

## COMPREHENSIVE HEALTH MONITORING

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A comprehensive health monitoring program should be part of laboratory animal management, to assist in the control and elimination of health variables that can affect important research projects. We offer Health Monitoring (HM) for both routine surveillance of animal colonies and for diagnosis of disease. HM results are available on-line through ILIMS, our Internet Laboratory Information Management System, which also allows you to schedule submissions and modify QC programs. Our protocols include the following set of multi-tiered diagnostic procedures:

**Serology** - The testing of serum for the detection of antibodies to viruses, *Mycoplasma pulmonis*, and selected bacteria and protozoa

**Microbiology** - The screening of respiratory and enteric cultures for a selected group of bacteria which are considered to be important opportunistic pathogens

**Parasitology** - Fur and skin are examined under magnification for detection and identification of ectoparasites. Phase contrast microscopy is used to detect enteric protozoa while direct examination of the intestinal tract for helminths is performed. Fecal concentration and centrifugation is used as a highly sensitive confirmatory test for helminth eggs and enteric protozoa.

**Pathology** - A thorough postmortem gross examination is performed. Any gross abnormalities are noted and collected for histological evaluation by a board-certified veterinary pathologist. As part of rat HM protocols, all animals are screened for Rat Respiratory Virus (RRV) by histopathology.

### Additional Pathology Services

**Diagnostic Evaluation** - Sick or moribund animals may be submitted for a diagnostic work-up. Laboratory testing will be performed as determined by a member of the professional staff.

**Histopathology** - Any sample from fixed tissues to prepared slides may be submitted for trimming, processing, staining and/or microscopic evaluation. Interpretation is performed by ACVP board-certified veterinary pathologists.

### Comprehensive Protocols\*

Charles River Laboratories has established HM protocols to meet the special testing demands of both immunocompetent and immunodeficient animals.

**HM Basic** - Microbiology, Parasitology, & Pathology

**HM Basic (Immunodeficient Models)** - Microbiology, Parasitology, Pathology, & *P. carinii* PCR

**HM Standard** - Serology Tracking Profile, Microbiology, Parasitology, & Pathology

**HM Intermediate** - Serology Assessment Profile, Microbiology, Parasitology, & Pathology

**HM Plus** - Serology Assessment Plus Profile, Microbiology, Parasitology, & Pathology

*\*Infectious Disease PCR services can also be added to the standard protocols as requested. All services within protocols may also be ordered individually.*

**For more information, or to begin your program, contact Technical Services at 1-800-338-9680.**





## PATHOLOGY SERVICES

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Elimination of experimental variability due to genetic and health factors is critical to the success of any animal-based research program. In addition to routine rodent diagnostics such as serology, microbiology, parasitology, molecular diagnostic testing, and model characterization services, we provide a wide range of pathology study offerings. Our laboratories are capable of performing work under GLP compliance as requested.

Charles River Laboratories offers an extensive selection of histopathology services. Programs are designed based on each customer's experimental protocol, utilizing as many or as few histopathology services as necessary. Board-certified veterinary pathologists direct all our pathology programs. Customers can choose from routine and special necropsy procedures, histologic evaluation of tissues from multiple species, complete tissue processing and slide preparation, routine and special staining techniques, as well as contract slide preparation and/or evaluation. With expert evaluation and documentation, you are assured timely reports of the highest quality. Prices are quoted on a per study basis.

To address the changing needs of our clients, we have multiple specialty services and continue to develop techniques supplementing our repertoire of diagnostic and investigative capabilities, such as immunohistochemical staining preparations. Tissue sections are stained with antibody markers to detect cell proliferation, apoptosis, expression of specific gene products, or cellular identification. We have particular ability to assess localization of monoclonal antibody binding to a full panel of human tissues.

*In situ* hybridization can be used in gene therapy/antigen applications to detect vector delivery and localization, transgene expression, and alterations in endogenous gene expression. Immunophenotyping and cell activation assays are performed using flow cytometry.

Modern image analysis software calculates quantitative changes in tissue features following an experimental protocol. For example, morphometric analysis has been used in potency studies, measuring the effects of growth hormones on rat tibial growth plates.

### Pathology Services

- Necropsy
- Histopathology
- Parasitology
- Clinical Chemistry

### Special Pathology services

- Immunohistochemistry
- Histomorphometry
- *In situ* Hybridization
- Flow Cytometry
- Quantitative (morphometric) Analysis
- Biomarker (plasma & tissue)
- Plastic-Embedding and Sectioning

### Applications

- Health Monitoring of Laboratory Animals
- Infectious Disease
- Toxicologic Safety Testing
- Phenotype Characterization

**Choose from our comprehensive array of services, and let Charles River Laboratories help meet all your pathology needs. Contact Technical Services at 1-800-338-9680 or [comments@crl.com](mailto:comments@crl.com) for details.**

  
**CHARLES RIVER**  
LABORATORIES

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