Scientific Instruments

Peira SliceTilter

PROBLEM

The discovery of neurogenesis in 1998 sparked a new wave of scientific research. Although clinical stage research is still in its infancy, drugs that enhance neurogenesis have the potential to completely change the way drugs are developed to treat CNS diseases. Researchers are looking to understand the mechanisms of information processing, development and degeneration of the central nervous system . In the experiment for which Peira developed the SliceTilter the researcher exposes mouse hippocampal tissue slices positioned on microelectrode arrays to gas and medium by shaking the MEA at regular intervals manually in order to stimulate celgrowth. Those cumbersome interventions are not standardized nor automatically logged on a computer.

SOLUTION

The SliceTilter is a platform which holds a total of 16 MEA's in which hippocampal slice cultures are placed. The tilting platform allows the researcher to expose the slices to gas and medium respectively in a controlled cycle. Timing and inclination angles of the platform can be set at different values in order to optimize the process whilst the loading and unloading system of the individual MEA's was designed with the principles of usability in mind. The whole platform is placed in an incubator under controlled atmosphere and allows prolonged and better culturing of the organotypic tissue. This automation improves the efficiency and effectiveness of the experiment considerably.

TECHNICAL DATA

Dimensions (LxWxH):	430 x 480 x 300mm
Weight:	15 kg
Power:	0.38 kW
Volts:	220V 50 – 60 Hz
Max working angle:	154°
Max speed:	1,5 rad/sec
CE:	The SliceTilter fully complies with all CE and EMC equipment guidelines relative to mechanical and electrical safety and electromagnetic compatibility.
Accuracy:	< 8 arcmin