

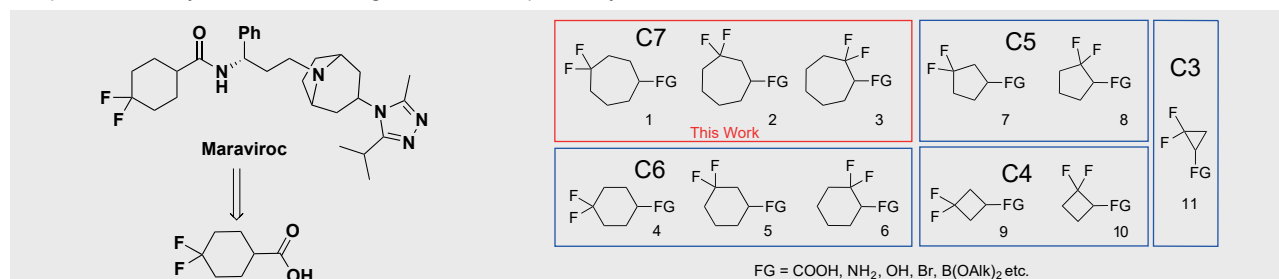
Synthesis of gem-difluorocycloheptanes building blocks

D. Volochnyuk, S. Ryabukhin, K. Melnykov

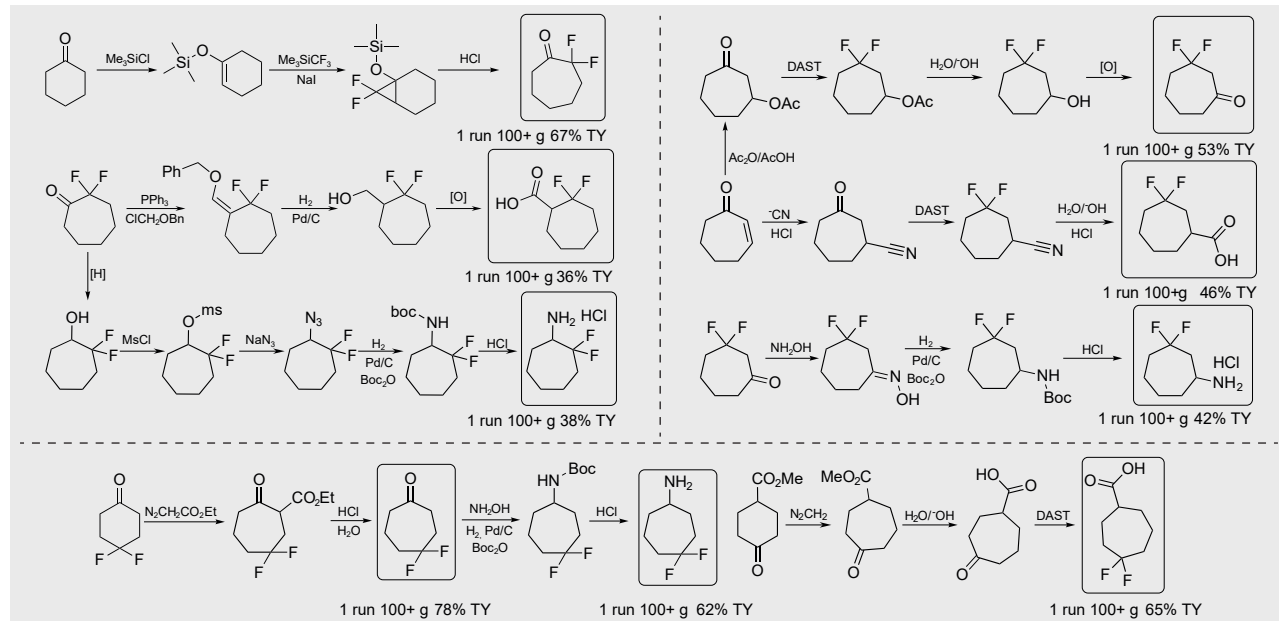
Introduction and Aim

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.^{1,2}

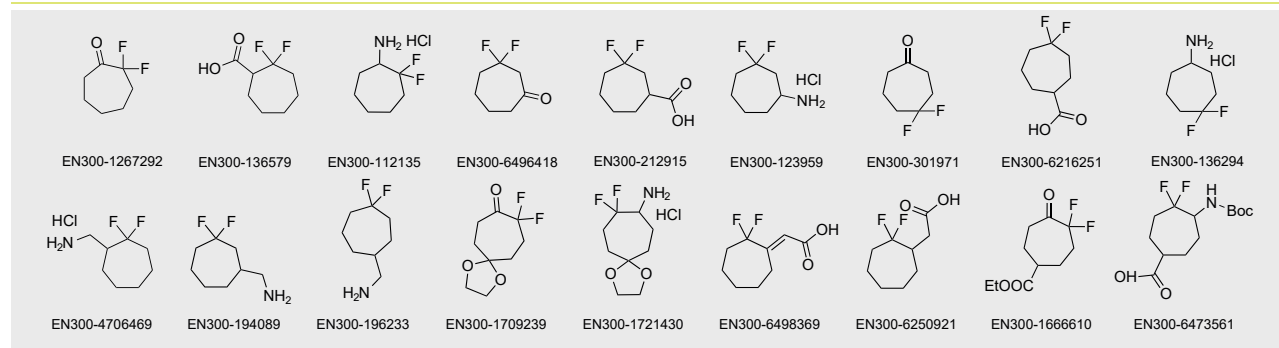
In our ongoing research in the synthesis of functionalized fluorinated cycloalkanes building blocks³⁻⁶ in 50-100g scale we draw our attention to difluorocycloheptanes. The methodologies for all isomeric amines, ketones and acids were elaborated and appropriate compounds were synthesized in 100+ gram scale. The possibility of next modification was also shown.



Synthesis & Functionalizations



Results



Contacts

Dmitriy M. Volochnyuk, Prof. Dr. Sci, d.volochnyuk@gmail.com;
Sergey V. Ryabukhin, Prof. Dr. Sci, s.v.ryabukhin@gmail.com;
Enamine Ltd, 78 Chervonotkatska St, 02660 Kyiv, Ukraine, www.enamine.net

References

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