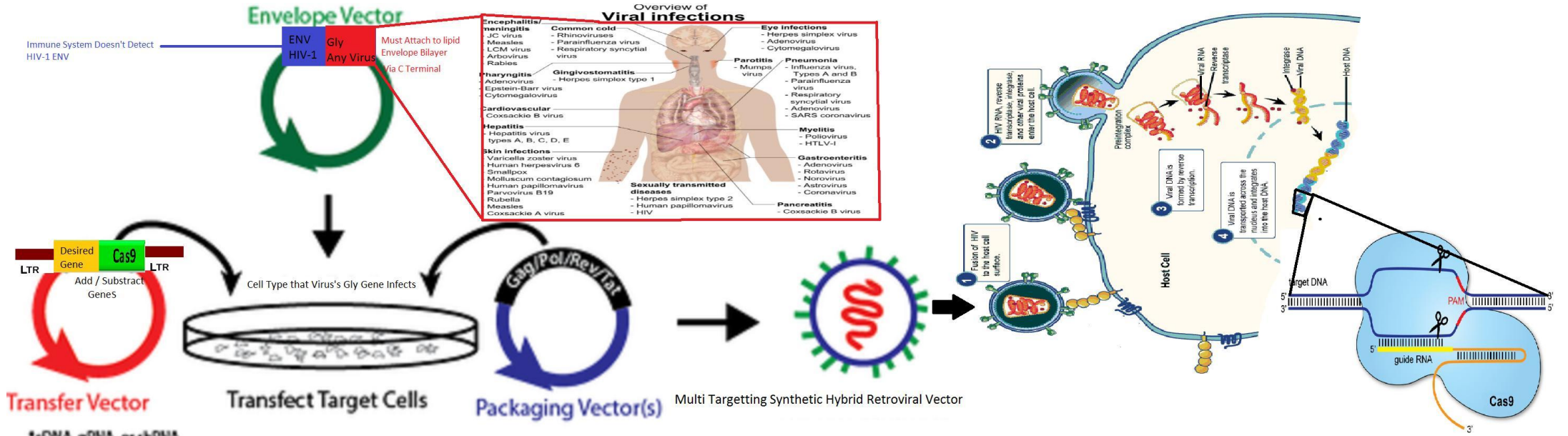

Envelope Vector
Immune System Doesn't Detect HIV-1 ENV
ENV HIV-1
Gly Any Virus
Must Attach to lipid Envelope Bilayer
Via C Terminal
Overview of Viral infections
Encephalitis/ meningitis
JC virus
Measles
LCM virus
Arbovirus
Rabies
Common cold
- Rhinoviruses
- Parainfluenza virus
- Respiratory syncytial virus
Pharyngitis
Adenovirus
Epstein-Barr virus
Cytomegalovirus
Gingivostomatitis
- Herpes simplex type 1
Cardiovascular
Coxsackie B virus
Hepatitis
- Hepatitis virus types A, B, C, D, E
Skin infections
Varicella zoster virus
Human herpesvirus 6
Smallpox
Molluscum contagiosum
Human papillomavirus
Parvovirus B19
Rubella
Measles
Coxsackie A virus
Sexually transmitted diseases
- Herpes simplex type 2
- Human papillomavirus
- HIV
Parotitis
- Mumps virus
Eye infections
- Herpes simplex virus
- Adenovirus
- Cytomegalovirus
Pneumonia
- Influenza virus, Types A and B
- Parainfluenza virus
- Respiratory syncytial virus
- Adenovirus
- SARS coronavirus
Myelitis
- Poliovirus
- HTLV-I
Gastroenteritis
- Adenovirus
- Rotavirus
- Norovirus
- Astrovirus
- Coronavirus
Pancreatitis
- Coxsackie B virus
LTR
Desired Gene
Cas9
LTR
Add / Substract Genes
Transfer Vector
*cDNA, gRNA, or shRNA
Cell Type that Virus's Gly Gene Infects
Transfect Target Cells
Gag/Pol/Rev/Tat
Packaging Vector(s)
Multi Targetting Synthetic Hybrid Retroviral Vector
1 Fusion of HIV to the host cell surface.
2 HIV RNA, reverse transcriptase, integrase, and other viral proteins enter the host cell.
Preintegration complex
3 Viral DNA is formed by reverse transcription.
4 Viral DNA is transported across the nucleus and integrates into the host DNA.
Host Cell
Viral RNA
Reverse transcriptase
Integrase
Viral DNA
Host DNA
target DNA
PAM
guide RNA
Cas9