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Chemistry
Letters

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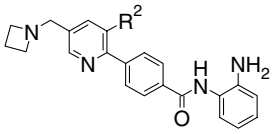
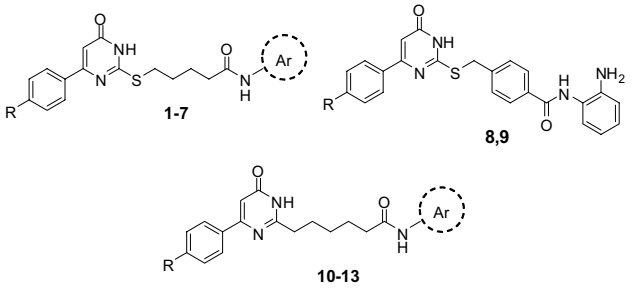
Contents

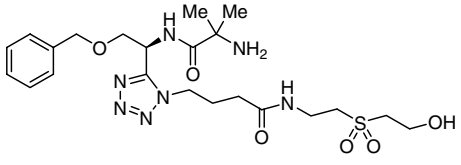
ARTICLES



The synthesis of the HDAC inhibitor **13b** is reported. (HDAC1 enzyme pIC_{50} 8.01.)

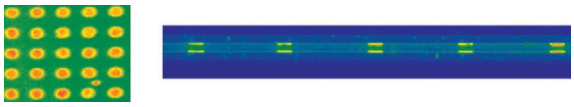


1-7 **8,9** **10-13**

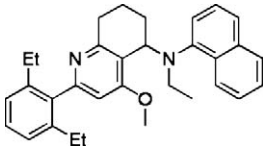


Compound **31** (EC_{50} = 0.2 nM)

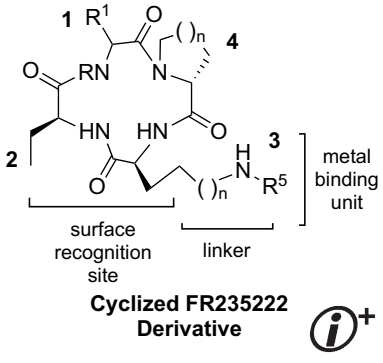
A novel series of *N*1 substituted tetrazole amides were prepared and showed to be potent growth hormone (GH) secretagogues. Among them, hydroxyl containing analog **31** displayed excellent in vivo activity by increasing plasma GH 10-fold in an anesthetized IV rat model.



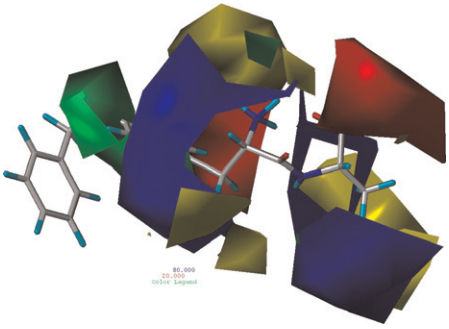
The patterning of oligonucleotides on glass slides and into the inner wall of capillary tubes have been achieved by using oxime bond formation.

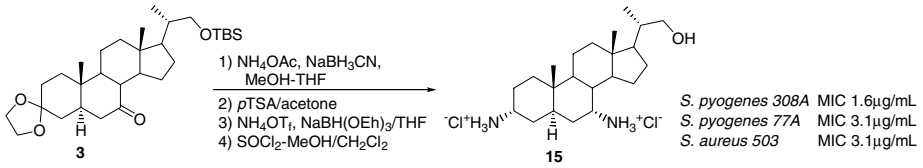


Synthesis and structure–activity relationships of a series of substituted 5,6,7,8-tetrahydroquinoline C5a receptor antagonists are reported.

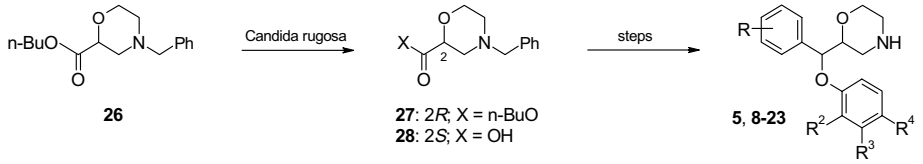


Based on our results of computational analysis, we have designed, synthesized, and performed in vitro activity assessment of novel Alexa Fluor-350-labeled dipeptides directed to identify novel substrates and inhibitors for human small peptide transporter PEPT1 in a high-throughput assay setting.

