# **NARISHIGE WEB NEWS**

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## How to Secure Small Animals

#### Use a Brain Map to Localize the Target within the Brain!

When you put an electrode on a site inside a brain, it is not possible to see from outside whether or not the electrode has really been placed on the site. However, even though you cannot see through the brain, you can locate the site if you have a map and the map has a proper directory. Living animal brains are studied referring to a brain atlas (brain map) available in the market. In brain maps, brain sites are directed based on a zero point in the particular map and expressed with distance from the zero point.



In order to conduct experiments along a brain map, you must fix an animal head just as it is shown in the map. In many maps, brains are horizontal and facing exact forward. As a matter of fact, there are several maps exist, but every single map emphasizes the same points, that are a line connecting two ear holes (interaural line) and a line dividing the head symmetric (median line). You can fix an animal properly referring to those two lines, and fix the animal head at three points.

An animal head is fixed solidly by held at three points. Holding both ears fixes the animal head in position, and then holding eye pits and upper jaw immobilizes the head. This method is commonly used for fixing middle-sized animals such as dogs and monkeys, while small-sized animals don't have a big head enough for using eye pits to hold, a nose is held from above, instead.

Competitors apply a method for middle-sized animals to small animals as it is, but it does not work for small animals as well as it does for middle-sized animals. As small animals are far more fragile than middle-sized animals are, special attention is needed for them and finer adjusting capability is also needed in the instrument.

#### Our products introduce unique design and methods for small animals.

#### $\diamond \blacklozenge$ Method of Fixing an Animal $\blacklozenge \diamond$







Align the vertical level as shown in the map and hook the tooth.



< POINT! > Animals are put under an anesthetic before experiments. In order to conduct experiments efficiently during duration of the anesthesia, researchers can't spare much time just to settle an animal on the instrument. It means fixing the animal quickly and properly is crucial.



Here is the auxiliary ear bar, bringing in powerful support!

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