Masa, Grup 2

Histology MCQ Exam 11.01.2021

A characteristic feature of the process of erythropoiesis is: disappearance of organelles

A typical multipolar neuron has: numerous dendrites

Anterograde axonal transport is executed by the protein: Kinesin

Based on the number of layers, the epithelial tissue is classified into: simple, columnar, stratified

Connective tissue with non-differentiated extracellular matrix CANNOT be found in the: ?

Elastic cartilage is present in all listed structures except for: —

Electrical synapses are formed via: gap junctions

Endocrine glands produce: Hormones

For which of the listed epithelial types are characteristic the cilia? Respiratory epith - Trachea

Histiocyte is an alternative name for: Macrophage

How are the contractile filaments oriented in cardiomyocytes? Z-Band

How many are the centrioles during G2 phase of the cell cycle? 4

How many types of muscle tissues do we distinguish under light microscopy? smooth + skeletal

How many types of myelocytes are recognized? 3

In simple epithelia, the basal lamina is in contact with: CT

In which of the following combinations the stages of monocytopoiesis are ordered correctly? —

In which type of granulocytes can we find azurophilic granules? Neutrophils

Osteoblasts arise from: osteoprogenitor cells

Osteocytes arise directly from: Osteoblast

Signal-recognition SRP-receptors are required for the translocation of: secretory proteins

Synapses can exist between an axon and which of the following? Dendrites ?

The basement membrane (basal lamina) is situated under the basal surface of the cells of: epitel. tissue

The blood is made up of two main components. They are: formed elements + plasma

The epiphyseal growth during ossification is formed by: epiphyseal cartilage

The epithelium of the stomach and the intestines originates mostly from: Endoderm

The formation of bone from a pre-existing cartilage framework is called: endochondral, indirect

The main type of collagen in the bone is: 1

The main type of collagen in the hyaline cartilage is: 2

The major tissue types are: epithelial, conn., muscle, nerve tissues

The megakaryoblast is a precursor cell in the process of: platelets

~~The megakaryoblast is a precursor cell in the process of:~~

The muscle spindles respond to: changes of muscle length, stretch

The neurohypophysial hormones are produced in: Hypothalamus

The normal value of the blood volume in health adult individual is: ~5 liter, 7% of body weight

The open canalicular system and dense tubules are specific for: Platelets

The Pacinian corpuscles respond to: vibrations

The physiological regeneration is a process in which: replacing cells

The process that forms new cartilage at the surface of an existing cartilage is called: Appositional growth

The type of haemoglobin in healthy adults is: HbA1

To which major tissue type belongs the bone? CT

To which sub-cellular structure correspond the Nissl's granulations? Neurons

What is covered by the epimysium? skeletal muscle

What is skeletal muscle hypertrophy? increase of cell size

What is the function of astroglia in the synapse biology? Modulation, Support

What is the function of lymphocytes Prod. immunocompetent cells.

What is the function of the macrophages? Inflammation defense

What is the main function of T-tubules in the structure of the rhabdomyocyte? carry action pot.

What is the name if the cells of the skeletal muscle tissue? myocyts, muscle fiber

What is the normal percentage of the lymphocytes out of the circulating leukocytes in healthy adults? 20-40%

What is the percentage of lymphocytes out of all leukocytes in the peripheral blood? 15-40%

What is the typical shape of the monocytes? kidney shaped

What is the typical shape of the nucleus of a Neutrophilic granulocyte? kidney shaped

What type of cells develop into plasma cells? B-cells

Where are the neuromuscular spindles located? skeletal musculatur

Where does the T-cell differentiation occur? Thymus

Where is the Pacinian corpuscle located? Derma of skin

Which are the major types of cardiomyocytes? Typical, Atypical, Secretory

Which are the three major types of cartilage tissue? Hyaline, Elastic, Fibrous

Which cell is the precursor cell of Neutrophilic granulocytes? myeloblast

Which cell produces most of the connective tissue's extracellular matrix? fibroblast

Which cells are involved in cell-mediated immunity? T-lymphocytes, phagocytes...

