

Pioneering EV Therapeutics — Creating the Future of Medicine



**Pioneering the Future of IVF: Embryo
Development Support with an MSC-EV Additive
(EXP02)**

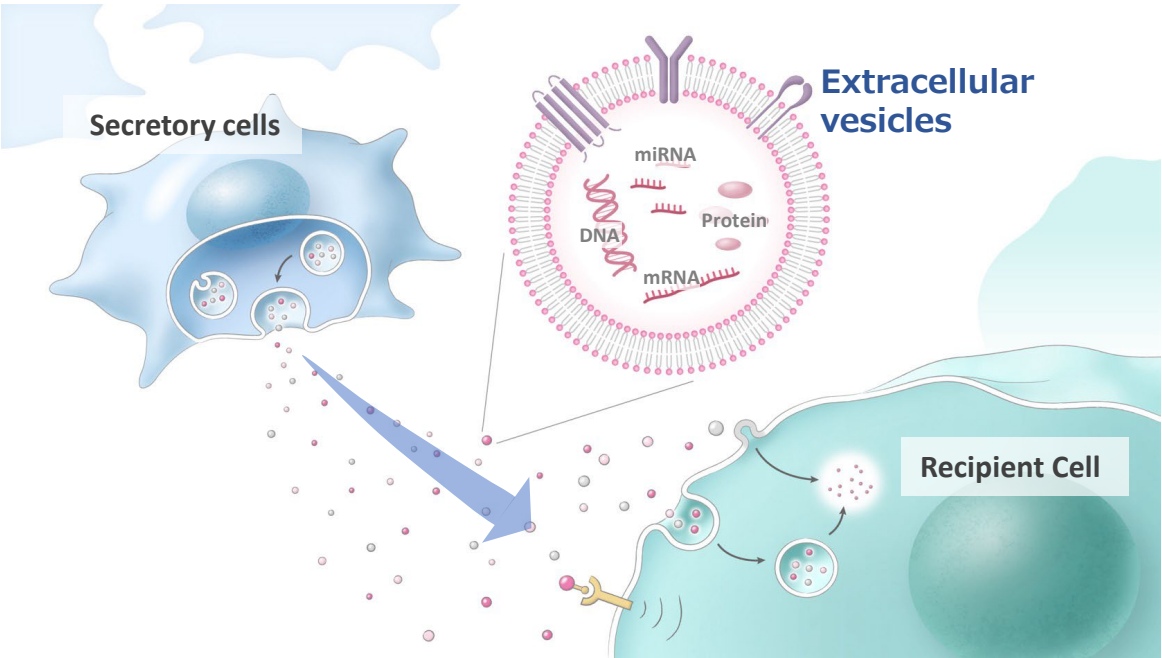
EXORPHIA, INC.

1. Company Overview

Japan’s pioneer in EV drug discovery, advancing safe, high-quality biopharmaceuticals.

Mission: Create the future of medicine with advanced EV technologies.

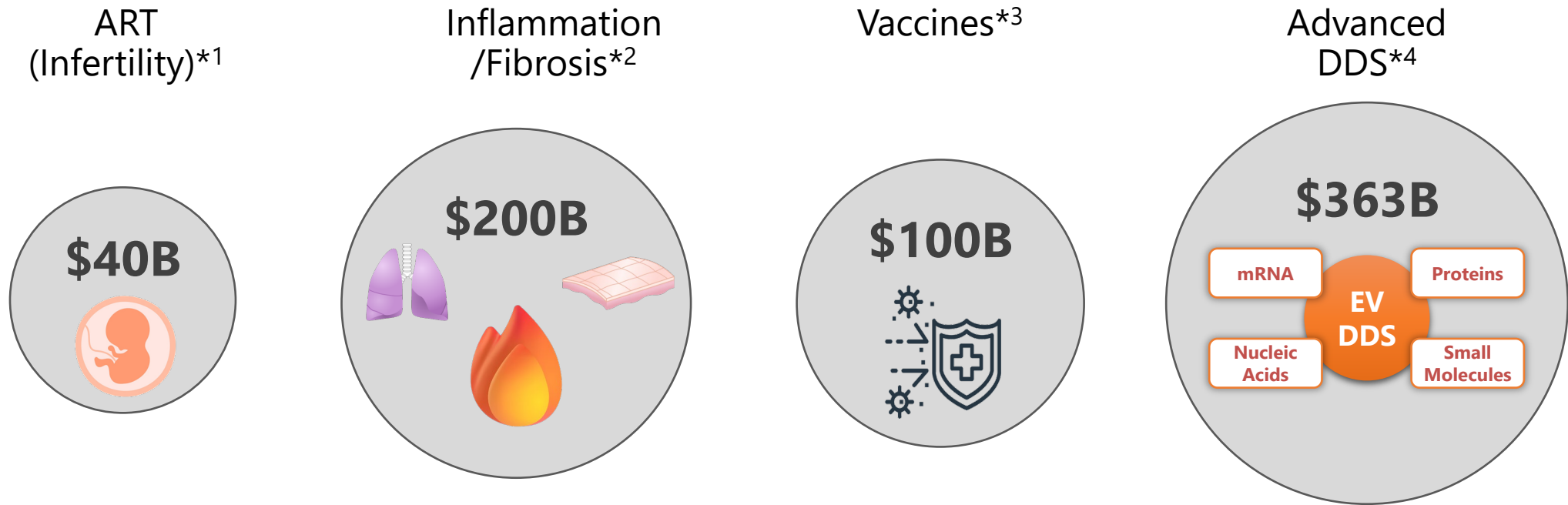
EVs are natural carriers that deliver cellular components.



