Supplementary Material

Table S1. Experimental and predicted pIC_{50} for the test compounds

| Test set | | HQSAR | | | CoMFA | | CoMSIA | |
Compound	Exp. pIC_{50}	Pred. pIC_{50}	Residual	Pred. pIC_{50}	Residual	Pred. pIC_{50}	Residual
7	5.02	5.02	0.00	5.10	0.076	5.17	-0.145
8	4.52	4.57	-0.05	4.56	0.034	4.52	0.003
19	4.91	4.89	0.02	4.90	-0.010	4.80	0.112
23	4.52	4.51	0.01	4.53	0.011	4.50	0.026
29	4.82	4.72	0.10	4.71	-0.111	4.78	0.040
32	4.56	4.65	-0.09	4.63	0.064	4.51	0.051
34	5.24	5.38	-0.15	5.24	0.001	5.23	0.005
37	4.98	4.94	0.04	4.99	0.010	4.98	-0.005
42	4.59	4.48	0.11	4.54	-0.051	4.52	0.068
43	5.11	4.99	0.12	5.01	-0.104	5.15	-0.033

Table S2. Descriptors calculated for the compounds used in this study

cpd	pIC$_{50}$	TopoPSA	MW	LogP	PFP1	PFP 2	PFP 9	PFP 10	PFP 11	PFP12	PFP 18	PFP 19	PFP 20	PFP 178	PFP 182
1	4.79	36.92	368.20	6.10	1	1	1	1	1	1	1	1	1	1	1
2	4.52	36.92	382.21	6.49	1	1	1	1	1	1	1	1	1	1	1
3	4.52	36.92	366.18	5.80	1	1	1	1	1	1	1	1	1	1	1
4	5.10	53.99	368.16	5.97	1	1	1	1	1	1	1	1	1	1	1
5	5.00	53.99	382.18	6.36	1	1	1	1	1	1	1	1	1	1	1
6	4.52	36.92	354.18	5.70	1	1	1	1	1	1	1	1	1	1	1
7	5.02	36.92	402.18	7.60	1	1	1	1	1	1	1	1	1	1	1
8	4.52	36.92	420.23	7.14	1	1	1	1	1	1	1	1	1	1	1
9	4.52	36.92	358.21	6.30	1	1	1	1	1	1	1	1	1	1	1
10	4.52	36.92	372.23	6.69	1	1	1	1	1	1	1	1	1	1	1
11	4.52	36.92	386.25	7.08	1	1	1	1	1	1	1	1	1	1	1
12	5.03	36.92	370.21	6.39	1	1	1	1	1	1	1	1	1	1	1
13	4.52	47.92	330.18	5.98	1	1	1	1	1	1	1	1	1	1	1
14	4.88	36.92	344.20	5.91	1	1	1	1	1	1	1	1	1	1	1
15	4.52	53.99	372.19	6.56	1	1	1	1	1	1	1	1	1	1	1

16	4.52	53.99	386.21	6.95	1	1	1	1	1	1	1	1	1	1	1
17	5.12	47.92	326.15	5.38	1	1	1	1	1	1	1	1	1	1	1
18	4.06	47.92	326.15	5.77	1	1	1	1	1	1	1	1	1	1	1
19	4.91	36.92	340.17	5.71	1	1	1	1	1	1	1	1	1	1	1
20	4.52	71.06	372.16	4.50	1	1	1	1	1	1	1	1	1	1	1
21	4.52	77.38	376.19	4.21	1	1	1	1	1	1	1	1	1	1	1
22	4.52	88.38	362.17	3.92	1	1	1	1	1	1	1	1	1	1	1
23	4.52	77.38	376.19	3.85	1	1	1	1	1	1	1	1	1	1	1
24	4.52	71.06	316.09	3.60	1	1	1	1	1	1	1	1	1	1	1
25	4.52	79.44	458.10	6.05	1	1	1	1	1	1	1	1	1	1	1
26	4.52	47.92	328.17	5.68	1	1	1	1	1	1	1	1	1	1	1
27	4.52	36.92	340.17	5.31	1	1	1	1	1	1	1	1	1	1	1
28	4.52	58.92	298.12	4.33	1	1	1	1	1	1	1	1	1	1	1
29	4.82	57.15	356.16	4.46	1	1	1	1	1	1	1	1	1	1	1
30	4.52	36.92	312.14	4.93	1	1	1	1	1	1	1	1	1	1	1
31	4.55	64.99	340.13	4.62	1	1	1	1	1	1	1	1	1	1	1
32	4.56	53.99	354.15	4.92	1	1	1	1	1	1	1	1	1	1	1
33	5.37	71.06	382.14	5.61	1	1	1	1	1	1	1	1	1	1	1
34	5.24	71.06	396.16	6.00	1	1	1	1	1	1	1	1	1	1	1

