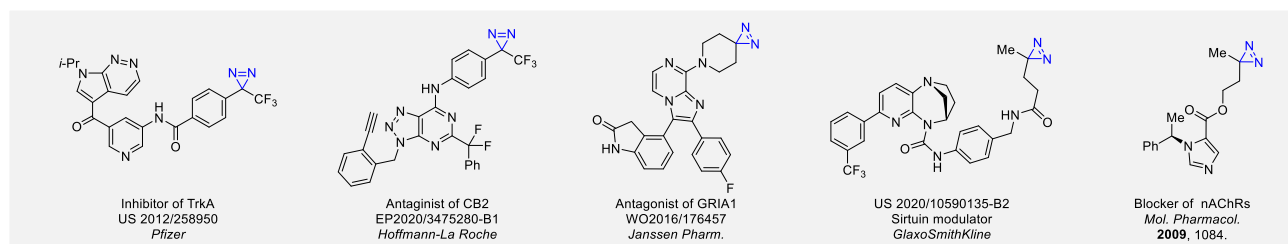
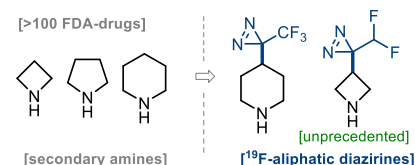


CF₃-Diazirines for photoaffinity labeling

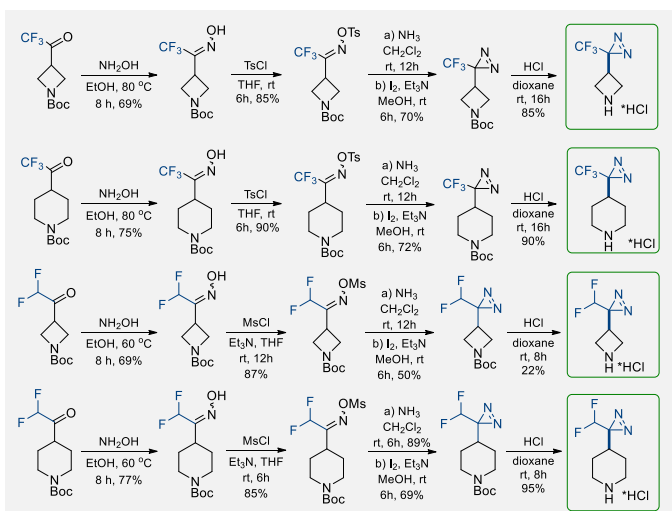
Y. Kornii, O. Shablykin, T. Tarasiuk, O. Stepaniuk, V. Matvienko, D. Alosyn, N. Zahorodniuk, I. V. Sadkova, P. K. Mykhailiuk

Introduction and Aim

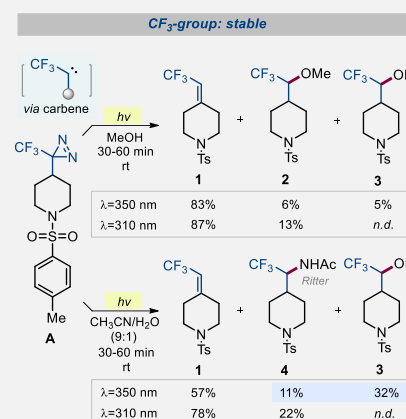
In 1980, *Brunner* demonstrated that the CF₃-substituted aromatic diazirines were more useful as photoaffinity labels, because the undesired isomerization products - CF₃-diazo compounds CF₃C(N₂)Ar, - were inert and did not cause the non-selective labeling.¹⁻³ Unexpectedly, chemists almost did not use aliphatic trifluoromethyl diazirines before. Moreover, these compounds were mostly unknown from the synthetic standpoint. We addressed this gap in chemistry: we elaborated a general practical method for trifluoromethyl and difluoromethyl aliphatic diazirines.⁴



Synthesis

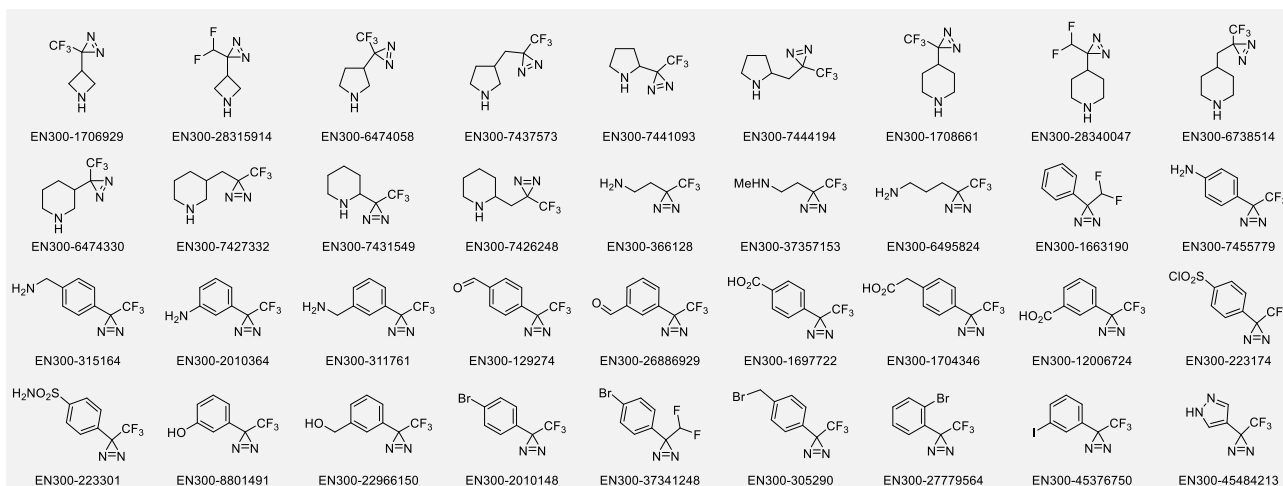


Photolabeling experiment



Photolabeling experiment of CF₃-diazirine A in different solvents.
c = 0.01 M. LC-MS data is shown

Results



Contact

Pavel K. Mykhailiuk, Dr. Sci.
pavel.mykhailiuk@gmail.com, mykhailiukchem.org
Enamine Ltd, www.enamine.net
78 Chervonotkatska St, 02094, Kyiv, Ukraine

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4. Y. Kornii *et al.* *J. Org. Chem.* **2023**, 88, 11-17.