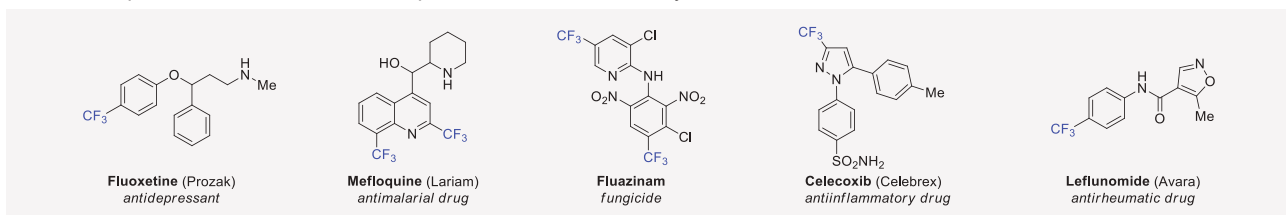


# Deoxofluorination of Aliphatic and (Hetero)aromatic Acids

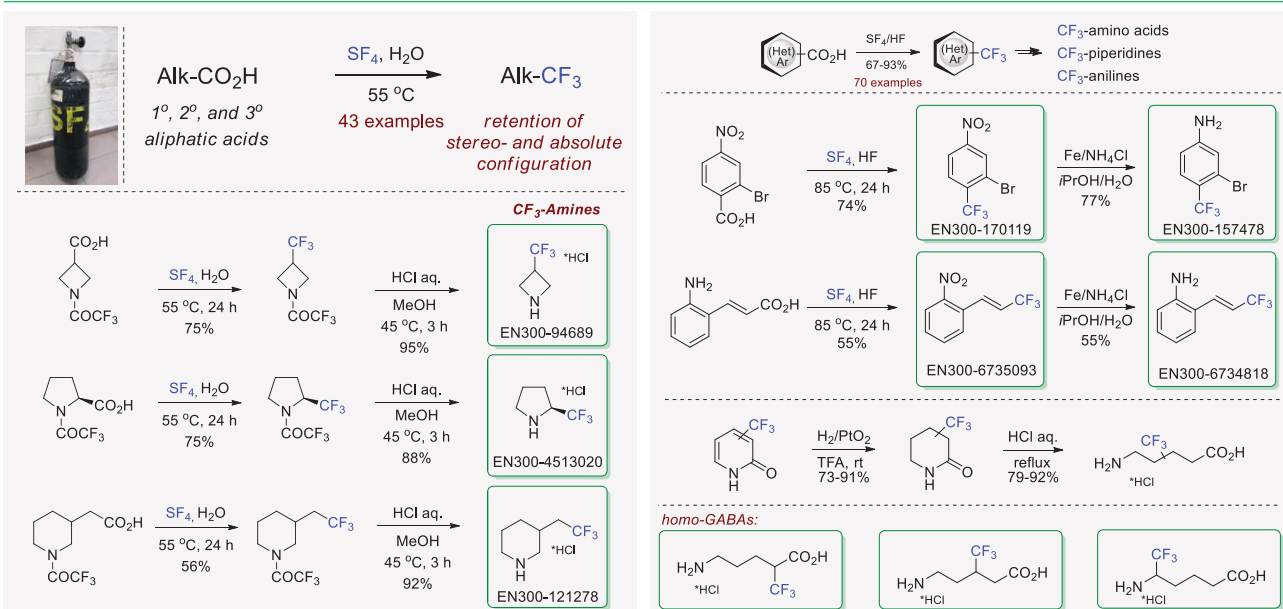
S. Trofymchuk, M. Bugera, A. A. Klipkov, B. Razhyk, S. Semenov, K. Tarasenko, V. S. Starova, O. Zaporozhets, A. N. Alekseenko, Y. Pustovit, O. Kiriakov, I. I. Gerus, A. A. Tolmachev, P. K. Mykhailiuk

## Introduction and Aim

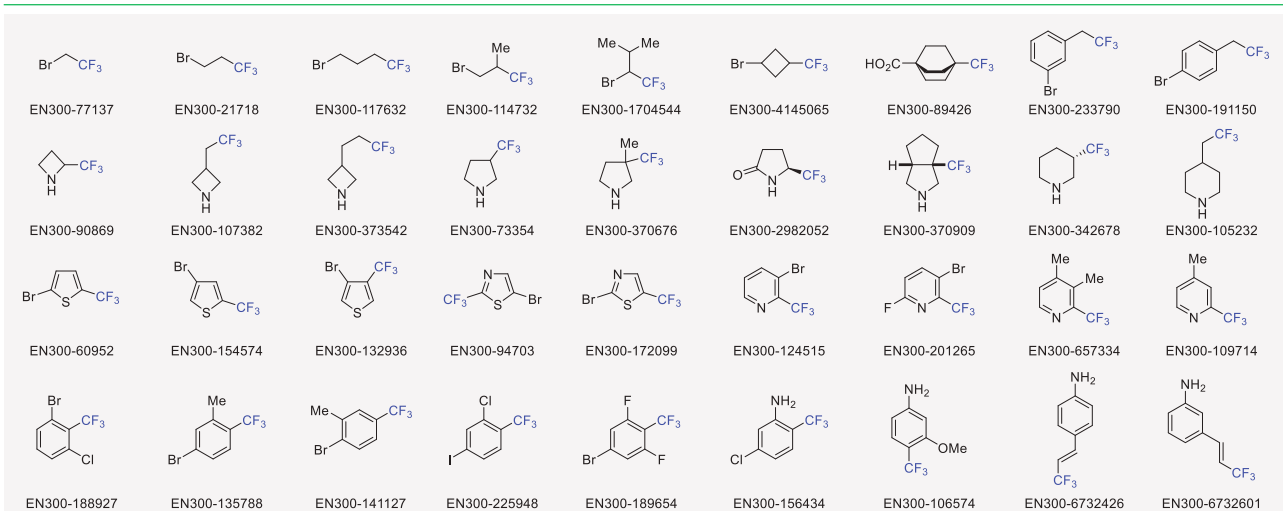
Modern medicinal chemistry and agrochemistry are tightly bound to organofluorine chemistry, because around 20% of all pharmaceuticals and up to 30% of agrochemicals are organic compounds that contain at least one fluorine atom. Trifluoromethyl group, in particular, is a part of the structure of more than seventy approved drugs. Carboxylic acids are amongst the most available chemical compounds classes, and it would have been desirable to have a practical method for converting them into the trifluoromethyl-substituted derivatives.<sup>1</sup> Herein we report on a mild fluorination of aliphatic and aromatic carboxylic acids with sulfur tetrafluoride.<sup>2,3</sup>



## Synthesis



## Results



## Contact

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## References

- W. A. Engelhardt et al. *J. Am. Chem. Soc.* **1960**, *82*, 3, 543.
- M. Bugera et al. *J. Org. Chem.* **2019**, *84*, 24, 16105.
- S. Trofymchuk et al. *J. Org. Chem.* **2020**, (minor revision).