

### What current treatments are available for hepatitis D?

Hepcludex (formerly Myrcludex B) is the first drug in the world to be approved for treatment of hepatitis delta. It was approved for prescription in Europe in July of 2020 and Gilead Sciences is working to seek approval in other parts of the world. Prior to the introduction of Hepcludex, pegylated interferon (PEG-IFN) has often been and continues to be used in hopes of stimulating the body's immune system to fight the virus. A small percentage of patients (<30%) experience remission when injected with PEG-IFN weekly over 48 weeks. Oral nucleosides (antivirals) approved for hepatitis B have no effect on hepatitis D, but many other drugs are being investigated for their effectiveness in treating hepatitis delta.

### What new drugs are in clinical trials for hepatitis D?

| Drug  | Mechanism  | Company                      | Clinical Trial Phase  | Designations   |
|---|--|------------------------------|---|--|
| Lonafarnib + Ritonavir                                    | Prenylation Inhibitor  | Eiger BioPharma, USA         | Phase III D-LIVR study Completed; Lonafarnib + Ritonavir (LOWR6 study) - Phase III active, not recruiting   | FDA Breakthrough Therap Designation<br>FDA Fast Track Designation<br>FDA Orphan Drug Designation<br>EMA Orphan Drug Designation<br>EMA PRIME       |
| Hepcludex (Formerly Myrcludex B)                          | Entry Inhibitor  | Gilead Sciences, Inc.        | Monotherapy: Approval by EMA & Biologics License Application filed with FDA - ongoing Phase III and Phase I trials  | EMA PRIME<br>FDA Breakthrough Therap Designation<br>FDA Orphan Drug Designation<br>Promising Innovative Medicine (PIM) Designation by British MHRA |
| BJT-778   | Monoclonal Antibody  | BlueJay Therapeutics         | Phase IIA   | EMA PRIME  |
| REP 2139 - Mg (in combination with PEG-IFN and Tenofovir) | HBsAg Inhibitor  | Replicor, Canada             | Compassionate Access Program available in France, Austria, Israel, Italy, and Turkey; Phase II clinical trial planned enrollment starting in France and USA, 2025 | N/A  |
| Tobevibart + Elebsiran                                    | siRNA Immune Response Stimulator/HBsAg Inhibitor/Entry Inhibitor | Vir Biotechnology            | Phase II (recruiting)   | N/A  |
| HH-003  | Entry Inhibitor  | Huahui Health                | Phase IIb (recruiting)  | N/A  |
| Hepalatlite   | NTCP Target  | Shanghai HEP Pharmaceuticals | Phase IIa (not yet recruiting)  | N/A  |
| ABI-6250 & Interferon Alpha Receptor Agonist              | Small Molecule Entry Inhibitor                                   | Assembly BioSciences         | Pre-clinical  | N/A  |
| GI-18000  | Immune Response Stimulator                                       | GlobImmune, USA              | Pre-clinical  | N/A  |

#### Lonafarnib + Ritonavir PHASE 3

Lonafarnib is a "prenylation inhibitor" that works by targeting the protein assembly process, which prevents new virus from being created. In a recent study, Lonafarnib combined with ritonavir showed promise in reducing hepatitis D virus levels.

#### Hepcludex (formerly Myrcludex B) PHASE 3

Hepcludex is an "entry inhibitor" that works by stopping the virus from entering and infecting hepatocytes (liver cells) and breaking the cycle of reinfection. It has shown activity against the hepatitis B virus, and has been approved in Europe for treatment of hepatitis D. The purpose of the Phase III trials is to evaluate the long-term effects of this drug.

## BJT 778 PHASE 2A

BJT-778 is a monoclonal antibody against hepatitis B surface antigen (anti-HBsAg mAb). This drug neutralizes and clears hepatitis B and hepatitis D virions and depletes HBsAg-containing subviral particles

## Tobevibart + elebsiran PHASE 2 (VIR-3434 & VIR-2218)

Elebsiran is an HBV-targeted siRNA that has the potential to stimulate an effective immune response and demonstrate direct antiviral activity against HBV and HDV. Tobevibart is a monoclonal antibody that targets HBsAg and is designed to remove HBV and HDV virus from the blood and block the entry of these viruses into liver cells.

## Rep 2139 (in combo w/ PEG IFN & Tenofovir) PHASE 2 PLANNING

REP 2139 is a "nucleic acid-based amphipathic polymer (NAP)", taken as a pill, that works by preventing infected liver cells from releasing hepatitis B virus into non-infected liver cells. It is being evaluated for use in combination with PEG-IFN and Tenofovir.

## Hepalptide PHASE 2

Hepalptide works by targeting NTCP (Sodium/Taurocholate Co-transporting Polypeptide).

## ABI-6250 and interferon alpha receptor agonist

These drugs are in development and will work to prevent HDV and HBV from entering healthy liver cells by blocking receptor mechanisms on the healthy cells.

## GI-18000

GI-18000 is an "immune response stimulator" that works by causing the host's T-cells to target and fight the infected liver cells.

## HH-003 PHASE 2

HH-003 is a novel entry inhibitor for HBV & HDV. It has the potential to become a new standard of care that offers functional cure, standalone or in combination with other therapeutics, for patients suffering from chronic HBV infection or HBV/HDV co-infection.

## How can people locate clinical trial sites?

People can search open and upcoming clinical trials on the [Clinicaltrials.gov](https://www.clinicaltrials.gov) website. For an updated and detailed list of hep delta clinical trials, visit our helpful guide, found at <https://www.hepb.org/research-and-programs/hepdeltaconnect/clinical-trials/>. Patients should also discuss the possibility of participating with their doctors, and see if their doctor can connect them with a local trial.

## How long will it take for new treatments to be available to all patients?

In the United States, new drugs must go through a multi-phase clinical trial process in order to test a drug's usefulness, safety and effectiveness before it is made available to all patients. Drugs face many obstacles during this process and not all of them make it to the patient market. While this process can take anywhere from 5-15 years, fast-track and priority designations can speed up the process.

### Clinical Trial Process