Which cells are involved in humoral immunity? B-cells, B-lymphocytes

Which cells perform bone resorption? osteoclasts

Which cells produce pigments? Melanocytes

Which cellular compartement contains the Nissl's granules? rough ER

Which connective tissue cell produces elastin? fibroblast

Which glial cell participate in myelin formation in the CNS? Oligodendrocytes

Which hormone stimulated the formation of haemoglobin? erythropoietin

Which is the innermost connective tissue sheath covering the axons that takes part in a peripheral nerve? Endoneurium

Which is the neurotransmitter of the neuromuscular junction? Acetylcholine

Which is true regarding the nucleus of a typical cardiomyocyte? 1-2 centrally nuclei

Which of the blood cells do NOT have a nucleus? Mature Eryth, Reticulocytes

Which of the features is NOT characteristics for the peroxisomes? —

Which of the following about T-memory lymphocytes is TRUE: memory for antigen survive

Which of the following are NOT carbohydrates? —

Which of the following cells have mainly phagocytic activity in the brain? Microglia

Which of the following cells participate in the process of monocytopoiesis?

Which of the following components are part of the extracellular matrix of the connective tissue? Collagen, elast. fibr

Which of the following connective tissue cells modulates the defence against parasites? Eosinophil

Which of the following connective tissue cells produces antibodies? Plasma cells

Which of the following does not belong to the formed elements of the blood? fibrinogen

~~Which of the following does not belong to the formed elements of the blood?~~

Which of the following function is NOT implemented by glial cells? —

Which of the following glands is purely serous? all listed

Which of the following is a glia cell astroc, microglia, digodendro, ...

~~Which of the following is a glia cell?~~

Which of the following is CORRECT concerning myoglobin? stores oxygen

Which of the following is typical for excitatory synapses? open $Na^{\oplus}$ channels

Which of the following statements about conductive cardiomyocytes is NOT correct? smaller then ...

Which of the following statements is NOT true regarding the loose connective tissue? —

Which of the following structures do NOT contain muscle cells? —

Which of the following structures is highly specific for the platelets? no nucleus, irregularly

Which of the following tissues is a subtype of the epithelial tissue: surface + glandular

Which of the following types of connective tissues has a liquid intercellular matrix? Blood

Which of the listed are functions of the epithelial tissue? Protection, Secretion, Absorpt...

Which of the listed cell types is at the earliest stage of granulocytopoesis? Myeloblast

Which of the listed cells produces histamine? Mast cell + basoph, leukocyte

Which of the listed neurons typically have a pear-shaped body? Multipolar piriform neur.

Which of the listed neurotransmitters are excitatory? Ach, Epinephrine, Glutamate ...

X Which of the listed proteins is involved in the contraction of smooth muscle cells but not of cardiomyocytes Troponin

Which of the listed structures contains elastic cartilage?

Which of the listed structures contains fibrocartilage?

Which of the listed tissues is a connective tissue subtype with fibrous extracellular matrix —

Which of the statements regarding secretory cardiomyocytes is NOT correct —

Which one of the following cells are NOT typically located in the loose connective tissue? Reticulocytes

Which one of the following cells is the main cellular component for the fat connective tissue? Adipocytes

Which one of the following proteins builds the collagen fibers in the loose connective tissue? Collagen

Which one of the following statements is NOT true regarding the brown adipose tissue? —

Which protein is involved in maintaining the stability of the erythrocyte membrane? Spectrin

Which sensory modality is perceived by nocireceptors? Pain

Which statement about the bone tissue is NOT true? —

Which statement about the cancellous (spongy) bone is NOT true? —

Which type of connective tissue has trabeculae? Cancellous bone

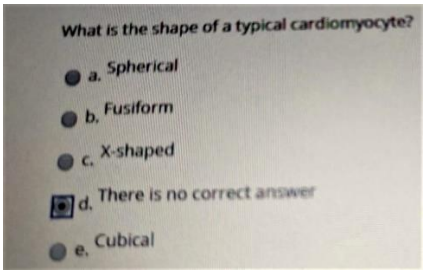
Which type of glia takes a major part in the synaptic biology? Astrocytes

Which type of granulocytes is increased significantly in blood during parasitosis? Eosinophils

α, λ, б – granules are specific for: Platelets

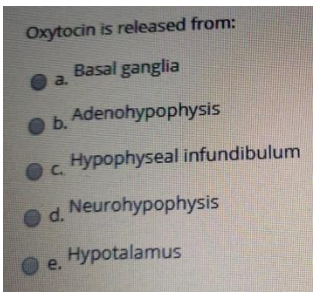
What is the shape of a typical cardiomyocyte?

