**Koch’s Postulates procedure**

While performing the steps of this procedure, keep in mind which step of Koch’s Postulates you are doing.

**First lab:**

1. Obtain a diseased fruit (what is a fruit?) from your instructor. Record the symptoms of your fruit’s disease and make a sketch of the fruit’s appearance.

2. Cut three small sections (about the diameter of a pencil eraser) from various areas of the lesion with a sterile scalpel and forceps. The forceps and scalpel should be dipped in a jar containing 90% ethanol and then passed through the incinerator to sterilize them before and after every use. Using a sterile petri dish place two of the sections in a 10% bleach solution for 30 seconds,. Pour off the bleach solution and rinse the sections well with sterile distilled water. Blot the sections dry on sterile filter paper and press the sections onto a PDA plate. Incubate the plates at room temperature for one week.

3. Pull the third tissue section gently apart with sterile instruments. Make a wet-mount using a few drops of lacto-phenol cotton blue on a clean glass slide. (What position should the condenser and diaphragm be adjusted?). Look for fungal spores and other identifying features. Sketch the spores and confer with your instructor as to the mold’s identity.

**Second lab:**

1. Observe your fungal cultures. Does it look like a pure culture?

2. Use a sterile borer to excise 3 sections of the fungal colony. Place the sections in a tube of sterile water (using sterile forceps) and vortex vigorously to dislodge the spores. Using a sterile dissecting pin, prick the skin of a test fruit several times in an area about the size of a dime. Use a sterile Pasteur pipette to drop the spore-water solution onto the broken skin. Label your fruit with your name and date.

3. Make a wet-mount of the fungal colony using a couple of drops of lacto-phenol cotton blue. Is it the same as the fungus you took from the diseased fruit?

**Third lab:**

1. Observe your test fruit. Does the lesion appear to be the same as the original fruit?

2. Perform step 2 and 3 from the first lab.

**Fourth lab:**

1. Perform step 3 from the second lab.