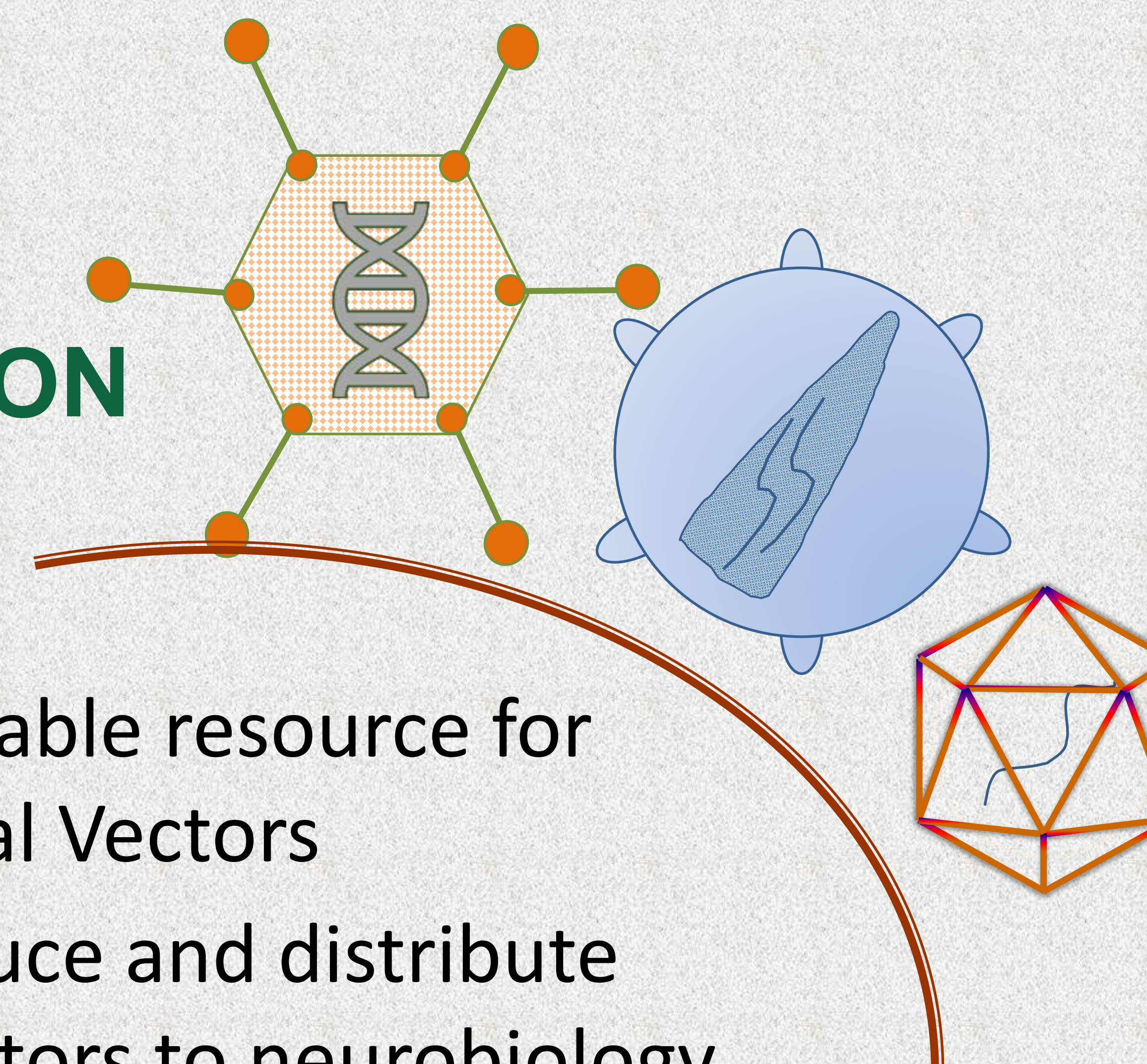


VIRAL VECTORS APPLICATIONS

- Efficient and stable gene expression
- Inducible gene expression
- Gene knockdown by shRNA
- Gene editing with CRISPR/Cas9
- Creation of stable cell lines
- Expression of Optogenetic probes
- Expression of regulatory RNAs
- Biochemical studies
- Transduction of cell/tissues in vitro or in vivo