- spherical
- fusiform
- x-shaped
- X there is no correct answer
- cubical



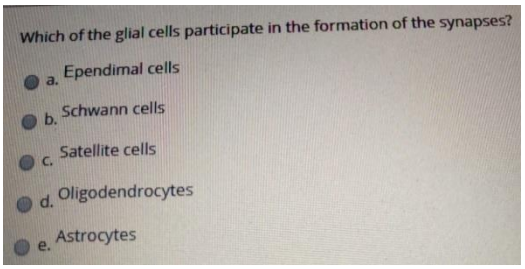
Oxytocin is released from:

- Basal ganglia
- Adenohypophysis
- Hypophyseal infundibulum
- X Neurohypophysis
- Hypotalamus



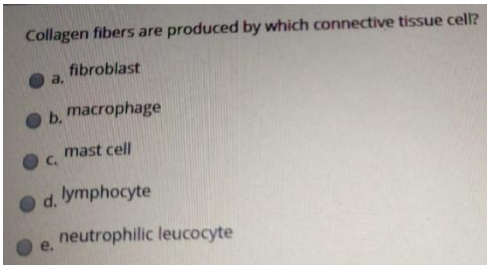
Which of the glial cells participate in the formation of the synapses?

- Ependimal cells
- Schwann cells
- Satellite cells
- Oligodendrocytes
- [x] Astrocytes



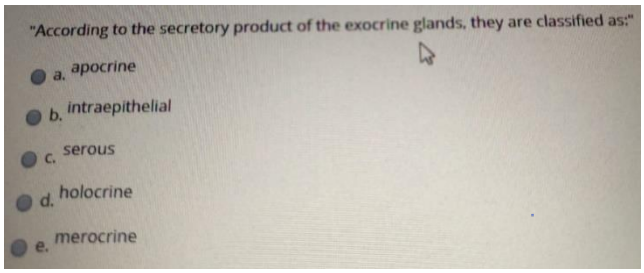
Collagen fibers are produced by which connective tissue cell?

- [x] fribroblast
- macrophage
- mast cell
- lymphocyte
- neutrophilic leucocyte



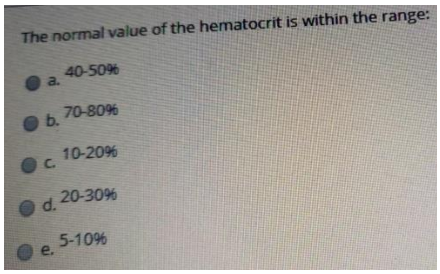
According to the secretory product of the exocrine glands, they are classified as:

- apocrine
- intraepithelial
- [x] serous
- holocrine
- merocrine



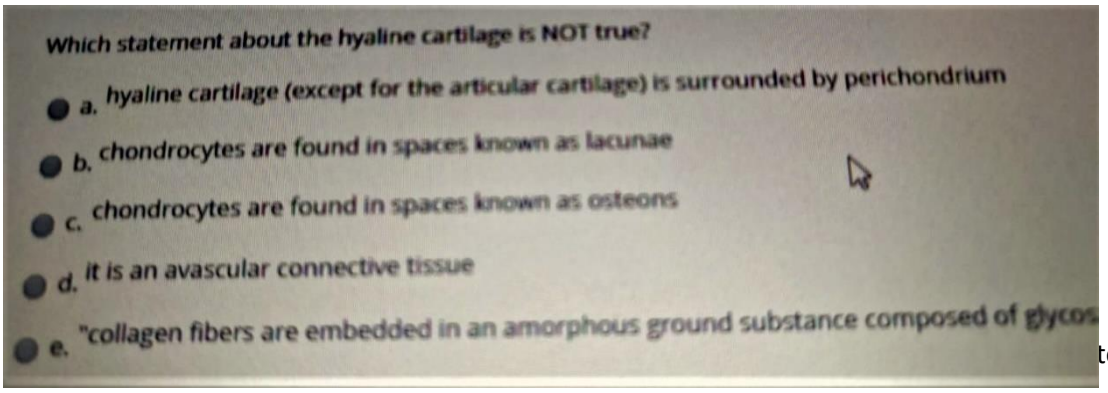
The normal value of the haematocrit is within the range:

- [x] 40-50%
- 70-80%
- 10-20%
- 20-30%
- 5-10%



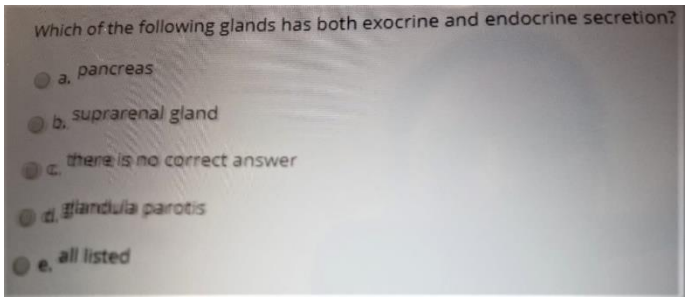
Which statement about the hyaline cartilage is NOT true?

