

GEMS Summary Chart

Service	Description
Quarantine	Our state-of-the-art quarantine facilities can accept animals from anywhere in the world with no restrictions in regards to health status. Our quarantine processes help to prevent the introduction of pathogenic agents into your facility, permit administration of corrective measures early in the breeding process, and provide health reports required by most facility managers and veterinarians.
Breeding & Aging	Our comprehensive breeding services allow you to focus your valuable time and resources on your research without worrying about the day-to-day aspects of colony management. Project objectives are achieved according to customized work plans, paying careful attention to factors such as zygosity for traditional breeding, and the more intricate aspects inherent with breeding conditional and knockdown animals. In addition to our all-inclusive breeding services, we also have short and long-term aging programs as well as customized feeding protocols. 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.
Rapid Colony Expansion	Our rapid colony expansion program utilizes <i>in vitro</i> fertilization (IVF), to generate a large number of transgenic or knockout animals in a significantly reduced time frame compared with natural matings. Starting with as few as two fertile males, Charles River can return hundreds of heterozygous offspring to you in approximately two months.
Rederivation	Our rederivation services can provide you with a reliable and cost-effective method for removing adventitious agents from rodent colonies. Our standard service guarantees to return at least three breeding pairs of rederived animals. Our rapid service guarantees to return at least two visibly pregnant females. All of our rederivations are performed via embryo transfer techniques to deliver animals consistent with the VAF TM Plus profile.
Cryopreservation & Storage	Our cryopreservation service 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. Charles River can cryopreserve and store embryos, ovaries and sperm.
Line Rescue Services	Our advanced embryology technologies can provide you with many options for recovering a line of rodents that has stopped breeding due to age or physical condition or that has an adverse phenotype reducing fertility. Options include ovarian transplantation, laser-assisted <i>in vitro</i> fertilization and intracytoplasmic sperm injection (ICSI).
Other Embryology Services	Our embryology laboratory is capable of providing advanced services such as mouse embryo assay (MEA), targeted embryonic stem (ES) cell injection, and computerized sperm analysis.
Genetic Testing Services	Our full-service genetic testing laboratory provides a variety of DNA-based tests including PCR genotyping, DNA profile testing by microsatellite, zygosity testing, expression testing, MAX-BAX SM speed congenics, and NOD and SCID testing.