



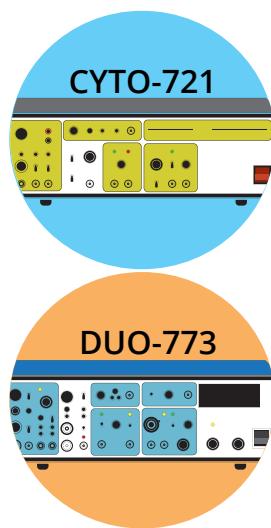
# MICRO-EPORE™

Pinpoint Cell Penetrator for Targeted Microinjection



[www.wpiinc.com](http://www.wpiinc.com)

# Pinpoint Cell Penetrator for Targeted Microinjection



## The Next Generation TARGETED MICROINJECTION

New and improved functionality



### Simple, Elegant Solution

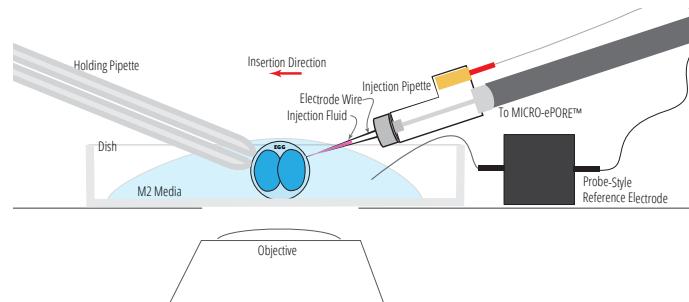
The new WPI **MICRO-ePORE™** pinpoint cell penetrator is a simple and versatile system that can be used for efficient microinjection of a diverse array of compounds and biomolecules into oocytes and pre-implantation stage mammalian embryos. Patent pending Flutter Electrode Technology assists in small, clean, precise membrane penetration without tearing or damaging the membrane.

### Experimental Data

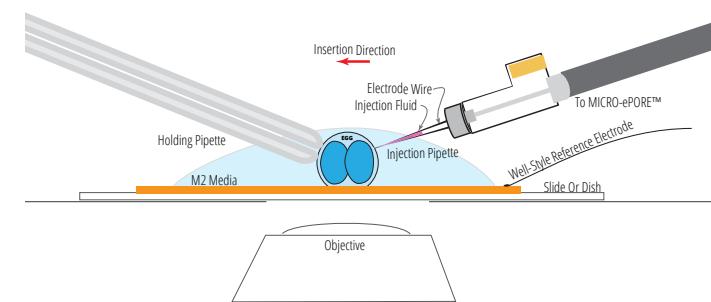
Electrophysiological systems utilizing negative capacitance have been routinely used for microinjection of a variety of biomolecules into mammalian oocytes, as well as pre-implantation and post-implantation embryos in developmental biology studies.<sup>1-6</sup> The system which is no longer available, the intracellular amplifier WPI Cyto721, allows the needle to pierce the cell membrane with minimal physical trauma. More recently this technique has been applied to the microinjection of CRISPR/Cas9 reagents into two-cell stage mouse embryos.<sup>7</sup> The authors demonstrated significant increase in the knock-in efficiency and high viability of embryos using their method.

The new **MICRO-ePORE™** pinpoint cell penetrator offers a

### Probe-Style Reference Electrode Option



### Well-Style Reference Electrode Option



### Benefits



Increased viability of injected embryos



Versatile system

- Integrates with WPI's PV820/PV830, as well as other popular microinjection systems, like the Eppendorf Femtojet® and the Narishige injectors
- Microinjection of diverse compounds and biomolecules- DNA, RNA, proteins
- Pre- and post-implantation in embryos of various species – mice, rats, monkeys, bovine, pigs, zebrafish, etc.

