Bioorganic & Medicinal Chemistry 19 (2011) 2777–2784

Contents lists available at ScienceDirect

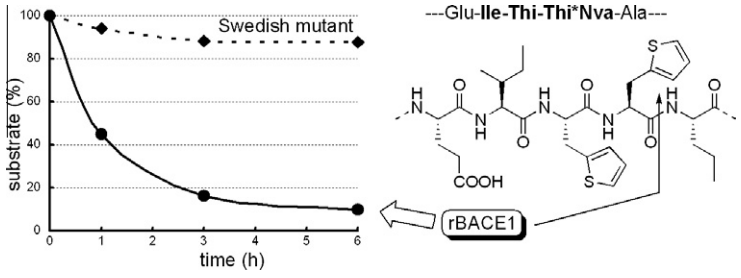
Bioorganic & Medicinal Chemistry

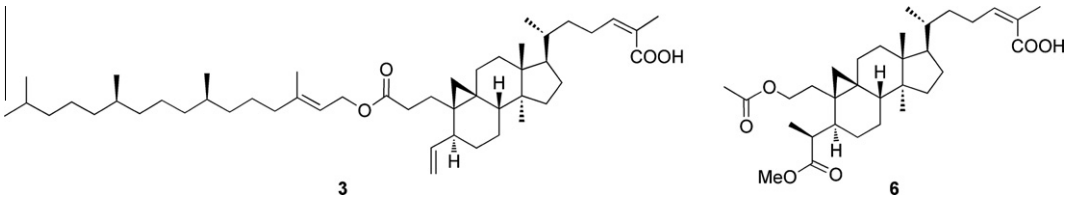
journal homepage: www.elsevier.com/locate/bmc

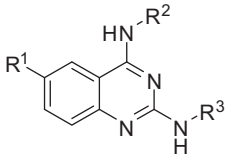
Bioorganic & Medicinal Chemistry Volume 19, Issue 9, 2011

Contents

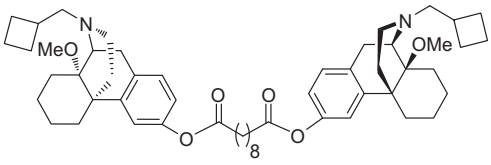
ARTICLES





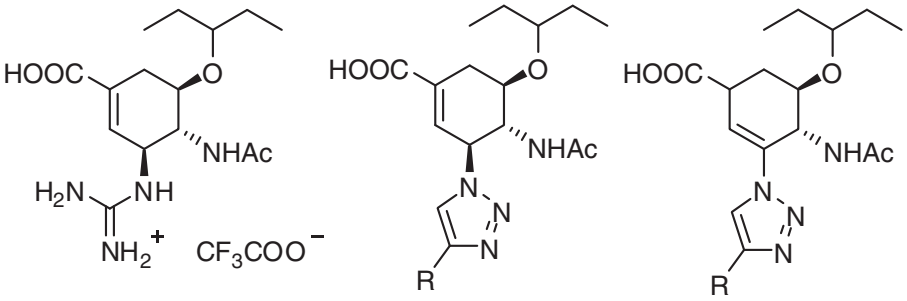


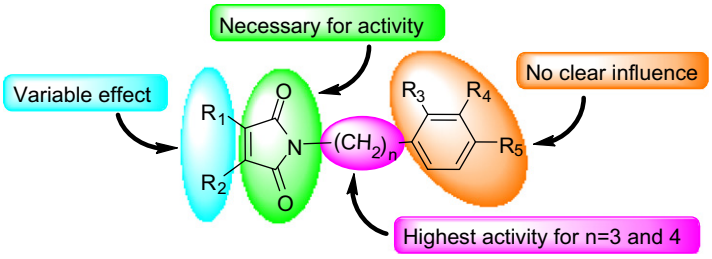
A series of novel 2,4-disubstituted quinazoline derivatives were prepared and their inhibitory activities on hPin1 were evaluated. Of all the synthesized compounds, eight compounds displayed inhibitory activities with IC_{50} value at the level of 10^{-6} mol/L. Preliminary structure–activity relationships were analyzed in details and the binding mode of the titled compounds was predicted using FlexX algorithm.



