maze is a very simple model that has been validated with known antianxiolytics, such as benzodiazepines, and can provide insight into the efficacy of a test compound. In this model, a mouse or rat is placed at the center of an elevated plus-shaped platform. One set of oppositely facing arms of the platform is enclosed and dark, while the other two are open to the air. The rodent's propensity to spend time in the two different types of arms of the platform can be assessed using a video camera and motion tracking software. In the absence of an effective compound, rodents will preferentially spend time in the closed spaces in order to avoid the anxiety of height and open spaces. Compounds capable of suppressing anxiety will increase the amount of time a rodent will spend in the open arms of the platform. This information can be used to assess the anxiety-like behavior of the rodent in the presence or absence of test compounds (Figure 7.2).

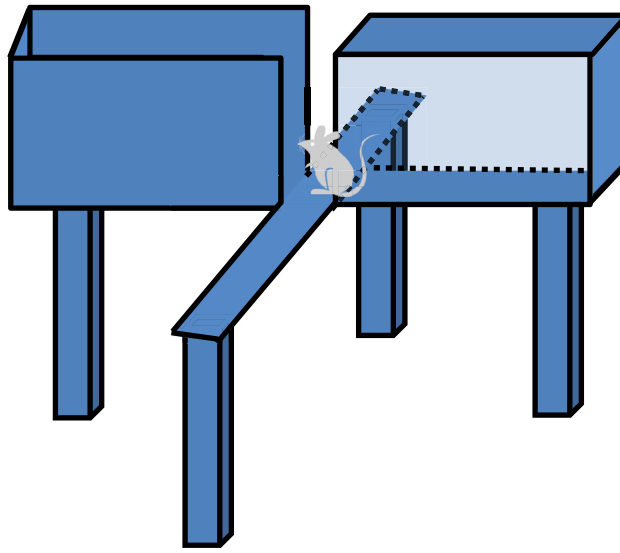

**FIGURE 7.2** The elevated plus maze tracks the amount of time a mouse spends in enclosed areas versus open sections of the platform using video cameras and motion sensors. The time difference has been correlated to antianxiolytic efficacy.

### *The Novel Object Recognition Test: A Model of Memory and Cognition*[19]

Another important aspect of central nervous system drug discovery is the identification of compounds capable of restoring or enhancing cognition and memory functions. As the population ages, memory impairment, whether as the result of diseases such as Alzheimer's disease or as a natural consequence of aging, is a serious health issue and has been the focus of many drug discovery programs. The novel object recognition