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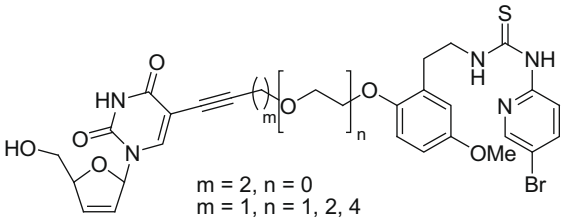
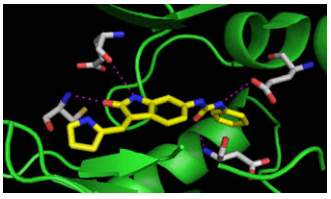
Contents

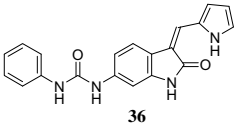
ARTICLES



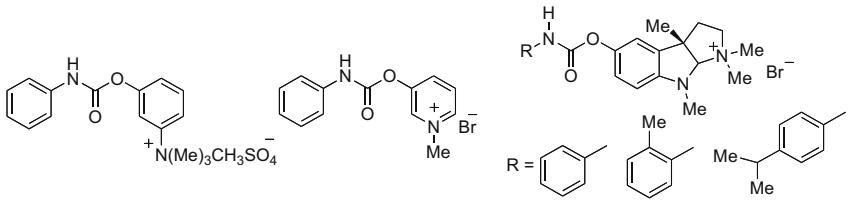
[d4U]-Spacer-[HI-236] bifunctional double-drug inhibitors against HIV-1 RT of the type shown below have been synthesized and evaluated in both cell-culture as well as in vitro against the enzyme, returning some nanomolar EC_{50} and IC_{50}'s.

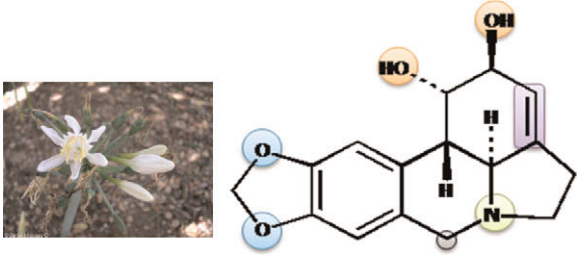
A series of 6-ureido-substituted 3-pyrrolemethylidene-2-oxindole derivatives were synthesized and identified as potent inhibitors of the vascular endothelial growth factor receptor and platelet-derived growth factor receptor families of receptor tyrosine kinases.

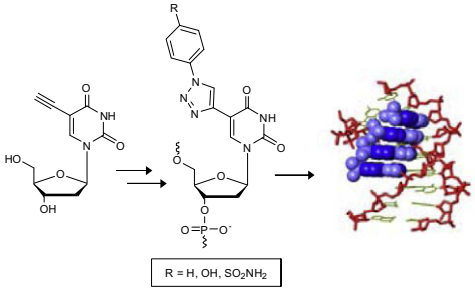


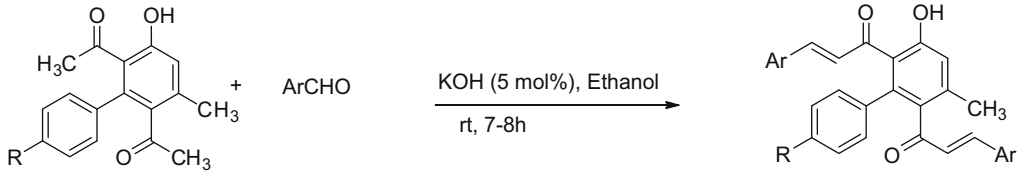


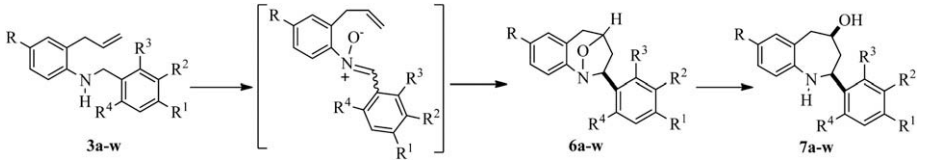
36

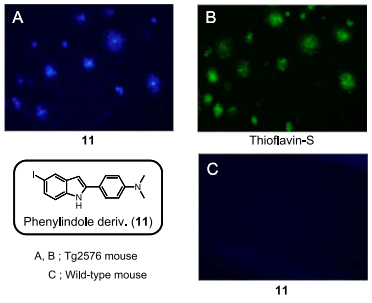


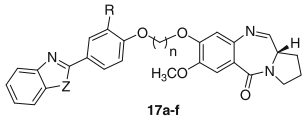






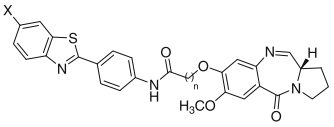






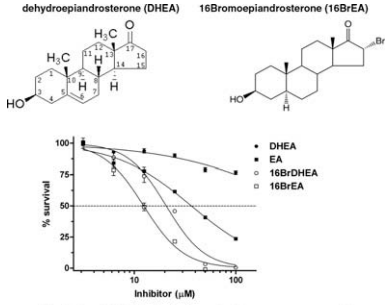
17a-f

17
a: n = 4, R = H, Z = S
b: n = 4, R = OCH_3, Z = S
c: n = 5, R = H, Z = S
d: n = 5, R = OCH_3, Z = S
e: n = 5, R = H, Z = O
f: n = 5, R = OCH_3, Z = O

