

New device for three-dimensional cut of tissue samples

DESCRIPTION OF THE TECHNOLOGY

CSIC with others participants have developed an automatic positioning device for three-dimensional cut of tissue samples.

The application of this device is in histology and neuroscience, as it allows functional studies that currently cannot be made, as usual devices cannot perform curved cuts tissue. Also tissues should also be fixed in advance. This device permits the study of neuronal populations connect with each other, enabling the advances in neuroscience.

The new device allows curved and the 3-dimensional tissue of interest tissue cuts. You can choose any plane of orientation. This makes it possible to make cuts comprising sectors of interest

of study. Therefore you can perform physiological studies between structures. This process cannot be done now to have the restriction of planar cuts in the usual devices.

Furthermore, this device does not have the restriction of the tissues are previously set in resin. Tissues with the new device simply must be suspended in a buffered liquid that feeds the living sample. This feature allows studies of "circuit electrophysiology," an unpublished application nowadays.

MARKET APPLICATION SECTORS

Business sector which is aimed technology falls within the scope of companies clinic- analytical instruments for use in laboratory cytology / histology.

TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

The new device offers significant advantages over the current devices, which confers greater advantage are as follows:

- Perfect positioning tissue samples.
- Cortes At any curved orientation plane of the samples.
- The Sample need not be fixed simply suspended in a buffer fluid.
- Allows Studies of neuronal populations connected and not only of isolated populations.
- Allows Physiological studies of tissues, since the sample remains alive and functional.
- Allows the analysis of the effect of drugs or compounds on brain structures.

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CURRENT STATE OF DEVELOPMENT

Technology in an advanced state of development, ready to be tested by interested companies.

INTELLECTUAL PROPERTY RIGHTS

PCT extension filled.

COLABORATION SOUGHT

Companies interested in commercializing the technology developed

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The curved cuts allow the study of various interconnected brain structures. In addition, the new device allows the study in living tissues.

CONTACT

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