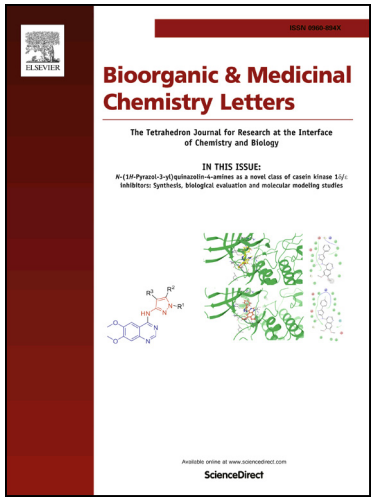

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Concise syntheses and HCV NS5B polymerase inhibition of (2'*R*)-3 and (2'*S*)-2'-ethynyluridine-10 and related nucleosides

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ABSTRACT

(2'*R*)-Ethynyl uridine **3**, and its (2'*S*)-diastereomer **10**, are synthesised in a divergent fashion from the inexpensive parent nucleoside. Both nucleoside analogues are obtained from a total of 5 simple synthetic steps and 3 trivial column chromatography purifications. To evaluate their effectiveness against HCV NS5B polymerase, the nucleosides were converted to their respective 5'-O-triphosphates. Subsequently, this lead to the discovery of the 2'-β-ethynyl **18** and -propynyl **20** nucleotides having significantly improved potency over Sofosbuvir triphosphate **24**.

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