

State-of-the art equipment and strict biosecurity measures alone are not enough to prevent catastrophic contaminations of rodent facilities. A comprehensive health surveillance program is important for early detection of adventitious infection and can help to reduce losses and lower costs associated with recycling.

THE SENDAI VIRUS

Recently, Sialodacryoadenitis Virus (SDAV) has become a cause for concern. In continuing with our series on infectious agents, we provide an overview of SDAV infection and what an outbreak could mean to your colony.

Sialodacryoadenitis Virus (SDAV)

Agent: RNA virus, family Coronaviridae, genus Coronavirus

SDAV is one of the most common viruses in laboratory rats.

Characteristics of Infection: SDAV is highly contagious, transmitted by contact and aerosol (no vertical transmission). An enzootic infection primarily affects suckling pups with a mild conjunctivitis; clinical signs disappear by weaning. Adult rats are usually immune due to previous infection however, overt disease may occur in naïve rat populations. Major target organs are serous or mixed serous-mucous tubuloalveolar glands.

Clinical signs include: porphyrin-stained nasal and ocular discharge, cervical edema, sneezing, photophobia and intermandibular swelling. Most clinical signs will disappear after one week. Although morbidity is high, mortality is seldom seen.

Research Implications: Due to the nature of the clinical manifestations, infection can compromise studies involving the eyes, salivary glands, lachrymal glands or respiratory tract. It is reported to reduce reproductive rate in breeding populations and slow the growth of young rats. SDAV infection has been shown to exacerbate concurrent *M. pulmonis* infection.

Diagnosis: Testing of sera for SDAV antibodies is the recommended methodology for colony surveillance. Serologic assays include ELISA, IFA and CF, with ELISA and IFA being the most sensitive. Histological examination of an SDAV-infected animal will reveal characteristic changes in the Harderian, submaxillary and parotid glands, aiding in diagnosis. Tissues specimens may also be tested for viral RNA by the RT-PCR.

Eradication: SDAV is highly contagious. It is most effectively eradicated by promptly depopulating the

infected colony. Before starting a new colony, the room in which the infected colony was housed should be thoroughly cleaned and disinfected, the source of the infection should be investigated, and steps should be taken to prevent a recurrence. For a colony that cannot readily be replaced, alternatives are to:

- Rederive by Cesarean section or embryo transfer.
- Quarantine (assuming immunocompetence), allowing no new animals into the colony until such a time as the infection has naturally run its course, approximately 6-8 weeks.

Further information may be obtained by viewing "Recovering from a Microbiological Contamination in Your Animal Facility" on the Charles River web site, www.criver.com on our *What's New* page.

Charles River offers assays and products designed for accurate and reliable SDA screening of laboratory rats.

You can outsource your colony testing:

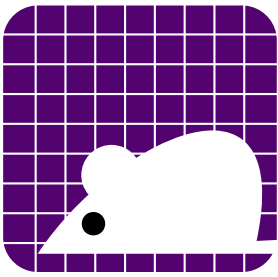
- Charles River assays for SDA via serology-based ELISA testing.
- Molecular diagnostics (RT-PCR) for SDA can also be performed.

Or if you prefer to test in-house:

- We provide reagents necessary for ELISA detection of SDA antibodies (i.e., SDA-coated plates, rat conjugate, and positive/negative control sera).
- The self-contained Murine ImmunoComb kit is a rapid, sensitive, ELISA-based assay which screens for Sendai virus, the rodent coronaviruses (MHV, SDA and RCV) and *M. pulmonis*.

If you would like more information about how Charles River can help your facility design and implement a comprehensive health-monitoring program, please call Charles River's Technical Assistance Department at 800-338-9680.

Lindsay, J. Russell. 1991. Sialodacryoadenitis Virus. Pp. 50-51 in Companion Guide to Infectious Diseases of Mice and Rats, Washington DC: National Academy Press.



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Manage your lab animal QC program with the click of a button!

Charles River is pleased to announce the fall 2000 launch of their new *Internet Laboratory Information Management System (ILIMS)*. Created exclusively to meet the data management needs of our customers, **ILIMS** will aid in the efficient design and implementation of our laboratory QC programs, providing real-time results on-line.

Because it was developed using a relational data model and a Java-based *n*-Tier Internet application development system (Versata), **ILIMS** allows us to link our laboratory services and schedules to your facility via the Internet. Comprehensive program oversight is accomplished with the click of a button while our interactive medium allows you the flexibility to personally manage your QC schedules according to the changing needs of your facility. The browser-based application was designed to be user friendly (point and click, pick lists) while providing a secure and confidential program management tool.

ILIMS Features:

- **Surveillance Program Development**
 - Specify: Assay Type, Sample Number and Frequency
 - Cost Calculation
 - Build Sampling Schedules
- **On-line Sample Submission**
- **On-line Result Access**
- **Future Modules Allow for Results Summary in User-Defined Database**
 - Sort by: Facility, Room, Species, Strain/Line

Following limited release in the summer of 2000, all CRL customers will have access to this exciting new service. **ILIMS** is another way Charles River Laboratories is dedicated to adding value to our products and services enabling you to better meet your research goals.


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