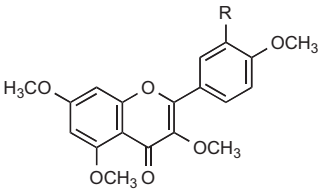
9b (MCL-692)
μ = 0.26 nM
κ = 0.37 nM
δ = 13 nM

15b (MCL-695)
μ = 0.089 nM
κ = 0.073 nM
δ = 8.0 nM

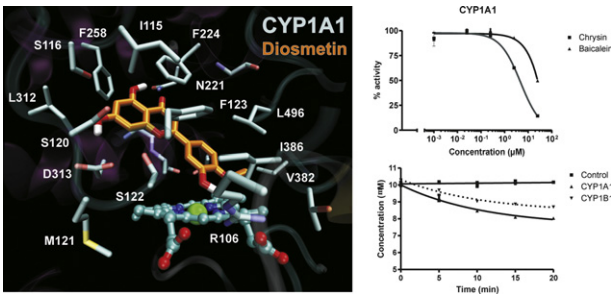


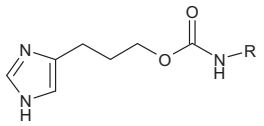


Among the 44 flavonoids, 3,4′,7-trimethylkaempferol, tetramethylkaempferol, and pentamethylquercetin concentration-dependently enhanced the adipogenesis of 3T3-L1 cells. With regard to structural requirements of flavonoids for the activity, it was found that: (1) most flavonoids having hydroxy groups lacked the effects; (2) flavonols with methoxy groups showed stronger effects particularly those with a methoxy group at the 3-position; (3) a methoxy group of flavonols at the B ring was also important. Tetramethylkaempferol and pentamethylquercetin significantly increased the amount of adiponectin released into the medium and the uptake of 2-deoxyglucose into the cells. Furthermore, both compounds also increased the mRNA levels of GLUT4, aP2, PPARγ2, and C/EBPs, although they did not activate PPARγ directly in a nuclear receptor cofactor assay.

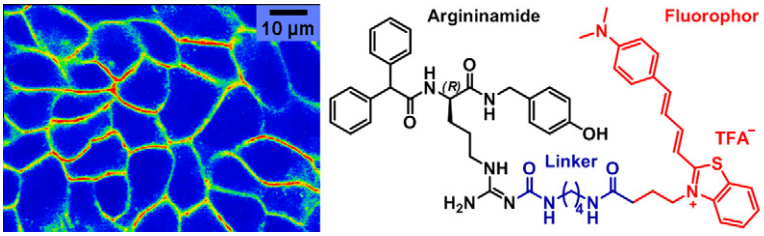


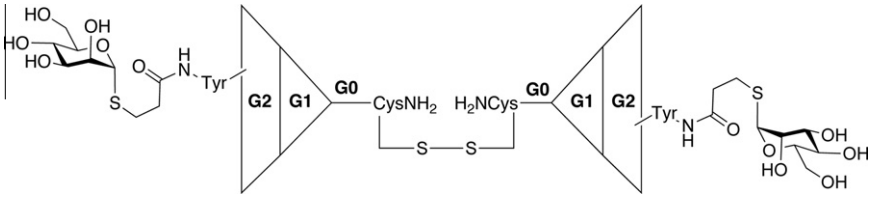
R=H, OCH_3

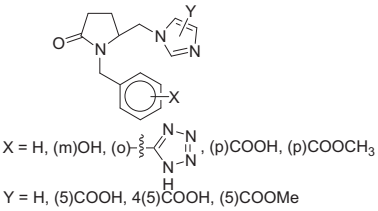




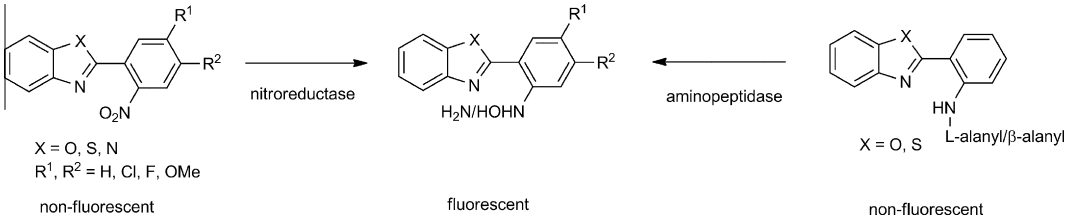
Two series of 3-(1*H*-imidazol-4-yl)propyl carbamates: a series of unsaturated alkyl derivatives and a series possessing a cycloalkyl group different distances to the carbamate moiety were prepared and tested for their affinities at human histamine H_3 and H_4 receptors. To expand pharmacological profile, compounds were also tested for their H_3 receptor antagonist activity on guinea pig ileum and in vivo after oral administration to mice. Tested compounds exhibited good affinity for the hH$_3$R and moderate to weak affinity for the hH$_4$R.