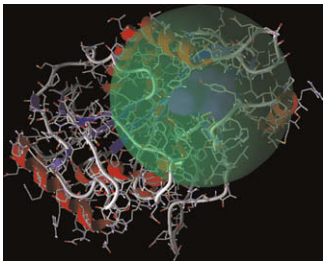


18a-b

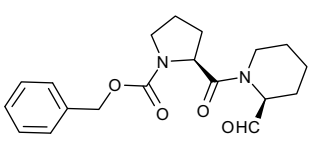
18
a: n = 4, X = H
b: n = 4, X = F

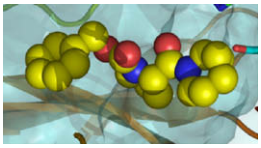


Toxicity of DHEA derivatives to *Trypanosoma cruzi*

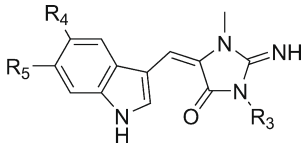


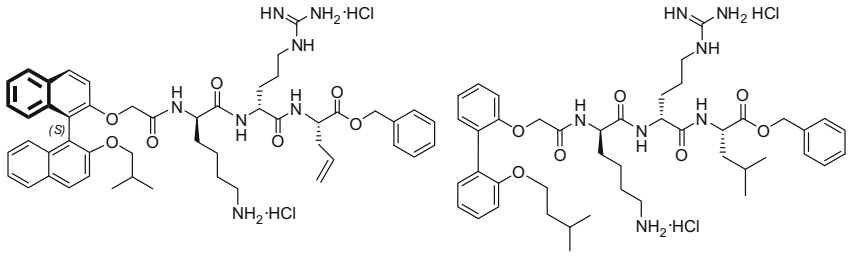
We describe here the structure of purine nucleoside phosphorylase from *Mycobacterium tuberculosis* (MtPNP) in complex with sulfate and its natural substrate, 2′-deoxyguanosine, and its application to virtual screening.





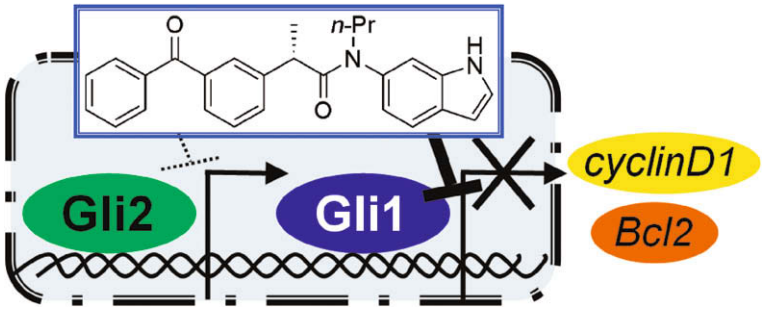
The synthesis of a new inhibitor of prolyl oligopeptidase, containing a piperidine ring, together with an X-ray structure of its complex with the enzyme, is described. This provides evidence that covalent inhibitors of POP do not have to be limited to structures containing five-membered N-containing heterocyclic rings.

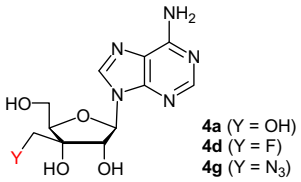




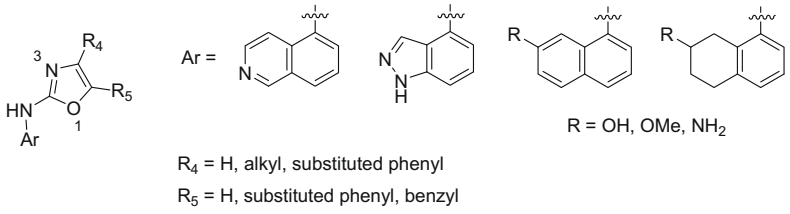
MIC (*S. aureus*) 1.95 μg/mL

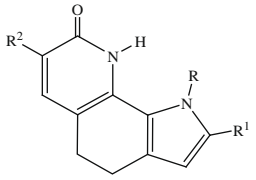
MIC (*S. aureus*) 1.95 μg/mL



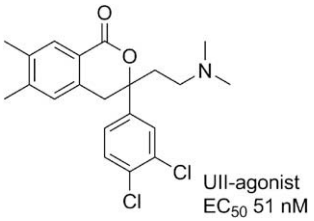


3′-C-Substituted-methyl-ribofuranosyl pyrimidine and purine nucleosides were designed and synthesized from D-xylose. Among these, adenine analogues, **4a**, **4d**, and **4g** showed significant anti-HCV activity in a replicon-based cell assay irrespective of the substituent (Y = OH, F, or N_3) at the 3′-C-substituted-methyl position although they are cytotoxic.





A series of pyrrolo[3,2-*h*]quinolinones, angelicin heteroanalogues, were conveniently synthesized. Three derivatives showed improved photoantiproliferative effect compared to angelicin without inducing DNA damage.



*Corresponding author
Supplementary data available via ScienceDirect

COVER

An insight into biologically relevant chemical space showing the scaffolds of potential natural-product based inhibitors orbiting their target, the protein structure of protein 11-beta steroid dehydrogenase (PDB code 1xu7). Graphic produced using Pymol (http://www.pymol.org). [M. A. Koch, A. Schuffenhauer, M. Scheck, S. Wetzel, M. Casaulta, A. Odermatt, P. Ertl, H. Waldmann, Charting biologically relevant chemical space: A structural classification of natural products (SCONP), *PNAS* **2005**, *102*, 17272–17277 and S. Wetzel, H. Waldmann, Cheminformatic analysis of natural products and their chemical space, *Chimia* **2007**, *61*(6), 355–360].

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