

Automatic Vitrification and Warming System

Are you facing the following problem?

- Not satisfied embryo cryopreservation successful rate
- Insufficient or unstable embryologists
- Embryologists are under huge pressure due to heavy workload



► Performance

Automate the embryo processing steps during vitrification and warming.
Reduce variability caused by manual operations.

**The World's First
Exclusive Product**

► Advantages

Stable

Enhance stability by reducing manual errors through easier operation

High Throughput

12 vitrification vessels can be processed continuously with 4 channels, achieving vitrification rate up to **3360** embryos/hr and warming rate up to **6720** embryos/hr

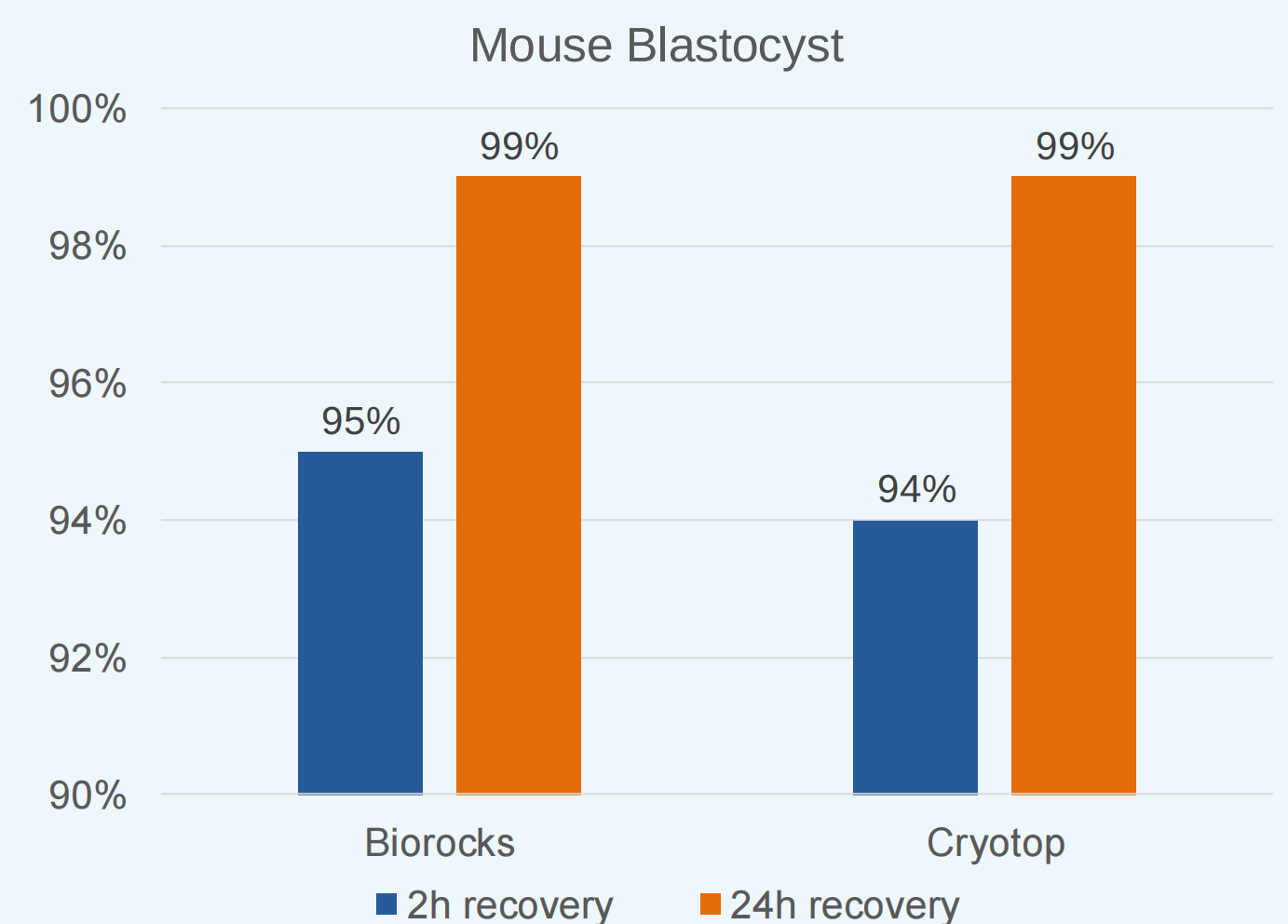
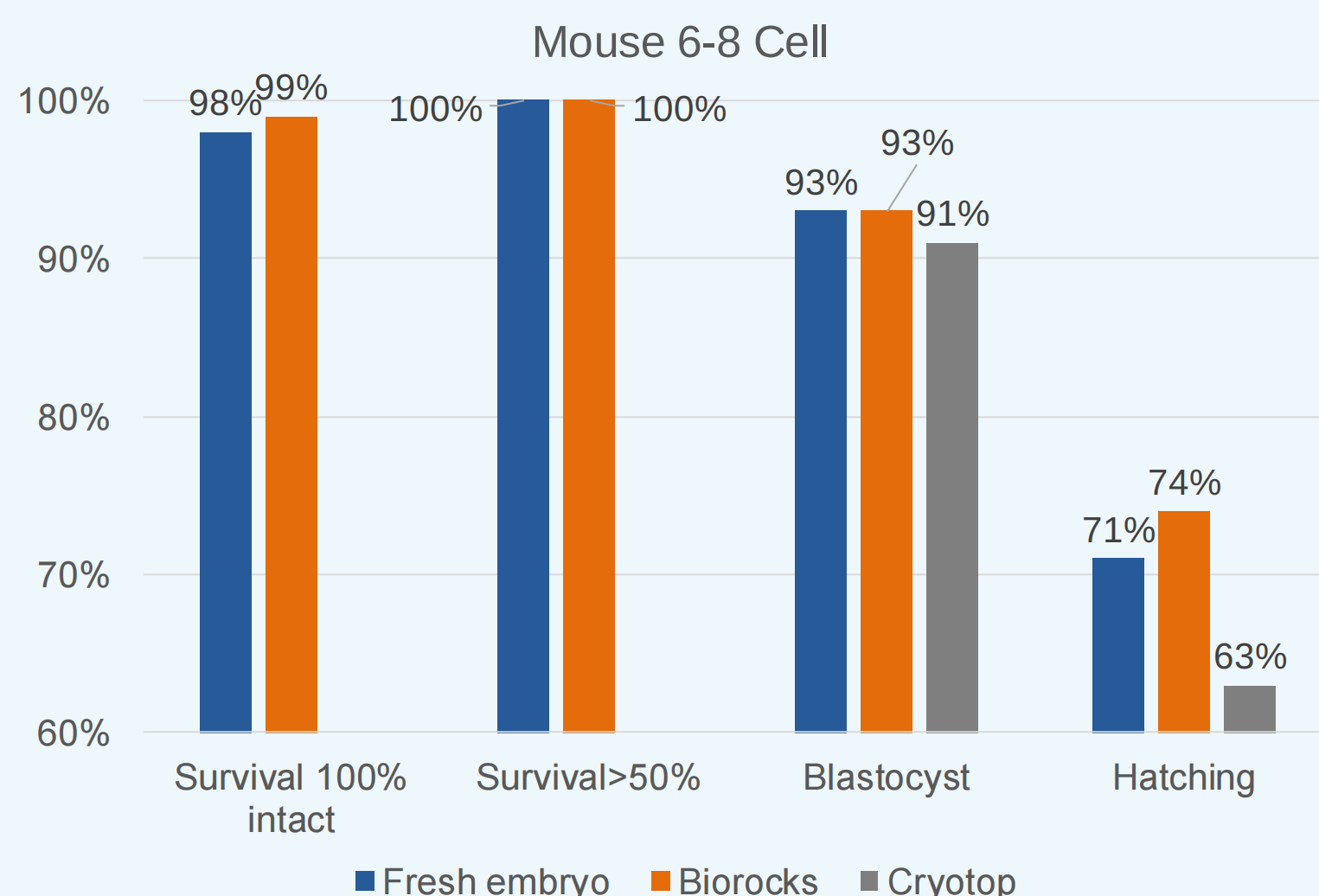
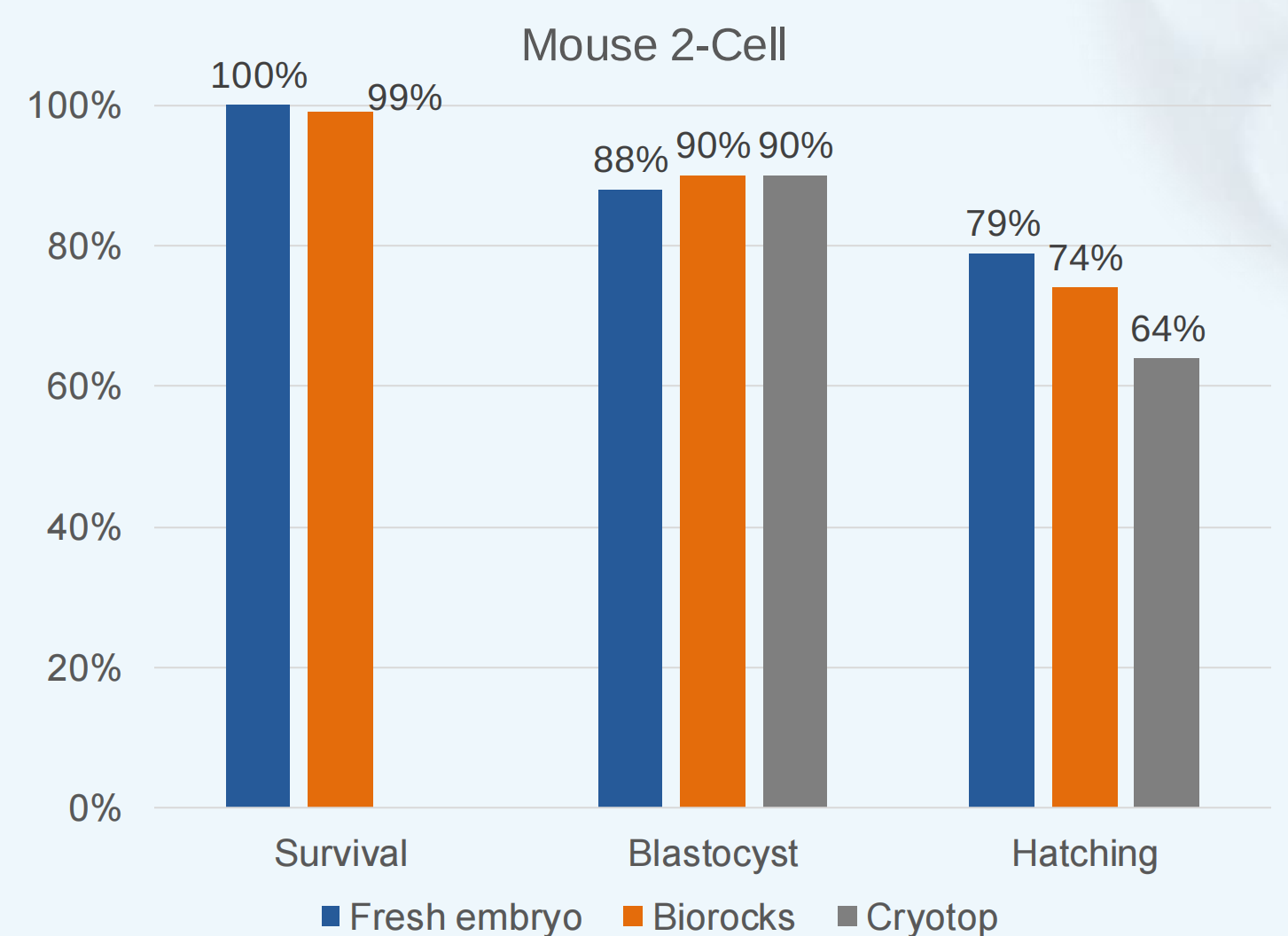
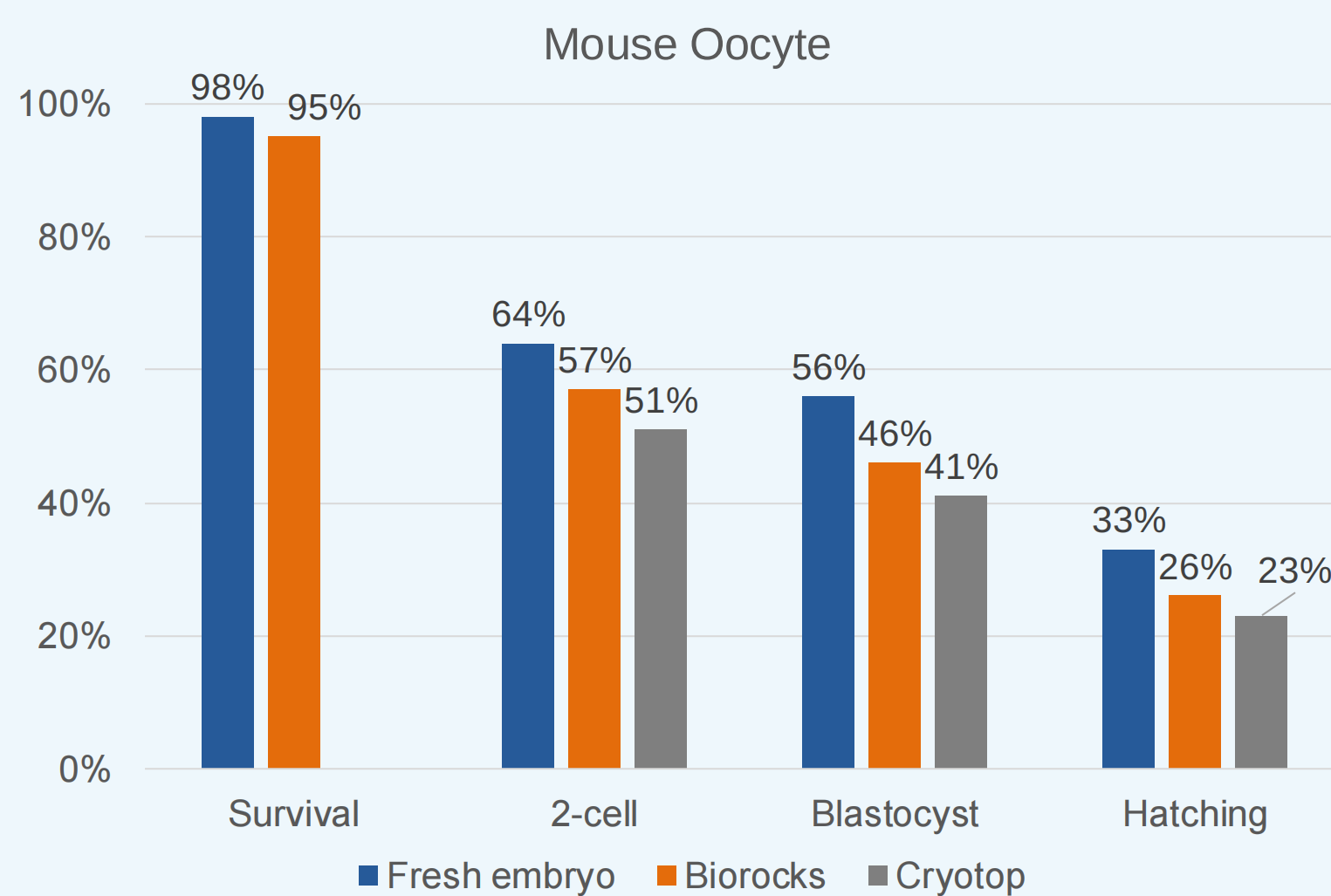
Compatible