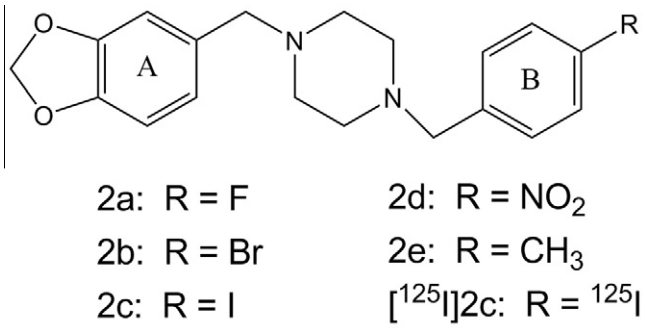


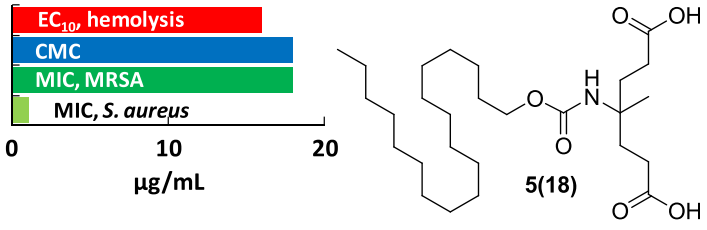


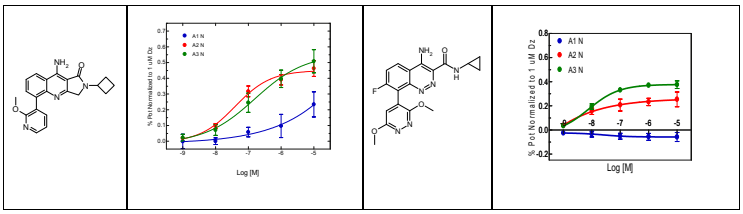


General structure of the target biologically evaluated synthetic compounds.

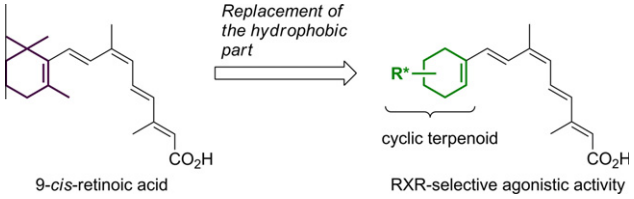


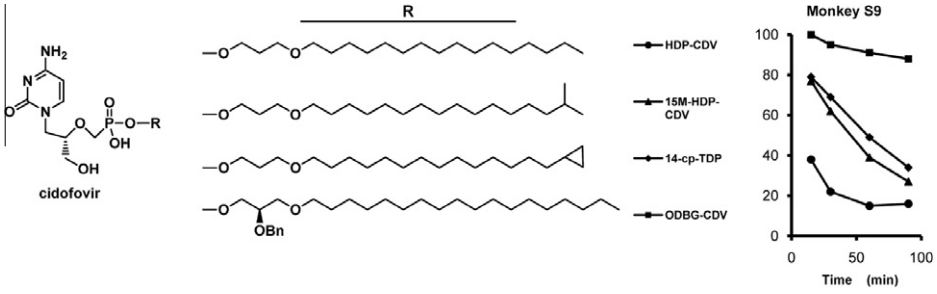


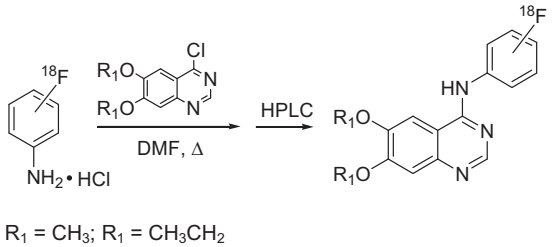




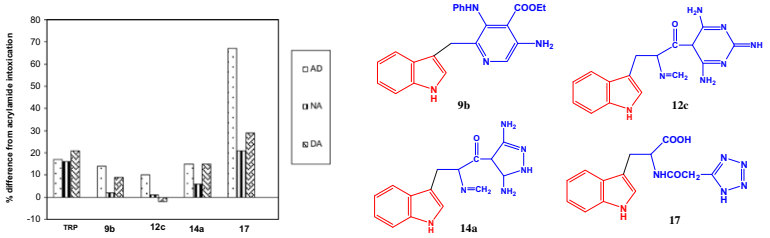
New structural classes of functionally selective benzodiazepine-site allosteric modulators of $GABA_A$ receptors are reported.



