

Cryopreservation of mouse embryos

The purpose of freezing mouse embryos is to preserve valuable and unique mouse stocks that could otherwise be lost due to breeding failure or disease. In addition, mouse freezing supports the sanitation of contaminated mouse strains and could save mouse husbandry costs.

The cryopreservation of mouse embryos will be divided into two categories.

- a) Strains that are being worked with and need to be cryopreserved and transferred into the new facility (Zentrum für präklinische Forschung).
This service is being established and will be run by the Transgenic Service, Ulrich Kloz and Frank van der Hoeven (<http://www.dkfz.de/en/transgen-service/index.html>).
- b) Important strains that are not at present required, but need to be preserved for the future. This service will be continued by Johannes Schenkel (<http://www.dkfz.de/en/embryobank/index.html>). Alternatively, strains that are frequently required for distribution can be given to the organisation EMMA (<http://www.emmanet.org/>) for freezing and storage.

Standard Operating Procedure for the cryopreservation in collaboration with Transgenic Service

- The customer will submit a Cryopreservation Application Form to the Cryopreservation Unit.
- The Cryopreservation Application Form will ensure that stringent records of each strain are maintained. This must be typed and not hand written.
- After the application has been agreed upon the customer will provide the Cryopreservation Unit with 10 stud males of the appropriate age (2-6 months old). Any genotype that may affect fertility should be registered.
- Female mice for mating to the males will be purchased by the Cryopreservation Unit.

Part 1: Application Form

- [Cryopreservation Application Form](#) is to be filled out by the customer and sent to the Transgenic Service (transgenicservice@dkfz.de)

Part 2: Cryopreservation

- The Cryopreservation Unit will collect and freeze 150 embryos for homozygote males mated with wild-type females and 250 embryos for heterozygote males mated with wild-type females
- The Cryopreservation Unit will perform a quality control within 4 weeks after freezing. Hereby frozen embryos will be thawed and transferred into foster mothers to ensure successful freezing.
- The customer will be given tissue for analysis. This could be embryos at day 17.5 or live born.
- Following completion of the embryo freezing 3 stud males will be sacrificed and used for sperm collection and subsequent freezing.
- Confirmation of analysis from customer should be given to the Cryopreservation Unit within 3 weeks after receiving embryos or tissue.

Part 3: Documentation

- Will be performed by the Cryopreservation Unit and then given to the customer for subsequent signatures and filing.