OUR MISSION

- to serve as valuable resource for Customized Viral Vectors
- to design, produce and distribute quality viral vectors to neurobiology and other UAB departments



SERVICES

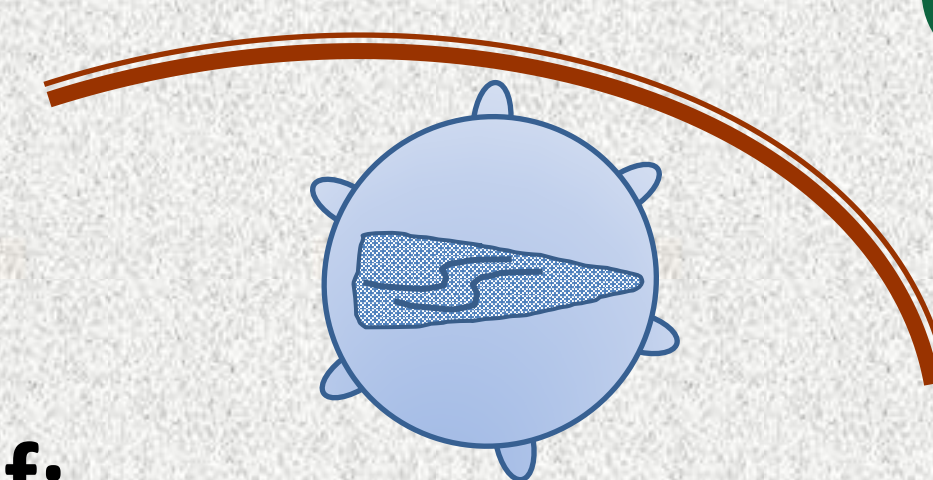
Viral vectors production:

Adenovirus
AAV
Lentivirus
Retrovirus

- Viral titers by real time PCR
- Viral titers by infectivity
- Virus purification, concentration
- Reporter Virus Aliquots

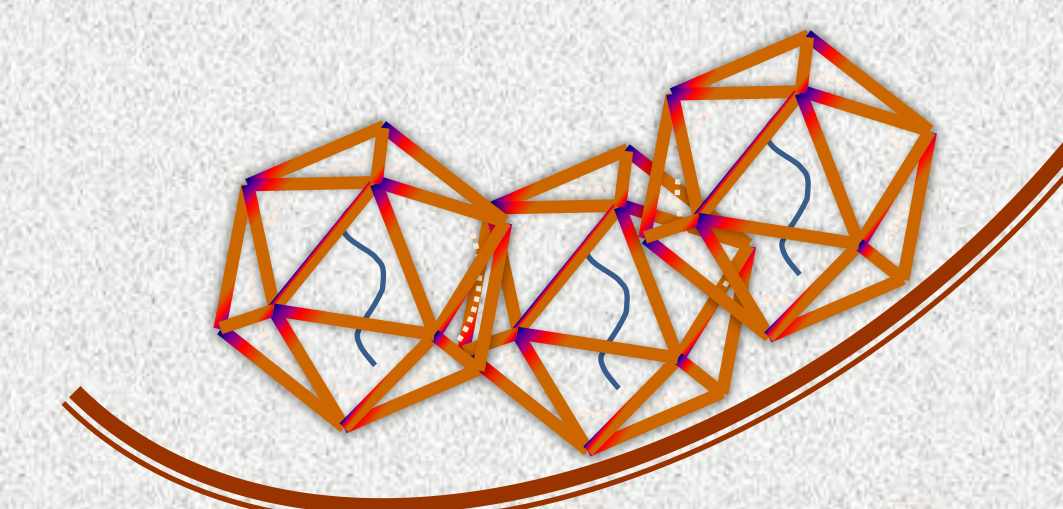
CHOOSING VIRAL DELIVERY SYSTEM

Viruses are highly efficient vehicles for delivering genes into cells with individual strengths and weaknesses.



Choose lentivirus if:

- expression cassette is smaller than 8 kb
- the gene needs to be integrated into the host genome for long term, stable expression
- a large proportion of cells to be infected without requiring a high titer of virus
- to perform a genome-wide functional study, in vivo imaging study, or produce iPSCs



Choose AAV if:

- expression cassette is smaller than 4.7 kb
- to use virus for *in vivo* experiments
- the gene does not need to be integrated into the host genome
- need a vector with low immunogenicity
- to infect only a few, specific cell types

We will help you to choose!

