Mounting Flies Protocol

**Materials:** Fly Nap®, small painting brush, toothpick, Parafilm® M, dissecting probe, dissecting microscope, hot plate

**Making Paraffin Waxed Toothpick**

1. Cut the Parafilm® to the desired amount and stretch the Parafilm® so that the film can be easily molded and wrapped around the toothpick.

2. Take the stretched Parafilm® and wrap it around about 1/3 into the tip of the toothpick. While wrapping, make a flat surface so that the finished product looks like a miniature fly swatter.

**Mounting Flies onto the Paraffin Waxed Toothpick**

1. Preheat the hot plate, just hot enough to melt the wax on the toothpick

2. Anesthetize the fruit flies using Fly Nap®.

3. Using a small painting brush, sort out fruit flies that will be used for the experiment by looking at the flies under the dissecting microscope. It is best to pick fruit flies with big, healthy wings.

4. Position the fly so that it is standing up right. Take the flat surface of the paraffin waxed toothpick and place it under the fly’s wings. You should only have the fly’s wings on the flat surface, or it is very difficult to attach the flies.

5. When the fly’s wings are successfully positioned onto the flat surface, take the dissecting probe and heat the probe by putting the tip of the probe on the preheated hot plate for about 10 seconds. When the probe does not get hot enough, heat the probe for a few more seconds.

6. Without touching the fly’s wings directly with the heated probe, melt the paraffin wax surrounding the fly’s wings by pressing the heated probe down into the paraffin wax surface. When the wax melts, quickly lift the probe (not high,
but just enough to get the probe off the waxed surface) and the melted wax should stretch out with the motion of the probe just like a cheese on a pizza stretching out following a bite. Use this stretched wax to cover the wings of the flies. This must be done in a swift, single motion since paraffin wax cools and hardens very quickly. This step has to be repeated until the fly's wings are securely covered by paraffin wax and the wings are tightly fixed.

Tip: After putting the melted paraffin wax over the fly’s wings, gently push the wax down on to the fly's wings using the probe.