Compatible to manual vitrification and warming process and storage. Providing a more scandalized and reliable option

High Successful Rate

Significantly reduce embryo damage during vitrification and warming, as proved by literature. 2-cell recovery rate can reach up to **99%**

► Data

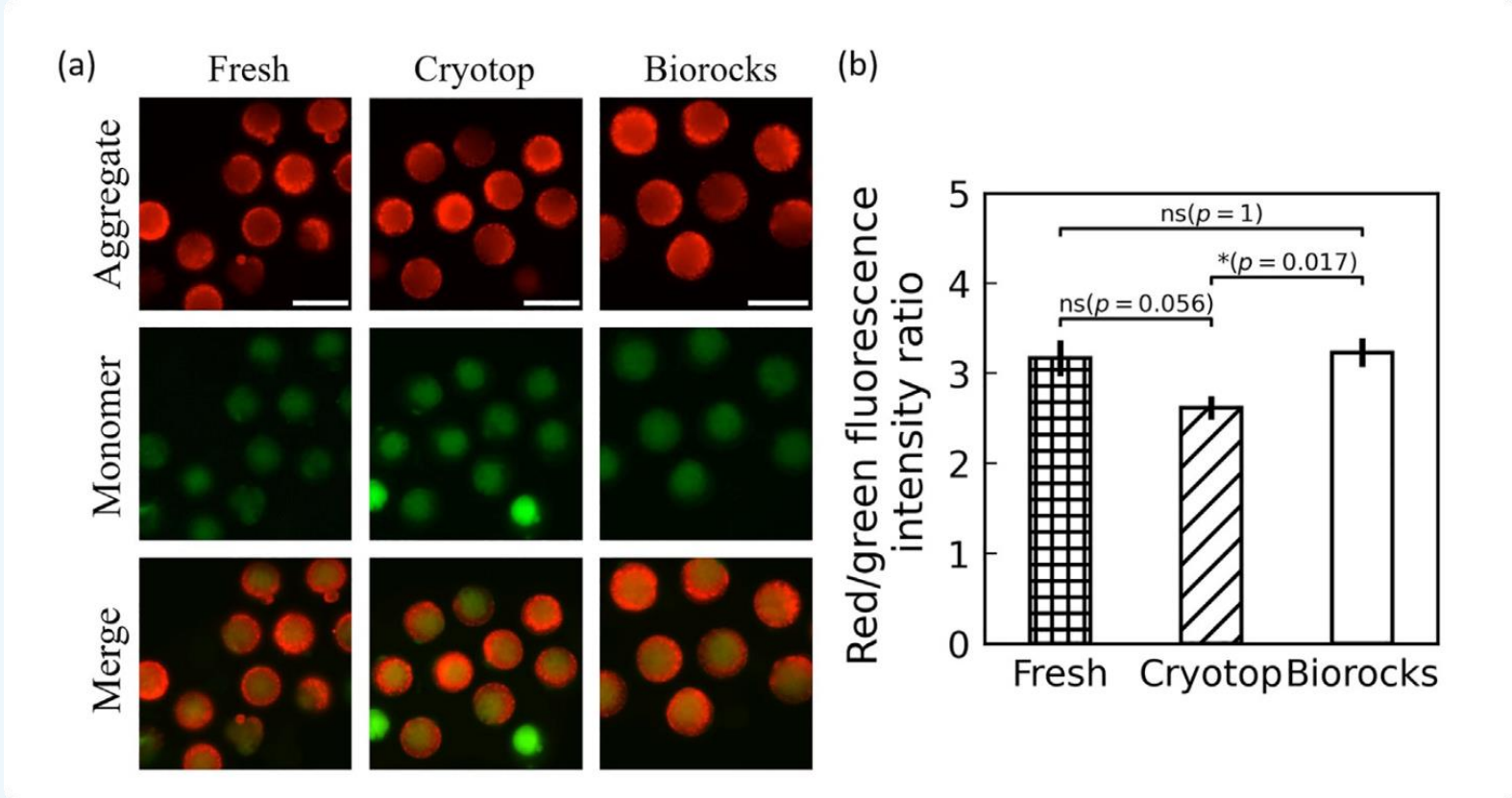


Biorocks Automatic Vitrification and Warming System

Significantly reduce embryos mitochondrial membrane of embryos during vitrification