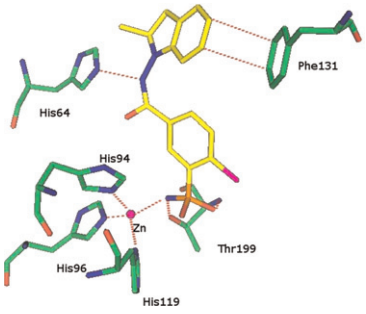


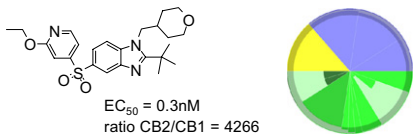


A series of 7α-aminobisnorsteroids were synthesized and antimicrobial activity was assessed against Gram-positive and Gram-negative bacteria. 3α,7α-Diaminobisnorsterol dihydrochloride **15** showed the highest antimicrobial activity against *Streptococcus pyogenes* 308A with a MIC value of 1.6 μg/mL. Among the tested compounds **13**–**20**, compound **13** showed MHC at 100 μg/mL.

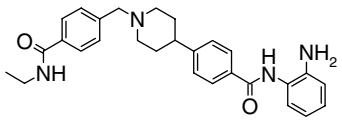


Morpholine derivatives **5**, **8**–**23** are inhibitors of monoamine reuptake. Target compounds were prepared using a highly specific enzyme-catalysed resolution of racemic morpholine ester **26** as the key step. Structure–activity relationships established that serotonin and noradrenaline reuptake inhibition are functions of stereochemistry and aryl/aryloxy ring substitution.

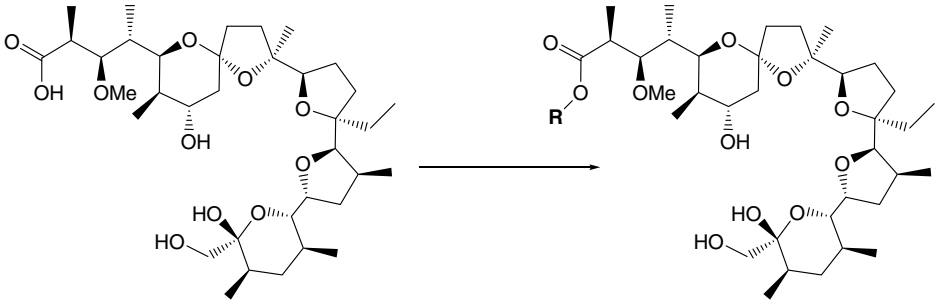


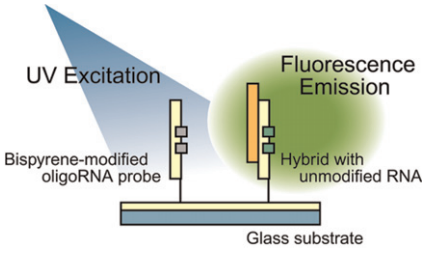


Synthesis and exploration of the structure–activity relationship of a novel benzimidazole series as highly selective CB2 agonists are reported.

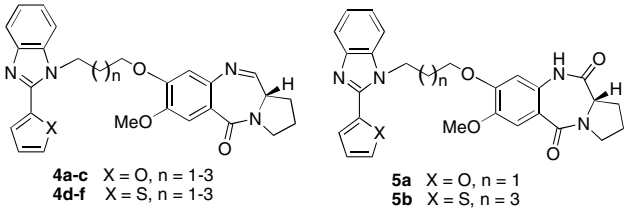


The synthesis of the HDAC inhibitor **16d** is reported. (HDAC1 enzyme pIC_{50} 7.46. A549a xenograft efficacy at 12.5 mg/kg.)

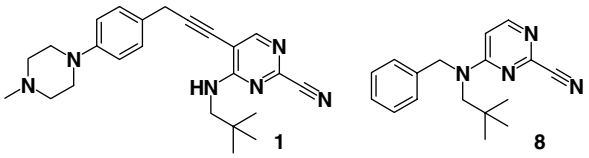




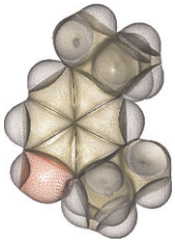
We developed a novel oligonucleotide microarray for the detection of RNA without fluorescent labeling of target RNA. The technology may contribute to on-site gene diagnostics of various diseases.



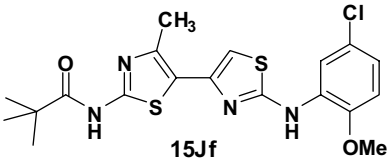
Benzimidazole linked pyrrolo[2,1-*c*][1,4]benzodiazepine conjugates were synthesized and displayed potential in vitro cytotoxicity against human cancer cell lines.



