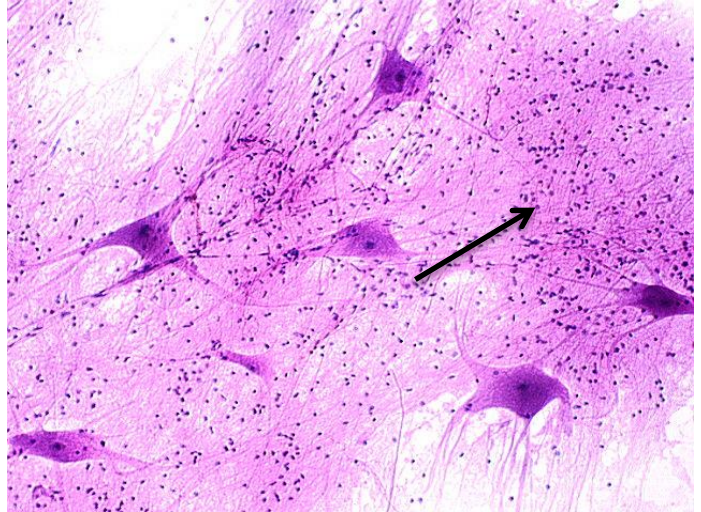
Lab 4c, Part B: Color Images

A.



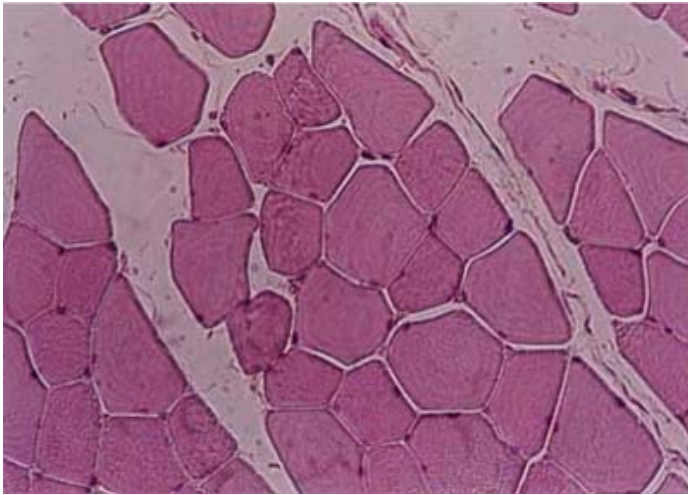
http://www.gwc.maricopa.edu/class/bio201/Histology/31SmoothMusc3_400X_rev.jpg

B.



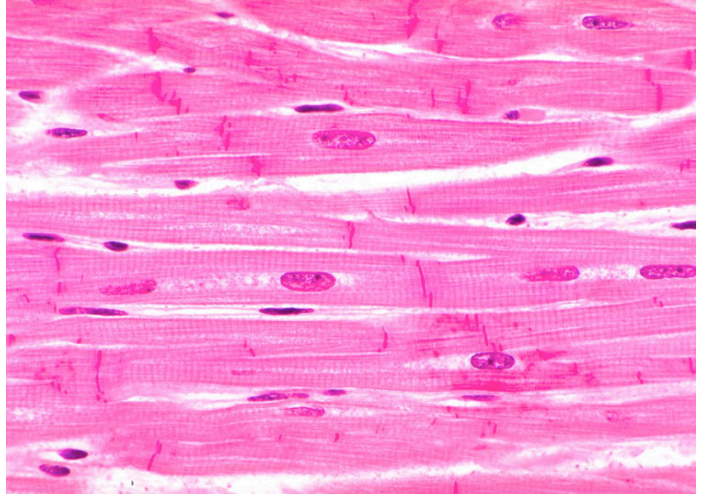
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C.



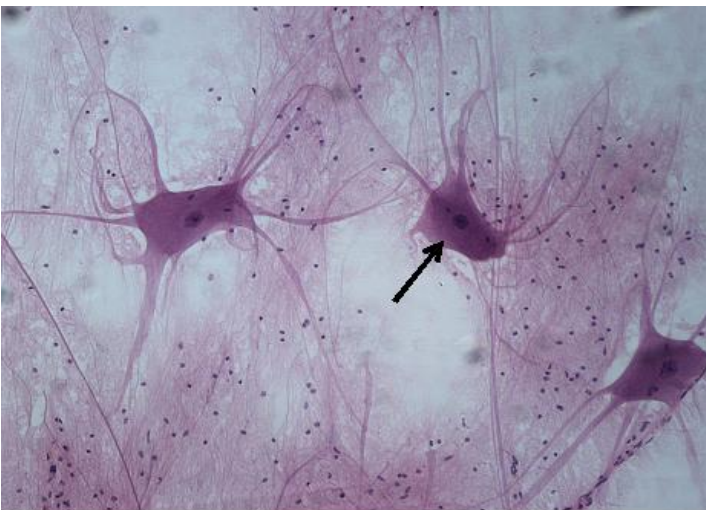
<http://www.histology-world.com/photomicrographs/striatedmuscle1.jpg>

D.



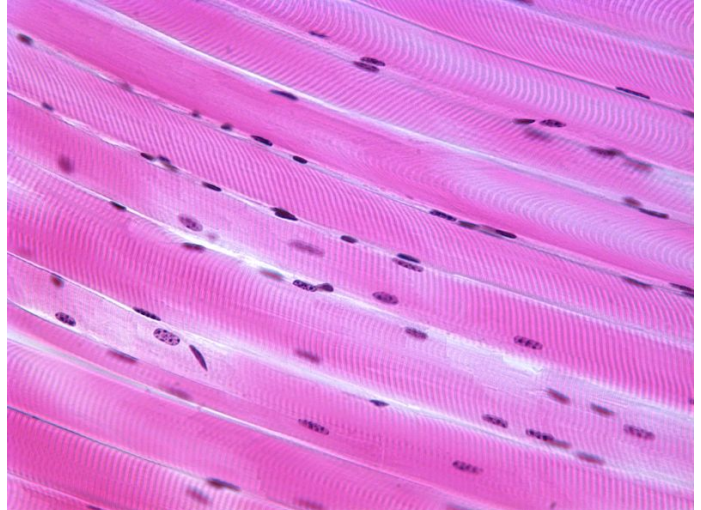
http://medcell.med.yale.edu/histology_old/muscle/images/cardiac_muscle.jpg

E.



http://www.proprofs.com/quiz-school/user_upload/ckeditor/soma.jpg

F.



http://4.bp.blogspot.com/_guSOFRs_Ks/TNvGn-s2D8I/AAAAAAAAAQo/A4rZFbinPWw/s1600/Skeletal+muscle+01a.jpg

