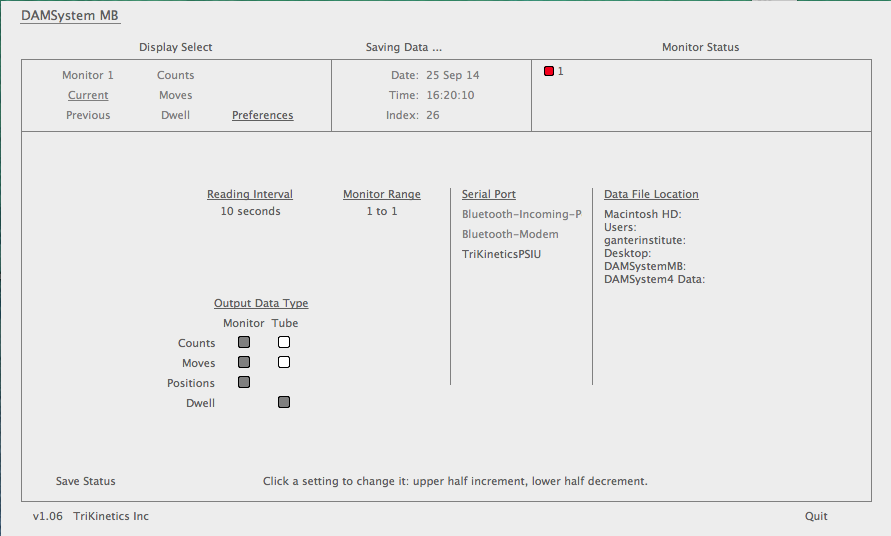
**Supplemental information for JoVE scriptwriter**

Please note that the steps should correspond to the steps in the manuscript text.

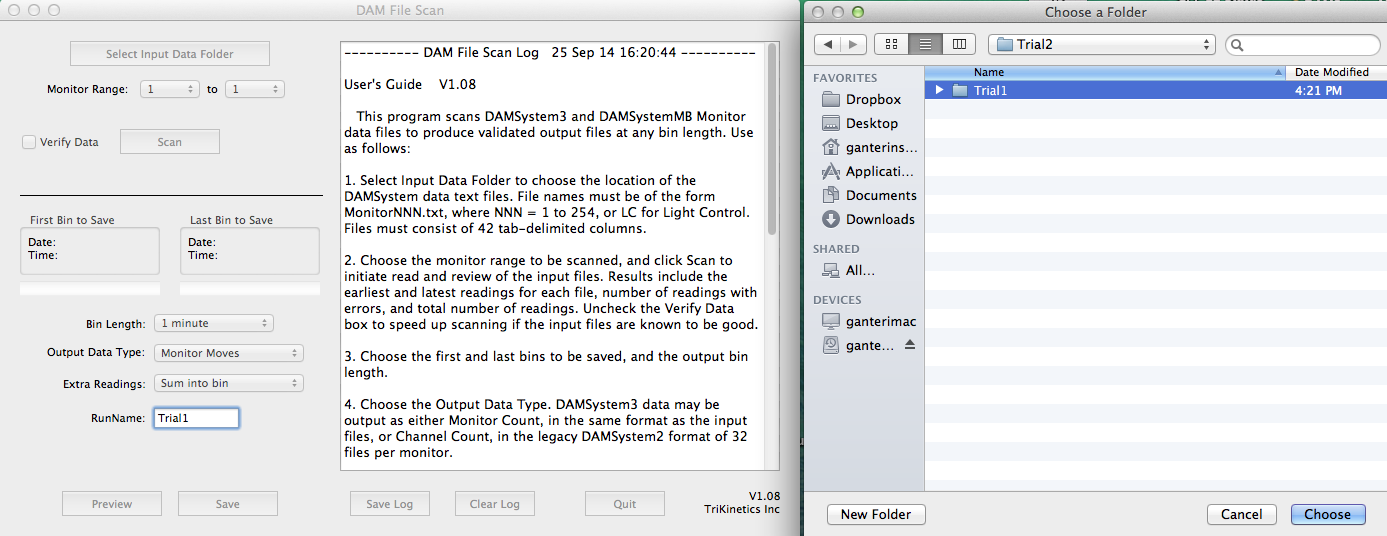
|  |  |  |
| --- | --- | --- |
| **Step #** | **Text** | **Visual representation** |
| ***1*** | ***Prepare larvae*** |  |
| *1.1* | *Rear larvae* | *Videographer footage of lab member* |
| *1.2* | *Prepare mesh filter: mesh and funnel* | *Videographer footage of lab member* |
| *1.3* | *Scoop food and larvae from culture vial* | *Videographer footage of lab member* |
|  | *Wash on mesh* | *Videographer footage of lab member* |
|  | *Select larvae for analysis* | *Videographer footage of lab member* |
| ***2*** | ***Prepare assay tubes*** |  |
| *2.1* | *Boil and pour gel* | *Videographer footage of lab member* |
| *2.2* | *Inspect tubes* | *Videographer footage of lab member* |
| *2.3* | *Moisturize tubes* | *Videographer footage of lab member* |
|  | Observe moisture level in tube | Video recorded through microscope |
| *2.4* | *Insert larva* | *Videographer footage of lab member* |
| 2.5 | Seal tubes with agar plugs | *Videographer footage of lab member* |
| 2.6 | Place tubes in monitor device | *Videographer footage of lab member* |
| 2.7 | Secure tubes with putty | *Videographer footage of lab member* |
| **3** | **Measuring Locomotion** |  |
| 3.1 | set up monitor in incubator | *Videographer footage of lab member* |
| 3.2 | Set up incubator and illumination | *Videographer footage of lab member* |
| 3.3 | Allow acclimation | *Videographer footage of lab member* |
| 3.4 | Connect monitor to computer | *Videographer footage of lab member* |
| 3.5 | Set up software parameters - frequency | Screen shots with voice-over narration |
| 3.6 | Set up recording parameters | Screen shots with voice-over narration |
| 3.7 | Connect power to monitor | *Videographer footage of lab member* |
| 3.8 | Connect monitor to computer | *Videographer footage of lab member* |
| 3.9 | Start the recording | Screen shots with voice-over narration |
| 3.10 | Stop the recording | Screen shots with voice-over narration |
| **4** | **Prepare data for processing** |  |
| 4.1 | Organize the data 1 | Screen shots with voice-over narration |
| 4.2 | Organize the data 2 | Screen shots with voice-over narration |
| 4.3 | Save the data | Screen shots with voice-over narration |
| **5** | **Accessing data for analysis** |  |
| 5.1 | Save to a table | Screen shots with voice-over narration |
| 5.2 | How to read the table 1 | Screen shots with voice-over narration |
| 5.3 | How to read the table 2 | Screen shots with voice-over narration |
|  |  |  |
|  | Representative Results – temperature effects | Still image of Figure 1 |
|  | Representative Results – genetic effects | Still image of Figure 2 |

**Representative Screen Shots:**

Step 3.5



Step 4.1

**

Step 5

