Table S2. Biological activities of purely synthetic guanidines

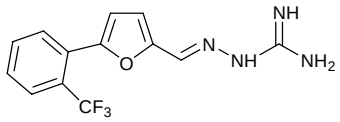
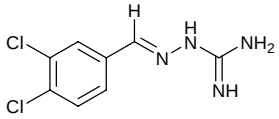
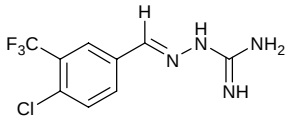
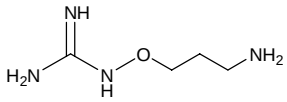
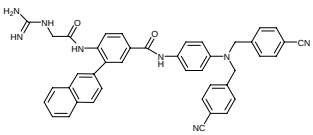
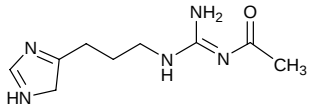
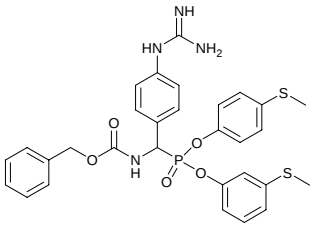
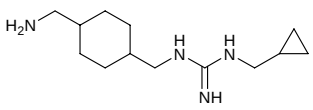
Entry	Guanidine compound	Biological activity	Potency	Ref.
1		NPFF2 and NPFF1 inhibitor	pEC_{50} 7.4 ± 0.2 (NPFF1) pEC_{50} 7.0 ± 0.4 (NPFF2)	26
2		NPFF2 and NPFF1 inhibitor	pEC_{50} nd (NPFF1) pEC_{50} 6.0 ± 0.2 (NPFF2)	26
3		NPFF2 and NPFF1 inhibitor	pEC_{50} < 5.5 (NPFF1) pEC_{50} 6.3 ± 0.2 (NPFF2)	26
4		Effect on promastigotes, amastigotes of wild-type *Leishmania donovani* and macrophage cell line	IC_{50}) 36 ± 7.0 μM (promastigotes) (IC_{50}) 9 ± 1.0 μM (amastigotes)	27
5		Non-peptidic substrate-mimetic inhibitors of Akt	(IC_{50}) 12 ± 2 μM	28
6		Activities of the prepared compounds at the hH4R in the steady-state GTPase assay	(pEC_{50}) 8.31	29
7		Inhibition of cathepsin G	15,600 k_{obs}/I^b (M^{-1} s^{-1})	30
8	Ac-Phe-Val-Thr-Phg^P(4-guanidine)-$(OC_6H_4$-4-*S*-$Me)_2$	Inhibition of cathepsin G	256,000 k_{obs} /I^b (M^{-1} s^{-1})	30
9		Antihyperglycemic and food intake-reducing agent	Reductions of glycemia levels at IST and of cumulative water (-59 %) and food (-40 %) intake, after 5 d of treatment in Male db/db Mice	31

