

THE PROMISING BIOACTIVE COMPOUNDS BASED ON POLYFLUOROSALICYLATES

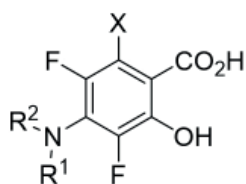
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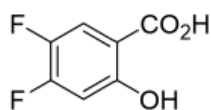
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Salicylic acid is one of the most popular pharmacophores for the creation of physiologically active compounds. According to experts' opinion, the chemistry of salicylic acid and its derivatives is still an important research area for the search for new drugs.¹

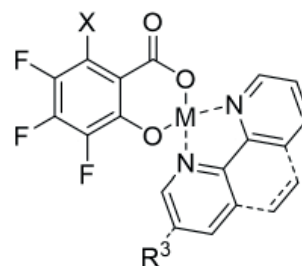
We have developed the effective methods for the synthesis of polyfluorosalicylic acids, tri- and tetrafluoro-derivatives of which showed the high anti-inflammatory and analgesic effect.² 4-Aminopolyfluorosalicylates having the high anti-inflammatory activity and low toxicity were synthesized.³ The directed way of introducing pharmacophore amine moieties can be used to obtain the efficient and low-toxic analgesics. 3,4-Difluorosalicylic acid showed the high anti-TB action and low acute toxicity, therefore it is promising to create tuberculostatics affecting to MDR strains.⁴ Metal complexes of tri- and tetrafluorosalicylic acids with pyridine derivatives as co-ligands are perspective for the search for the new antibacterial and antimycotic agents.



**high analgesic activity;
moderate anti-inflammatory
action; low acute toxicity**



**high anti-TB activity;
low acute toxicity**



**high antifungicidal activity;
moderate antibacterial action**

References

1. Ekinci D., Şentürk M., Küfrevioğlu O.I., Expert Opin. Ther. Patents., 2011, 21, 1831-1841
2. Shchegol'kov E.V., Shchur I.V., Burgart Ya.V., et al. Bioorg. Med. Chem., 2017, 25, 91.
3. Shchur I.V., Shchegolkov E.V., Burgart Ya.V., et al. ChemistrySelect, 2019, 4, 1483
4. Shchegol'kov E.V., Shchur I.V., et al. Bioorg. Med. Chem. Lett., 2016, 26, 2455.

The work was financially supported by the Russian Science Foundation (grant № 16-13-10255).