Pseudovirus Production

The Laboratory of Cellular Oncology (LCO) wiki site gives detailed technical information about the production and manipulation of human papillomavirus (HPV) and polyomavirus (PyV) based gene delivery vectors. Such vectors are also known as pseudoviruses. They are generated by co-expressing the two viral capsid proteins (L1 and L2 (HPVs) or VP1 and VP2/3 (PyVs)) using codon-modified expression constructs. The two capsid proteins are necessary and sufficient for intracellular packaging of reporter plasmids within mammalian 293TT cells. The resulting high-titer pseudovirus stocks can deliver packaged reporter plasmids to a wide variety of cell types in vitro and in vivo.

Like other types of viral vectors, HPV and PyV based pseudoviruses represent a potential biohazard. Investigators should consult their institution's biosafety committee, or similar advisory body, before engaging in the production or manipulation of any form of viral gene delivery vector.