- hyaline cartilage (except for the articular cartilage) is surrounded by perichondrium
- chondrocytes are found in spaces known as lacunae
- [x] chondrocytes are found in spaces known as osteons
- It is an avascular connective tissue
- collagen fibers are embedded in an amorphous ground substance composed of glycos…



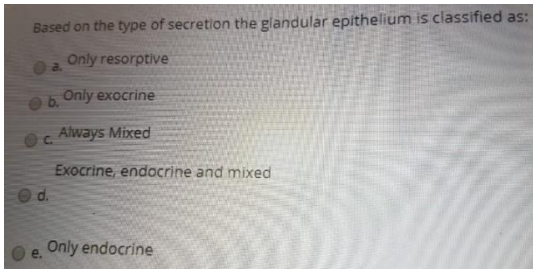
Which of the following glans has both exocrine and endocrine secretion?

- [x] pancreas
- [ ] suprarenal gland
- [ ] there is no correct answer
- [ ] glandula parotis
- [ ] all listed



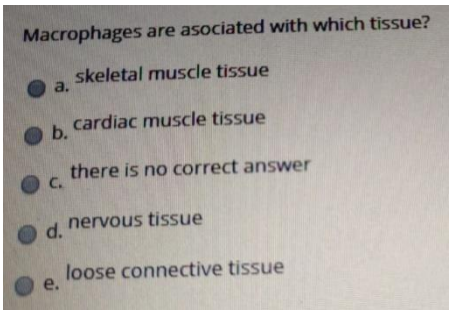
Based on the type of secretion the glandular epithelium is classified as:

- [ ] Only resorptive
- [ ] Only exocrine
- [ ] Always Mixed
- [x] Exocrine, endocrine and mixed
- [ ] Only endocrine



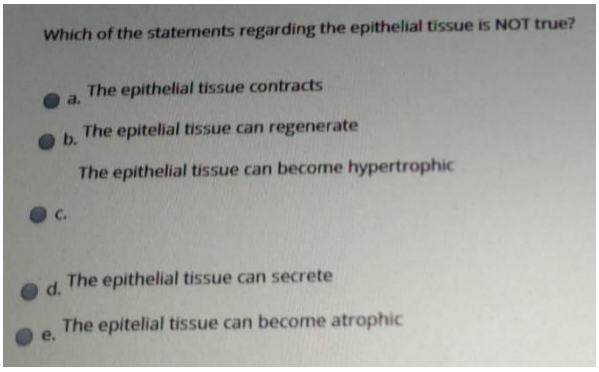
Macrophages are associated with which tissue?

- [ ] skeletal muscle tissue
- [ ] cardiac muscle tissue
- [ ] there is no correct answers
- [ ] nervous tissue
- [x] loose connective tissue



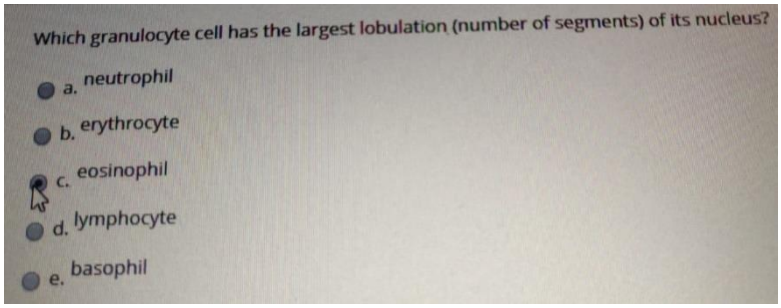
Which of the statements regarding the epithelial tissue is NOT true?

- [x] The epithelial tissue contracts
- [ ] The epithelial tissue can regenerate
- [ ] The epithelial tissue can become hypertrophic
- [ ] The epithelial tissue can secrete
- [ ] The epithelial tissue can become atrophic



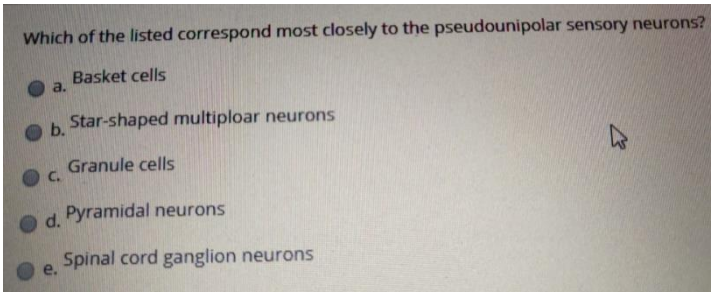
Which granulocyte cell has the largest lobulation (number of segments) of its nucleus?

