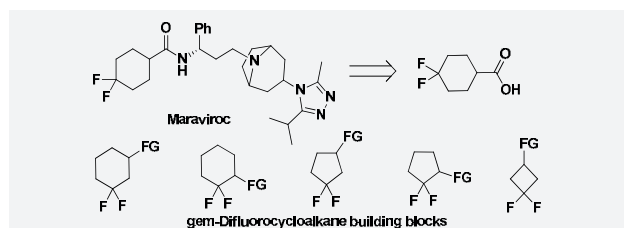


Synthesis of Gem-difluorocyclobutane/pentane/hexane Building Blocks – Useful Reagent For Drug Discovery

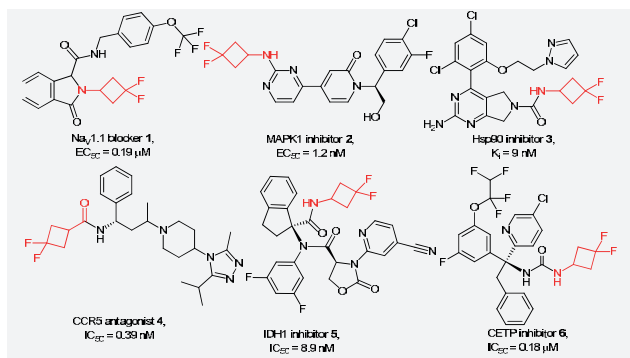
S. Ryabukhin, D. Volochnyuk, O. Grygorenko, K. Melnykov, D. Sibgatulin

Introduction and Aim

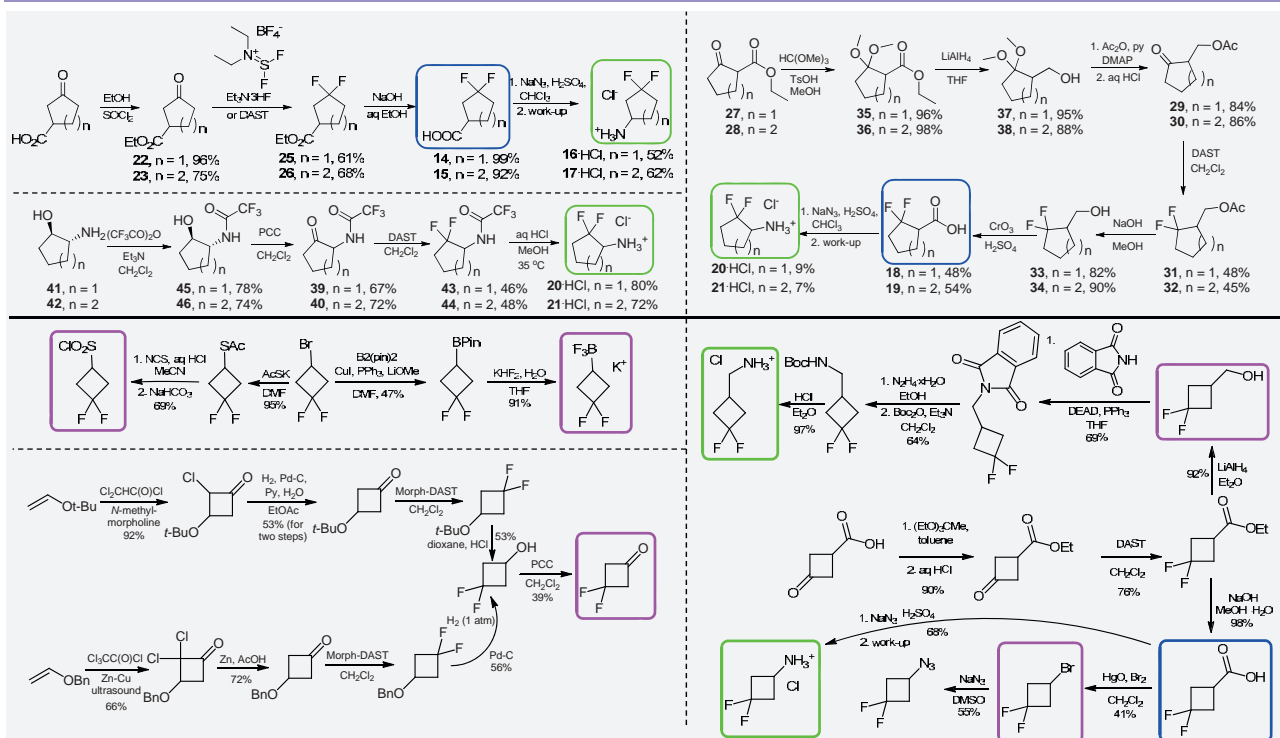
Fluorinated cycloalkane building blocks are important structural motifs which become increasingly important in various areas, and most of all in drug discovery and agrochemistry. One of the most prominent examples of this concept is related to development of Maraviroc (**1**), an antiretroviral drug approved by FDA in 2007. In this case, using 4,4-difluorocyclohexanecarboxylic acid (**2**) as a building block for the modification of optimized substance resulted in the compound with unique antiviral profile and lack of affinity for the hERG channel.¹⁻⁴



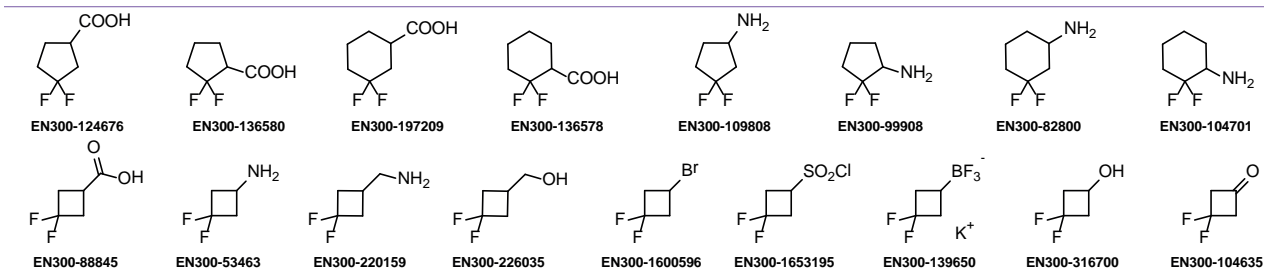
Fluorinated cyclobutanes have attracted interest as building blocks for the synthesis of various biologically relevant molecules. In particular, 3,3-difluorocyclobutanes feature in the structure of many potential drugs



Synthesis



Results



Contact

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