HEPATITIS DELTA CONNECT
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Hepatitis D
Treatment and Clinical Trials

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	Soroka University Medical Center	Phase III D-LIVR study completed; Lonafarnib + Ritonavir (LOWR6 study) - Phase III active, not recruiting	FDA Breakthrough Therapy Designation FDA Fast Track Designation FDA Orphan Drug Designation EMA Orphan Drug Designation EMA PRIME
Hepcludex (Bulevirtide) (Formerly Myrcludex B)	Entry Inhibitor	Gilead Sciences, Inc.	Ongoing Observational and Patient Registry trials	EMA PRIME FDA Breakthrough Therapy Designation FDA Orphan Drug Designation Promising Innovative Medicine (PIM) Designation by British MHRA
BJT-778	Monoclonal Antibody	BlueJay Therapeutics	Phase IIA	EMA PRIME FDA Breakthrough Therapy Designation
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
JNJ-73763989	Short interfering RNA (siRNA) agent	Janssen Research & Development	Phase II	N/A
Tobevibart + Elebsiran	SiRNA Immune Response Stimulator/HBsAg Inhibitor/Entry Inhibitor	Vir Biotechnology	Phase II (recruiting)	EMA PRIME FDA Breakthrough Therapy Designation
HH-003	Entry Inhibitor	Huahui Health	Phase IIb/III (recruiting by invitation)	FDA Breakthrough Therapy Designation
Hepalatide	NTCP Target	Shanghai HEP Pharmaceuticals	Phase IIa (recruiting)	N/A
RBD1016	Short interfering RNA (siRNA) agent	Ribocure Pharmaceuticals AB	Phase II (recruiting)	N/A
ABI-6250 & Interferon Alpha Receptor Agonist	Small Molecule Entry Inhibitor	Assembly BioSciences	Phase I (recruiting)	N/A
GI-18000	Immune Response Stimulator	GlobeImmune, 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.

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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 (short-interfering RNA) 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 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 and D viruses into non-infected liver cells. It is being evaluated for use in combination with PEG-IFN and Tenofovir.

Hepalatide **PHASE 2**

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

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.

JNJ-73763989 **PHASE 2**

JNJ-73763989 is a short-interfering RNA (siRNA) agent that has shown efficacy against HBV and is now being evaluated for how well it works against hepatitis delta, alongside a nucleos(t)ide analog (NA) regimen, compared to NA alone.

RBD1016 **PHASE 2**

RBD1016 helps treat HDV by reducing the amount of HDV RNA that is bound to it as a siRNA.

ABI-6250 and interferon alpha receptor agonist PHASE 1

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 PRE-CLINICAL

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

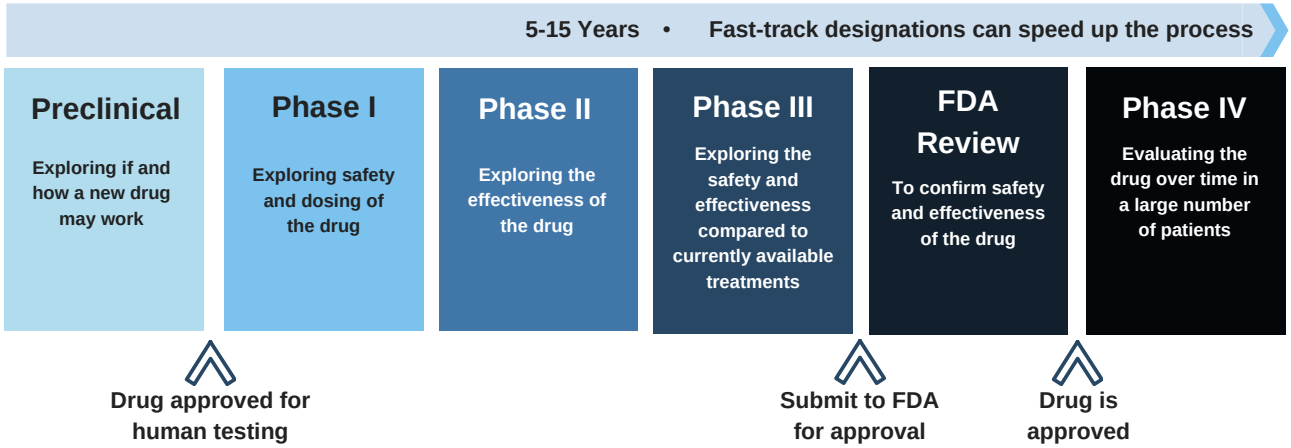
How can people locate clinical trial sites?

People can search open and upcoming clinical trials on the **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



HEPATITIS B FOUNDATION

The Hepatitis B Foundation is a national nonprofit research and disease advocacy organization for hepatitis B. It established Hepatitis Delta Connect as a dedicated program in 2016 to provide information and support for those affected by hepatitis D.