Table 2. (contd.) Biological activities of purely synthetic guanidines

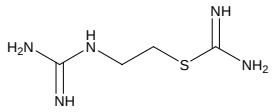
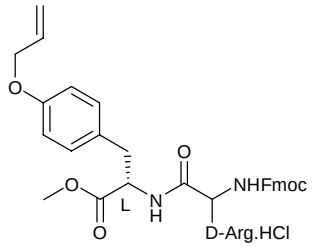
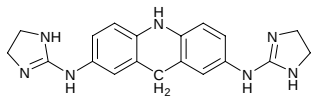
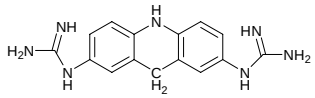
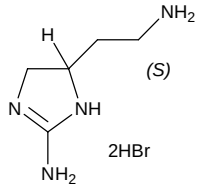
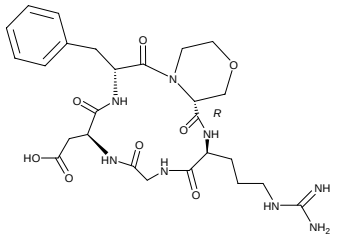
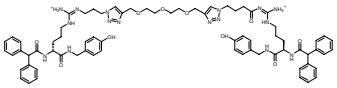
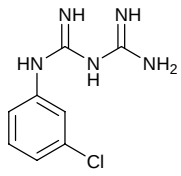
Entry	Guanidine compound	Biological activity	Potency	Ref.
11		Affinity (pKi) of H4 receptor ligands at rat histamine receptors	Rat : pK_i 6.9 ± 0.1 Human: pK_i 7.5 ± 0.1	32
12		Anti-mycobacterial activity against *S. aureus*	MIC 7.8 μg/mL	33
13		*In vitro* antitrypanosomal activity	IC_{50} (*T. brucei rhodesiense* STIB900 strain) 0.0049 μM	34
14		*In vitro* antiplasmodial activity	IC_{50} (*P. falciparum* K1 strain) 0.0023 μM	34
15		Binding affinities to I_1, I_2 and α_2-adrenoceptors	I_1 IC_{50} 477 nM; I_2 K_i 54,950 nM; α_2 K_i 11,770 nM	35
16		Inhibition of [^{125}I]-echistatin specific binding to purified human integrin proteins $\alpha_v\beta_3$ and $\alpha_v\beta_5$	IC_{50} ($\alpha_v\beta_5$) 21.0 ± 2.1; IC_{50} ($\alpha_v\beta_3$) 32.6 ± 7.0; Two-site model, $\alpha_v\beta_3$: IC_{50h} 6.5 ± 2.0 and IC_{50l} 458 ± 191 (IC_{50h} and IC_{50l} correspond to IC_{50} in the receptor high- and low affinity states)	36
17		NPY Y_1R antagonism on HEL cells (calcium assay) and Y_1R binding determined on SK-N-MC cells	Y_1R antagonism (Ca^{2+}-assay) K_b 7.0 ± 2.5 nM	37
18		Effects of amino acid mutations of Loop B, C and E residues on 5-HT (serotonin) and *m*CPBG (*m*-clorophenylbiguanidine) induced functional response	*m*CPBG EC_{50} 1.7 ± 0.10	38

Table 2 (contd.). Biological activities of purely synthetic guanidines

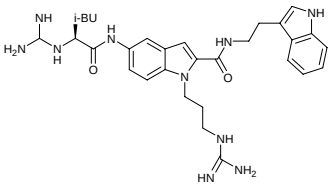
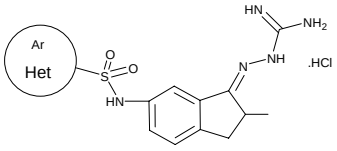
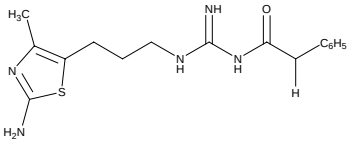
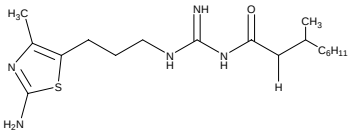
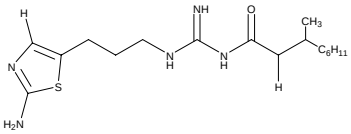
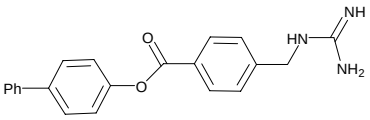
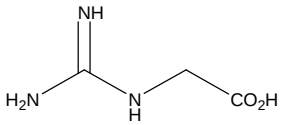
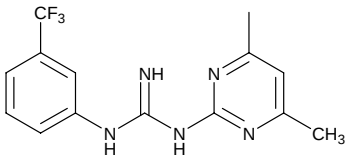
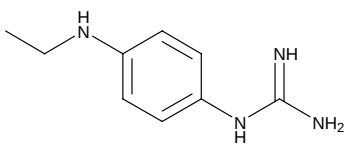
Entry	Guanidine compound	Biological activity	Potency	Ref.
19		Inhibition in human CXCR4 transfected Chinese hamster ovary (CHO) cells using [^{125}I]SDF-1 as a radioligand	IC_{50} 1.2 μM	39
20		Binding affinities and an antagonistic response at the 5-HT6 receptor	K_i 1.6 ± 0.1 nM; I_{max} 157 ± 6 (%); IC_{50} 58 ± 9 nM	40
21		Histamine H_2 receptor agonism on the guinea pig right atrium	pEC_{50} 6.22 ± 0.01	41
22		Agonist efficacies and potencies at hH_2R–GsαS and gpH2R–GsαS expressed in Sf9 cell membranes	hH_2R–GsαS EC_{50} 10.2 ± 1.1 nM	41
23		Agonist efficacies and potencies at hH_2R–GsαS and gpH2R–GsαS expressed in Sf9 cell membranes	gpH_2R–GsαS EC_{50} 4.3 ± 1.1 nM	41
24		Antibacterial against various human pathogenic *Staphylococci*	MIC 0.5 μg/mL	42
25		Activity at recombinant ρ1 $GABA_C$ receptors expressed in *Xenopus oocytes*	IC_{50} 5.4 μM	43
26		Inhibition of the root-growth of rape (*Brassica campestris*)	86.7 % at 100 μg/mL	44
27		Binding assays in human prefrontal cortex to determine agonistic or antagonistic activity *in vitro* functional [35S]GTPγS	EC_{50} 213 ± 18 μM	45

