

Cellular / Slice electrophysiology

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Organisation

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SCOPE OF THE METHOD

The Method relates to	Human health
The Method is situated in	Basic Research
Type of method	In vitro - Ex vivo
Species from which cells/tissues/organs are derived	Mice / Rat
Type of cells/tissues/organs	Brain / Neuronal cell

DESCRIPTION

Method keywords

Patch clamp
Field potential
Brain slice

Scientific area keywords

Electrophysiology
neuroscience
Physiology

Method description

In this method, it is possible to use active/viable animal or human brain slices / cells (normal or disease model) to study the effects of different drugs on brain cells (neuron or glia) in diverse brain region.

Lab equipment

Vibration isolation table with Faraday cage ;

Signal amplifier ;
Digitizer ;
Micromanipulator ;
IR-DIC Microscope ;
Perfusion pump ;
Glass pipette microforge.

Method status

History of use
Published in peer reviewed journal

PROS, CONS & FUTURE POTENTIAL

Advantages

Reduce animal use ;
Any drugs can be tested before clinical studies ;
Possibility of sharing same animal for different experiments depending on target brain regions.

Challenges

Require sophisticated instruments which are expensive ;
Require long training before successful implementation.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

References

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Associated documents

[segev2016.pdf](#)

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