NARISHIGE WEB NEWS
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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.

<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.

<table>
<thead>
<tr>
<th>Fixation 1</th>
<th>Fixation 2</th>
<th>Fixation 3</th>
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<tbody>
<tr>
<td>An egg is sandwiched between two preparations.</td>
<td>An egg is fixed with self-made preparations as shown.</td>
<td>An egg is fixed with mesh that is commercially available.</td>
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