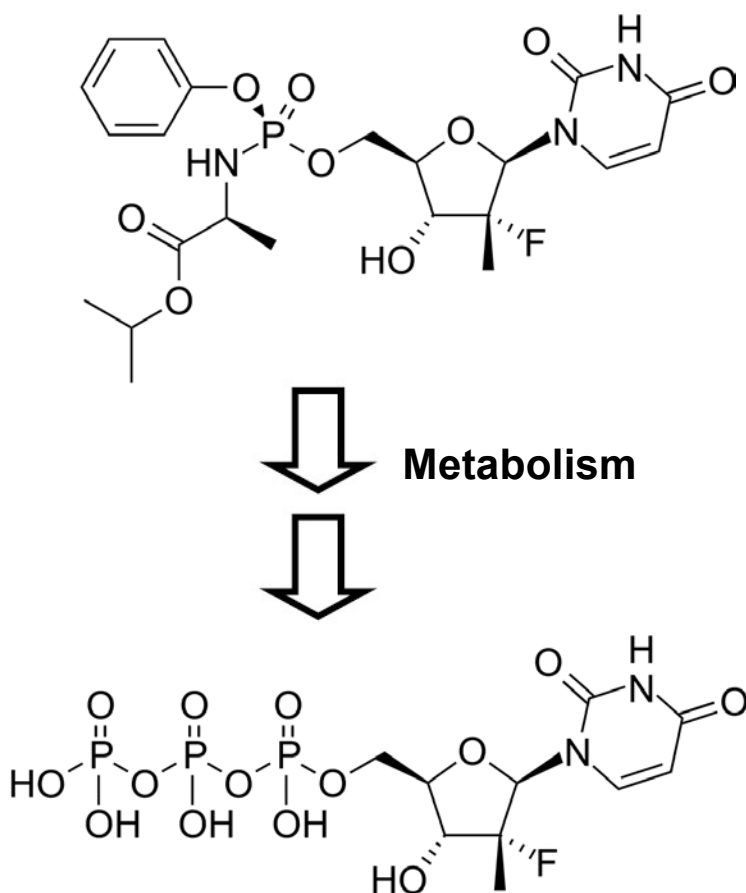


20.201 Prodrug Metabolism Mini Case Study
11 November 2013

Shown below is one of the drugs discussed in the *New York Times* article "[Hepatitis C, a Silent Killer, Meets Its Match](#)" that was recently sent to the class. The molecule is a prodrug that must be metabolized into its active form, also shown below. Answer the following questions about these molecules. You may use any references you see fit as long as you properly cite your sources. Submit your answers by email on or before November 15.

1. Propose a mechanism for the transformation. Does the transformation occur in a single step or in a series of steps? Hint: the transformation requires several enzymes related to phosphate esters and nucleotides.
2. What is the drug's mechanism of action, and how is it related to the structure of the active form?



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20.201 Mechanisms of Drug Actions
Fall 2013

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