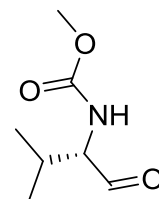


Total Synthesis of Ledipasvir (Harvoni®)

J. Med. Chem. **2014**, *57*, 2033-2046.

Bioorg. Med. Chem. **2016**, *24*, 1937-1980.

- Ledipasvir is a potent NS5A inhibitor that is approved for use in combination with sofosbuvir, a nucleotide inhibitor of viral polymerase, for the treatment of chronic hepatitis C virus (HCV) genotype 1 infection

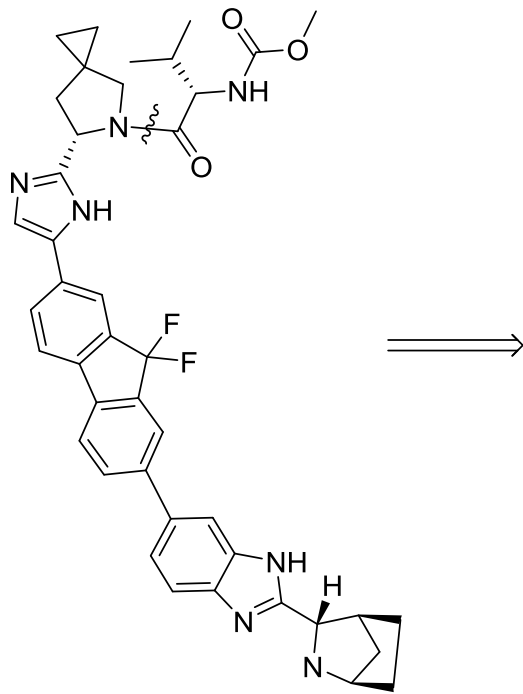


- The combination was discovered and developed at Gilead Sciences and is marketed as the fixed combination with brand name of Harvoni®.



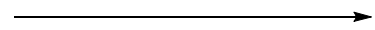
Presented by Yuanzhe Zhang, Liu group.

Retro-synthetic Analysis

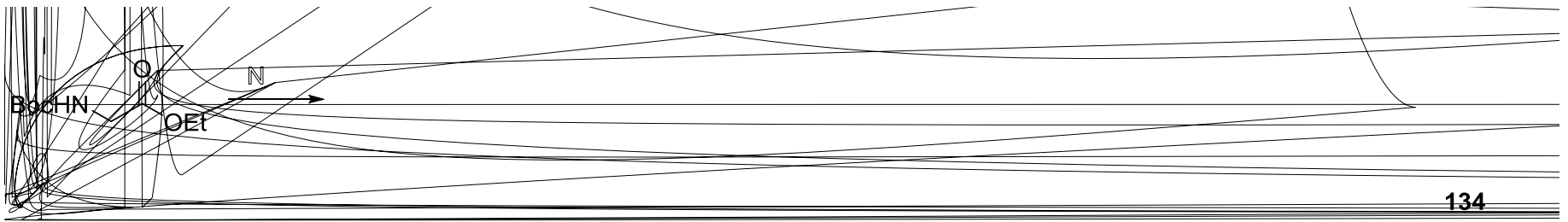
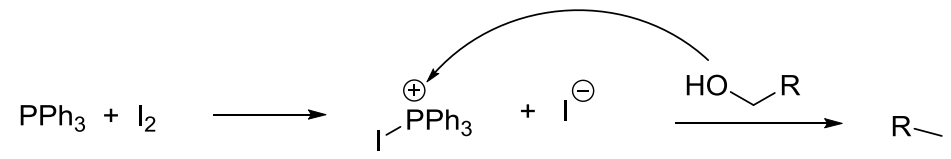
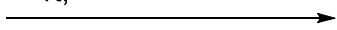


