Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary materials

In silico approach: Biological activities prediction of nordentatin derivatives as anticancer agent in cAMP pathway inhibitors

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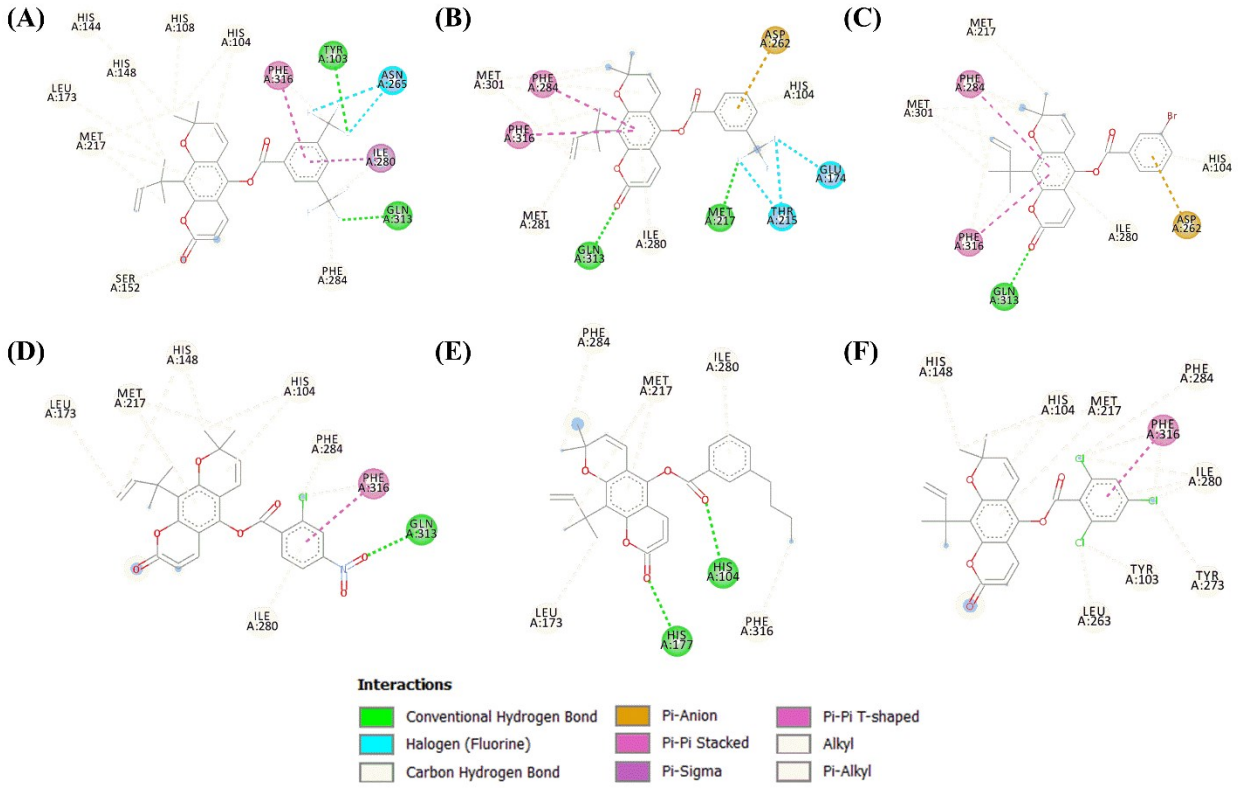

Fig. S1. Types of interactions in each complex of the candidate-receptor: (A) PS-1, (B) PS-2, (C) PS-3, (D) PS-5, (E) PS-7, and (F) PS-9.