- [x] neutrophil
- [ ] erythrocyte
- [ ] eosinophil
- [ ] lymphocyte
- [ ] basophil



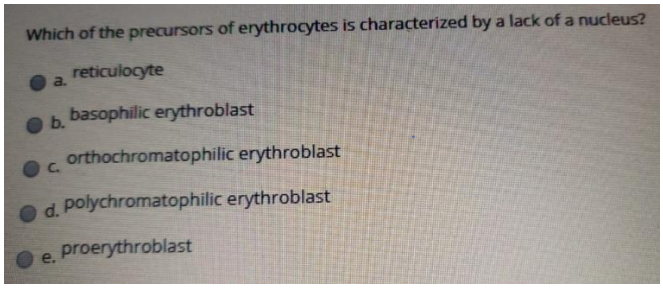
Which of the listed correspond closely to the pseudounipolar sensory neurons?

- Basket cells
- Star-shaped multipolar neurons
- Granule cells
- Pyramidal neurons
- Spinal cord ganglion neurons



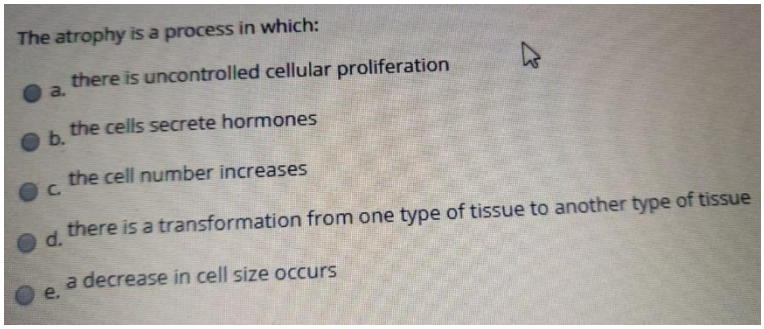
Which of the precursors of erythrocytes is characterized by a lack of a nucleus?

- reticulocyte
- basophilic erythroblast
- orthochromatophilic erythroblast
- polychromatophilic erythroblast
- proerythroblast



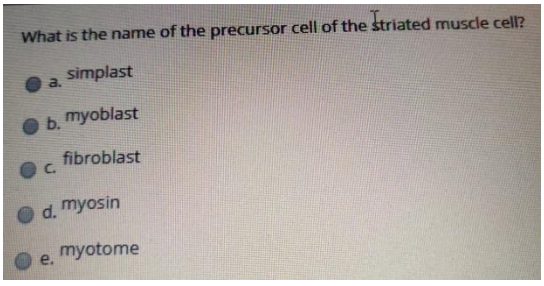
The atrophy is a process in which:

- there is uncontrolled cellular proliferation
- the cells secrete hormones
- the cell number increases
- there is a transformation from one type of tissue to another type of tissue
- a decrease in cell size occurs



What is the name of the precursor cell of the striated muscle cell?

- simplest
- myoblast
- fibroblast
- myosin
- myotome



Match each of the listed cell types to their function from the drop-down menu:

Myocytes	
Macrophages	
Oligodendrocytes	
Mast cells	
Schwann cells	

Match the listed cell types to their appropriate description from the drop-down menu:

Neurons	
Astroglia	
Adipocytes	
Keratinocytes	
Cardiomyocytes	

Match each of the listed cellular structures to the corresponding cell from the drop down menu

Nissl bodies	
Intercalated discs	
Mucin granules	
Cytokeratin filaments	
Myosin filaments	

Match the listed structures and their typical localization:

Neurosecretory nerve endings from hypothalamus	
Meissner’s corpuscles	
Motor end plates	
Pacinian corpuscles	
Free nerve endings	

Match the listed cell types to their corresponding tissues from the drop-down menu:

Chondrocytes	
Erythrocytes	
Fibroblasts	
Osteoclasts	
Microglia	

Match each of the listed structures to their corresponding localization from the drop-down menu:

Brush border	
Simple pseudostratified ciliated epithelium	
Stereocilia	
Basal infoldings (basal labyrinth)	
Desmosomes	

Match the average cell diameter to the respective cells from the drop-down menu:

15 – 18 µm	
2-4 µm	
120-150 µm	
50-70 µm	
10-12 µm	

Match each of the listed structures to the corresponding tissue from the drop down menu, in which they are observed:

Collagen type I	
Myelin	
Collagen type II	
Giannuzzi's demilunes	
Collagen type IV