


Chamberlain University College of Nursing

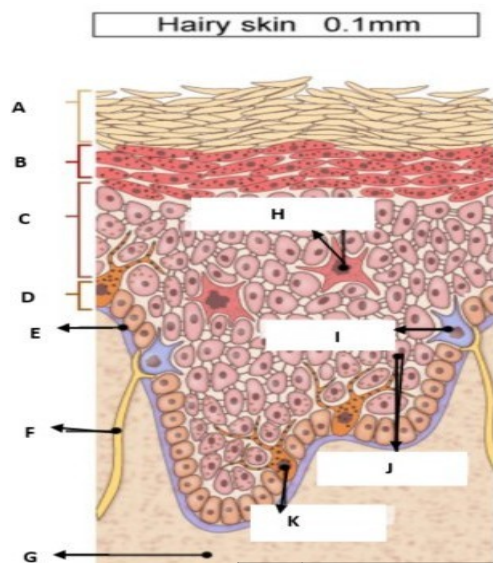
BIOS 251: Anatomy and Physiology Lab

Professor Zille


Week 5 Lab: Integumentary system

Part A: Anatomy of the skin

- I. Microscopic anatomy of the skin. Complete the table using the image provided



II.

	Structure	Function
A	Stratum corneum	Protects the body's innermost layers against injuries, toxins, and bacteria.
B	Stratum granulosum	It helps create a waterproof barrier that prevents fluid loss from the body.
C	Stratum spinosum	It helps to make your skin flexible and robust.
D	Stratum Basale	The stratum basale is the epidermis' innermost layer. This is the layer in which new skin cells develop. It also contains keratinocyte stem cells, which produce keratin. It aids in the development of hair, nails, and the outer layer of skin, which protects you from the elements.
E	Basement membrane	It separates and protects tissues.
F	Sensory nerve	It's involved in sensations like touch, pain, itch, warmth, and cold and transmits impulses from the receptor to the CNS (brain or the spinal cord).
G	Dermis	It promotes thermoregulation and aids in pulling and stretching due to the presence of elastic and reticular fibers and fibroblast.
H	Langerhans cells	They operate as the outermost guard of the cutaneous immune system and are likely to initiate the earliest reactions against pathogens detected via the skin.
I	Merkel cells or tactile epithelial cells	They are a type of sensory receptor called mechanoreceptor. They are oval-shaped cells that connect to nerve terminals and detect light touch and superficial pressure in the skin.
J	keratinocytes	Keratinocytes generate keratin and perform a variety of essential functions in skin restoration. They establish a tight barrier that removes unwanted substances from the body, minimizing moisture, heat, and other component loss.
K	melanocytes	They are responsible for the pigment of skin and hair, which contributes