

Development and Commercialization of a Device for Mammalian Sperm Activation Using Specific Wavelength Light Irradiation

FY2025 STEP2



Kanazawa Medical University

Commercialization
Promotion Organization (main in-charge) QB Capital, LLC

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Problem

Humans

Assisted Reproductive Technology (ART) market

Human sperm count has **decreased by 59.3% over the past 40 years.**

Cows

Livestock Markets

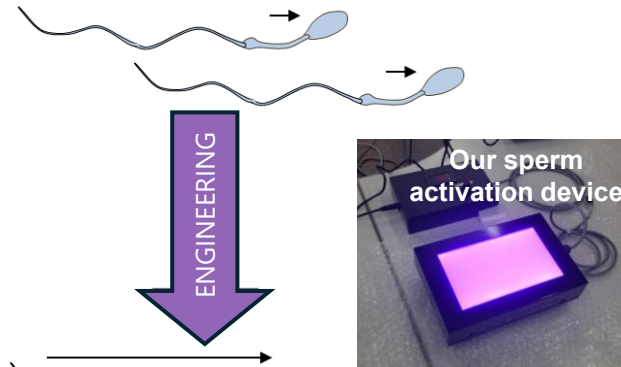
The conception rate of cows has **continued to decline since 1989.**

Technology

Sperm Activation Technology by Specific Wavelength Light Irradiation

- US Patent 1196931B2, etc.

Weak motility sperm with low fertilization rates



Improved motility and fertilization rates

Customer

1. ART market

- Fertility clinics



Providing new assisted reproductive technologies for couples hoping to conceive

2. Livestock market

- Farmers
- Government



Possible to improve conception rates and reduce production costs

Market Size

- Japan ART device market size: **9.1 billion yen** (2022, estimated by Fuji Keizai)
- US market size: **\$1.52 billion** (estimated by Dimension Market Research)
- US market for devices and services to improve livestock productivity is **\$350 million** (Grand View Research)
- The global market for productivity improvement devices and services is estimated at **\$1.17 billion (175.5 billion yen)**

Expected establishment date: FY 2028

Target market: Global