Table 2 (contd.). Biological activities of purely synthetic guanidines

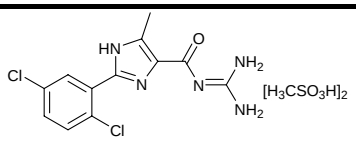
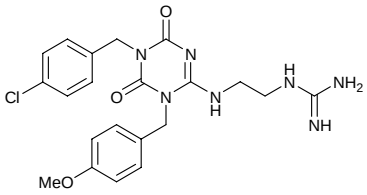
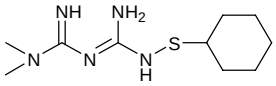
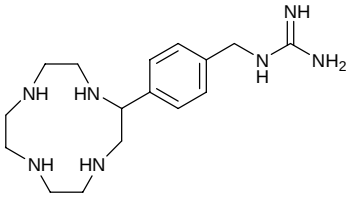
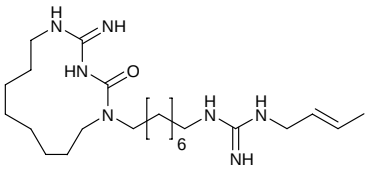
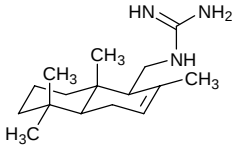
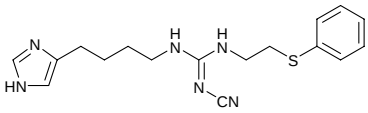
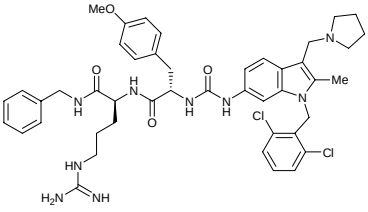
Entry	Guanidine compound	Biological activity	Potency	Ref.
28		NHE-1 inhibitor	(IC_{50}) 0.1 μM	46
29		PK1 receptor antagonists	(IC_{50}) 0.019 μM	47
30		Antidiabetic agent	69 μM (I.V.) 0.1 mM (oral)	48
31		Selective anti-protozoal activity against trypanosomes	(EC_{50}) 41.2 μM	49
32		Antifungal activity	(MIC) 1.25 μM	50
33		Antifungal activity	(MIC) 32 μg/mL	51
34		Human histamine H_4 receptor ligand (hH_4R agonist)	(pEC_{50}) 7.47	52
35		Peptide-mimetic antagonists	(IC_{75}) 0.02 μM	53

