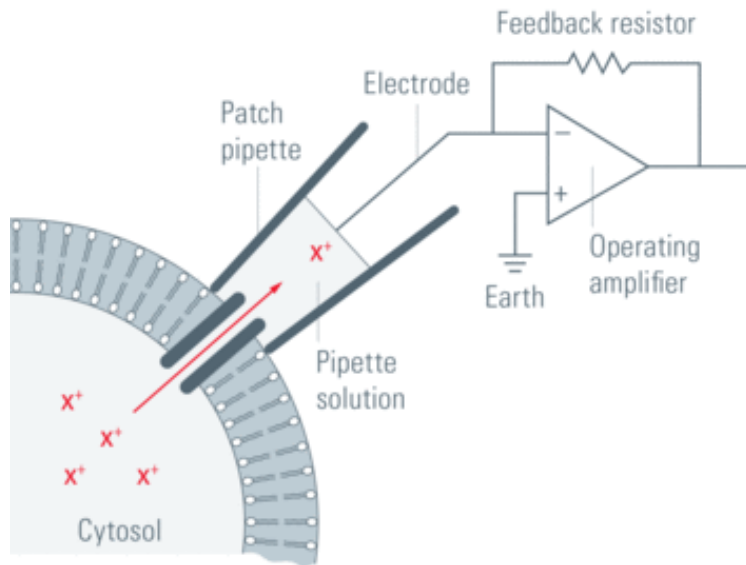


Application

Electrophysiology techniques such as patch clamp are employed in the field of neuroscience to measure exceptionally tiny electrical currents in the ion channels of cells.



Source: <http://www.leica-microsystems.com/science-lab/the-patch-clamp-technique/>

Equipment used

[ZDeck Motorized XY Platform System](#), [ZDP50T Motorized Microscope Translation Stage](#), [Sensapex 3-Axis Micromanipulator with Linear Piezo Drive](#)

Challenges

Electrophysiological recordings require the absence of outside electrical noise.

Solution

Motorized XY platforms, microscope translation stages, and micromanipulators from Prior Scientific.

Prior's line of motorized XY and Z stages and zero-drift micromanipulators generate no electrical noise while at rest (i.e., during recording). Additionally, the flexibility afforded by the height-adjustable ZDeck makes it ideal for multiphoton microscopes used for imaging of both slices and small animals, where the microscope itself must remain fixed. The ultra-compact Sensapex micromanipulators allow for close placement to the sample for best possible stability and flexibility to add as many manipulators as needed.