Founded	2019
HQ	Tokyo to date
Capital Raised	\$12M
Major Shareholders	   D3 LLC Discovery Development Deployment   共立ホールディングス
Team	20 (R&D-centric)
University Partners	 東京大学 THE UNIVERSITY OF TOKYO  Institute of SCIENCE TOKYO  三重大学 MIE UNIVERSITY

2. Market Opportunities

EVs address sizable needs in **infertility, inflammatory disease, and vaccines/DDS.**

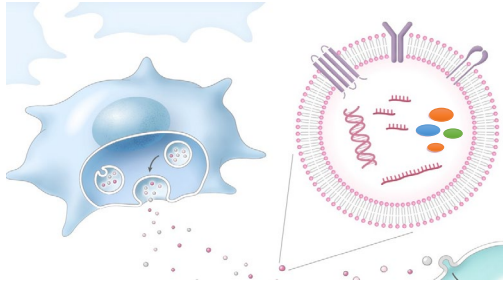


*1 Assisted Reproductive Technology Market Size & Share Analysis - Growth Trends & Forecasts (2025 - 2030), Mordor Intelligence Research & Advisory. (2025 , June).
 * 2 Inflammation & fibrosis drugs (combined): Anti-inflammatory, USD 196.81 B by 2031 (Straits Research); PLUS Antifibrotic, USD 7.62 B by 2033 (Verified Market Reports)
 * 3 Vaccine market: projected to reach approx. USD 100 B by 2030 (WHO estimate)
 * 4 Advanced DDS: USD 362.77 B by 2030 (Mordor Intelligence, "Advanced Drug Delivery Systems Market Size & Share," June 2025)

3. Two Core EV-Based Technologies

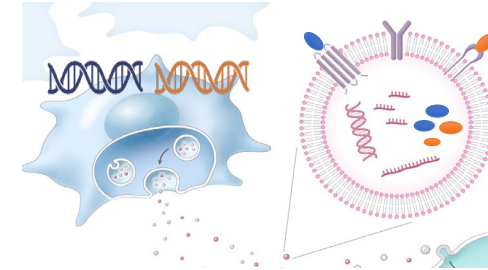
Prime-EV™

- ✓ **Highly purified** components derived from MSCs.
- ✓ Therapeutic **efficacy enhanced** by cell pre-conditioning technology.
- ✓ **Key components are established as QC markers**.^{*1}



Engineered EV

- ✓ **Cargo-loading technology** enabling efficient protein loading.^{*2}
- ✓ Broad applicability to vaccines and DDS
- ✓ **Strong exclusivity** vs competitors, supported by granted patents in Japan and the U.S.^{*3}



Advanced CMC

- ✓ High-accuracy potency prediction/consistency from >1,000 lots.
- ✓ ISO standardization contribution for medical EVs as a working-group member.

Enabling Development Across Multiple Applications

4. Pipeline Overview

Balanced portfolio: **Near-term revenue** (EXP02), clinical-ready **Prime-EV** (EXP01), and **first-in-class engineered EV** vaccine (EXP03).

Asset	Target Disease	Research	Preclinical	Clinical	Marketing	Note
EXP02: IVF Additive Naïve	Infertility			2026 Japan	2028 Japan 2029 Global	- Improves high-grade blastocyst yield; Japan-first→global.
EXP01: Anti-inflammatory /Antifibrotic Naïve	Pulmonary (IPF/ARDS)					Balanced efficacy and safety to overcome current therapy gaps.
	Dermatology (AD)					Topical—inflammation control + barrier rebuild.
EXP03: Engineered EV Vaccine Engineered	Respiratory Infectious Diseases					Intranasal multivalent vaccine. - Engineered EV Lead Program.
Indication Expansion Engineered	①EV-based cancer vaccine. ②Nucleic-acid delivery EVs with enhanced CNS penetration. ③Immune-tolerance–inducing EVs for autoimmune diseases (preliminary data in hand).					

5. EXP02 (IVF Additive)

Naïve



Increase good blastocysts. Reduce cycles per live birth.

Market : ~3M IVF cycles worldwide; ~0.5M in Japan.