	pIC50	TopoPSA	MW	LogP	PFP										
35	4.96	27.69	310.16	5.31	1	1	1	1	1	1	1	1	1	1	1
36	4.78	47.92	328.17	5.68	1	1	1	1	1	1	1	1	0	1	1
37	4.98	47.92	328.17	5.68	1	1	1	1	1	1	1	1	1	1	1
38	4.93	36.92	342.18	5.61	1	1	1	1	1	1	1	1	1	1	1
39	5.26	46.15	450.24	7.15	1	1	1	1	1	1	1	1	1	1	1
40	5.07	57.15	434.21	6.92	1	1	1	1	1	1	1	1	1	1	1
41	4.87	46.15	448.22	6.85	1	1	1	1	1	1	1	1	1	1	1
42	4.59	36.92	300.14	4.66	1	1	1	1	1	1	1	1	1	1	1
43	5.11	38.69	296.14	5.37	1	1	1	1	1	1	1	1	1	1	1
44	4.94	36.92	416.20	6.55	1	1	1	1	1	1	1	1	0	1	1
45	4.65	38.69	296.14	5.37	1	1	1	1	1	1	1	1	1	1	1
46	4.96	36.92	416.20	6.55	1	1	1	1	1	1	1	1	0	1	1
47	4.52	36.92	300.14	4.66	1	1	1	1	1	1	1	1	1	1	1
48	4.52	46.15	406.18	5.90	1	1	1	1	1	1	1	1	1	1	1
49	4.52	36.92	326.15	5.14	1	1	1	1	1	1	1	1	1	1	1
50	4.52	46.15	406.18	5.90	1	1	1	1	1	1	1	1	1	1	1

IC_{50}: Half-maximal inhibitory concentration; pIC_{50}: -log IC_{50}; **TopoPSA:** Topological polar surface area; **MW**: Molecular weight; **LogP:** Partition coefficient of a molecule between aqueous and lipophilic phases (in general, water and octanol, respectively); **PFP:** PubChem fingerprint.

A)

Applicability domain - HQSAR

B)

Applicability domain - CoMFA

C)

