



Quarantine and Health Monitoring

We know that in today's research environment, many investigators collaborate and share animal models with colleagues throughout the world. In most cases, when animals are shipped between institutions, the receiving facility requires the animals to be quarantined for a period of time. This requirement has led to a shortage of quarantine space at many facilities. To help combat this growing problem, Charles River's Genetically Engineered Models and Services group offers state-of-the-art, isolator-based quarantine facilities in countries throughout the world. A dedicated importation specialist works with you and your collaborator to ship, quarantine, and receive your animals. Combined, our worldwide presence and dedicated importers afford you the ability to move animals efficiently around the globe.

Quarantine

When quarantining animals, it is of critical importance to have a well-designed, sensitive quarantine protocol to ensure that the health of the colony is accurately assessed and reported. At Charles River, we have a standard quarantine procedure that is specifically designed to detect all common rodent pathogens. Upon arrival at Charles River, your animals are placed into the biosecurity of an isolator and eight sentinel animals (four immunocompetent and four immunodeficient) are introduced. Immunodeficient animals are sensitive to bacterial pathogens and endoparasites, while immunocompetent animals are used for the detection of viral antibodies and ectoparasites. These eight sentinels are placed into direct contact with your animals for two weeks, followed by six weeks of dirty bedding exposure. At the completion of the eight week period, half of the sentinels are submitted to our on-site diagnostic laboratory for a complete health assessment. The remaining sentinels are reserved in case any repeat testing is necessary following the initial evaluation. All results are typically available within two weeks.

Throughout the quarantine period, your animals can be bred amongst themselves, bred with commercially available wild type animals, or fed a special diet to precondition them for study. These options can help speed up your research by having more animals available for your experiments at the completion of quarantine. Once the quarantine is completed, Charles River can continue to breed and maintain your colony, ship the animals to your facility, or if necessary based on the health reports, rederive the colony to remove unwanted adventitious agents.

Health Monitoring Protocols

Bacteriology

Screening of respiratory and enteric cultures for bacterial species that are primary pathogens and for selected groups of bacteria that are considered to be important opportunistic pathogens.

Pathology

Complete post-mortem evaluation of the animal and histological evaluation of gross abnormalities. Custom necropsy and histopathologic evaluation are also available on specimens ranging from whole animal to fixed tissue.

Parasitology

The pelage and skin are examined for ectoparasites and the gastrointestinal tract is checked by various methods for protozoa and helminths.

Serology

Our principal serology testing method is the Multiplexed Fluorometric ImmunoAssay™ (MFIA™). The MFIA™ is highly sensitive and easily automated, allowing us to perform assays efficiently while providing consistency from one submission to the next. We also provide confirmatory testing at no charge for samples that have inconclusive or unexpected results using alternative techniques, including enzyme-linked immunosorbent assay (ELISA), indirect fluorescent antibody (IFA) test, western blot (WIB), and, upon request, hemagglutination inhibition (HAI) assay.



Animal Health

It is important to have a current, accurate health report for all animals entering or leaving your facility for the following reasons:

- To avoid introduction of pathogenic agents into your animal facility, thereby preventing a potential outbreak;
- To know a potential variable (the animals' health) that could potentially skew scientific data;
- To permit administration of corrective measures early in the breeding process before a significant amount of time and resources are committed to expanding a colony of less than desirable health status;
- To share animals with collaborators who require accurate health reports before accepting animals into their animal facility; and
- To provide assurance to you, your animal facility, and your collaborators that the health of your colony is known and is accurately communicated.



Comprehensive Health Monitoring

Charles River's diagnostic laboratory is the world's foremost animal testing facility, performing hundreds of thousands of determinations annually. Highly qualified professional personnel, including veterinarians and PhD-level scientists with specialties in laboratory animal medicine, virology, microbiology, and pathology, manage Charles River's full-service diagnostic laboratory. A proprietary computer system tracks and reports results for all tests, and laboratory staff consult with clients on a regular basis. Charles River's team of professionals, backed by our state-of-the-art Wilmington facility, guarantees that customers receive high-quality results and quick turnaround. Health monitoring protocols range in type and complexity from simple serology tracking profiles to comprehensive health assessments involving serology, bacteriology, parasitology, and pathology. Health monitoring is performed for both routine surveillance of animal colonies and for diagnosis of disease.

Serology Profiles Group Common Pathogens for Customized Testing

Species	Profiles	Agents Included
Mouse	Parvovirus	MPV-1, MPV-2, MVM, NS-1
	Prevalent	MPV-1, MPV-2, MVM, NS-1, MHV, MNV, TMEV, (GDVII), EDIM
	Tracking	Parvovirus Profile and SEND, PVM, MHV, MNV, TMEV, REO, MPUL, EDIM
	Assessment	Tracking Profile and LCMV, MAV, ECTRO, K, POLY
	Assessment Plus	Assessment Profile and MTLV*, MCMV, HANT, ECUN, CARB
Rat	Parvovirus	RPV, H-1, KRV, RMV, NS-1
	Prevalent	RPV, H-1, KRV, RMV, NS-1, SDAV
	Tracking	Parvovirus Profile and SEND, PVM, SDAV, REO, MPUL
	Assessment	Tracking Profile and TMEV, LCMV, MAV
	Assessment Plus	Assessment Profile and HANT, ECUN, CARB
Guinea Pig	Tracking	SEND, SV-5, PVM, REO, PI-3, GAV
	Assessment	Tracking Profile and ECUN, LCMV
Hamster	Tracking	SEND, SV-5, PVM, REO, LCMV
	Assessment	Tracking Profile and ECUN

* IFA is the primary test, no alternative test available