Cyano pyrimidine acetylene and cyano pyrimidine *t*-amine, which belong to a new chemical class, were prepared and tested for inhibitory activities against cathepsin K and the highly homologous cathepsins L and S. The use of novel chemotypes in the development of cathepsin K inhibitors has been demonstrated by derivatives of compounds **1** and **8**.

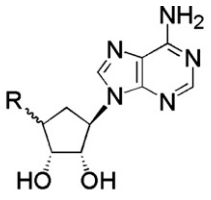


We construct predictive QSAR models for hepatocyte toxicity data of phenols using Quantum Topological Molecular Similarity (QTMS) descriptors along with hydrophobicity (log *P*) as predictor variables.

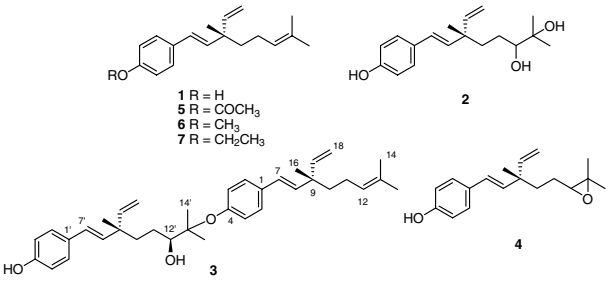


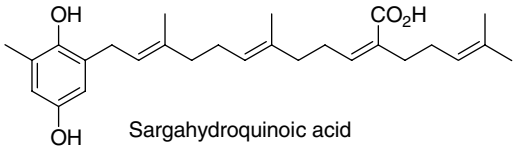
ΔF508-CFTR corrector activity

Vmax (mM/s)	K_d (μM)
0.13 ± 0.01	0.7

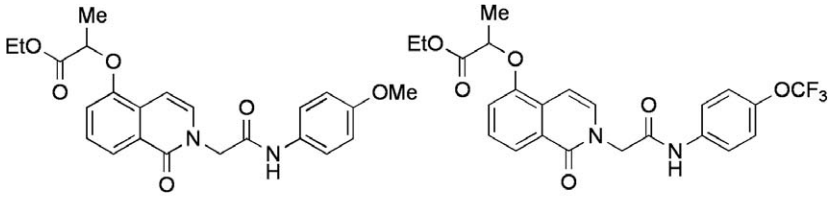


R = OSO_3Na, OSO_2NH_2, N_3, NH_2, OH



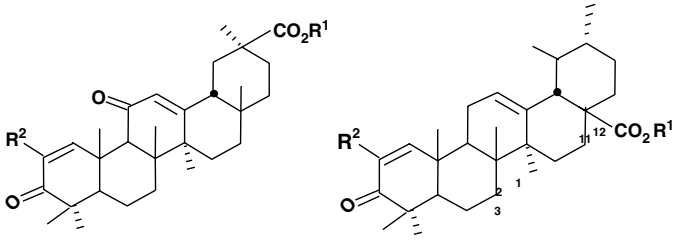


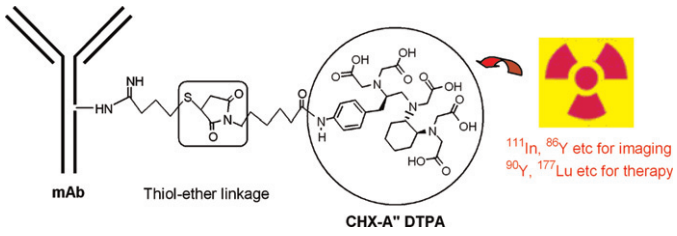
EC_{50} 11.8 μm on basilar artery: 140 μM on Cartoid Artery Selective Index (SI, EC_{50} for basilar): 11.9.

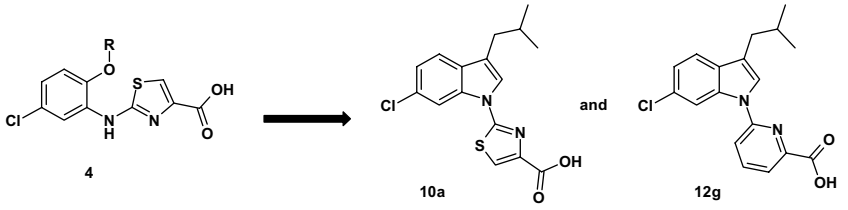


31, IC_{50} (SF-1) = 200 nM **32**, IC_{50} (SF-1) = 200 nM

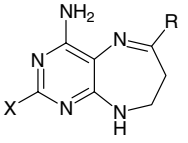
The 2-cyano and 2-trifluoromethyl substituted 1-en-3-one derivatives of methyl glycyrrhetinate and methyl ursolate are potent inhibitors of bladder and pancreatic cancer cell growth.



