Preparation and Evaluation of Potent Pentafluorosulfanyl-Substituted Anti-Tuberculosis Compounds

The front cover picture shows promising pentafluorosulfanyl (SF₅) anti-tuberculosis compounds 6-chloro-2-ethyl-N-(3-(pentafluoro-λ₆-sulfaneyl)benzyl)imidazo[1,2-a]pyridine-3-carboxamide (18) and 2,6-dimethyl-N-(4-(pentafluoro-λ₆-sulfaneyl)benzyl)imidazo[2,1-b]thiazole-5-carboxamide (19) ascending a mountain of in vitro assessments (including replicating, nonreplicating, and intracellular potency, toxicity, solubility, and ADME). These SF₅-bearing compounds were also compared with similar CF₃-bearing compounds 2,6-dimethyl-N-(4-(trifluoromethyl)benzyl)imidazo[1,2-a]pyridine-3-carboxamide (1) and 2,6-dimethyl-N-(4-(trifluoromethyl)benzyl)imidazo[2,1-b]thiazole-5-carboxamide (5). The overarching goal is to advance compounds within the next “mountains” of preclinical evaluation. Cover art created by Rebecca Rausch. More information can be found in the Full Paper by Garrett C. Moraski, Marvin J. Miller et al. (DOI: 10.1002/cmdc.201700170).