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Fruit flies used as models for traumatic brain injury

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Scientists at UW-Madison are giving fruit flies brain damage in order to test potential therapies for traumatic brain injury.

A patent in late February was granted for a device used to model TBI in invertebrate models. The Wisconsin Alumni Research Foundation is currently seeking commercial partners to develop this method of drug screening.

Researchers developed a mechanical device that can induce TBI in fruit flies, which respond to impact trauma in “many of the same ways as humans,” according to an info sheet provided by WARF.

Around 100 flies can be loaded into the clear vial portion of the device, which is attached to a baseboard with a long, flexible spring. When the spring is pulled back and released, the vial whips downwards into a rubber pad.

When the flies hit the bottom and sides of the container, they experience brain trauma. The patent application for the device shows it can be adjusted to change the level of impact.

Once the flies have been through the device, researchers can test therapy compounds on them. This achieves two main goals: identifying biological pathways for the effects of TBI, and screening potential therapies for TBI.

See more at WisBusiness.com.