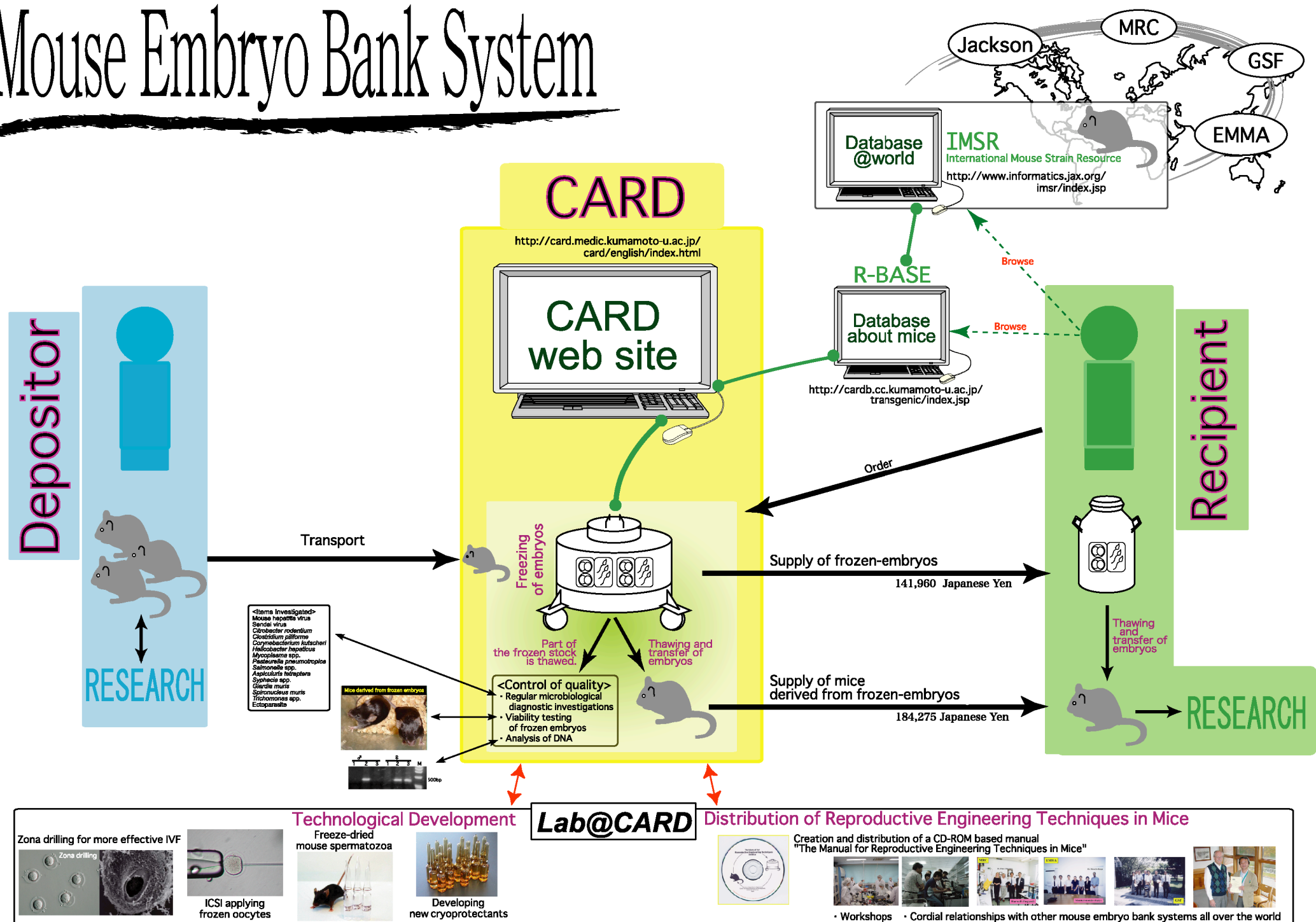


Mouse Embryo Bank System



Center for
Animal
Resources and
Development



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In 1998, the Center for Animal Resources and Development (CARD) at Kumamoto University in Japan expanded their embryo bank to ensure cryopreservation of valuable mouse stocks. In particular the bank is intended to safeguard unique genetic material and to make it readily available to the scientific community. The bank contains mutant and transgenic stocks, congenic lines and wild mice.

Our embryo bank system offers the following essential services.

1. Freezing of embryos

In general, 2-cell embryos obtained by fertilization in vitro are cryopreserved by simple vitrification. For most strains our goal is to freeze a minimum of 300 embryos. We also freeze epididymal spermatozoa from mutant and transgenic lines.

2. Viability testing of frozen embryos

In order to assess the viability of all stocks, samples of thawed embryos are transferred to foster mothers, and the proportion that are capable of normal development to live-born young is evaluated. The foster mothers and young are maintained in an isolator until regular microbiological diagnostic investigations are carried out.

3. Analysis of DNA

In the case of transgenic lines, the transgenicity is confirmed by PCR analysis of genomic DNA from the tail tissue of 4-week-old mice.

4. Regular microbiological diagnostic investigations

Some of the offspring from frozen embryos are tested for viral, bacterial and parasitic pathogens at 8 weeks of age.

5. Distribution of stocks

Requests for quality-ensured stocks are fulfilled by dispatching frozen embryos in a dry shipper for recovery in-house. We are also capable of supplying breeding nuclei.