Applicability domain - CoMSIA
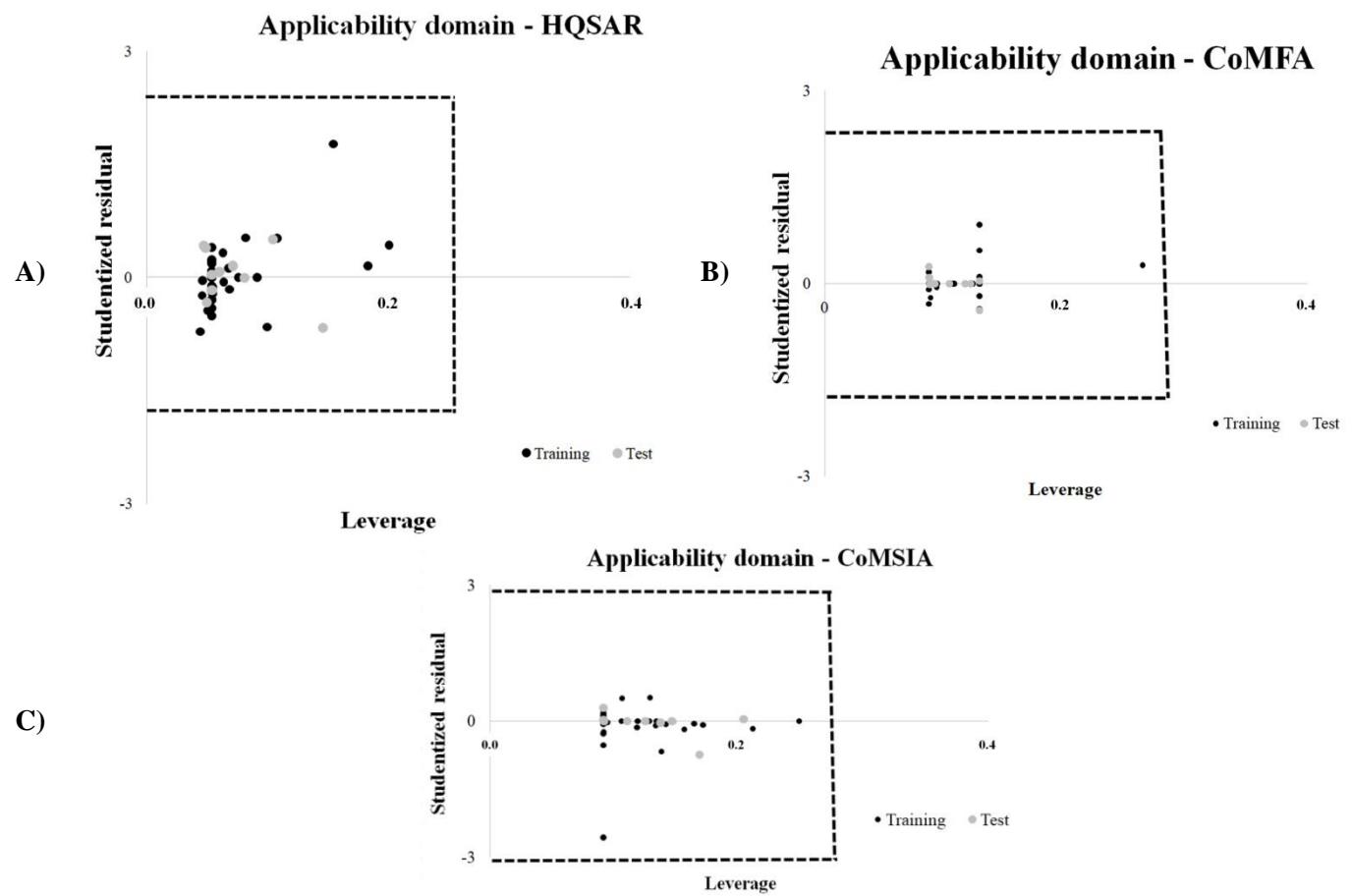
Figure S1. Plot of Leverage *versus* Studentized residuals for (A) HQSAR, (B) CoMFA and (C) CoMSIA (black dots represent the training set and grey dots represents the test compounds).

A)

B)

