

Biocontainment Downgrades for Low-Hazard Viral Vectors Used in Animals



The University of Texas at Austin

S.O.P.:	#
Title of S.O.P.:	ABSL Downgrade
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Purpose

To provide guidance for researchers on the procedures to follow when downgrading biocontainment for viral vectors used in animals.

Overview

Researchers periodically make requests to have the IBC downgrade the biocontainment level of their IBC protocol from ABSL-2 to ABSL-1 to allow animal technicians to handle their animals at ABSL-1. The researcher must have IBC approval prior to downgrading biocontainment.

Current generation commercial systems employ multiple safety features which significantly reduce the potential for replication, but a risk assessment must be done before downgrading these vectors.

The protocols must involve replication-incompetent viruses whose gene cassettes do not encode for oncogenes, toxins, growth factors, immune dysfunction or other factors that pose human risk from exposure. If the host animal has endogenous or helper virus present or if recombination is possible, downgrading is not permitted.

Downgrading

Animals exposed to approved viral vectors can be downgraded to ABSL-1 when the animals are considered no longer to have the potential to shed virus. This is typically 72 hours post-exposure but may be extended up to one week depending on the risk assessment.

Hazard Awareness

All animal technicians handling animals post-exposure should be aware of the vectors used and the signs and symptoms of exposure to those vectors. Animal technicians should be instructed on emergency response procedures in the event of an exposure. Cage cards should have a biohazard label.

Personal Protective Equipment

Personnel will wear gloves, eye protection and lab coats when handling animals or contaminated materials. An apron or gown should be worn during inoculation.

Inoculation

When working with these vectors, there is the potential for exposure. Inoculation should be done in a biological safety cabinet (BSC). Chemical or physical restraints should be used whenever possible. Safety sharps should be used to reduce the potential for exposure. The injection/exposure site must be disinfected using an appropriate disinfectant after the procedure.

Handling Animals

Animals will be handled at ABSL-2 until cleared for downgrading.

Necropsy

Animals sacrificed prior to 72 hours will be handled at ABSL-2. Work will be conducted at BSL-2.

Bedding/Waste

Cage changing must be done before downgrading to ABSL-1. Animal transfer and bedding disposal should be done in a BSC. Cages will be disinfected prior to washing. Bedding and waste will be disposed into a biohazardous waste.

Director, Environmental Health and Safety

Date

Revisions

Revision	Description of Revision	Effective Date
0	New document created by EHS. Document reviewed by EHS staff, Occupational Health Program staff and in consultation with the IACUC committee members.	TBD