

Program of Veterinary Care

Veterinary care is primarily administered by the Attending Veterinarian. The veterinary technicians provide the primary treatments and assessment of animals in consultation with the AV. The Veterinarian performs regular rounds of all species, discuss treatments with the veterinary technicians and frequently consults with principal investigators. The backup veterinarians support the Attending Veterinarian via clinical backup, pathology, and consultation.

The duties and responsibilities of the Attending Veterinarian listed below include provision of clinical and preventative medicine, protocol review, regulatory and compliance activities, and other investigator and research support activities.

UNTHSC-approved vendors include Charles River Laboratories, Envigo, Jackson Laboratories and Taconic Farms. UNTHSC is confident in the quality of the animals that these vendors provide. Animal health reports for each of these vendors are available on their respective websites. Animals received from non-approved sources (e.g. other universities, etc.) are screened more cautiously. A copy of at least the last two health reports from the non-approved originating facility are sent to the Attending Veterinarian for review, prior to shipment. The AV requests other records or requires additional tests if he has concerns regarding the health of the animals at origin. Once the records are reviewed and approved by the AV, the animals are shipped and housed in quarantine facilities immediately upon arrival. Upon arrival, rodents are tested for ecto- and endo-parasites. Before conclusion of the quarantine period (a pre-determined amount of time...up to 42-49 days), the animals are tested (and must have a negative status for excluded pathogens) prior to being released into the general housing population.

Animals are transported to UNTHSC by commercial vendors aboard climate-controlled vehicles. If animals are transported, all cages are covered and carried in a DLAM-dedicated climate-controlled vehicle. If animals are transported between DLAM facilities and an investigator lab, all cages are covered. One cage may be hand-carried but if more than one cage is moved, a carrying cart is required. Movement of animals via stairwells or passenger elevators is discouraged. Research staff uses the freight elevator to move animals between floors to reduce exposure of animal allergens to non-animal research personnel. Also, to avoid suffocation or overheating, animals are not to be covered longer than ten minutes.

Sentinel mice and rats are evaluated at least once a quarter. Generally, two sentinel rats and two sentinel mice are placed per side of an occupied rack. Sentinel cages are identified with a sentinel card with the word "Sentinel." Sentinels are exposed to 100%

soiled bedding from occupied cages present on the same side of the rack for a period of 15 weeks.

QUARTERLY

Serological tests as well Real-Time PCR sampling on feces sampling which detects parasites, bacteria and viruses are performed for three continuous quarters on all sentinel samples. Gross necropsies with collection of lesions for histological and microbiological evaluation are performed when deemed necessary. Serological tests performed are as follows:

Mouse

Mouse Parvovirus-1 (MPV-1, MPV-2)
Minute virus of mice (MVM)
Parvovirus NS-1 (NS-1)
Parainfluenza virus Type 1 (Sendai)
Mouse hepatitis virus (MHV)
Murine Norovirus (MNV)
Theiler's murine encephalomyelitis virus (TMEV [GDVII])
Mouse Rotavirus/Epizootic diarrhea of infant mice (EDIM)
Lymphocytic choriomeningitis virus (LCMV)
Mouse adenovirus (MAV)
Mouse pox-Ectromelia virus (ECTRO)
Mouse pneumonitis virus (K)
Polyoma virus (POLY)
Mouse cytomegalovirus (MCMV)
Hantavirus hantaan (Hant)
Encephalitozoon cuniculi (ECUN)
Cilia-associated respiratory bacillus (CARB)
Mouse thymic virus (MTLV)
Sendai virus (SEND)
Pneumonia virus of mice (PVM)
Reovirus (REO)
Mycoplasma pulmonis (MPUL)

Rat

Rat Parvovirus (RPV)
Toolan's H-1 virus (H-1)
Kilham rat virus (KRV)
Rat minute virus (RMV)
Parvovirus NS-1 (NS-1)

Rat coronavirus (SDAV)
Sendai virus (SEND)
Pneumonia virus of mice (PVM)
Reovirus (REO)
Mycoplasma pulmonis (MPUL)
Lymphocytic choriomeningitis virus
Mouse adenovirus (MAV)
Hantavirus hantaan (Hant)
Mouse pneumonitis virus (K)
Rat Respiratory Virus histopathology (lungs)
Rat theilovirus (RTV)

Mouse/Rat
Necropsy
Histology for any abnormal necropsy findings
Ecto- and Endo-parasite evaluation
Mycoplasma pulmonis screening by PCR
Pneumocystis carinii (on immunodeficient models)
Other tests upon request

ADDITIONAL TESTING PANELS AVAILABLE UPON REQUEST:

Microbiology: Upper Respiratory Culture Panel (Mouse & Rat)

Beta Strep. spp (Groups B & G)
Klebsiella pneumoniae
Pseudomonas aeruginosa
Beta Strep. spp.
Pasteurella spp.
Staphylococcus aureus
Bordetella bronchiseptica
Pasteurella multocida
Streptococcus pneumonia
Corynebacterium kutscheri
Pasteurella pneumotropica
Klebsiella oxytoca
Pseudomonas spp.

