

# Details of Technology

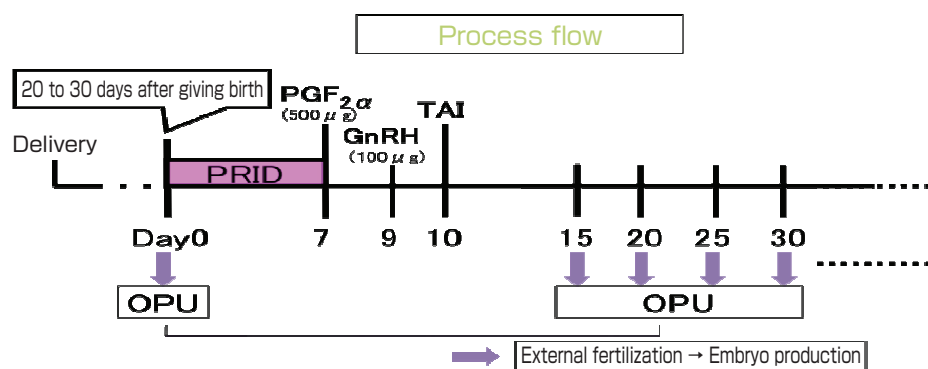
Name of Technology	Stockbreeding · cow · reproduction / Early postpartum Japanese black cows are impregnated by timed artificial insemination, and a large number of transferable embryos are produced by ovum pick-up and <i>in vitro</i> embryo production.	Life Science
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Key words	ovum pick-up (OPU), <i>in vitro</i> embryo production (IVP), timed artificial insemination (TAI) at early postpartum period, synchronization of ovulation using progesterone/estrogen releasing intravaginal device (PRID), timed embryo transfer, increase in conception rate	

What kind of technology is this?

## Outline

**By this technology, Japanese black cows can be impregnated at a high conception rate in the very early postpartum period whether suckling or not, and it is possible to produce a large number of embryos of Japanese Black Cows.**

In parous Japanese black cows which are suckling or have been weaned early, oocytes are removed by OPU in the early postpartum period, 16 to 37 days after delivery, and immediately after the OPU, the synchronization of ovulation with PRID and TAI are performed. Then, by performing three repeated OPU-IVP treatments about 7 days after TAI, cows can be impregnated at very early postpartum period, and it is possible to produce a large number of embryos of Japanese black cows.



What are its applications?

- 1) A large number of transferable Japanese black cow embryos with high genetic and economical value can be produced efficiently.
- 2) One delivery per year can be accomplished without prolongation of non-pregnant period after delivery.
- 3) A high conception rate, about 70% , can be attained by TAI in the early postpartum period (within 50 days) in a desired cow group.
- 4) The combined business of milk and meat can be established by using a dairy cow such as Holstein for breeding via transfer of embryos of Japanese black cows.
- 5) The descendant cows of high yielding commercial dairy herds can be produced efficiently.

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