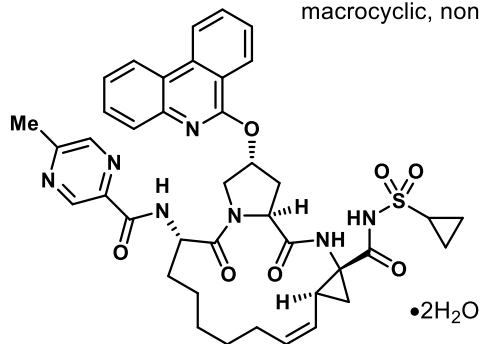




- Paritaprevir is used in combination with other drugs to treat hepatitis C virus (HCV)
- Not approved by the FDA for use outside approved combination therapy (below)
- Technivie (AbbVie) consists of paritaprevir, ombitasvir, and ritonavir
 - Treatment for genotype 4
 - Recommended 12 week treatment - \$76,653 USD
- Viekira Pak (AbbVie) has the same components with an extra dasabuvir pill
 - Treatment for genotypes 1a and 1b which comprises 60% of all cases
 - Recommended for 12 week or 24 (with cirrhosis) week treatment - \$83,319 - \$166,638



2nd wave NS3/4A inhibitors macrocyclic, non-covalent inhibitors

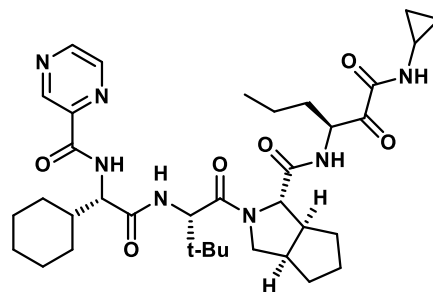


Paritaprevir Hydrate

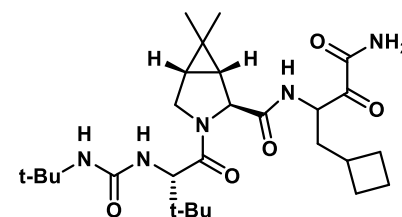
- HCV is comprised of structural and non-structural (NS) proteins
- Paritaprevir inhibits NS3/4A, serine protease and cofactor, essential for viral replication
 - Complex inhibits host immune system interferon signalling, facilitating viral escape
 - Paritaprevir specifically targets binding site of serine protease - highly conserved
- Metabolized by cytochrome P450 - ritonavir inhibits CYP activity, increasing half-life of paritaprevir
- Shown to act synergistically with NS5A inhibitors (ombitasvir)
- high rates of sustained viral response after 12 months (SVR12) shown in clinical trials
 - SVR - virus RNA remains undetectable x months after treatment is stopped

References: *Curr. Med. Chem.* **2014**, *21*, 3261-3270.
<http://www.hepatitisc.uw.edu/>
 US Patent WO2010030359A2.

1st wave NS3/4A inhibitors - linear, covalent inhibitors

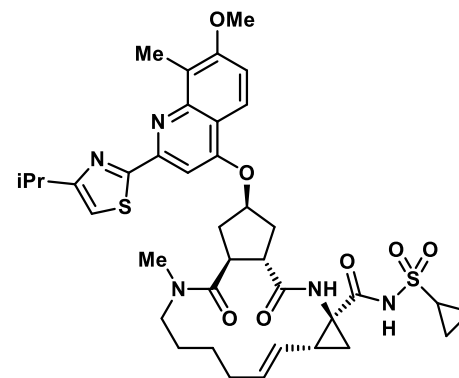


Telaprevir (Incivek®, Vertex Pharmaceuticals)



Boceprevir (Victrelis®, Merck)

-discontinued due to newer treatments



Simeprevir (Olysio®, Janssen Pharmaceutica)