PERSONNEL

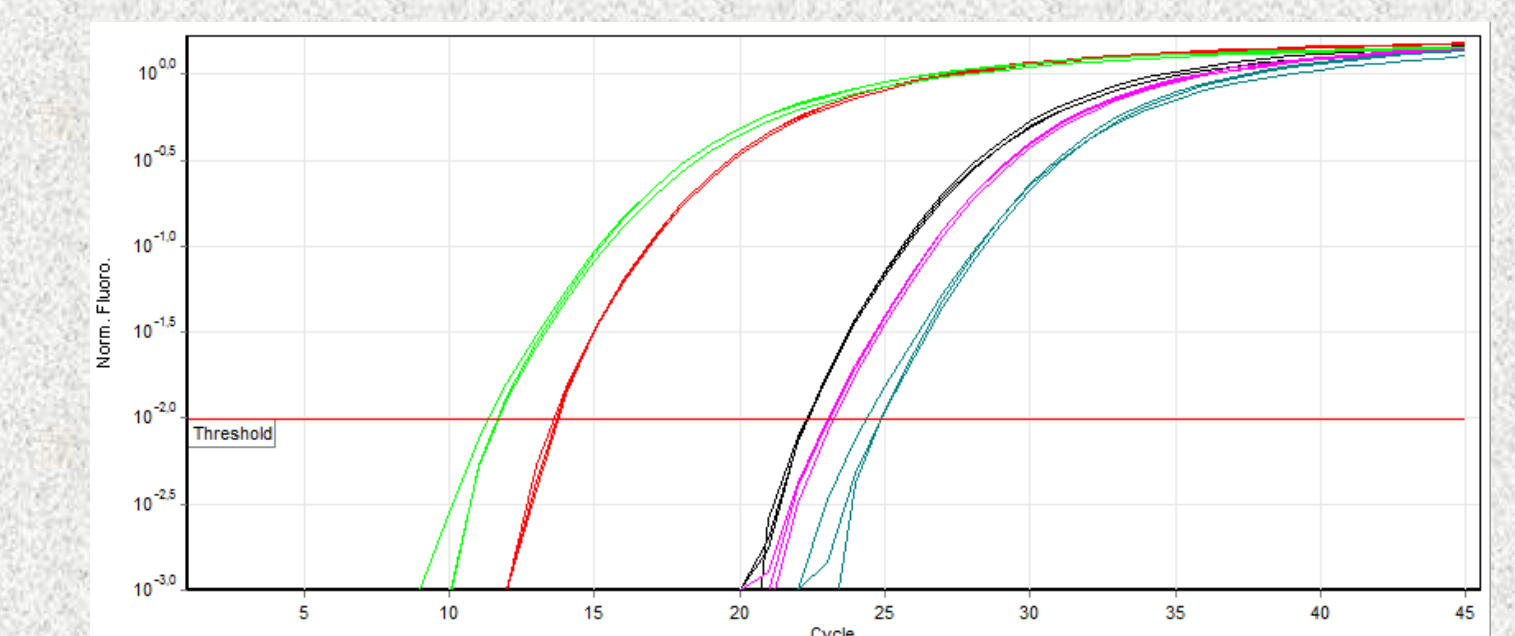
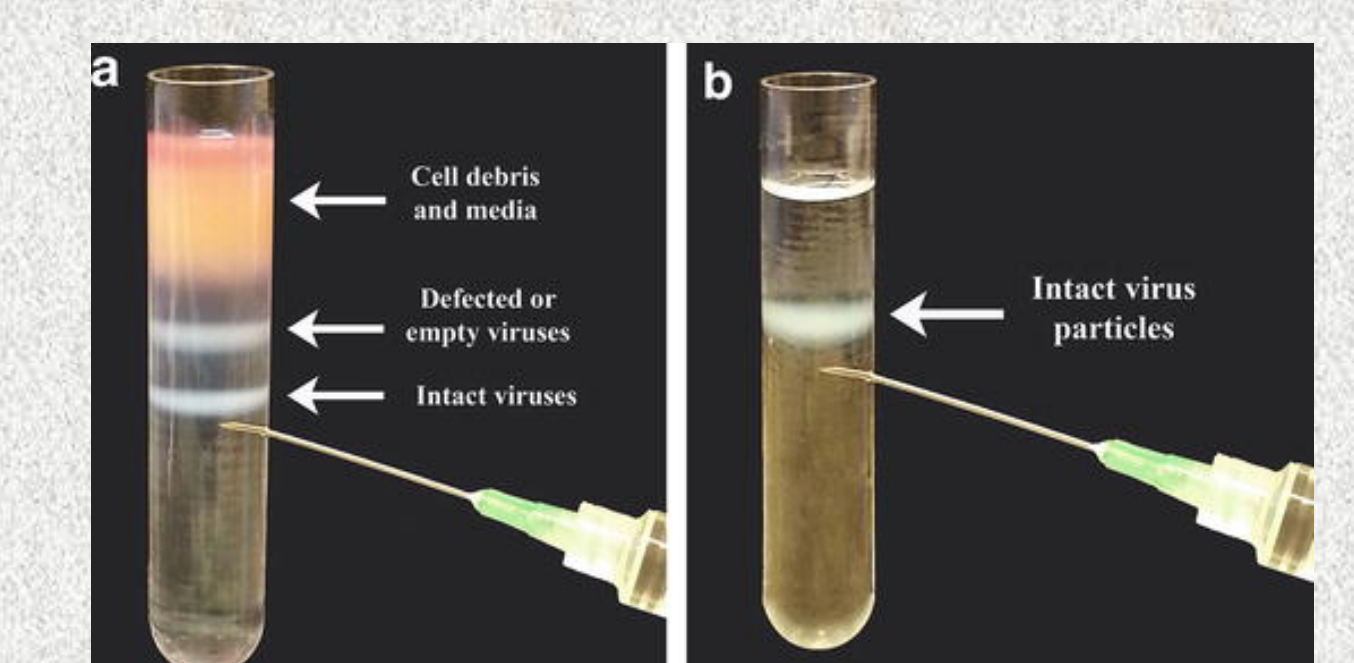
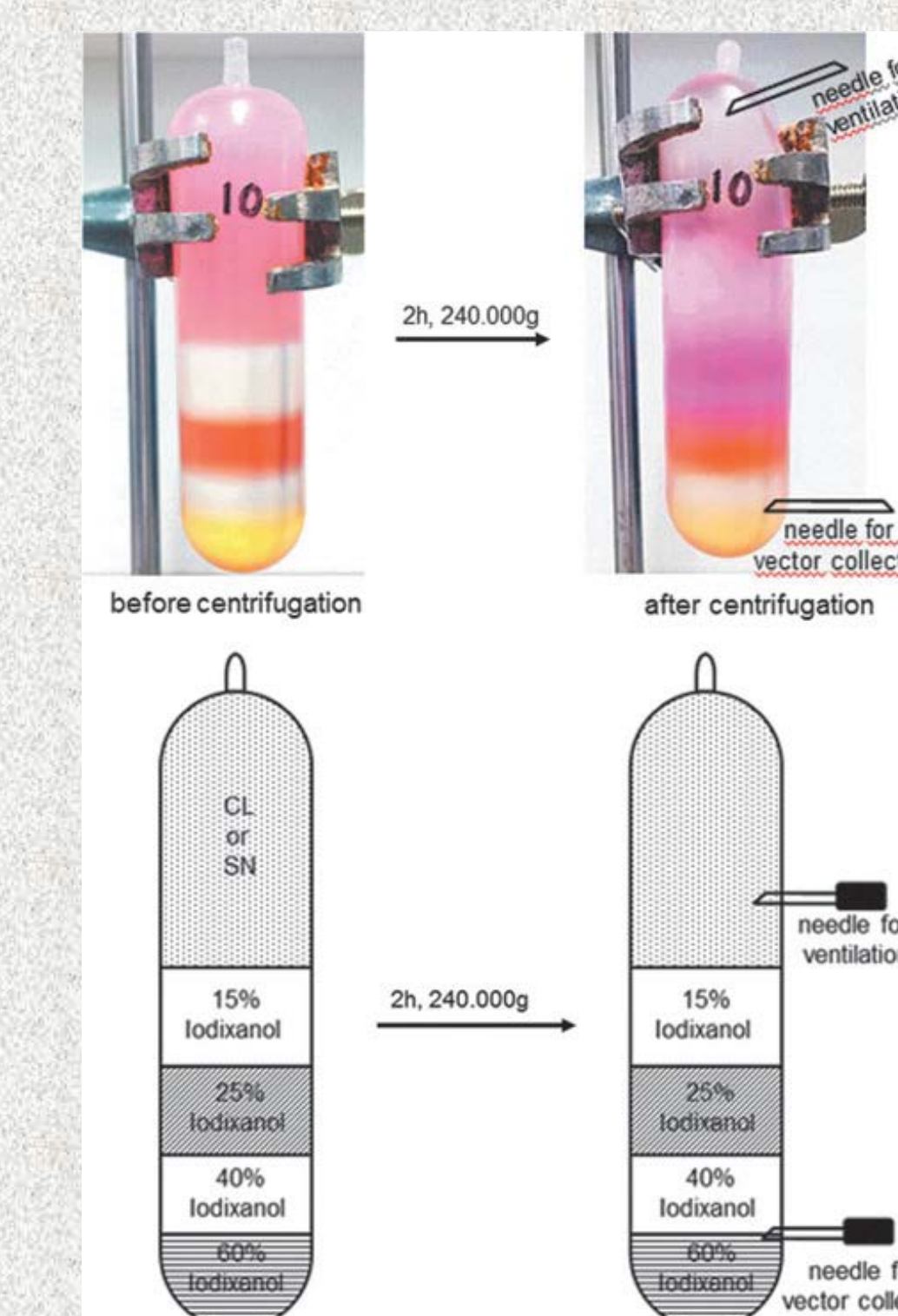
Director: William Britt
Technical Director: Larisa Pereboeva
Core Research Assistant: Brook Walker

