

Agent Summary– Lentivirus vectors ([NIH OBA Guidance](#))

1. Precaution

Risks of lentivirus vectors: The major risks to be considered for research with HIV-1 based lentivirus vectors are

- potential for generation of replication-competent lentivirus (RCL), and
- potential for oncogenesis.

These risks can be mitigated by the nature of the vector system (and its safety features) or exacerbated by the nature of the transgene insert encoded by the vector.

General criteria for risk assessment of lentivirus vectors: Decisions about containment should take into account a range of parameters/considerations including:

- the nature of the vector system and the potential for regeneration of replication competent virus from the vector components,
- the nature of the transgene insert (e.g., known oncogenes or genes with high oncogenic potential may merit special care),
- the vector titer and the total amount of vector,
- the inherent biological containment of the animal host, if relevant, negative RCL testing

Examples of lentivirus vectors: Constitutive Lentivirus System, Fluorescent Lentivirus system, IRES Bicistronic Lentivirus Systems, Lentiviral vectors Systems with an EF-1 Alpha Promoter, shRNA Lentivirus System, Tet-Inducible Lentivirus Vectors.

2. PPE: follow SOP #2.0 donning and doffing procedure
3. Lab area : _____
4. Animal holding area : _____
5. Animal procedure area: _____