C)
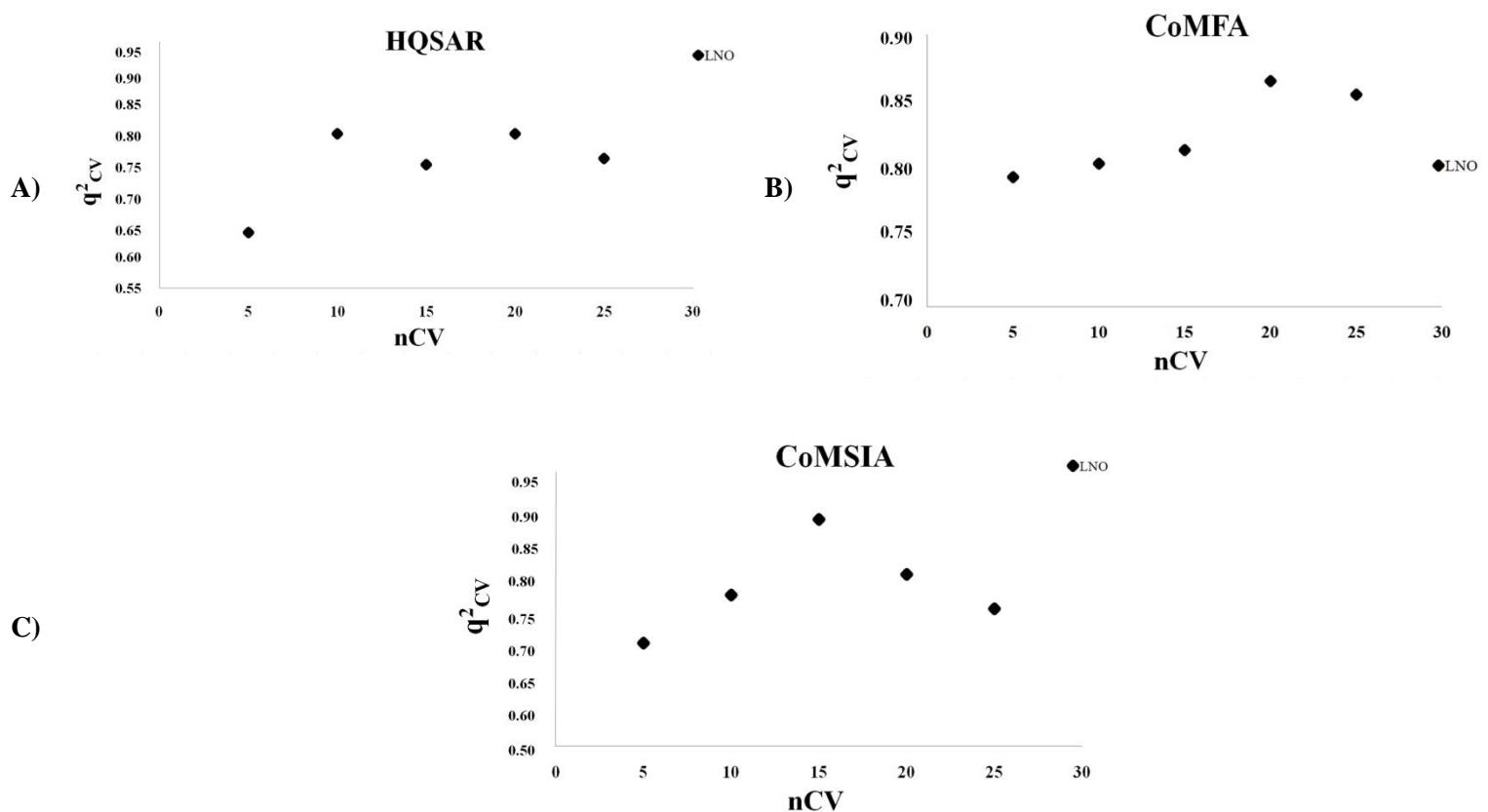
Figure S2. Results from the cross-validation (LNO) of the obtained models: (A) HQSAR, (B) CoMFA and (C) CoMSIA.
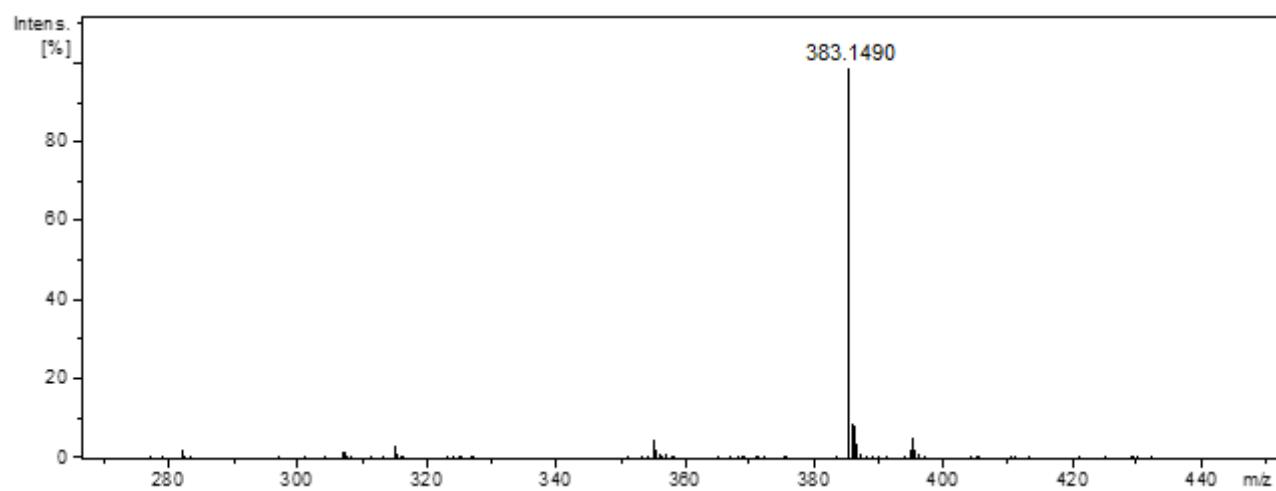
Figure S3. HRESIMS spectrum (positive mode) of compound **7.**