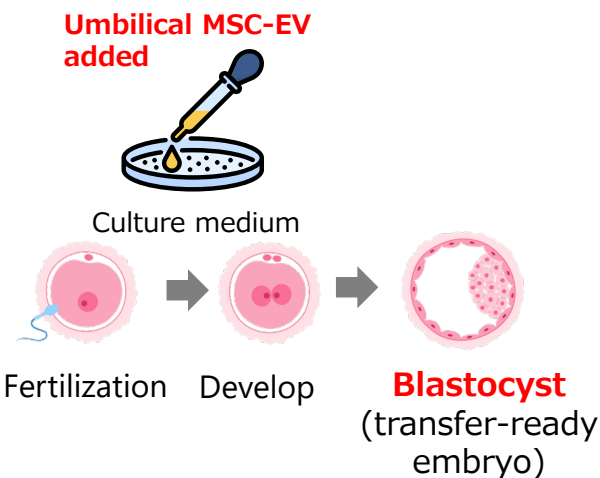
What : Trace-add **MSC-EV supplement** to standard IVF media; **no workflow change**.

Advantage : Superior efficacy; **add to existing media only**.

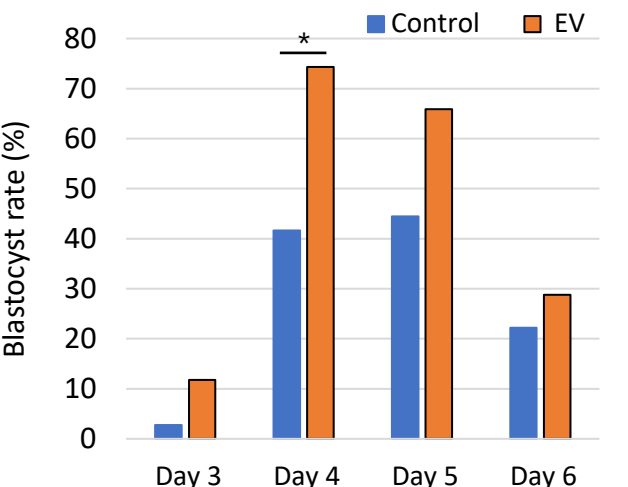
Business Model : **Direct sales**; scale-up in partnership with **CDMOs**.

Progress : **NEDO-funded**; **3 conference presentations**; efficacy confirmed; key components identified; **patent filed***1.

EV addition to the IVF culture process



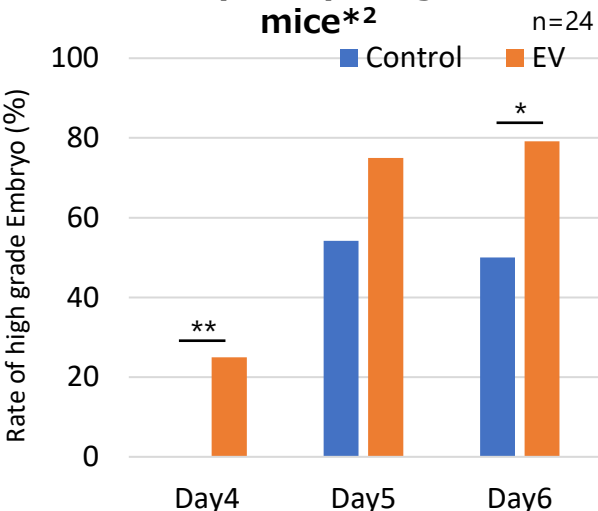
Blastocyst formation (low-blastocyst-yield mouse) n=34-36



Improved blastocyst development efficiency

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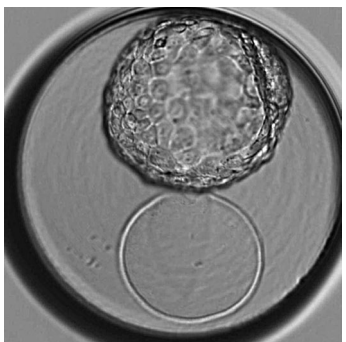
High-grade embryo rate(>3BB) in Aged-mice*2



Improved embryo quality (advanced-age)

* p<0.05
** p<0.01

*1: 2025-130104
*2: Aged C57BL/6J (≈ humans in their late 40s)



Good-quality blastocyst

6. Our team with diverse expertise essential for drug discovery



**CEO, Founder
Koji Kuchiishi**

“extensive bio-venture management experience and global contacts”



**Head of Drug Discovery, Cofounder
Izumi Kaneko, PhD**

“extensive experience in drug discovery”



**Head of Business Development
Junichi IMOTO, PhD MBA**

“strengths in business development leveraging drug discovery research experience”



**Head of CMC Development
Kenichi TAMURA, MBA**

“an expert in stem cell and designer cell development with 10+ years in R&D and regulatory development.”



**Head of Clinical Development
Chikako YAMAUCHI, PhD**

“with over 15 years of experience in clinical development at a global pharma company”



**EV engineering, Pharmacology
T. Yonekura Ph.D.**

“strengths in molecular biology and drug discovery research.”



Closing

- **EVs to tackle infertility, inflammatory disease, and infectious disease.**
- **Near-term revenue:** consumables (EXP02).
Long-term growth: out-licensing & DDS tech licensing.