Abstract: BMS-986001 is an investigational Nucleoside Reverse Transcriptase Inhibitor (NRTI) for the treatment of HIV infection. In this presentation, the scalable synthesis of this NRTI will be described starting from simple achiral building blocks, with particular emphasis on a novel and highly selective pyranose to furanose ring tautomerization to access a key five-membered ring intermediate. In addition, several synthetic approaches to a key chiral pyranone building block will be presented, including an unprecedented organocatalytic dynamic kinetic asymmetric transformation (DyKAT).

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