

Infectious Disease Platform

Capacity

- Comprehensive **virus, bacteria, fungi** coverages
- Supporting drug and vaccine discovery from early research to clinical trials

Capability

- **20+** various viruses
- Supporting discovery of antivirals and vaccines, including HBV, SARS-CoV, IFV, RSV, HCV, HIV, EV71, herpes, rabies and other viruses
- **130+** different bacterial and fungal species
- Support of the discovery of antibacterials and antifungals, including ESKAPE, *Streptococcus*, *Neisseria*, *H. influenza*, Anaerobes, *H. pylori*, *Mycoplasma* and more
- Opsonophagocytic assays: *S. pneumoniae*

Facility

- **1500+** m² BSL-2 in vitro labs
- **1700+** m² ABLS-2 small animal and **1100+** m² ABLS-2 large animal facilities
- Collaborations with third party P3 labs for high pathogenic viruses and bacteria

370+

Active clients

800+

Projects per year

70+

IND studies per year

10

Supported drugs on market

40+

Audits from 2020

14

of top 20 global pharma

Antiviral Platform

From assay setup to clinical trial support

Liver-specific viruses

HBV HCV HDV

Respiratory viruses

HCoV FIV RSV HPIV HRV HAAdV HMPV

Herpes viruses

HSV-1 HSV-2 HCMV EBV VZV HHV-6

Other viruses

BKV HIV EV71 CV ZIKV DENV HPV NV VV RABV

Develop bioassays

- ✓ Biochemical assays
- ✓ Cell-based assays
- ✓ Virological assays

HTS

Lead ID/Op, SAR, PCC

- ✓ Compound screen
- ✓ Characterization
- ✓ MOA study

Support clinical trials

- ✓ Viral Genotyping
- ✓ VL
- ✓ Phenotyping
- ✓ Host factors

- Genotypic spectrum and pan-virus panel
- Drug combination and serum shift
- Cross resistance and *de novo* selection of drug-resistant virus
- *In vivo* and *ex vivo* efficacy
- Customer designed studies
- IND packaged

CAP certificate

Vaccine Platform

From Discovery and Candidate Selection to Bioanalysis for Clinical Trials

• Vaccine discovery *In vitro* evaluation • Preclinical *In vivo* evaluation • Clinical Trials

Antigen expression evaluation

Vaccine design and formulation

Novel adjuvants

Novel antigen delivery vectors

Immunogenicity analysis

Challenge and protection studies

Neurovirulence evaluation

Local and systemic tox

Vector bio-distribution and shedding studie

Viral Vector Platform

Construct design and generation

- AAV, AdV, HSV, LV, and other viral vectors

Virus production

Product evaluation

In vitro and *in vivo* bioactivity test

Support of clinical trials (CAP lab)

Clinical Bioanalysis Platform

- Molecular Testing Laboratory recognized with accreditation from CAP
- Successfully cleared every CAP inspection; flawlessly passed all inspections from NMPA/FDA
- Achieved one-time passing in proficiency testing (HBV DNA and HCV RNA viral load, UGT1A1 genotyping) endorsed by CAP, SCCL, and NCCL
- Expertise in clinical virology, oncolytic virus pharmacokinetics (PK) and pharmacodynamics (PD), vaccine immune response analysis, cell therapy PK and PD assessments, AAV therapy, and advanced therapeutics

CAP certification



CNAS certification

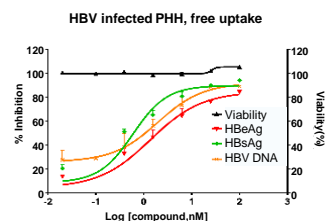


BSL-2 certification

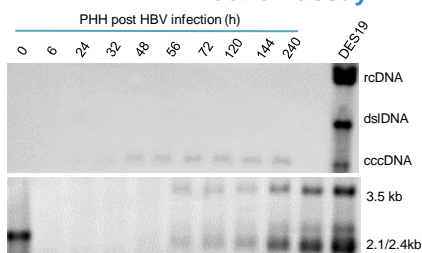


Showcases

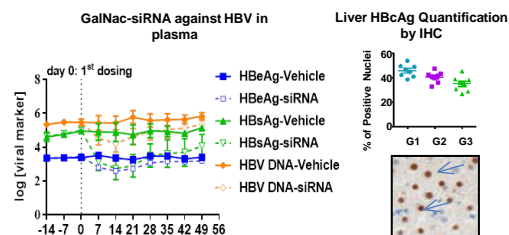
GalNAc-siRNA inhibition of HBV replication in PHH



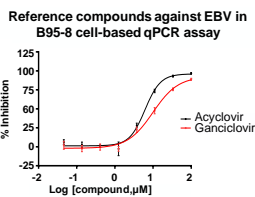
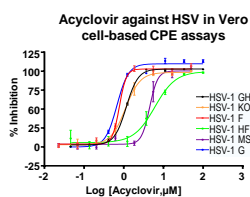
Inhibition of HBV cccDNA and RNA in PHH-HBV infection assay



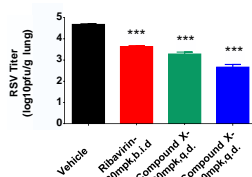
Inhibition of HBV in AAV-HBV mouse model



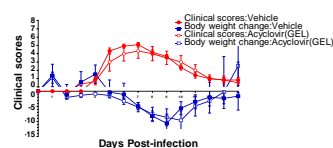
In vitro activity against herpes viruses



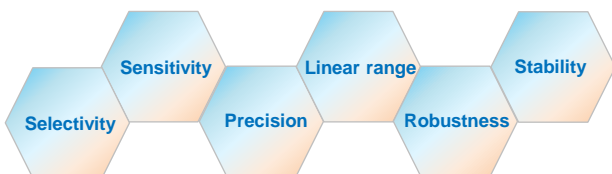
RSV cotton rat model



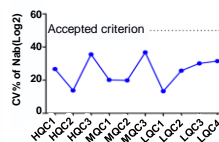
HSV-2 guinea pig genital infection model



CAP validation of RSV neutralization test (NT)

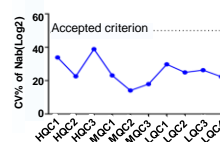


RSV A2 NT



Inter-run precision

RSV B18537 NT



Inter-run precision



PRNT test by AID ELISpot Reader



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