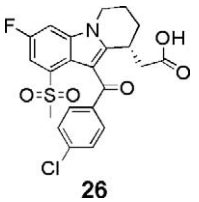


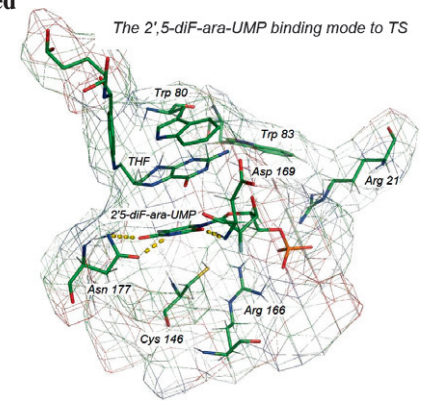


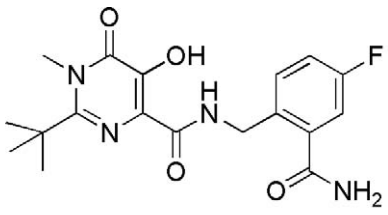
The discovery, synthesis, and biological activity of a novel series of indole EP1 receptor antagonists is described, such as compounds **10a** and **12g**. Compound **12g** demonstrated in vivo efficacy in a preclinical model of inflammatory pain.



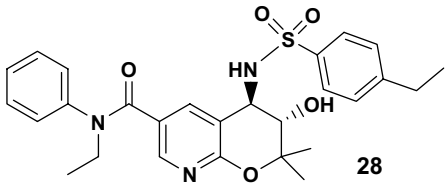
We report the discovery of the pyrimido-diazepine scaffolds as novel adenine mimics. Structure-based design led to the discovery of analogs with potent inhibitory activity against receptor tyrosine kinases, such as KDR, Flt3, and c-Kit. Compound **14** exhibited low nanomolar KDR enzymatic and cellular potencies (IC_{50} = 9 and 52 nM, respectively).





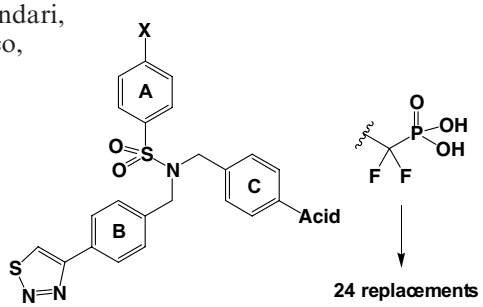


HIV Spread CIC_{95} (50% HHS) = 10 nM

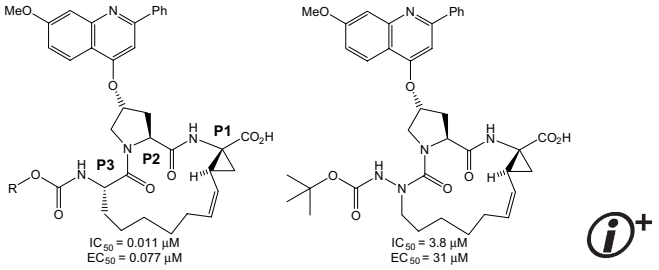


28

The design and synthesis of a series of highly functionalized pyrano-[2,3*b*]-pyridines is described. These compounds were assayed for their ability to block the I_{Kur} channel encoded by the gene hKV1.5 in patch-clamped L-929 cells. Six of the compounds in this series showed sub-micromolar activity, the most potent being **28** with an IC_{50} of 378 nM.



P3 Aza analog of a potent macrocyclic tripeptide inhibitor of HCV protease was over 2 orders of magnitude less active in both enzyme (NS3-4A) inhibition and sub-genomic replicon assays.



OTHER CONTENTS

*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

Overlay of high resolution co-crystal structures of *R*-**22**-ADP (cyan) and **1**-ADP (green) bound in an allosteric binding site of the mitotic kinesin KSP. [Roecker, A. J.; Coleman, P. J.; Mercer, S. P.; Schreier, J. D.; Buser, C. A.; Walsh, E. S.; Hamilton, K.; Lobell, R. B.; Tao, W.; Diehl, R. E.; South, V. J.; Davide, J. P.; Kohl, N. E.; Yan, Y.; Kuo, L. C.; Li, C.; Fernandez-Metzler, C.; Mahan, E. A.; Prueksaritanont, T.; Hartman, G. D. *Bioorg. Med. Chem. Lett.* **2007**, *17*, 5677.]

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