δ 7.45 (d, J = 1.8 Hz, H-2), 7.32 (d, J = 1.8 Hz, H-6), 7.01 (dd, J = 17.1 and 10.6, H-8), 6.95 (d, J = 8.1 Hz, H-5'), 6.82 (d, J = 1.8 Hz, H-2'), 6.76 (dd, J = 8.1 and 1.8 Hz, H-6'), 6.37 (dd, J = 17.1 and 1.8 Hz, H-9a), 6.00 (m, H-8'), 5.82 (dd, J = 10.6 e 1.8, H-9b), 5.10 (m, H-9'), 3.99 (s, 5-OCH₃), 3.86 (s, 3'-OCH₃), 3.38 (d, J = 6.6 Hz, H-7'), 2.01 (s, CH₃ acetyl).
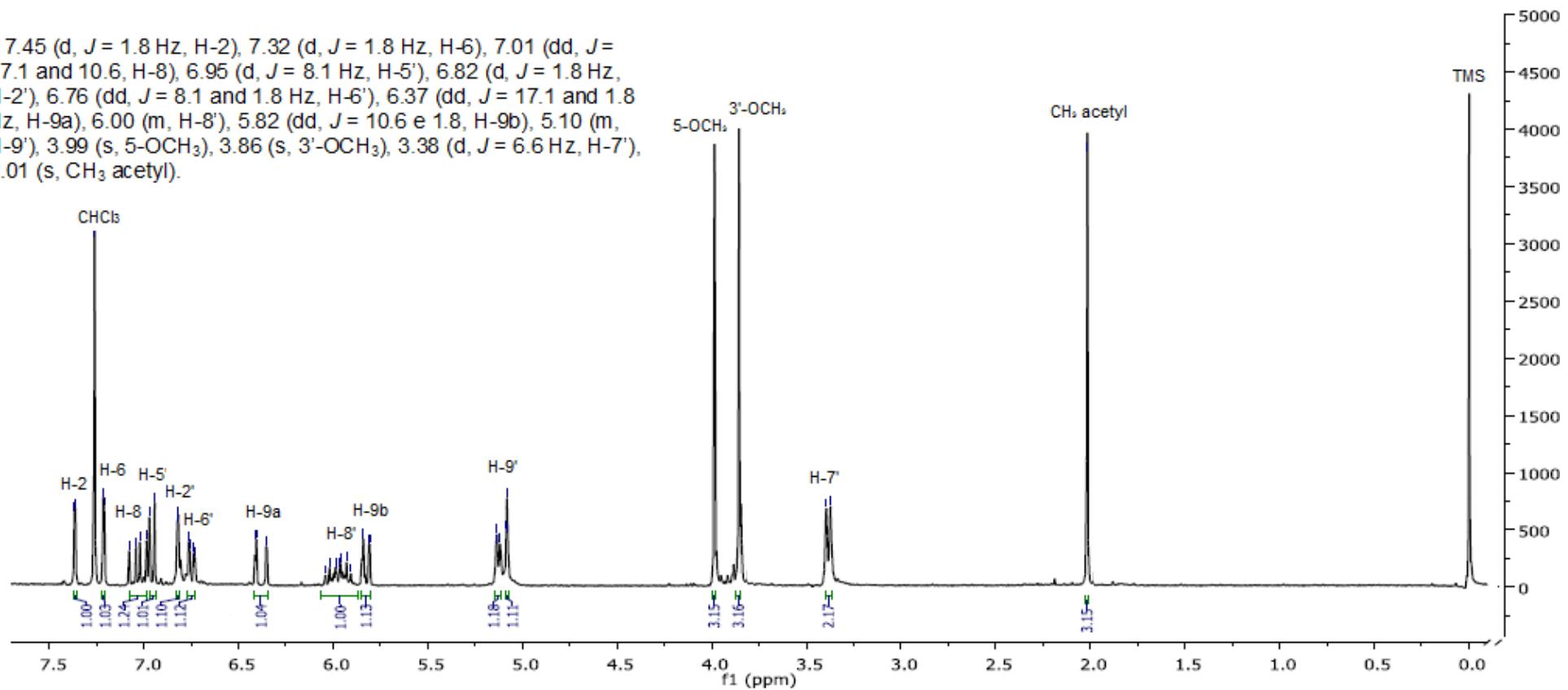
Figure S4. ¹H NMR spectrum of compound **7** (δ, 300 MHz, CDCl₃)**.**