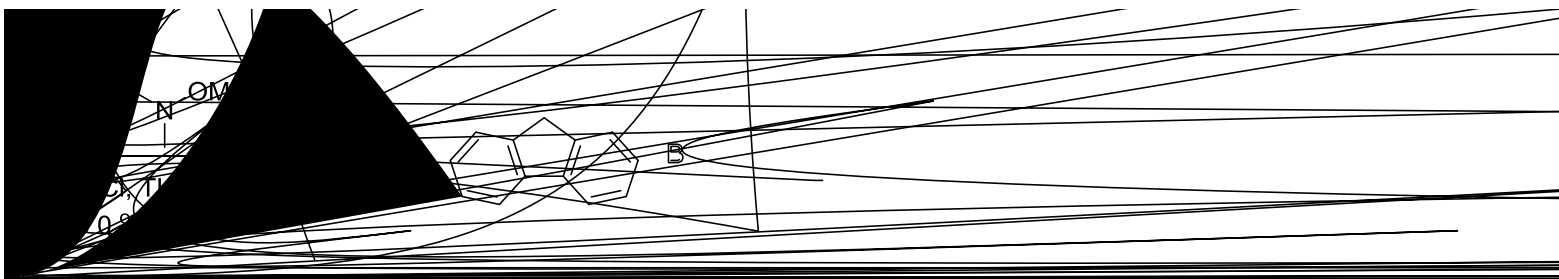
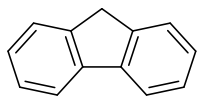


1) LiOH, 2-MeTHF, H

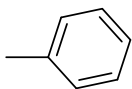
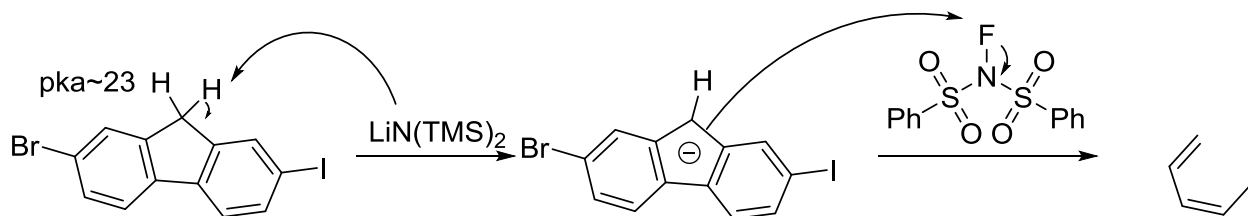


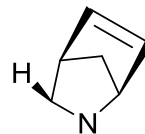
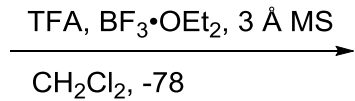
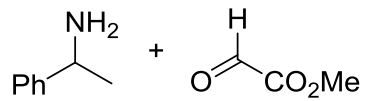
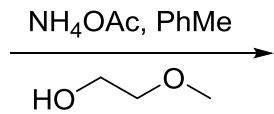
1) 1 M HCl, 2-MeTHF,
rt,





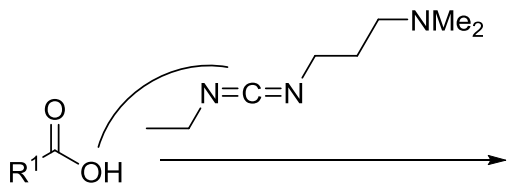
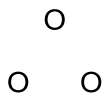
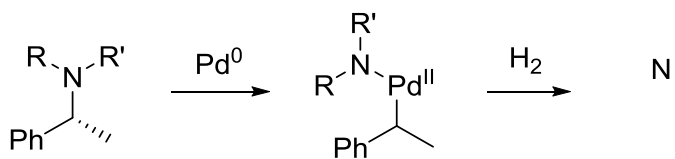
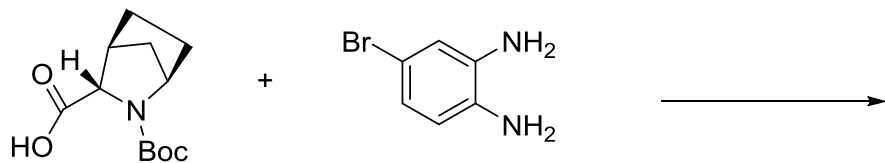
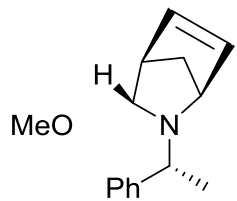
$7I_2 + IO$



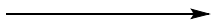


NH



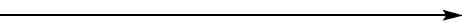


HOAc, MTBE



55 °C,

1) **143**, 1 M K₃PO₄, 70 °C



2) oxalic



C₂H₅