Femtojet® 4I is a registered Trademark of Eppendorf AG



Easy to operate – Hands-free operation with foot switch control



User adjustable frequency and voltage – Four programmable protocols



Small, portable unit saves precious benchtop space



Works with all major inverted microscopes

### KEY FEATURES

- Touch-screen display-resistive touch panel for use with gloves
- Injection control through foot switch or manually through touch screen
- Intuitive user-interface
- User adjustable frequency and voltage through touch screen
- Small footprint
- Four user-programmable protocols
- Adjustable audio continuity tone indicating active probe
- Injection counter to indicate total number of injections

### TARGET APPLICATIONS

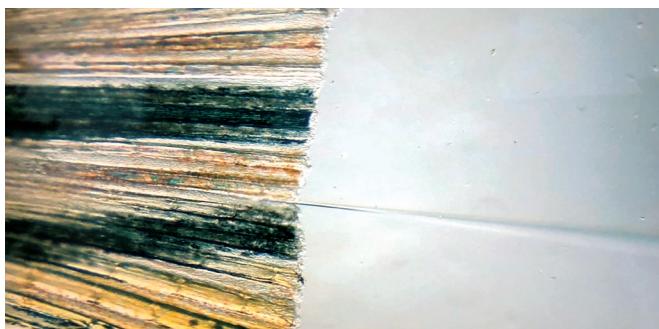
- Microinjection into oocytes and pre-implantation stage mammalian embryos, including microinjection of CRISPR-Cas9 reagents into the cytoplasm of two-cell stage embryos
- Pronuclear rodent zygote microinjection
- Gene silencing in zebrafish

### SPECIFICATIONS

Voltage parameters.....	0-3.0 V, at 1 mV increments
Frequency parameters.....	50-3000 Hz, at 1 Hz increments
Pipette resistance alarm threshold maximum.....	500 MΩ
Dimensions .....	19.7 x 12.7 x 7.6 cm (7.75 x 5 x 3 in.)
Weight .....	0.9 kg (2 lb.)
Certifications.....	CE, RoHS

**NOTE:** Specifications are subject to change.

# MICRO-EPORE™ SUCCESSES IN UNIVERSITY LABORATORIES



A researcher at Jinggangshan University, Jiangxi Province used a MICRO-ePORE™ to inject morphilinos in a zebrafish tail fin.



A typical microinjection setup with the MICRO-ePORE™, an INV-101 Inverted Microscope and a PV820 Pneumatic PicoPump.

## REFERENCES

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## ORDERING INFORMATION

<b>MICRO-ePORE</b>	MICRO-ePORE™ System. The system includes the MICRO-ePORE™ controller, Electrode Holder of your choice, Microelectrode Holder Interface Cable, Well-Style Reference Electrode, Probe-Style Reference Electrode Assembly, Foot Switch and Power Cord
<b>SYS-PV820</b>	Pneumatic PicoPump Microinjector
<b>SYS-PV830</b>	Pneumatic PicoPump Microinjector with Vacuum Pressure
<b>1B100-3*</b>	Single-Barrel Standard Borosilicate Glass Tubing, 3 in. (76mm) long, 1.0mm OD, 0.58 mm ID, package of 500
<b>TIP1TW1*</b>	Pre-Pulled Glass Pipettes, 1 µm tip ID, 1.0 mm glass OD, Thin wall, fire polished
<b>300683</b>	WPI MICRO-ePORE™ Holder
<b>300684</b>	FEMTO MICRO-ePORE™ Holder
<b>300685</b>	NARISH MICRO-ePORE™ Holder
<b>75122-110</b>	Replacement gaskets, green, 1.0 mm, pkg. of 10
<b>75122-210</b>	Replacement gaskets, black, 1.2 mm, pkg. of 10
<b>75122-310</b>	Replacement gaskets, red, 1.5 mm, pkg. of 10
<b>75122-410</b>	Replacement gaskets, white, 1.65 mm, pkg. of 10
<b>13142</b>	MICRO-ePORE™ Foot Switch
<b>99192</b>	Probe-style Reference Electrode
<b>99190</b>	Well-style Reference Electrode

\*Many varieties and choices are available for glass capillaries and pre-pulled µTip micropipettes.

**NOTE:** The WPI MICRO-ePORE™ is designed for research use only.



Order today!