# OptiPrep™ Reference List RV01

## GROUP I VIRUSES

- **The seven groups of the Baltimore classification system are defined by the type of viral genome and the replication method. Each group contains a variety of virus types defined by structural and biological features. The OptiPrep™ reference lists are based on the Baltimore system; within each group, viruses are listed alphabetically according to family, genus and species. Where necessary, references are further divided alphabetically according to research topic/sub-topic.**
- **Publications are listed alphabetically by first author.**
- **Multiple entries from the same first author are listed chronologically.**
- **For detailed methodologies of Group I virus purfication see OptiPrep™ Application Sheets V07-V13. V06 is a methodological review of OptiPrep™ technology.**

### 1 Adenoviridae

#### 1a Adenovirus and adeno-associated virus

**Aoki, N.**, Yamaguchi, S., Kitajima, T., Takehara, A., Katagari-Nakagawa, S., Matsui, R., Watanabe, D., Matsushima, T. and Homma, K.J. (2015) *Critical role of the neural pathway from the intermediate medial mesopallium to the intermediate hyperpallium apicale in filial imprinting of domestic chicks (Gallus gallus domesticus)* Neuroscience, **308**, 115–124

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**De Luna Vieira, I.**, Tamura, R.E., Hunger, A. and Strauss, B.E. (2019) *Distinct roles of direct transduction versus exposure to the tumor secretome on murine endothelial cells after melanoma gene therapy with interferon-β and p19Arf* J. Interferon Cytokine Res., **39**, 246-258

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**El-Andaloussi, N.**, Bonifati, S., Kaufmann, J.K., Mailly, L., Daeffler, L., Deryckère, F., Nettelbeck, D.M., Rommelaere, J. and Marchini, A. (2012) *Generation of an adenovirus-parvovirus chimera with enhanced oncolytic potential* J. Virol., **86**, 10418-10431

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**Giacca, M.** and Zacchigna, S. (2012) *Virus-mediated gene delivery for human gene therapy* J. Control. Release, **161**, 377–388

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**Koivisto, E.**, Acosta, A.J., Moilanen, A-M., Tokola, H., Aro, J., Pennanen, H., Sakkinen, H., Käikkonen, L., Ruskoaho, H. and Rysä, J. (2014) *Characterization of the regulatory mechanisms of activating transcription factor 3 by hypertrophic stimuli in rat cardiomyocytes* PLoS One, **9**: e105168

**Laborda, E.**, Puig-Saus, C., Cascalló, M., Chillón, M. and Alemany, R. (2013) *Adeno-associated virus enhances wild-type and oncolytic adenovirus spread* Hum. Gene Ther. Methods **24**, 372–380

**Le Lay, S.**, Hajduch, E., Lindsay, M.R., Le Lièpvre, X., Thiele, C., Ferré, P., Parton, R.G., Kurzchalia, T., Simons, K. and Dugail, I. (2006) *Cholesterol-induced caveolin targeting to lipid droplets in adipocytes: a role for caveolar endocytosis* Traffic, **7**, 549-561

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**Manninen, A.**, Verkade, P., Le Jay, S., Torkko, J., Kasper, M., Fullerkrug, J. and Simons, K. (2005) *Caveolin-1 is not essential for biosynthetic apical membrane transport* Mol. Cell. Biol., **25**, 10087-10096
**Matsui, R.**, Tanabe, Y. and Watanabe, D. (2012) *Avian adeno-associated virus vector efficiently transduces neurons in the embryonic and post-embryonic chicken brain* PLoS One **7**: e48730
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**Rognoni, E.**, Widmaier, M., , C., Mantwill, K., Holzmüller, R., Gansbacher, B., Kolk, A., Schuster, T., Schmid, R.M., Saur, D., Kaszubiak, A., Lage, H. and Holm, P.S. (2009) *Adenovirus-based virotherapy enabled by cellular YB-1 expression in vitro and in vivo* Cancer Gene Ther., **16**, 753–763
**Schaar, K.**, Geisler, A., Kraus, M., Pinkert, S., Pryshliak, M., Spencer, J.F., Tollefson, A.E., Ying, B. et al (2017) *Anti-adenoviral artificial microRNAs expressed from AAV9 vectors inhibit human adenovirus infection in immunosuppressed Syrian hamsters* Mol. Ther. Nucleic Acids, **8**, 300-316
**Segura, M.M.**, Kamen, A.A. and Garnier, A. (2011) *Overview of current scalable methods for purification of viral vectors* In, Viral Vectors for Gene Therapy: Methods and Protocols, Methods in Molecular Biology, **737** (eds. Merten O.W. and Al-Rubeai, M.) Springer Science+Business Media, pp 89-116
**Sharon, D.** and Kamen, A. (2018) *Advancements in the design and scalable production of viral gene transfer vectors* Biotech. Bioeng., **115**, 25–40
**Sztacho, M.**, Segeletz, S., Sanchez-Fernandez, M.A., Czupalla, C., Niehage, C. and Hoflack, B. (2016) *BAR proteins PSTPIP112 regulate podosome dynamics and the resorption activity of osteoclasts* PLoS One, **11**, e0164829
**Tamura, R.E.**, Hunger, A., Fernandes, D.C., Laurindo, F.R., Costanzi-Strauss, E. and Strauss, B.E. (2017) *Induction of oxidants distinguishes susceptibility of prostate carcinoma cell lines to p53 gene transfer mediated by an improved adenoviral vector* Hum. Gene Ther., **28**, 639-653
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## 2 Asfaviridae