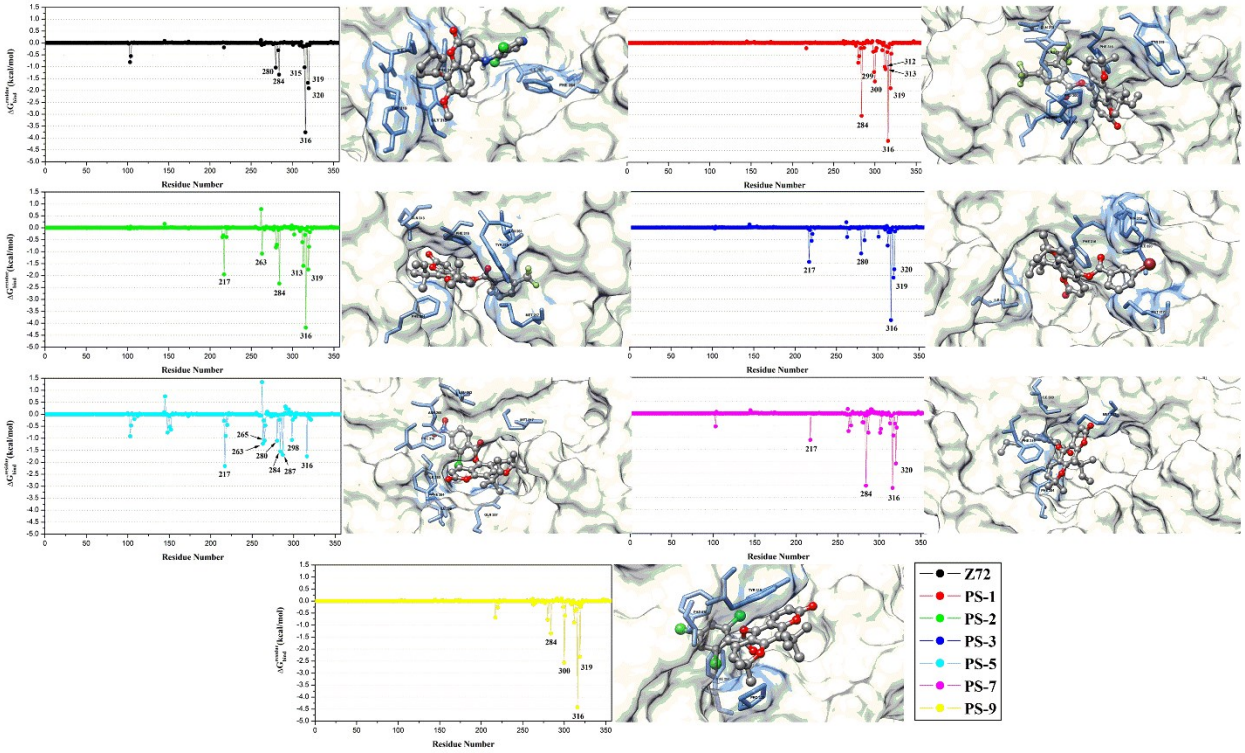

Fig. S2. The residual energy decomposition plotted along with the simulation over the last 20 ns of each complex.