YEAR 2018-2019

- 5 cloning projects
- 24 Adenoviral preps
- 42 LV preps
- 6 AAV preps + 4 VCore AAV test runs
- AAV protocol optimization
- LV protocol optimization

CONTACT

Larisa Pereboeva
Phone: 996-6082
Email: lpereboeva@peds.uab.edu

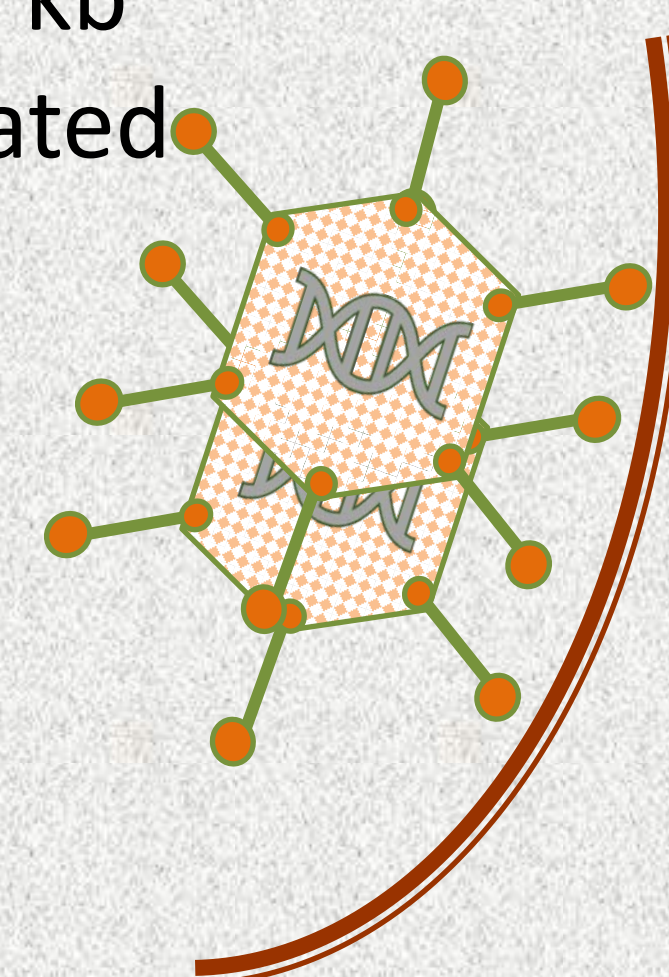


Other services:

- Consultations on vectorology
- Cloning to viral plasmids
- Mini or maxi prepped DNA
- Glycerol stocks of bacteria
- Mycoplasma testing
- Student training

Choose adenovirus if:

- expression cassette is smaller than 8 kb
- the gene does not need to be integrated into the host genome
- high levels of transient expression required with a high transduction efficiency
- a high titer of virus is needed for infection



SUPPORT

NINDS P30 NS047466