### 2a African swine fever virus

**Lithgow, P.**, Takamatsu, H., Werling, D., Dixon, L. and Chapman, D. (2014) *Correlation of cell surface marker expression with African swine fever virus infection* Vet. Microbiol., **168**, 413-419
**Zhang, F.**, Hopwood, P., Abrams, C.C., Downing, A., Murray, F., Talbot, R., Archibald, A., Lowden, S. and Dixon, L.K. (2006) *Macrophage transcriptional responses following in vitro infection with a highly virulent African swine fever isolate* J. Virol., **80**, 10514-10521

### 2b Faustovirus

**Klose, T.**, Reteno, D.G., Benamar, S., Hollerbach, A., Colson, P., La Scola, B. and Rossmann, M.G. (2016) *Structure of faustovirus, a large dsDNA virus* Proc. Natl. Acad. Sci. USA, **113**, 6206-6211

## 3. Baculoviridae

### Baculovirus vectors

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**Strauss, R.**, Hüser, A., Ni, S., Tuve, S., Kiviat, N., Sow, P.S., Hofmann, C. and Lieber, A. (2007) *Baculovirus-based vaccination vectors allow for efficient induction of immune responses against Plasmodium falciparum circumsporozoite protein* Mol. Ther., **15**, 193-202

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**Wang, Q.**, Bosch, B-J., Vlak, J.M., van Oers, M.M., Rottier, P.J. and van Lent, J.W.M. (2016) *Budded baculovirus particle structure revisited* J. Invertebr. Pathol., **134**, 15–22

## 4. Herpesviridae

### 4a. Cytomegalovirus

**Poglitsch, M.**, Weichhart, T., Hecking, M., Werzowa, J., Katholnig, K., Antlanger, M., Krmpotic, A., Jonjic, S., Hörla, W.H., Zlabinger, J.G., Puchhammer, E. and Säemanna, M.D. (2012) *CMV late phase-induced mTOR activation is essential or efficient virus replication in polarized human macrophages* Am. J. Transplant., **12**, 1458–1468

**Rupp, B.**, Ruzsics, Z., Sacher, T. and Koszinowski, U.H. (2005) *Conditional cytomegalovirus replication in vitro and in vivo* J. Virol., **79**, 486-494

**Tsen, S-W.D.**, Kingsley, D.H., Poweleit, C., Achilefu, S., Soroka, D.S., Wu, T.C. and Tsen, K-T. (2014) *Studies of inactivation mechanism of non-enveloped icosahedral virus by a visible ultrashort pulsed laser* Virol. J., **11**: 20

### 4b. Epstein-Barr virus

**Campion, E.M.**, Hakimjavadi, R., Loughran, S.T., Phelan, S., Smith, S.M., D'Souza, B.N., Tierney, R.J., Bell, A.I., Cahill, P.A. and Walls, D. (2014) *Repression of the proapoptotic cellular BIK/NBK bene by Epstein-Barr virus antagonizes transforming growth factor β1-induced B cell apoptosis* J. Virol., **88**, 5001–5013

**Fitzsimmons, L**., Bell, A. and Rowe, M., Tierney, R.J., Shannon-Lowe, C.D., (2015) *Unexpected patterns of Epstein–Barr virus transcription revealed by a High throughput PCR array for absolute quantification of viral mRNA* Virology 474, 117–130

**Hernando, H.**, 1, Islam, A.B.M.M.K., Rodríguez-Ubreva, J., Forné, I., Ciudad, L., Imhof, A., Shannon-Lowe, C. and Ballestar, E. (2014) *Epstein–Barr virus-mediated transformation of B cells induces global chromatin changes independent to the acquisition of proliferation* Nucleic Acids Res., **42**, 249–263

