## **AAV-Specific Viral Vector Classification**

AAV Lacking P78<sup>rep</sup> and Packaging Line

Containment Level 1 but Containment Level 2 Recommended

Recombinant AAV Purification + concentration and application requiring

## **Containment Level 1**

• Non-mammalian genes, genes with no human/animal homologues

- Bacterial/Phage/Viral genes functioning as a recombinase
- Fluorescent or opsin proteins only
- Genes catalyzing luminescent reactions (eg. luciferase)
- Reporter genes (eg. HSV Tk)
- AAV expressing siRNA or shRNA that <u>do not</u> affect cell viability or proliferation
- Targeting nucleotide fragment (CRISPR-CAS9 AAVs) with no human/animal homologues\*
- Preference to do injections at CL2

## **Containment Level 2**

• Homologues of human genes or human genes (Including DREADDs and genes fused to reporter genes)

- Targeting nucleotides (CRISPR/Cas9 AAVs) with homology to human genes\*
- Injections must be done at CL2.
- Animals must be housed at CL2 until shedding time is over, 7-10 day minimum, after which CL1 housing and handling is permitted.
- If animals are needed sooner than 7-10 days post-injection must proceed at CL2, optional testing for shedding per UWO Viral Vector Policy may be performed.

## Containment Level 2+ or 3

- Transgenes that are known or suspected oncogenes
- Transgenes that promote tumorigenesis, enhance cell survival, or proliferation
- Transgenes that are known anti-apoptotic genes
- Targeting nucleotides (CRISPR/Cas9 AAVs) that are homologous to suspected or known oncogenes, or genes that control/impact cell survival, proliferation/apoptosis\*
- Designation of CL2+ or CL3 depends on risk assessment by investigator and Biohazard Subcommittee
- Mandatory testing for shedding per Viral Vector Policy

\* The classification of AAVs employing CRISPR/Cas9 will be done by the risk assessment of the targeted nucleotide fragment.