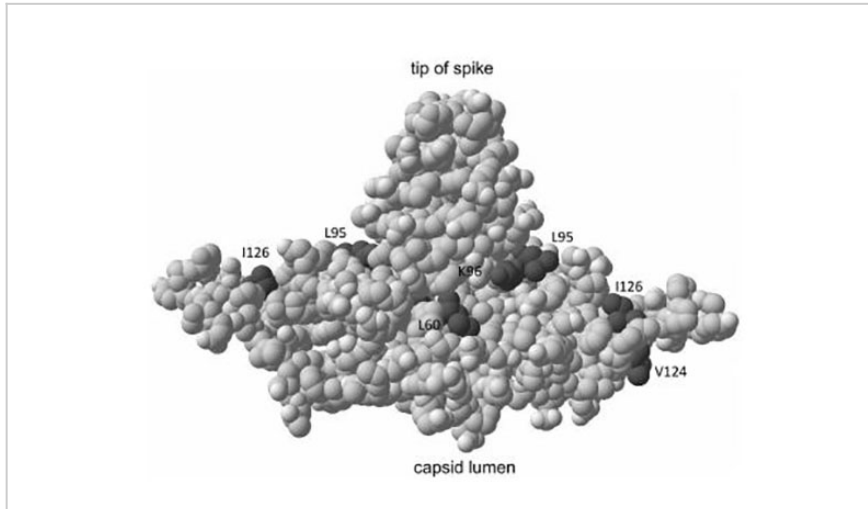


New Antiviral Strategies to Cure Persistent HBV Infection

ID# 2015-4365



Location of the Hbc Residues

Technology Summary

The present invention addresses the role of the capsid protein in the cccDNA formation of the Hepatitis B virus. Certain Hbc (Hepatitis B core protein) mutations were found to alter the integrity of mature nuclear capsid (NC). Those mutations enhanced cccDNA formation and increased the nuclear cccDNA pool. The increased levels of cccDNA formed by these Hbc mutants will facilitate efforts to target this critical viral episome for antiviral development. These findings provide the rationale to manipulate the integrity of mature NCs as novel ways to eliminate viral persistence by diminishing levels of viral nuclear episomes. The invention opens the opportunity to designing new antiviral strategies to cure persistent HBV infection.

Application & Market Utility

Screening for capsid-targeted antiviral drugs. Diagnostic for HBV cccDNA load as well as effectiveness of the treatment. Manipulating levels of viral nuclear episomes (cccDNA). Allows identification of host factors regulating HBV capsid assembly. Cure for chronic HBV infection.

Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

1-3

Seeking

Investment | Licensing | Research

Keywords

- hepatitis B
- cccDNA
- capsid protein
- core protein
- virus persistence

Researchers

Jianming Hu

Professor of Microbiology and Immunology

Originating College

College of Medicine

Office of Technology Management Contact

Martinez, Alison