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## 4c. Herpes simplex virus

### Angiogenesis

**Arafat, W.O.**, Casado, E., Wang, M., Alvarez, R.D., Siegal, G.P., Glorioso, J.C., Curiel, D.T. and Gomez-Navarro, J. (2000) *Genetically modified CD34$^+$ cells exert a cytotoxic bystander effect on human endothelial and cancer cells* Clin. Cancer Res., **6**, 4442-4448

**Berto, E.**, Bozac, A., Volpi, I., Lanzoni, I., Vasquez, F., Melara, N., Manservigi, R. and Marconi, P. (2007) *Antitumor effects of non-replicative herpes simplex vectors expressing antiangiogenic proteins and thymidine kinase on Lewis lung carcinoma establishment and growth* Cancer Gene Ther., **14**, 791-801

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**Shah, A.C.**, Price, K.H., Parker, J.N., Samuel, S.L., Meleth, S., Cassady, K.A., Gillespie, G.Y., Whitley, R.J. and Markert, J.M. (2006) *Serial passage through human glioma xenografts selects for a Δγ134.5 herpes simplex virus type 1 mutant that exhibits decreased neurotoxicity and prolongs survival of mice with experimental brain tumors* J. Virol., **80**, 7308-7315

### Anti-neoplastic agents

**Cassady, K.A.**, Bauer, D.F., Roth, J., Chambers, M.R., Shoeb, T., Coleman, J., Prichard, M., Gillespie, Y. and Markert, J.M. (2017) *Pre-clinical Assessment of C134, a chimeric oncolytic herpes simplex virus, in mice and non-human primates* Mol. Ther. Oncolytics, **5**, 1-10

### Assembly/cell interactions

**Bosse, J.B.**, Bauerfeind, R., Popilka, L., Marcinowski, L., Taeglich, M., Jung, C., Striebinger, H. et al (2012) *A beta-herpesvirus with fluorescent capsids to study transport in living cells* PLoS One, **7**: e40585

**Jambunathan, N.**, Chowdhury, S., Subramanian, R., Chouljenko, V.N., Walker, J.D. and Kousoulas, K.G. (2011) *Site-specific proteolytic cleavage of the amino terminus of herpes simplex virus glycoprotein K on virion particles inhibits virus entry* J. Virol., **85**, 12910–12918

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### Exosome secretion profiles

**Heikkilä, O.**, Ryödi, E. and Hukkanen, V. (2016) *The $\gamma_1$34.5 neurovirulence gene of herpes simplex virus 1 modifies the exosome secretion profile in epithelial cells* J. Virol., 90, 10981-10984

### Gene expression/therapy

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**St. Leger, A.J.**, Peters, B., Sidney, J., Sette, A. and Hendricks, R.L. (2011) *Defining the herpes simplex virus-specific CD8$^+$ T cell repertoire in C57BL/6 mice* J. Immunol., **186**, 3927–3933

### Glycoprotein K

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### HIV infection, in

**Caselli, E.**, Galavan, M., Cassai, E., Caruso, A., Sighinolfi, L. and Di Luca, D. (2005) *Human herpesvirus 8 enhances human immunodeficiency virus replication in acutely infected cells and induces reactivation in latently infected cells* Blood, **106**, 2790-2797

### HLA modification


**Caselli, E.**, Campioni, D., Cavazzini, F., Gentili, V., Bortolotti, D., Cuneo, A., Di Luca, D. and Rizzo, R. (2015) *Acute human herpesvirus-6A infection of human mesothelial cells modulates HLA molecules* Arch. Virol., **160**, 2141–2149


### Host cell proteins


**Hammarstedt, M.**, Ahlqvist, J., Jacobson, S., Garoff, H. and Fogdell-Hahn, A. (2007) *Purification of infectious human herpesvirus 6A virions and association of host cell proteins* Virol J. **4**:101


### Immunosurveillance


**Frank, G.M.**, Lepisto, A.J., Freeman, M.L., Sheridan, B.S., Cherpes, T.L. and Hendricks, R.L. (2010) *Early $CD4^+$ T cell help prevents partial CD8+ T cell exhaustion and promotes maintenance of herpes simplex virus 1 latency* J. Immunol., **184**, 277-286

**Frank, G.M.**, Buela, K-A.G., Maker, D.M., Harvey, S.A.K. and Hendricks, R.L. (2012) *Early responding dendritic cells direct the local NK response to control herpes simplex virus 1 infection within the cornea* J. Immunol., **188**, 1350–1359


### Infectivity studies


**Ahlquist, J.**, Hammarstadt, M., Jacobson, S., Garoff, H. and Fogdell-Hahn, A. (2006) *Identification of host cell proteins in purified infectious humanherpesvirus 6A (HHV-6A) viral particles* J. Neuroimmunol., **178**, Suppl. 1, 114

