# The Skin -- Microscopic Perspective

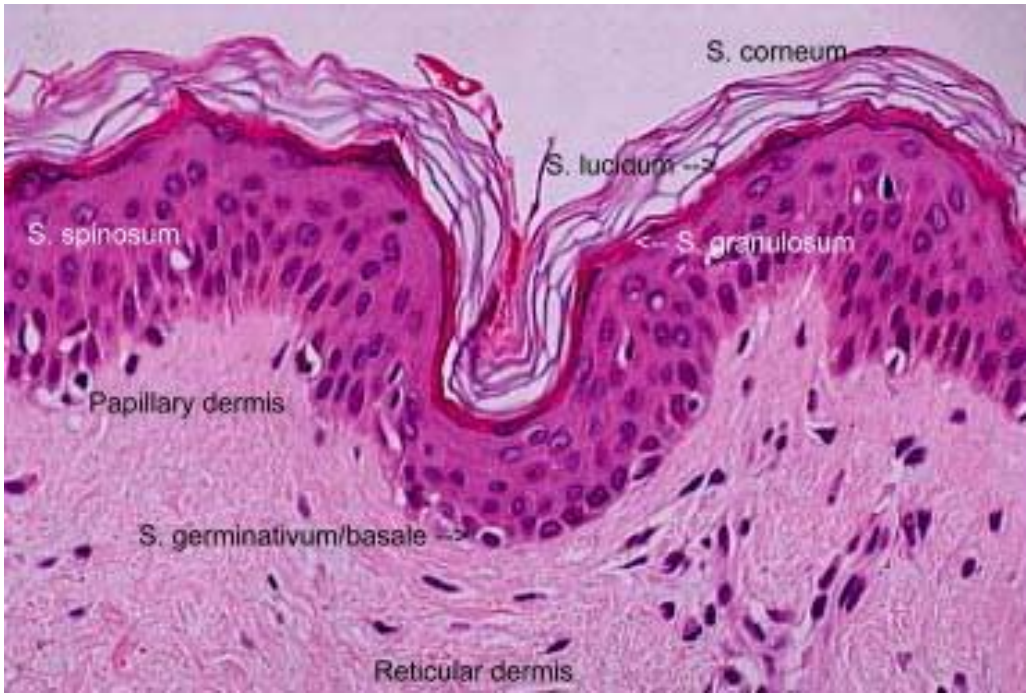
There is no background information section with this experiment – there is more than enough in lecture and on my web site to keep you occupied.

*Supplies Necessary*

| | | |
|---|---|---|
| Microscope | Microscope slide of human skin -- thin | Microscope slide of human skin -- thick |
| Colored pencils | Lens paper | Calipers |
| Cadaver | This experiment | #3 Scalpel handles with #10 blades; rat tooth forceps |

As mentioned, previously, the skin is the largest organ system in the body. It is a system that is first violated when health care providers push needles through it or dissect it in surgery, or do not care adequately for a patient, causing the formation of pressure sores (decubitus ulcers).

As mentioned in the lecture directly preceding this experiment, there are three layers to the skin: the epidermis, the dermis and the subcutaneous layer. The following graphic illustrates a labeled micrograph of the epidermis:




Using this micrograph, compare it to what you see under your microscope on low (10X) and high (40X) power magnifications of both thick and thin skin. Draw your findings, below, in the space provided – including the dermis (not well represented, above).

| | |
|---|---|
| | |
| 10X – Thin Skin | 40X – Thin Skin |

| | |
|---|---|
| | |
| 10X – Thick Skin | 40X – Thick Skin |

## The Skin -- Macroscopic Perspective

This experiment requires the use of a cadaver. For this experiment, you are to measure the thickness of the skin on the cadaver with calipers at specific sites and record the values, below (in ink):

| Site of Measurement | Thickness in mm | Site of Measurement | Thickness in mm |
|---|---|---|---|
| Top of Head | | Occipital Region | |
| Over Scapular Spine | | In Axillae | |
| Elbow | | Anterior Wrist | |
| Chest | | Abdomen | |
| Over Sacrum | | Large/Rounded/Thick Region of the Buttocks | |
| Over Greater Trochanter | | Over Sacrum | |
| Shin | | Over Fibular Head | |
| Over Lateral Malleolus | | Calf | |
| Lateral Aspect of Foot | | Over Medial Malleolus | |
| Heel of Foot | | Medial Aspect of Foot | |

## Questions

1) Based upon your measurements, are there any regions that appear to be at greater risk of pressure ulcer development than others? What is a pressure ulcer? What is its other name?

2) If so, where are they?

3) What makes you think this?