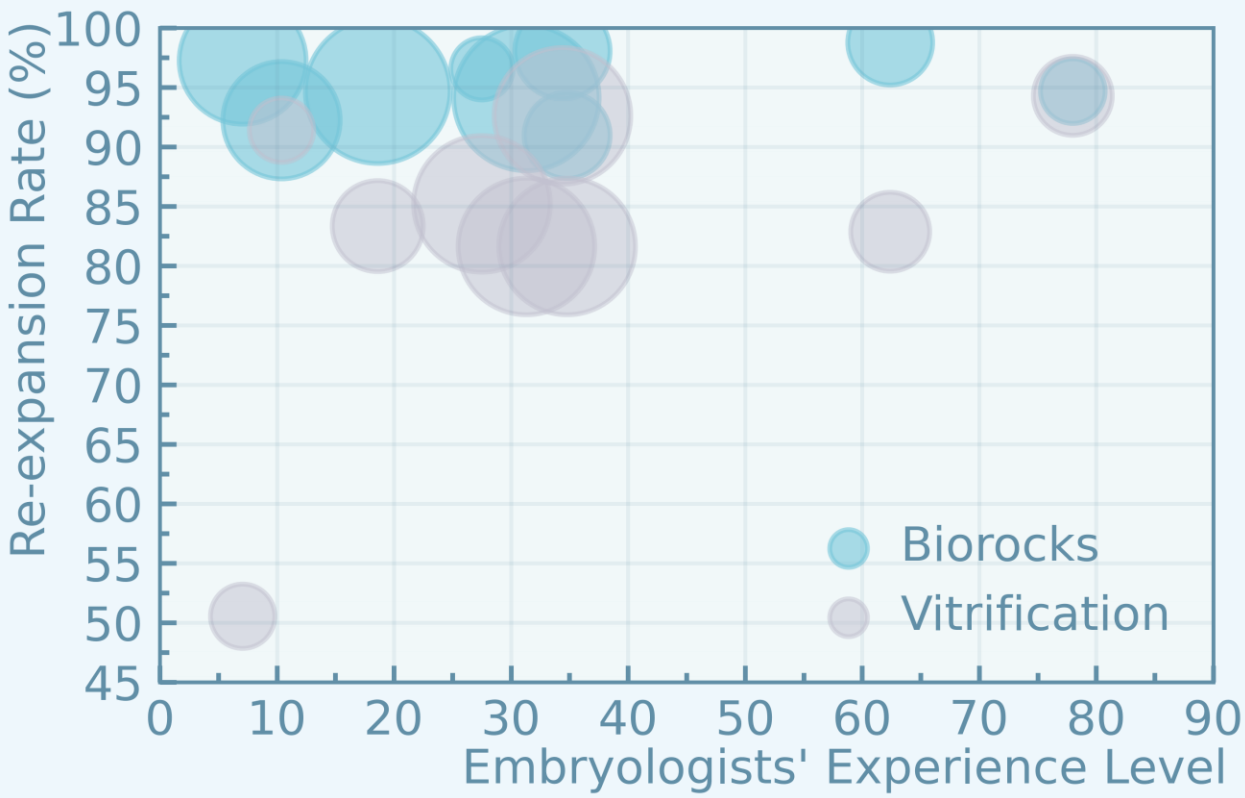
JC-1 fluorescence staining for mitochondrial membrane potential (MMP) measurement. (a) Relative MMP ($\Delta\Psi_m$) in oocytes from fresh, Cryotop, and Biorocks. Scale bar: 100 μ m. All images were processed in the same manner. Degenerated oocytes (abnormally bright cells in the FITC channel) were excluded in subsequent intensity ratio calculations. (b) Red/green fluorescence intensity ratios for the three groups. Data represents the results of three independent experiments.*Statistically significant ($p<0.05$) .