Table 2 (contd.). Biological activities of purely synthetic guanidines

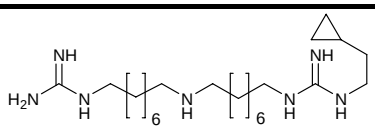
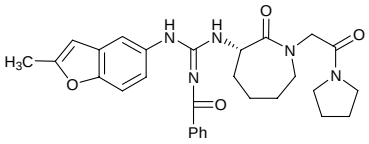
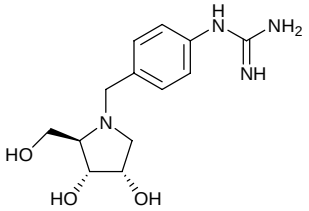
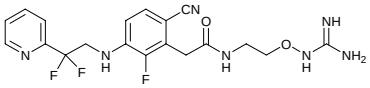
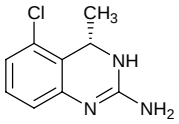
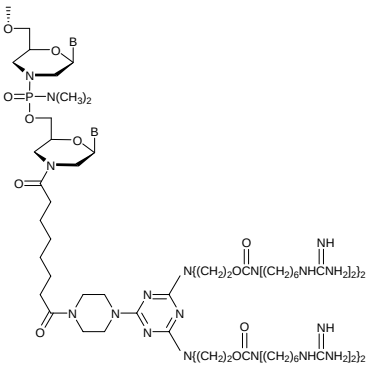
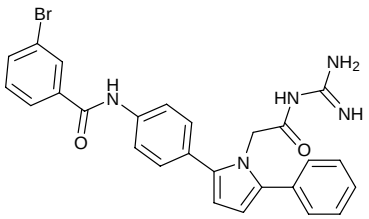
Entry	Guanidine compound	Biological activity	Potency	Ref.
36		Maize polyamine oxidase (PAO) inhibitor	(K_i) 0.08 nM	54
37		Factor Xa inhibitor	(IC_{50}) 6 nM	55
38		IAG-NH inhibitory activity	(K_i) 7.0 ± 1.4 μM	56
39		Thrombin inhibitor	(K_i) 1.2 nM	57
41		5-HT_{5A}/5-HT_7 receptor ligand	(K_i) 1.3 nM	58
42		Induces dystrophin expression	6 mg/kg (Intravenous dose)	59
43		β-secretase inhibitor (BACE-1)	(IC_{50}) 0.60 μM	60

Table 2 (contd.). Biological activities of purely synthetic guanidines

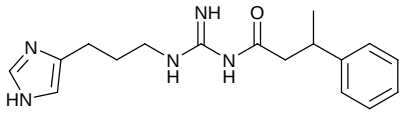
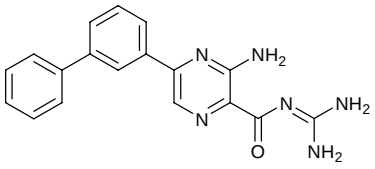
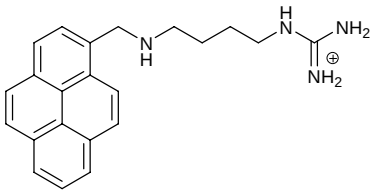
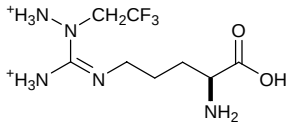
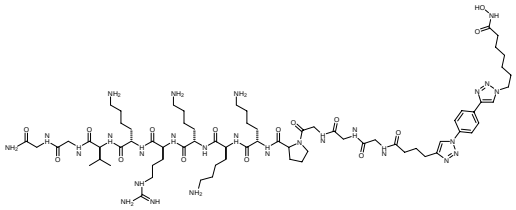
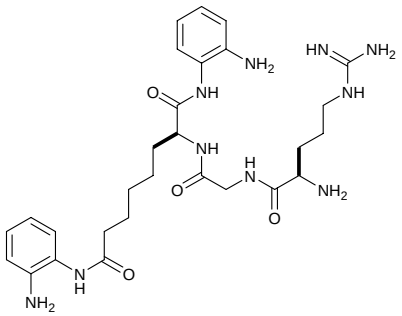
Entry	Structure	Biological activity	Potency	Ref.
44		Histamine H_2-receptor agonist	(pEC_{50}) 7.80± ± 0.07	61
45		Acid-sensing ion channel-3 inhibitor (ASIC3)	(IC_{50}) 0.49 μM ASIC3 titration	62
46		Antiproliferative activity	(IC_{50}) 1.9 μM SKBR3	63
47		iNOS inhibitor	(K_i) 10.5 ± 5.7 μM	64
48		Histone deacetylase inhibitor	(IC_{50}) 14 nM HDAC 1/2	65
49		Histone deacetylase inhibitor	(IC_{50}) 4.7 ± 0.2 μM HDAC1 (IC_{50}) 1.3 ± 0.7 μM HDAC3	66

