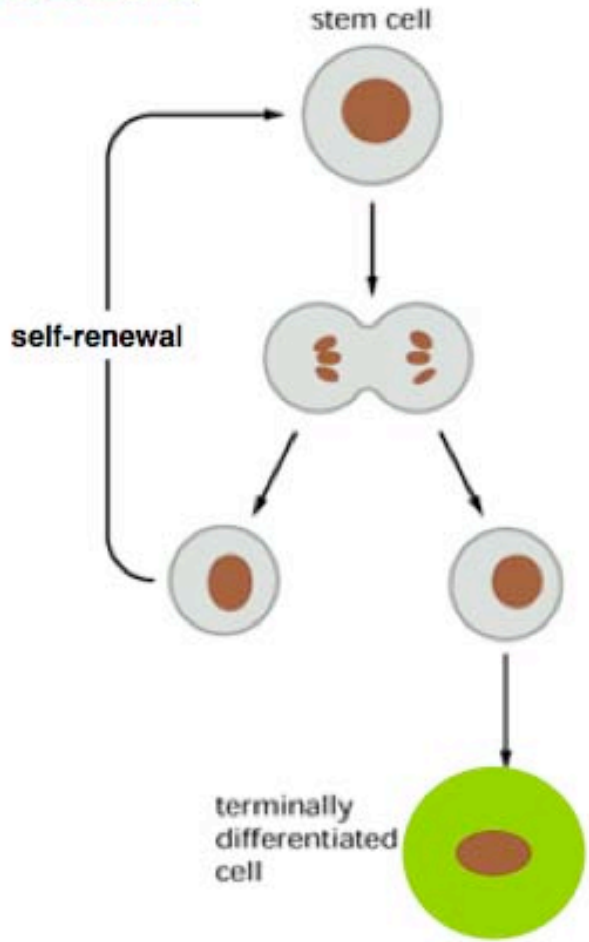
BLOOD

- Types of cells/components in the blood and their characteristics
- Origin of different types of cells
- Function of cells

Hematopoiesis

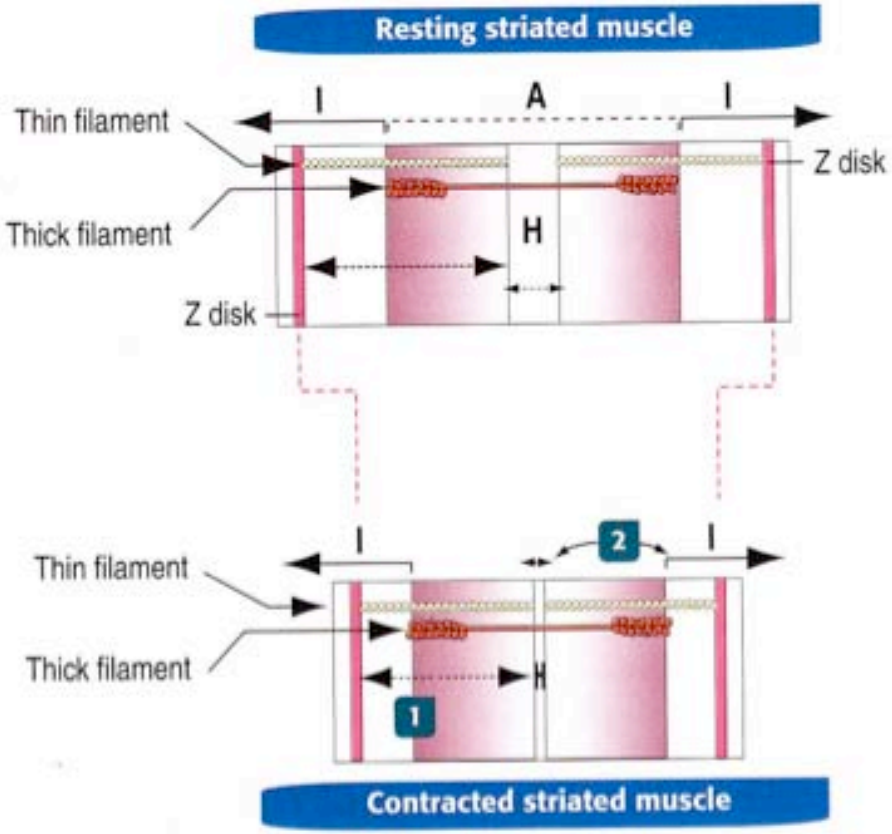
generation of new blood cells

- **Bone Marrow**
  - Erythropoiesis
  - Granulopoiesis
  - Monocytopoiesis
  - Megakaryocytopoiesis
- **Lymphoid organs**
  - Lymphocyte production



Leukocytes
(White Blood Cells)

Length of the sarcomere during muscle contraction and relaxation



During muscle contraction

1 The length of the thick and thin filaments does not change. This is demonstrated by **the constant length of the A band and the distance between the Z band and the adjacent edge of the H zone.**

2 The length of the sarcomere decreases because thick and thin filaments slide past each other. This is demonstrated by **a reduction in the length of the H zone and the I band.**

The A band represents the distribution of the myosin thick filaments. The H band indicates the myosin tail regions of the thick filaments is not overlapping with thin filaments.
Thin filaments are attached to the Z disk. Two half–I bands—containing thin filaments—are seen at the right and left side of the Z disk.