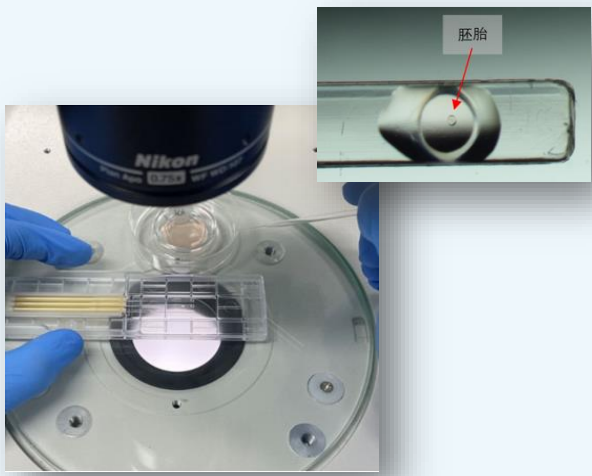
Wang S, Chen L, Fang J, et al. A compact, high-throughput semi-automated embryo vitrification system based on hydrogel[J]. Reproductive BioMedicine Online, 2023: 103769.

Manual vitrification and warming shows significant variability even with experienced embryologists.

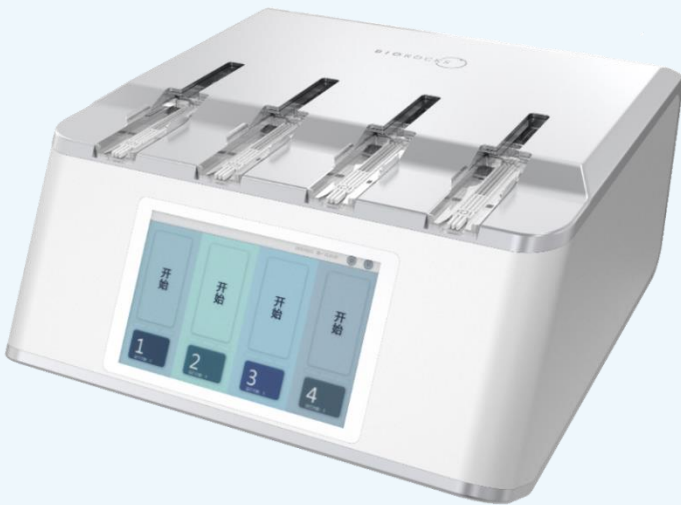
In contrast, vitrification and warming with Biorocks system significantly reduced variability even with novice embryologists.



► Vitrification Procedure



Transfer embryo into vessels



Start vitrification protocol



Transfer to liquid nitrogen

12 vitrification vessels can be processed continuously with 4 channels, achieving vitrification rate up to 3360 embryos/hr

► Warming Procedure



Take out the vessels



Warm the vessel in oil bath



Start warming protocol

12 vitrification vessels can be processed continuously with 4 channels, achieving warming rate up to 6720 embryos/hr

► 2 Cell Data from Different Strains

Table 1 Survival and Development of Mouse Embryos from Different Strains Vitrified and Warmed in Biorocks System

	B6D2F1	B6D2F1 (Fresh Control)	KM	KM (Fresh Control)	C57BL/6	C57BL/6 (Fresh Control)
Number of 2 cells	371	144	448	128	40	38
Survival (100% Intact)	365	144	438	128	39	38
Blastocyst (Day 4)	317	129	276	91	34	30
Survival Rate	98.4%	100.0%	97.8%	100.0%	97.5%	100.0%
Blastocysts Rate	85.4%	89.6%	61.6%	71.1%	85.0%	78.9%



E-mail



Website

Company: Shenzhen Biorocks Biotechnology Company Limited
Address: 11F Science and innovation building, Science park of Hua run sanjiu, Guan Sheng Yi Road, Long hua District, Shenzhen, Guangdong Province, China.