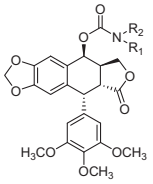




$R_1 = CH_3$; $R_1 = CH_3CH_2$

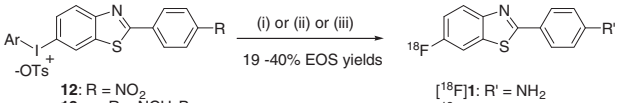


The main goal of the present study was to synthesize new indole derivatives with structures justifying neuroprotective activity. The potential neuroprotective effects of these newly synthesized agents against acrylamide induced neurotoxicity in rats were investigated.



6a-j

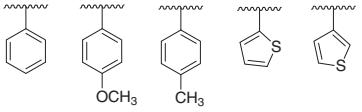
6a: R_1 = H, R_2 = propyl
6b: R_1 = H, R_2 = isopropyl
6c: R_1 = H, R_2 = cyclopropylmethyl
6d: R_1 = CH_3, R_2 = CH_3
6e: R_1 = H, R_2 = 2-methoxyethyl
6f: R_1 = H, R_2 = prop-2-yn-1-yl
6g: R_1R_2N = morpholinyl
6h: R_1 = H, R_2 = 4-trofluoromethylbenzyl
6i: R_1 = H, R_2 = 3-ethyl-1H-indole
6j: R_1 = H, R_2 = 2-dimethylaminoethyl



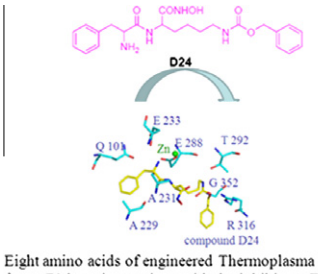
12: R = NO_2
13a-e: R = NCH_3Boc
14: R = $N(CH_3)_2$

[^{18}F]**1**: R' = NH_2
[^{18}F]**2**: R' = $NHCH_3$
[^{18}F]**3**: R' = $N(CH_3)_2$

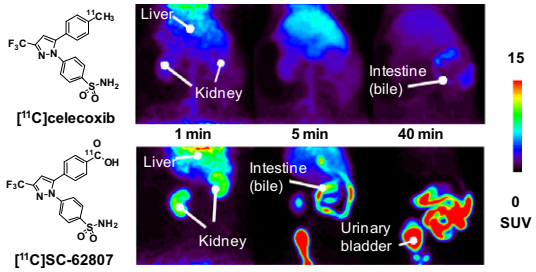
Ar =

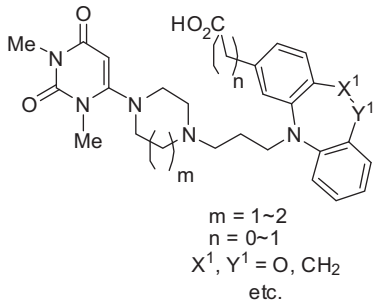


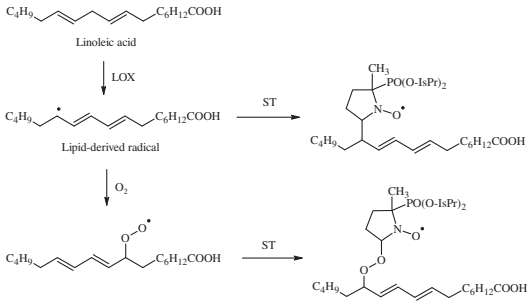
13a **13b** **13c** **13d** **13e**



Eight amino acids of engineered Thermoplasma Acidophilum factor F3 have interactions with the inhibitors. They are Q101, A229, A231, E233, E288, T292, R316 and G352.







*Corresponding author
Supplementary data available via ScienceDirect

COVER

The known veterinary anthelmintic and proton ionophore, closantel, was recently discovered to also exhibit potent chitinase inhibition activity and inhibit molting in the parasitic nematode, *Onchocerca volvulus*, the causative agent of the neglected tropical disease onchocerciasis. [C. Gloeckner, A. L. Garner, F. Mersha, Y. Oksov, N. Tricoche, L. M. Eubanks, S. Lustigman, G. F. Kaufmann, K. D. Janda, Repositioning of an existing drug for the neglected tropical disease Onchocerciasis, *Proc. Natl. Acad. Sci., U.S.A.* **2010**, *107*, 3424.]

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ISSN 0968-0896