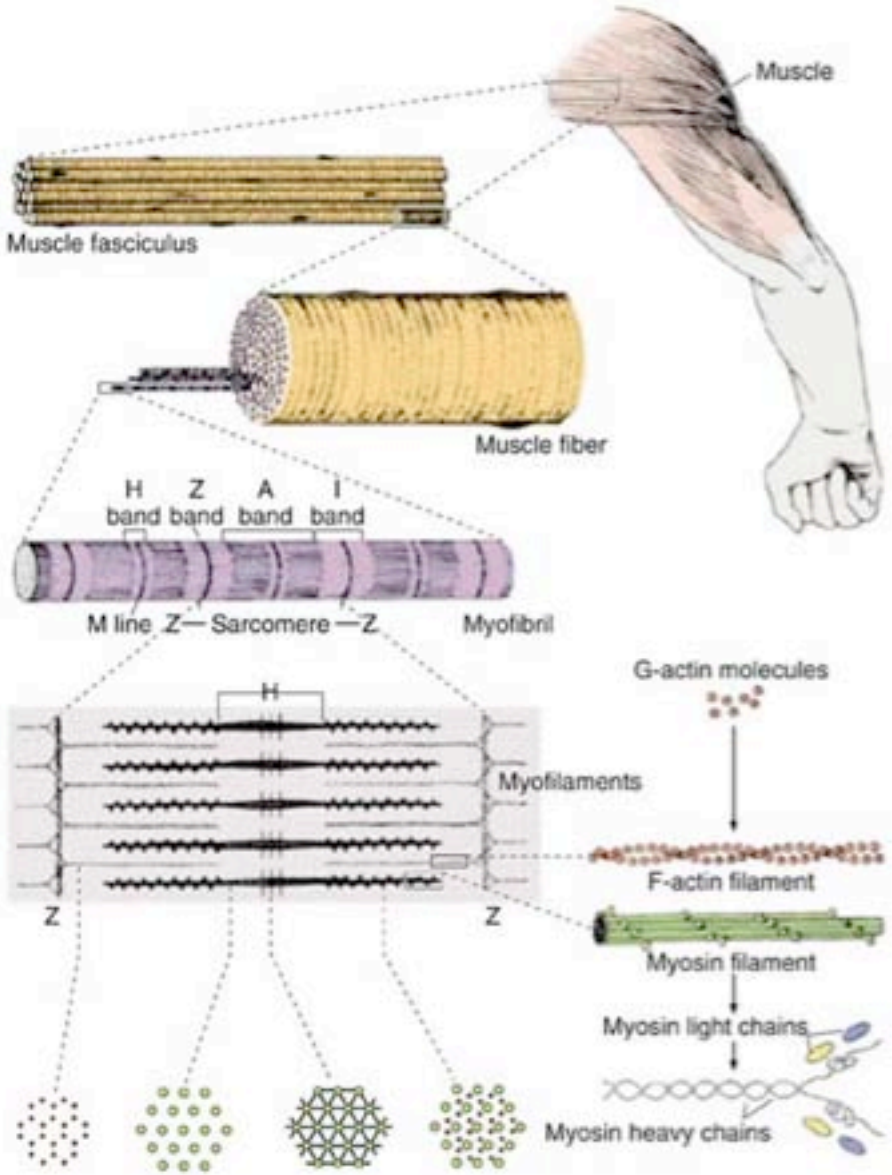
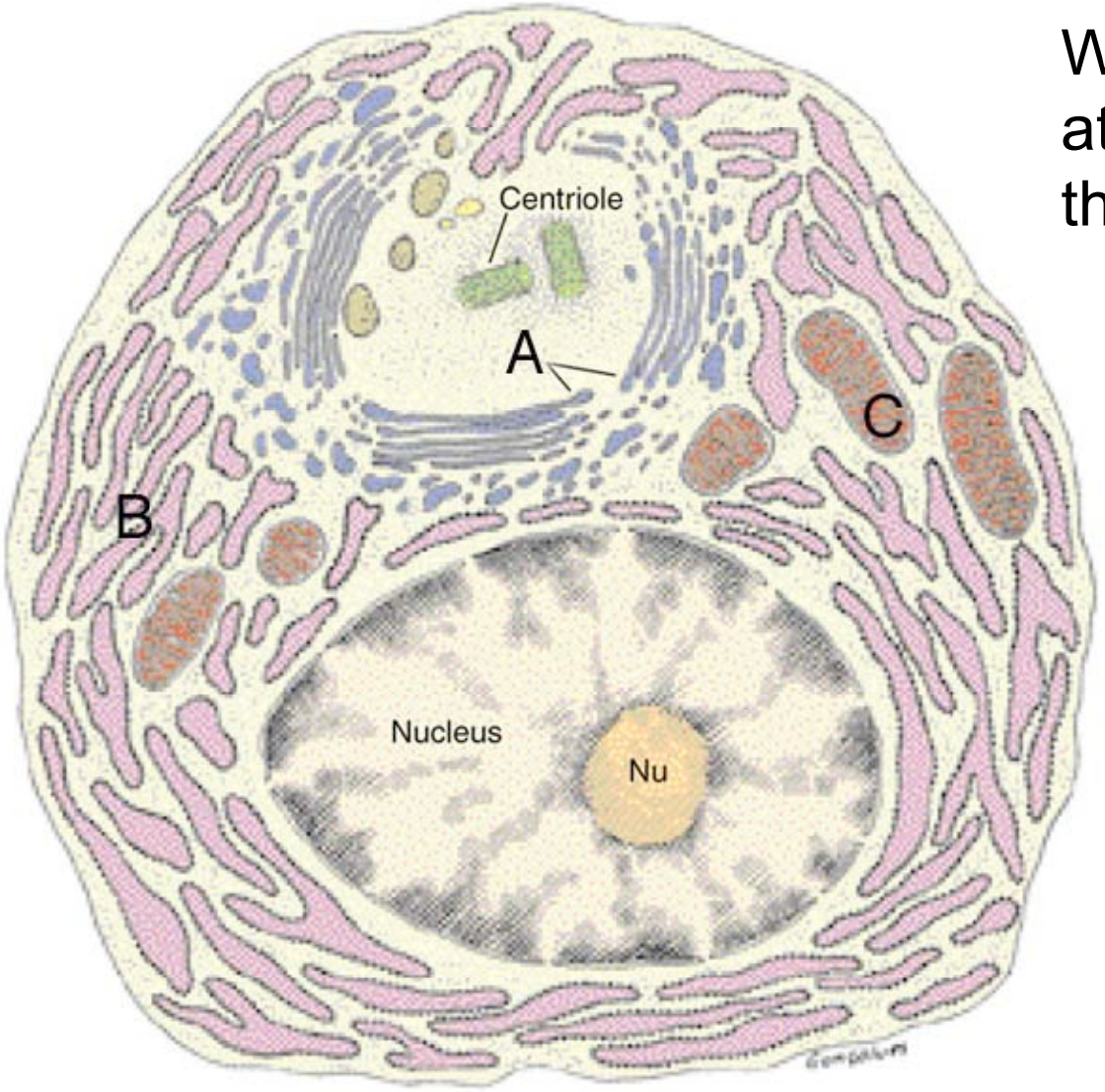


