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# A Roadmap to a Cure\* Research Agenda for Hepatitis B

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## A Roadmap to a Cure Overview

Broad Areas of Research

Table 1

Virology

Improve understanding of HBV virology; emphasize research to define the molecular mechanisms responsible for cccDNA biogenesis, homeostasis and decay; expand research on viral and host functions influencing the viral life cycle

#### Immunology

Improve understanding of adaptive and innate immunology of HBV acute, chronic, and resolved infections, and reactivation

#### Viral Therapeutics

Develop HBV antiviral therapies against new viral and cellular targets; develop immunological approaches that selectively repress or eliminate HBV in infected cells

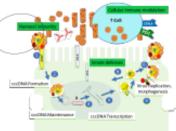
### al Liver Cancer

Improve understanding of molecular pathways leading to liver cancer

#### Management

Exploit understanding of molecular pathways leading to liver cancer for discovery and development of new early detection and management of the cancer

Liver Cancer



#### Combined

- Develop and standardize new research reagents and systems to study HBV and liver cancer for the purposes of drug discovery and development
- Establish new, and expand current, inter-institution and inter-laboratory collaborative networks for basic science discovery and validations
- Establish new, and expand upon current, clinical networks for therapeutic drug testing and validation, nationally and globally



### A Roadmap to a Cure\*

### Principles for Cure Research

- The surest way to cure HBV is to eliminate or permanently silence its cccDNA.
- The most significant impediment to achievement is our limited understanding of the fundamental molecular mechanisms that control cccDNA biogenesis, homeostasis and decay.
- Understanding these mysteries is now within reach, due to recent technological advances that enable definition of these mechanisms.

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#### A Research Agenda for Curing Chronic Hepatitis B Virus Infection

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