

MMRRC-UNC Production Facility Description

The University of North Carolina-Chapel Hill is fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International).

The MMRRC Production Facility is located within the barrier maintained lower basement of the Genetic Medicine Building. The lower basement animal facility and the MMRRC Production Facility were first populated in July of 2010. To be housed in the lower basement, all mice must be re-derived via embryo transfer or originate from an approved vendor. This barrier facility is a highly restricted area with access via card key readers only and currently houses the MMRRC, the UNC Transgenic Core, the Collaborative Cross and the National Gnotobiotic Rodent Resource Center. Core and Husbandry staffs are not permitted to re-enter the barrier if they have gone to another facility prior to Genetic Medicine within the past 24 hours. All husbandry personnel, cagewash and all supplies are dedicated to the facility.

Entrances to the MMRRC Production Facility are locked via card key readers and restricted to dedicated husbandry and MMRRC staff. Mice are imported into the MMRRC facility by embryo transfer only. Importing Germ-free gnotobiotic Swiss Webster mice from Taconic and inoculating them with Altered Schaedler flora created the original colony of pseudo-pregnant recipient females and vasectomized males. The MMRRC has a separate importation colony at an off-site facility where all donated strains are housed prior to re-derivation. All animal manipulations are done at the satellite facility and embryos are transported to Genetic Medicine for transfer into a pseudo-pregnant recipient female.

All personnel have to don protective clothing to enter the facility. Protective shoe covers are donned while stepping over the vestibule threshold. Once in the vestibule, full coveralls, masks, caps and gloves are donned. Any materials, equipment and supplies must be decontaminated through a misting tunnel or bagged and manually sprayed down with Peroxigard.

Our animal care procedures are the same for all of our rooms/colonies within the MMRRC Production Facility. All mice are housed in micro-isolated Techniplast ventilated caging (Green Line Sealsafe Plus) in positive pressure rooms. All bedding (corn cob), water bottles, cardholders, nestlets, enrichment tunnels/huts and food (Purina LabDiet Advanced Protocol, Select Mouse 50IF/9F Auto – 50VOG) are autoclaved. NuAire Class II Type A2 Biological Safety Cabinets are used for all changing and opening of cages to handle mice. All Biological safety cabinets are wiped down before and after every use with Peroxigard or Spor-Klenz. All staff must don protective sleeves and double glove in order enter our mouse rooms. All staff must spray down their sleeves before working in the biological safety cabinet. Dip trays of Spor-Klenz are used in all hoods for dipping gloved hands or forceps prior to handling mice, for every cage. Sterilized scoops are used for handling newborn litters of pups. The MMRRC facility has its own veterinary medical supplies as well.

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Shipping Live Mice and Frozen Material

We ship all live mice in sterilized, white plastic, filtered shipping crates (provided by Jackson Laboratory). Each compartment has ample food and a sterilized 6oz. ClearH2O HydroGel pouch. Males and females are divided into separate compartments to prevent pregnancy while shipping. Males who are not littermates are also placed in separate compartments to reduce fighting. Written on the top of each crate are the genotype, gender, and strain of each mouse in the shipment (coat colors are noted for international shipments). Mice are also ear notched according to their genotype. All orders for frozen material are shipped in sealed liquid nitrogen dry cryo shippers.

The morning the shipment leaves our facility, a confirmation email is sent to the receiving institution providing the airbill tracking number. Also attached in PDF form to this email are: the shipment's packing list, containing the sex, genotype, ear notch key, and date of birth of the animals (for live mice orders); the genotyping and breeding protocol for the strain ordered; the thawing protocol and the MMRRC Frozen Material Policy (for frozen material orders). Hard copies of this information are included with the shipment paperwork as well.

Prior to arranging shipments of resuscitated litters, the ordering investigator may specify if they do not want to receive the wild type offspring.

Preferred Couriers

Our preferred couriers are Validated Delivery Solutions and Optimize Courier for all live mice shipments. Our preferred couriers for all frozen material are FedEx Express (domestic) and Validated Delivery Solutions, Optimize Courier and Cryoport (International).

Their contact information is:

- Validated Delivery Solutions – (877) 355-3773 – <https://www.validateddeliverysolutions.com/>
- Optimize Courier – (570) 234-3803 - <https://www.Optimize-Courier.com>
- Cryoport – (949) 470-2300 - <https://cryoport.com/>
- FedEx – (800) 463-3339 – www.fedex.com
(800) 247-4747 (International)

If you already have an account with these couriers, please provide the account number as this greatly facilitates setting up shipping. If you do not have an account, all of the shipping, handling and custom charges (if applicable) will be included on your final invoice.

MMRRC Product Policies

Resuscitated Litter Policy

The distribution fee covers the expense of resuscitating mice from the cryo-archive; you will receive the resulting litter. The litter will contain at minimum one breedable mutant carrier; the actual number of animals and the gender and genotype ratios will vary. (Typically, multiple breeder pairs can be established from the recovered litter.) Prior to shipment, the MMRRC will provide information about the animals recovered. If you anticipate or find that you need to request specific genotypes, genders or quantities of mice in excess of what is likely from a resuscitated litter, you may discuss available options and pricing with the supplying MMRRC facility.

Sperm Policy

An aliquot contains sufficient material (volume and concentration) for at least two IVFs or several artificial inseminations (based on our procedures). The MMRRC makes no guarantee concerning success of these procedures when performed outside the MMRRC facilities.

Embryo Policy

An aliquot contains a sufficient number of embryos (in one or more vials and based on the transfer success rate of the MMRRC facility) to transfer to at least two recipients. The MMRRC makes no guarantee concerning embryo transfer success experienced in the recipient investigator's laboratory. Neither gender nor genotype ratios are guaranteed.

MMRRC Contact Information

The MMRRC-UNC is one of four distribution centers located in the United States. The MMRRC is a collaborative effort, funded by grants from the DPCPSI of the NIH. The strain ordered determines which center is fulfilling your request. The other MMRRC centers are:

- MMRRC at the University of California, Davis – (530) 754-6677 – mmrrc@ucdavis.edu
- MMRRC at the University of Missouri - (573) 882-6459 – mmrrc@missouri.edu
- MMRRC at The Jackson Laboratories - (800) 910-2291 (North America) – mmrrc@jax.org
(207) 288-6009 (International)
- General MMRRC Customer Service – (800) 910-2291 – service@mmrrc.org