I. K. MANGION,* C.-Y. CHEN* ET AL. (MERCK AND CO., INC., RAHWAY, USA)
Enantioselective Synthesis of an HCV NS5a Antagonist
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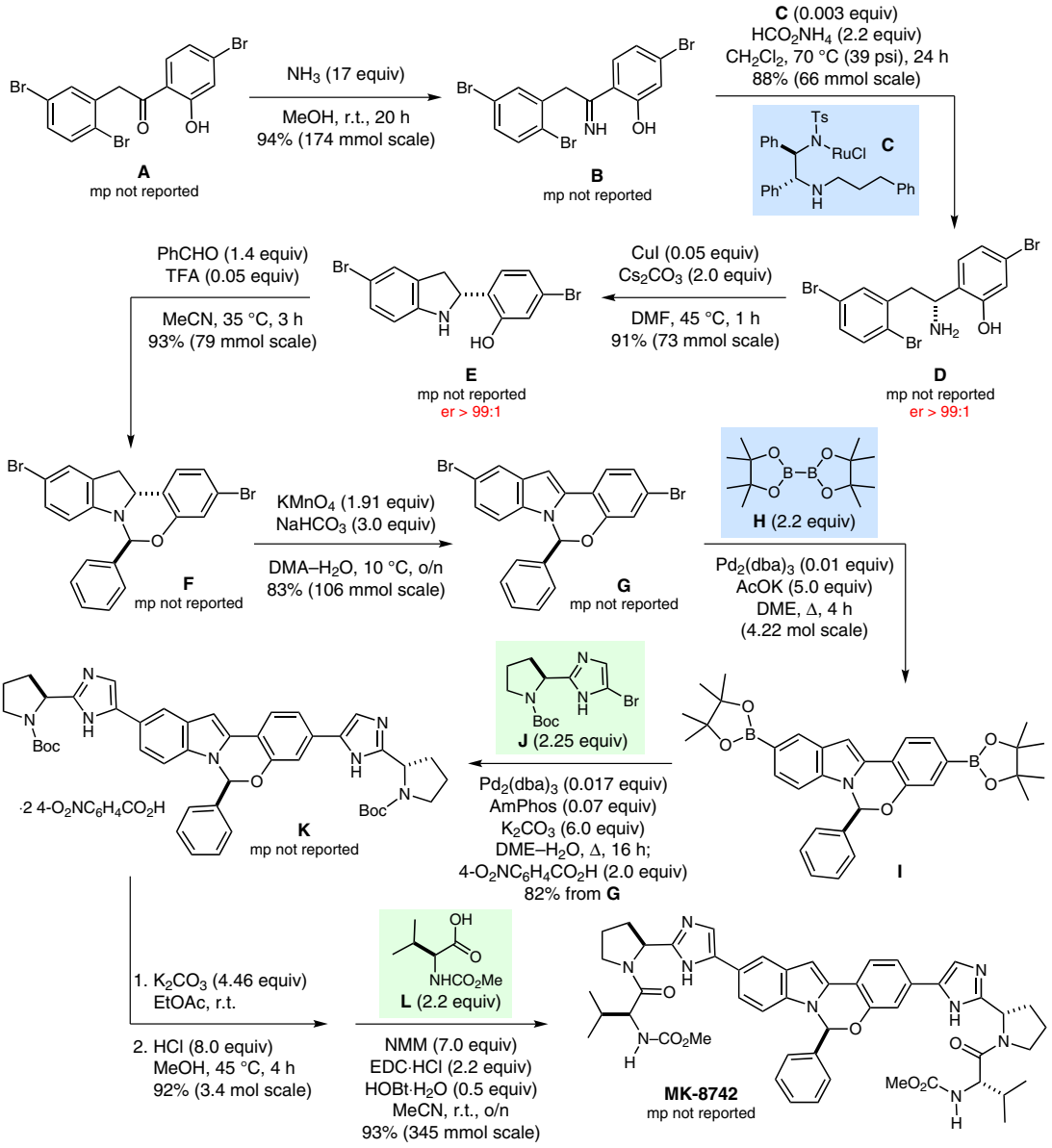
Synthesis of MK-8742



Significance: MK-8742 is an inhibitor of the hepatitis C nonstructural protein NS5a. Key steps in the synthesis depicted are (1) the asymmetric transfer hydrogenation of the imine **B** and (2) the crystallization-induced diastereoselection in the formation of the *N*,*O*-acetal **F**.

Comment: The dr in the *N*,*O*-acetal formation **E** → **F** (7:1) improved to >99:1 by conducting the reaction in MeCN as the solvent and with TFA as the acid catalyst. $KMnO_4$ effects the oxidation of the indoline **F** without racemization of the *N*,*O*-acetal, providing indole **G** in 83% yield and with >99% ee.

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Category
Synthesis of Natural Products and Potential Drugs

Key words
MK-8742
NS5a inhibitors
asymmetric transfer hydrogenation
crystallization-induced diastereoselection