

QUARANTINE AND HEALTH MONITORING

In today's research environment, many investigators collaborate and share animal models with colleagues throughout the world. As a result, many researchers have found themselves running short of isolation or quarantine space. Charles River's state-of-the-art transgenic facilities in Wilmington, MA and San Diego, CA are equipped with flexible film and semi-rigid isolators that provide an excellent quarantine environment. These facilities, combined with a network of international sites, afford Charles River the unique ability to move animals efficiently around the globe. Visit www.criver.com/info/quotes for project estimates.

Animal Health

It is important to obtain the most recent health reports for all animals entering or leaving a facility for the following reasons:

- To avoid introduction of pathogenic agents into one's facility; thereby preventing a potential outbreak
- To eliminate an unnecessary variable (the animal's 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 provide health reports as required by most facility managers and/or veterinarians as a precautionary measure before accepting new animal shipments into their facility

For example, if a client needs to receive a shipment of mice from a collaborator in Europe, Japan, or anywhere else in the world, all the client needs to do is provide us with the collaborator's contact at the source location. Charles River takes care of the rest—scheduling the animal shipment, coordinating transportation, securing import permits, and receiving animals at our Wilmington or San Diego facility. Once the animals are in-house, they are quarantined and tested via a standard Transgenic Services quarantine protocol or a customized quarantine protocol provided and approved by the client. Breeding during quarantine can be accommodated.

Quarantine

Our standard quarantine procedure calls for the use of sentinel animals and a combination of "direct contact" and "soiled bedding" exposure. We normally recommend using both nude and immunocompetent mice as sentinels. Nude mice are sensitive to bacterial pathogens and endoparasites, while immunocompetent animals are used for the detection of viral antibodies and ectoparasites.

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

For mouse and rat serology, our principle testing method is the Multiplexed Fluorometric Immunoassay™ (MFIA™), while the enzyme-linked immunosorbent assay (ELISA) remains the primary tool for screening guinea pig and hamster serum samples. We also provide confirmatory testing at no charge for samples that have inconclusive or unexpected results. Confirmatory testing is performed using alternative techniques including the indirect fluorescent antibody (IFA), hemagglutination inhibition (HAI) assay, and Western blot.



We recommend that four nude and four immunocompetent mice be added to the isolator for sentinel monitoring. After the desired exposure time, two of the nude mice will be submitted for pathology, parasitology, and bacteriology, while two of the immunocompetent mice will be submitted for a complete health assessment including the Assessment Plus serological profile. The remaining mice will be reserved in case any repeat testing becomes necessary following the initial evaluations.

All health monitoring results are usually available within two weeks. These test results dictate the next step in the process. Charles River can forward the animals along to the appropriate institutions, rederive the colony to remove adventitious agents, begin/continue breeding animals, or provide related services for the customer. While rederivation remains the only guaranteed method of eliminating adventitious agents, Charles River can also perform various treatment protocols designed to eliminate pathogens such as *Syphacia*, *Aspicularis*, *Pasteurella*, and fur mites.

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
	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
	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


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