Table 2 (contd.). Biological activities of purely synthetic guanidines

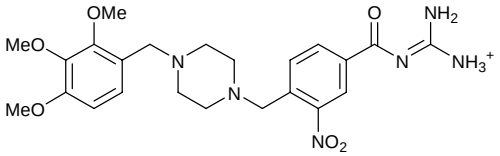
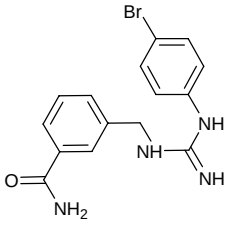
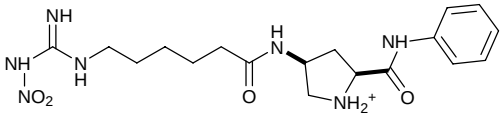
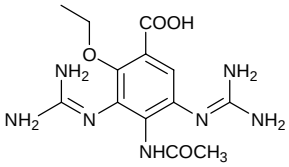
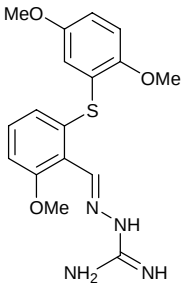
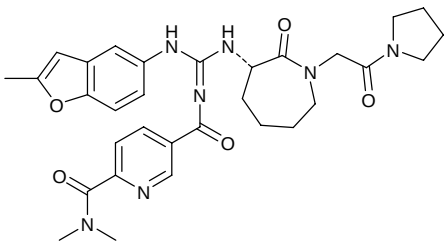
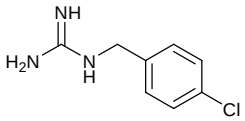
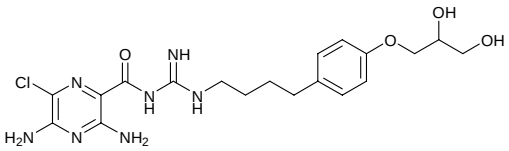
Entry	Structure	Biological activity	Potency	Ref.
50		Na^+/H^+ exchanger inhibitor	(IC_{50}) 3.60 nM	67
51		Cholera toxin inhibitor	(IC_{50}) 31 ± 12 μM	68
52		iNOS inhibitor	(IC_{50}) 2.36 μM	69
53		Neuraminidase inhibitor	(IC_{50}) 0.032 μM	70
54		Apoptosis inducer	(EC_{50}) 0.060 ± 0.003 μM Caspase activation activity (GI_{50}) 0.062 ± 0.013 μM cell growth inhibition	71
55		FXa inhibitor	(IC_{50}) 9 nM (EC_{2xPT}) 2.5 μM	72
56		Inducing weight loss in mice	-19.7 ± 1.0 (BALB/c) -11.0 ± 0.7 (*ob/ob*) -7.3 ± 0.8 (DIO)	73

Table 2 (contd.). Biological activities of purely synthetic guanidines

Entry	Structure	Biological activity	Potency	Ref.
57		ENaC blocker	(IC_{50}) 7.54 ± 2.71 nM CBE (IC_{50}) 6.40 ± 5.93 nM HBE	74