**Avanzi, S.**, Leoni, V., Rotola, A., Alviano, F., Solimando2, L., Lanzoni, G., Bonsi, L., Di Luca, D., Marchionni, C., Alvisi, G. and Ripalti, A. (2013) *Susceptibility of human placenta derived mesenchymal stromal/stem cells to human herpesviruses infection* PLoS One, **8**: e71412

**Becerra-Artiles, A.**, Santoro, T. and Stern, L.J. (2018) *Evaluation of a method to measure HHV-6B infection in vitro based on cell size* Virol. J., **15**: 4

**Bozac, A**., Berto, E., Vasquez, F., Grandi, P., Caputo, A., Manservigi, R., Ensoli, B. and Marconi, P. (2006) *Expression of human immunodeficiency virus type 1 tat from a replication-deficient herpes simplex type 1 vector induces antigen-specific T cell responses* Vaccine, **24**, 7148-7158

**Caselli, E.**, Fiorentini, S., Amici, C., Di Luca, D., Caruso, A. and Santoro, M.G. (2007) *Human herpesvirus 8 acute infection of endothelial cells induces monocyte chemoattractant protein 1-dependent capillary-like structure formation: role of the IKK/NF-κB pathway* Blood, **109**, 2718-2726

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**Decman, V.**, Kinchington, P.R., Harvey, S.A. and Hendricks, R.L. (2005) *Gamma interferon can block herpes simplex virus type 1 reactivation from latency, even in the presence of late gene expression* J. Virol., **79**, 10339-10347

**Divito, S.J.** and Hendricks, R.L. (2008) *Activated inflammatory infiltrate in HSV-1-infected corneas without Herpes stromal keratitis* Invest. Ophthalmol. Vis. Sci., **49**, 1488-1495

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**Lepisto, A.J.**, Frank, G.M., Xu, M., Stuart, P.M. and Hendricks, R.L. (2006) *CD8 T cells mediate transient Herpes stromal keratitis in CD4-deficient mice* Invest. Ophthalmol. Vis. Sci., **47**, 3400-3409

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**Prabhakaran, K.**, Sheridan, B.S., Kinchington, P.R., Khann, K.M., Decman, V., Lathrop, K. and Hendricks, R.L. (2005) *Sensory neurons regulate the effector functions of $CD8^+$ T cells in controlling HSV-1 latency ex vivo* Immunity, **23**, 515-525

**Sheridan, B.S.**, Khanna, K.M., Frank, G.M. and Hendricks, R.L. (2006) *Latent virus influences the generation and maintenance of CD8+ T cell memory* J. Immunol., **177**, 8356-8364

**Sheridan, B.S.**, Cherpes, T.L., Urban, J., Kalinski, P. and Hendricks, R.L. (2009) *Reevaluating the CD8 T-cell response to herpes simplex virus type 1: involvement of CD8 T cells reactive to subdominant epitopes* J. Virol., **83**, 2237-2245

**St. Leger, A.J.**, Jeon, S. and Hendricks, R.L. (2013) *Broadening the repertoire of functional herpes simplex virus type 1–specific $CD8^+$ T cells reduces viral reactivation from latency in sensory ganglia* J. Immunol., **191**, 2258–2265

**Sun, L.**, St. Leger, A.J., Yu, C-R., He, C., Mahdi, R.M., Chan, C-C., Wang, H., Morse, III, H.C. and Egwuagu, C.E. (2016) *Interferon regulator factor 8 (IRF8) limits ocular pathology during HSV-1 infection by restraining the activation and expansion of* $CD8^+$ *T cells* PLoS ONE 11(5): e0155420

**Xu, M.**, Lepisto, A.J. and Hendricks, R.L. (2004) *CD154 signaling regulates the Th1 response to herpes simplex virus-1 and inflammation in infected corneas* J. Immunol., **173**, 1232-1239

### Interferon regulatory factor

**Sun, L.**, St. Leger, A.J., Yu, C-R., He, C., Mahdi, R.M., Chan, C-C., Wang, H., Morse, III, H.C. and Egwuagu, C.E. (2016) *Interferon regulator factor 8 (IRF8) limits ocular pathology during HSV-1 infection by restraining the activation and expansion of* $CD8^+$ *T cells* PLoS ONE 11(5): e0155420

### Karposi's sarcoma associated

**Caselli, E.**, Fiorentini, S., Amici, C., Di Luca, D., Caruso, A. and Santoro, M.G. (2007) *Human herpesvirus 8 acute infection of endothelial cells induces monocyte chemoattractant protein 1-dependent capillary-like structure formation: role of the IKK/NF-*$\kappa$*B pathway* Blood, **109**, 2718-2726

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**OptiPrep™ Reference List RV01: 2nd edition, January 2020**