

## Microinjection of Adherent Cells

Narishige products are used for adherent cells as well as for floating cells!  
In this news, we will review microinjection of adherent cells.

### ◆◆ Adherent Cells ◆◆

Adherent cells adhere to a petri dish, unlike floating cells which float in a petri dish. Therefore, the combinations of manipulators are different between floating cells and adherent cells.

### ◆◆ Manipulators for Adherent Cells ◆◆

Manipulator(s) are not required on the holding side of adherent cells. You only need manipulator(s) on the injection side.

#### <POINT!>

The cell is adhered to the bottom of a petri dish. A pipette is set at an angle to approach the cell. If you manipulate the pipette only in three axes (XYZ) to insert, it will cause a large cut to the cell and results in severe damage. (See Figure 1)

By employing T-axis, that is the movement in the same direction as the pipette, you can minimize the damage when a pipette is inserted. (See Figure 2)

A representative product of T-axis is the MMO-220A. Also, Narishige supplies manipulators that include T-axis, such as the MWS-1A or YOU-1.

※If you have any questions about adding T-axis or choosing a manipulator, please do not hesitate to contact us.

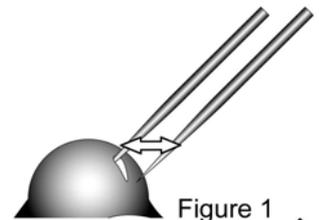


Figure 1

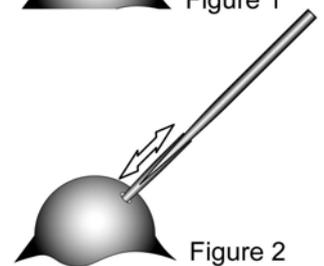


Figure 2

#### < Bit of Knowledge >

When a cell is relatively large (ex. Xenopus oocyte or rice-fish egg), a floating cell can be injected the same as an adherent cell, with only manipulator(s) on the injection side. In doing so, the floating cell is secured with a little ingenuity. Following are some examples.

<b>Fixation 1</b>	<b>Fixation 2</b>	<b>Fixation 3</b>
<p>An egg is sandwiched between two preparations.</p>	<p>An egg is fixed with self-made preparations as shown.</p>	<p>An egg is fixed with mesh that is commercially available.</p>