Fig. 10-11: Skeletal (striated) muscle

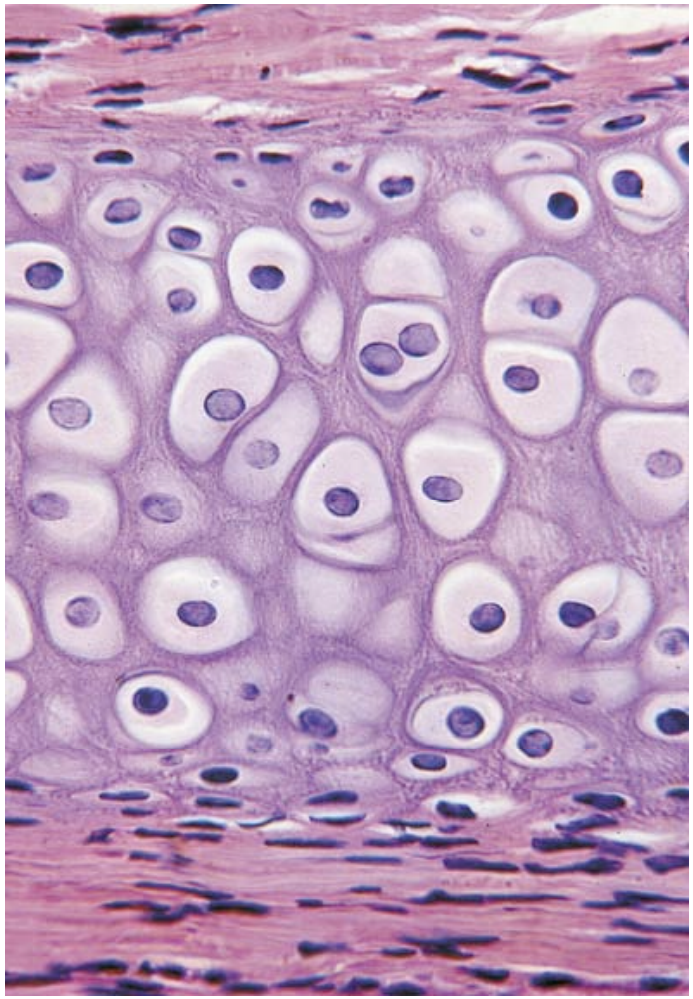


What are the structures at A, B and C? What do they do?

Golgi Apparatus

Endoplasmic Reticulum

Mitochondria



What tissue type is this?

Name two different functions of this tissue

Hyaline cartilage

True or False ?

Both cardiac and skeletal muscle are striated.

Skeletal muscle cells contain many nuclei per cell.

Skeletal muscles often branch.