

SERVICE	DESCRIPTION
QUARANTINE	Prevents introduction of pathogenic agents into one's facility, permits administration of corrective measures early in the breeding process, and provides health reports required by most facility managers and veterinarians.
COLONY MAINTENANCE & DEVELOPMENT	Project objectives are achieved according to customized work plans. Bio-containment isolator technology allows for the acceptance of animal colonies of varying health status, thus eliminating the need for rederivation prior to receipt and project initiation.
REDERIVATION	Rederivation is the principle method of removing adventitious agents from rodent colonies. Transgenic Services utilizes embryo transfer techniques as the primary method of deriving colonies consistent with the VAF™ Plus profile.
CRYO RESERVE	In conjunction with embryo transfer rederivation, Charles River Laboratories offers the cryopreservation and storage of an additional 100 embryos per line. Should the need arise (catastrophe or repeat outbreak at the client's facility), Charles River can immediately perform embryo transfers in order to generate additional rederived offspring.
CRYOPRESERVATION & STORAGE	Cryopreservation provides effective protection against the loss of valuable research models due to microbial contamination, catastrophic accidents, or the alteration of genetic expression in later generations. Charles River can cryopreserve and store embryos, ovaries and sperm.
IN VITRO FERTILIZATION (IVF) CRYOPRESERVATION	IVF is commonly used to generate large numbers of embryos which can be cryopreserved to provide effective protection against the loss of valuable research models due to microbial contamination, catastrophic accidents, or the alteration of genetic expression in later generations.
INTRACYTOPLASMIC SPERM INJECTION (ICSI)	ICSI is a rescue service for lines with severe fertility issues and the means of embryo recovery from previously frozen sperm. This procedure is best used as a last attempt to save/recover a line after less intensive procedures such as IVF have been tried.
RAPID EXPANSION	By utilizing <i>in vitro</i> fertilization (IVF), rapid expansion allows investigators to obtain a large number of transgenic or knockout animals while spending only a fraction of the time and money required for live matings. Charles River can return hundreds of heterozygous offspring in approximately two months from as few as two carrier males. This can lead to faster study start-up and quicker colony expansion and development. Rapid expansion has the added benefit of rederivation of your colony. Charles River currently offers this service with C57BL/6, FVB/N, any BL/6 hybrid, and selected DBA strains. Additional strains are in development, and we will consider any request.
SPERM ANALYSIS	A comprehensive fertility evaluation aids in identifying the cause of poor reproductive performance and the best route for overcoming infertility. The sperm evaluation consists of assessment of motility, concentration, rate of forward movement and percent live/dead based on membrane integrity of the sperm head.
GENETIC TESTING SERVICES	A variety of DNA-based tests are provided including PCR genotyping, DNA profile testing by microsatellite, zygosity testing, expression testing, MAX-BAX SM speed congenics, and NOD and SCID testing
PHENOFIRSTSM	PhenoFirst SM is designed as the first thorough look at your rat or mouse model. PhenoFirst SM includes <i>in vivo</i> evaluation, pathology, hematology, clinical chemistry, and urinalysis.
PHENOTYPING PANELS (DISEASE/SYSTEM)	Basic model characterization begins with PhenoFirst SM . In addition, Charles River has established the following panels to assist in model characterization: Diabetes, Embryonic Lethal, Huntington's Disease, Hypertension, Metabolism, Neurodegenerative Disease, Obesity, Osteoporosis, Reproduction, and Respiratory Function. We continually develop new therapeutic panels. For a complete list and detailed protocols, please visit our Phenotyping Services web page.
TRANSGENIC SUPPLY	Often, promising new model emerge in laboratories without enough information to determine if the model is commercially viable. Transgenic Supply is designed as the first step toward making your model commercially available. With Transgenic Supply, Charles River maintains and breeds your animals in a customized program allowing for large- or small-scale production.