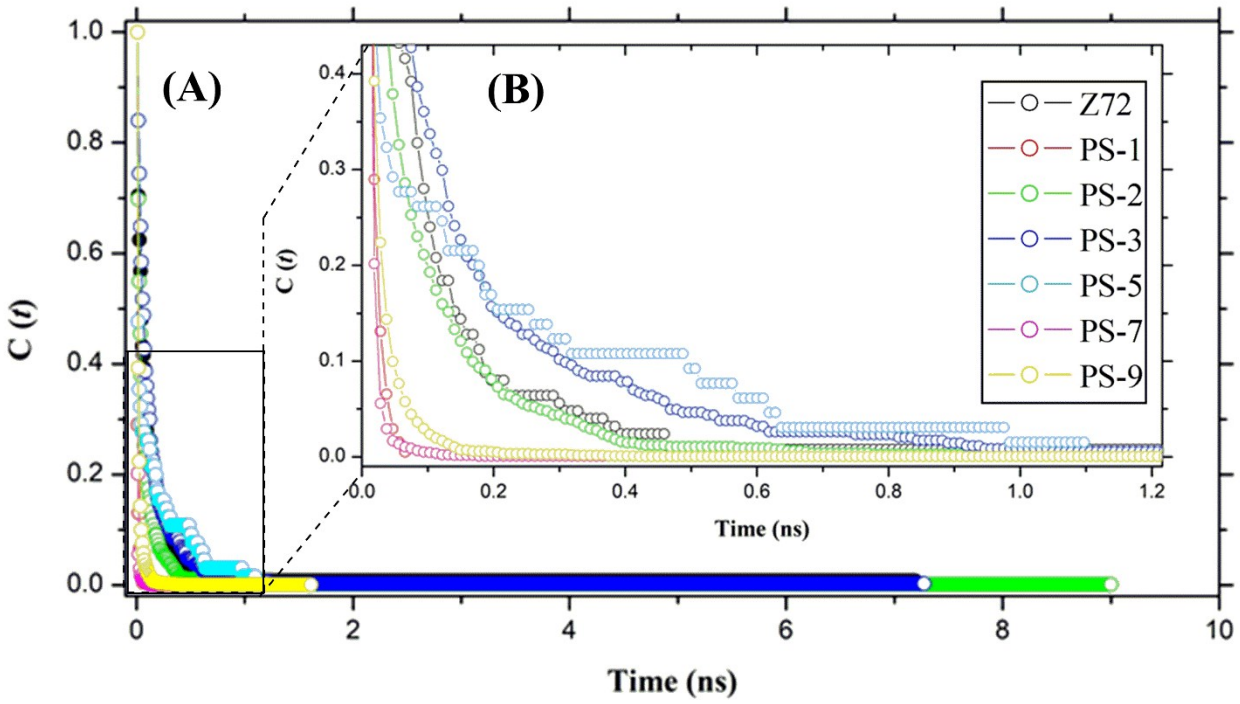

Fig. S3. Lifetime H-bond of each complex

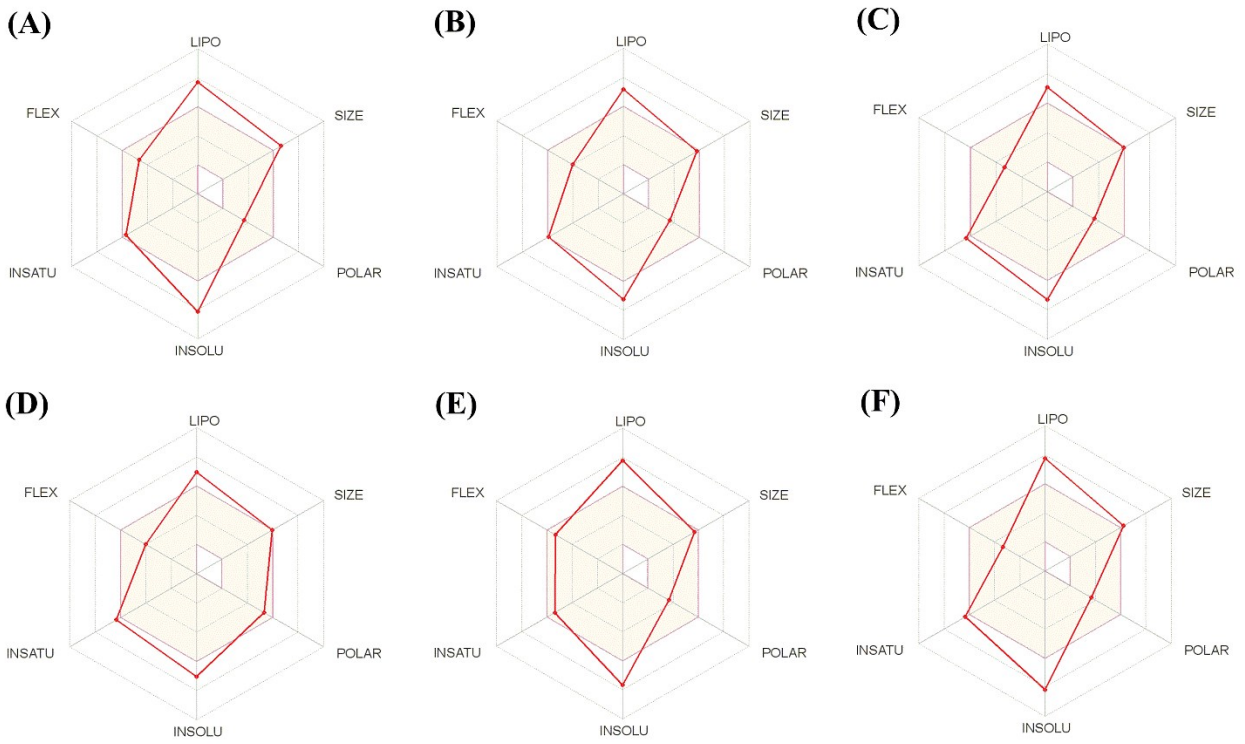

Fig. S4 The suitable physicochemical space for oral bioavailability prediction (A) PS-1, (B) PS-2, (C) PS-3, (D) PS-5, (E) PS-7, and (F) PS-9

Table S1 ADMET prediction of best candidates used pkCSM server

Parameters	PS-1	PS-2	PS-3	PS-5	PS-7	PS-9
Absorption						
Water Solubility (log mol/L)	-6.31	-6.15	-5.95	-5.97	-6.31	-6.30
Caco-2 Permeability (log Papp in 10^{-6} cm/s)	1.30	1.24	1.19	0.83	1.21	1.21
Intestinal Absorption-Human (% Absorbed)	90.56	93.83	95.38	100	95.15	92.22
Skin Permeability (Log Kp)	-2.74	-2.74	-2.74	-2.73	-2.73	-2.74
P-glycoprotein substrate	No	No	No	No	No	No
Distribution						
VDss-Human (log L/Kg)	-0.06	-0.06	-0.04	-0.48	-0.15	0.01
Fraction Unbound-Human (Fu)	0.01	0.03	0.04	0.04	0.05	0.02
BBB Permeability (log BB)	-0.25	-0.26	-0.26	-1.08	-0.41	-0.26
Metabolism						
CYP2D6 Substrate	No	No	No	No	No	No
CYP1A2 Inhibitor	No	No	No	No	No	No
CYP2D6 Inhibitor	No	No	No	No	No	No
Excretion						
Total Clearance (log mL/min/Kg)	-0.36	-0.02	-0.09	0.13	0.36	0.08
Renal OCT2 Substrate	No	No	No	No	No	No
Toxicity						
AMES Toxicity	No	No	No	No	No	No
Max. Tolerated Dose-Human (log mg/Kg/day)	0.53	0.54	0.59	0.39	0.56	0.61
hERG I Inhibitor	No	No	No	No	No	No
Oral Rat Acute Toxicity-LD50 (mol/Kg)	3.46	3.21	2.97	2.54	2.72	3.20
Oral Rat Chronic Toxicity-LOAEL (log mg/Kg_bw/day)	0.71	1.21	1.49	1.33	1.45	1.11
Hepatotoxicity	Yes	Yes	Yes	Yes	No	No
Skin Sensitisation	No	No	No	No	No	No