Gastrointestinal Tract Culture Panel (Mouse)
Citrobacter rodentium
Pseudomonas aeruginosa
Citrobacter spp.
Salmonella spp.

Klebsiella oxytoca
Pseudomonas spp.
Klebsiella pneumoniae
Other

Gastrointestinal Tract Culture Panel (Rat)

Pseudomonas spp.
Pseudomonas aeruginosa
Salmonella spp.
Other

Additional health evaluations may be conducted at the discretion of the veterinarian upon consultation with the research staff or according to the specific needs of the investigator. Investigators are encouraged to pursue additional tests when their specific research objectives require it.

The veterinary staff evaluates animals showing clinical signs of illness or abnormal results from diagnostic procedures/testing. These animals may be observed, treated, isolated, or euthanized to prevent further spread of the infectious agent/disease to the rest of the colony.

Animals are received at the dock and placed in the receiving room by DLAM personnel and checked for order specifications, identified and observed for signs of illness. If animals show signs of illness or abnormal behavior, the Veterinarian and/or Veterinary Technician is notified and the animals are rejected, euthanized, or accepted and treated.

Rodents from non-approved sources are only received at UNTHSC after the Veterinarian has reviewed the health monitoring program from the originating institution and has given approval for receipt. The animals are transported immediately into the quarantine room. Access to the quarantine room is restricted to DLAM personnel only. Rodents are tested for the presence of viruses, ecto- and endo-parasites via PCR. The rodents are maintained in quarantine for a period of four to seven weeks or shorter times if PCR is used.

Once the mice are determined to be seronegative for MPV-1, MPV-2, MVM, NS-1, HHV, MNV, TMEV (GDVII), EDIM and free of pinworms and fur mites, they are then released to the investigator's animal housing room. Similarly, once the rats are determined to be seronegative for RPV, H-1, KRV, RMV, NS-1, SDAV, RTV and free of pinworms and fur mites, they are then released to the investigator's animal room.

Quarantine periods can be shortened to 10-14 days with approval from the Veterinarian. Early release from quarantine is facilitated through PCR testing. Fresh fecal pellets are collected from each quarantined animal after a 3-5 day stabilization period. Up to ten pellets can be pooled per sample and submitted to a commercial diagnostic laboratory. Once the mice are determined to be negative for MPV-1, MPV-2, MPV-3, MPV-4, MVM, MNV, MHV, TMEV (GDVII), MRV/EDIM (considered the most prevalent mouse viruses in laboratory animal facilities) and free of pinworms and fur mites, they are then released to the investigators animal housing room in the DLAM animal facility. Similarly, once the rats are determined to be negative for RPV, KRV, RMV, H-1, RCV, SDAV, RTV (considered the most prevalent rat viruses in laboratory animal facilities) and free of pinworms and fur mites, they are then released to the investigators animal housing room.

A minimum 3-day acclimation period is required for all newly inter-institutionally transported animals. Swine are given five days to acclimate. Certain models and research projects may require longer acclimation times. Investigators are encouraged to consider such factors to meet their specific research needs and consult with the Veterinarian, when applicable. Exceptions to this policy must be justified in an IACUC-approved protocol.

Urgent requests to use animals before completion of the 3-day acclimation period must be requested in writing to the IACUC Chair and will be considered on a case-by-case basis.

Animals are housed separately according to species and health status. Rodents, animals of the same species and same health status, are housed in ventilated racks in the same room regardless of the source.

If animals in a single room are ill, test positive or are suspected to be positive for any of the excluded pathogens, the room is quarantined. Small groups of rodents are isolated in one area of the ventilated rack. Signs indicating the disease status are displayed prominently on the door into the room or rack. The room is cleaned last on the daily cleaning schedule. DLAM and research personnel are notified to wear appropriate protective clothing, to handle the infected animals last, and to avoid mixing animals from different groups.

All animals are observed by technicians twice daily and by the Compliance and Quality Assurance Coordinator once daily. DLAM technicians are trained to report abnormal appearing animals by placing one part of a dated, two-part Unusual Circumstance card on the cage and give the other part/copy to the RVT. The Veterinary Technician conducts daily rounds and does health checks, in addition to collecting Unusual Circumstance cards initiated by the husbandry technicians and examining those animals. The Veterinary Technician prepares an Animal Health Report sheet that is delivered to the Veterinarian.

Medical care of sick animals is initiated by email notification when entered by the room technician into the online database. DLAM veterinary staff assess all reported sick animals and initiate treatment (if necessary) in consultation with the Veterinarian. The

Veterinary Technician sends an email to the investigator detailing the health status of the animal with a treatment plan and/or recommendations. Verbal discussion with an investigator in regards to animal treatment, whether over the phone or in person, is always followed up with an email to act as a record. The Veterinarian is copied on all email correspondence and is briefed by the technicians daily on treatment cases.

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