δ 192.3 (C-7), 168.9 (C=O acetyl), 152.5 (C-5), 150.5 (C-3'), 150.1 (C-3), 143.2 (C-4'), 137.3 (C-8'), 136.6 (C-4), 135.1 (C-1), 131.7 (C-8), 129.5 (C-9), 121.1 (C-6'), 120.0 (C-5'), 116.2 (C-9'), 113.1 (C-2'), 112.0 (C-2), 106.8 (C-6), 56.7 (5-OCH$_3$), 56.0 (3'-OCH$_3$), 40.0 (C-7'), 20.1 (CH$_3$ acetyl)
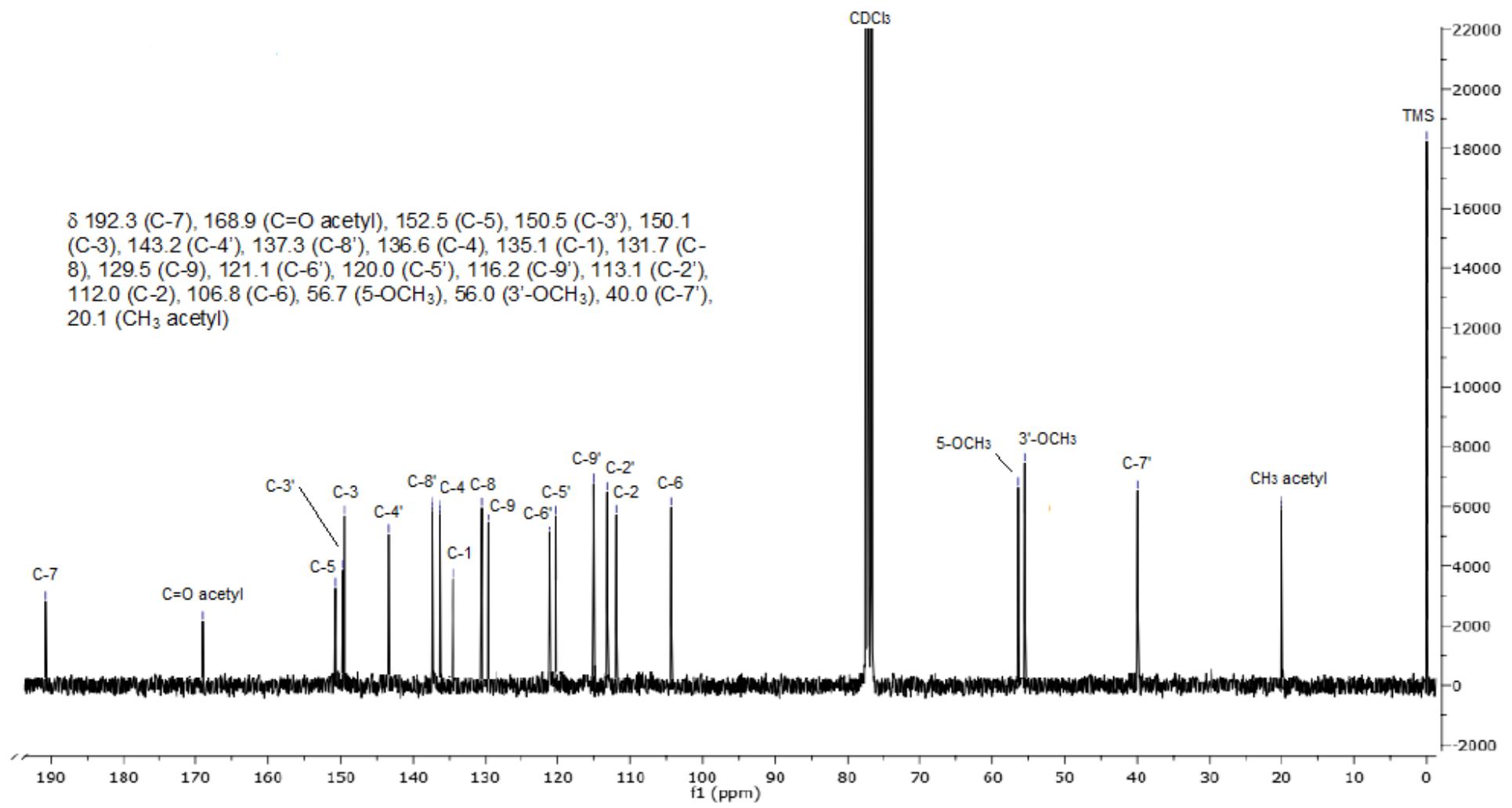
Figure S5. ^{13}C NMR spectrum of compound **7** (δ, 75 MHz, CDCl$_3$)**.**
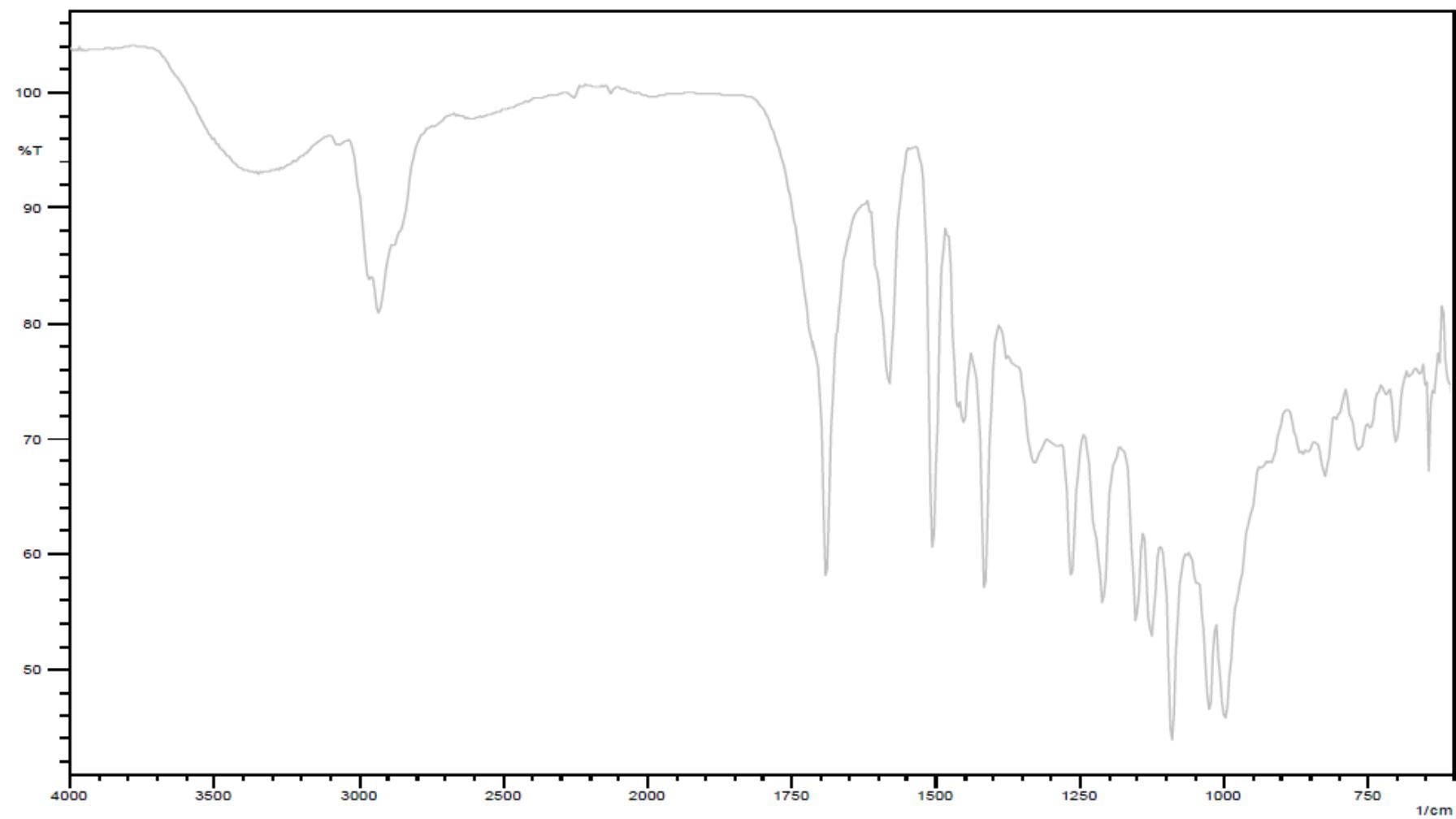
Figure S6. IR spectrum of compound **7.**