

SUPPORTING INFORMATION

Development of Hydroxamate-Based Histone Deacetylase Inhibitors of Bis-substituted Aromatic Amides with Antitumor Activities

Di Ge,^{1,#} Lina Han,^{1,#} Feifei Yang,^{1,2,#,*} Na Zhao,¹ Yang Yang,² Hua Zhang,^{1,*} and Yihua Chen^{2,*}

^{a,1}School of biological science and technology, University of Jinan, Jinan, Shandong Province 250022, China

^{b,2}Shanghai Key Laboratory of Regulatory Biology, The Institute of Biomedical Sciences and School of Life Sciences, East China Normal University, Shanghai, 200241, China.

^{c,*}Corresponding Authors: Dr. Yihua Chen or Dr. Hua Zhang or Dr. Feifei Yang, E-mail: yhchen@bio.ecnu.edu.cn or bio_zhangh@ujn.edu.cn or yee68511@126.com.

^{d,#} These authors contribute equally to this research work.

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Compound 9a

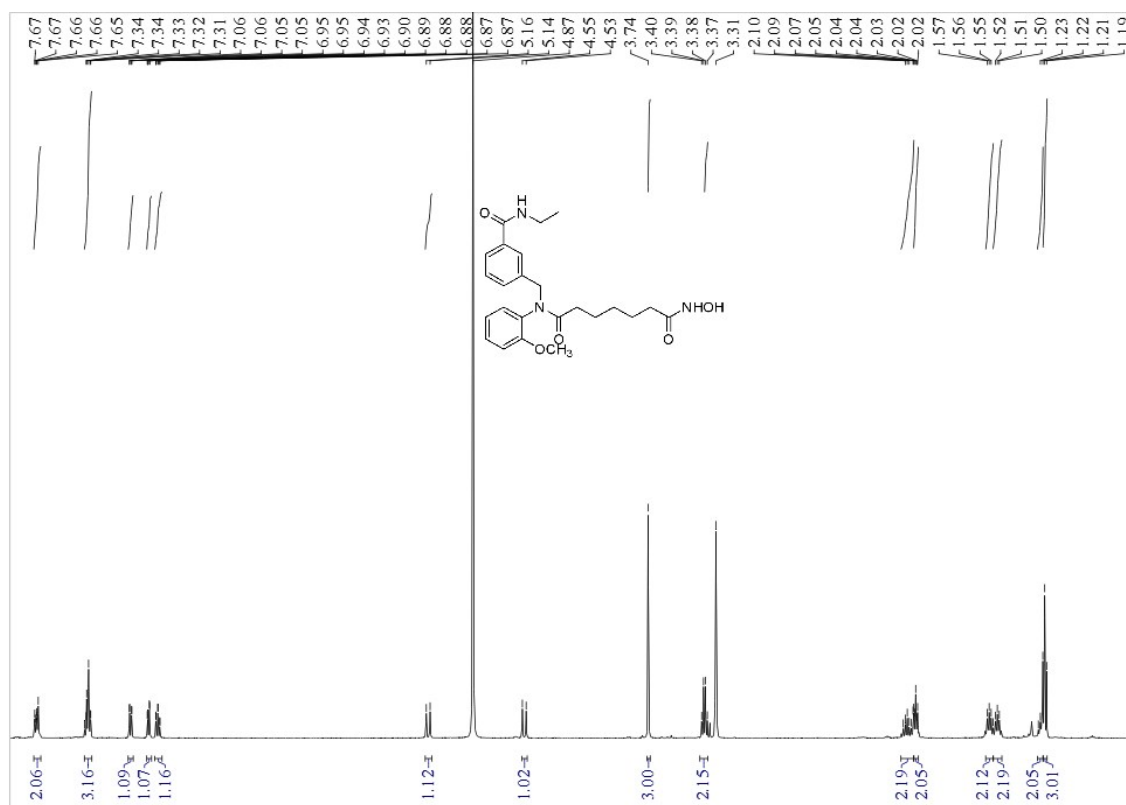


Fig. S1. The ^1H NMR spectrum for 9a

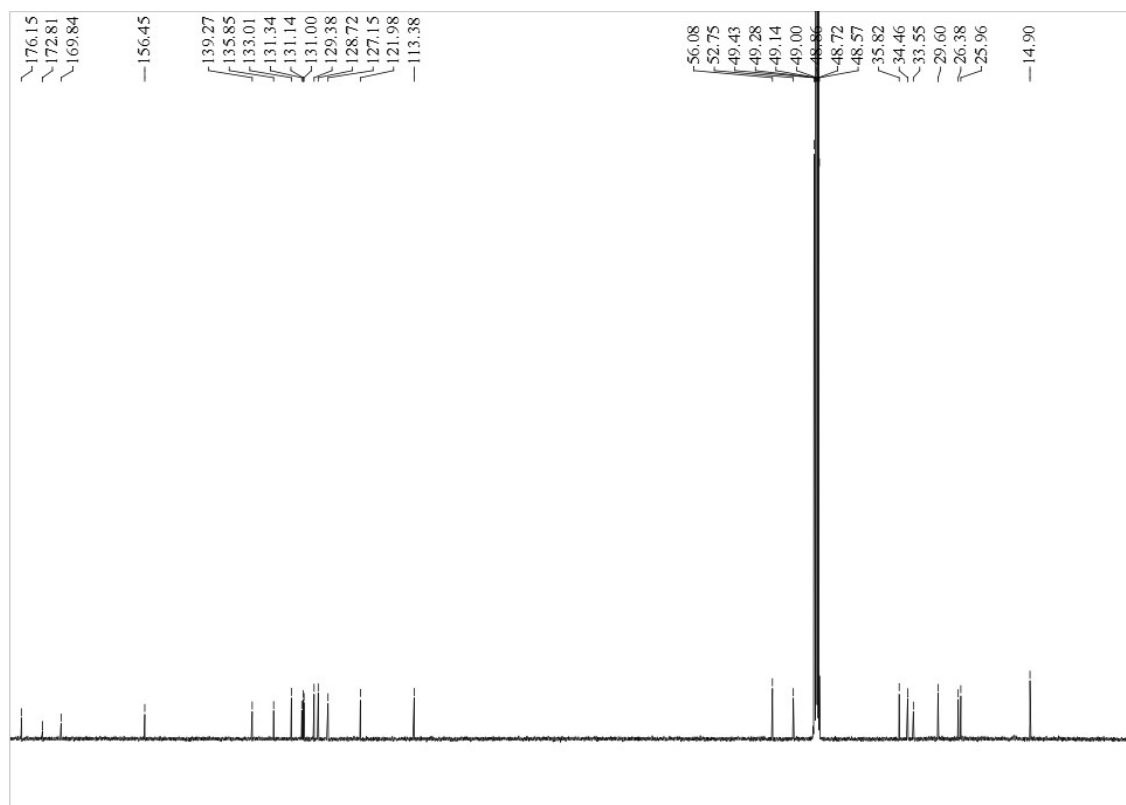


Fig. S2. The ^{13}C NMR spectrum for 9a

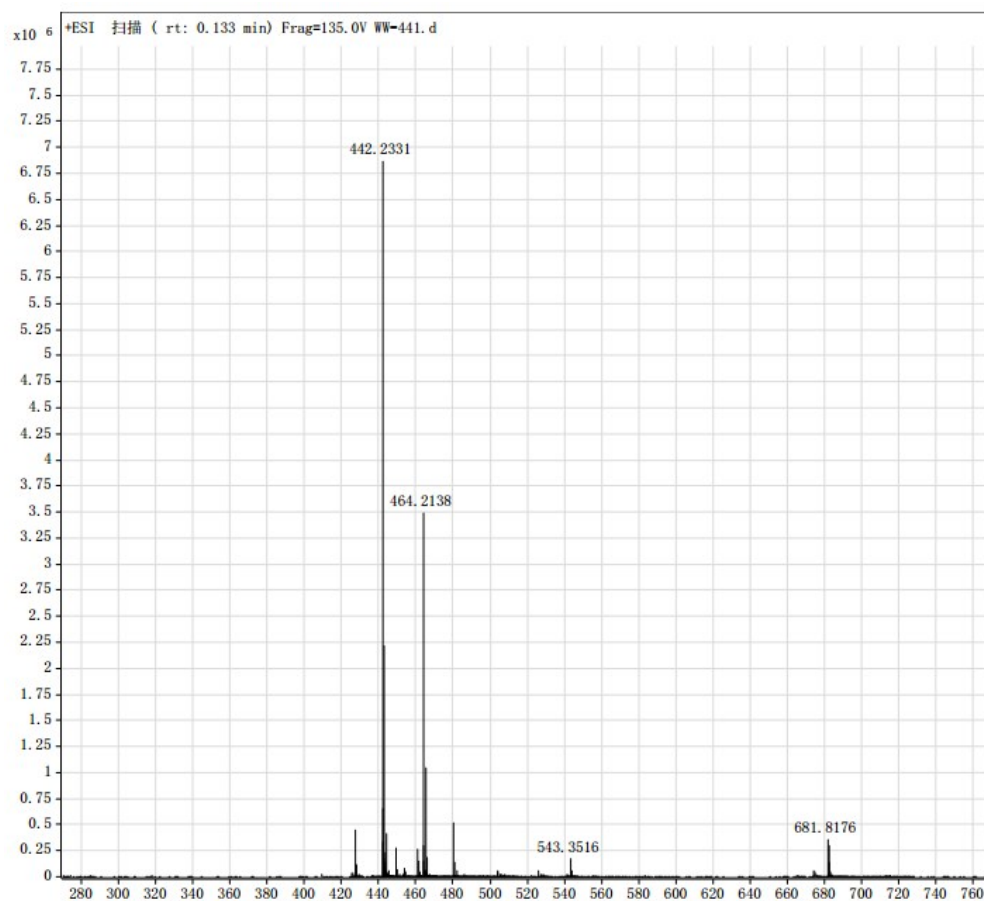
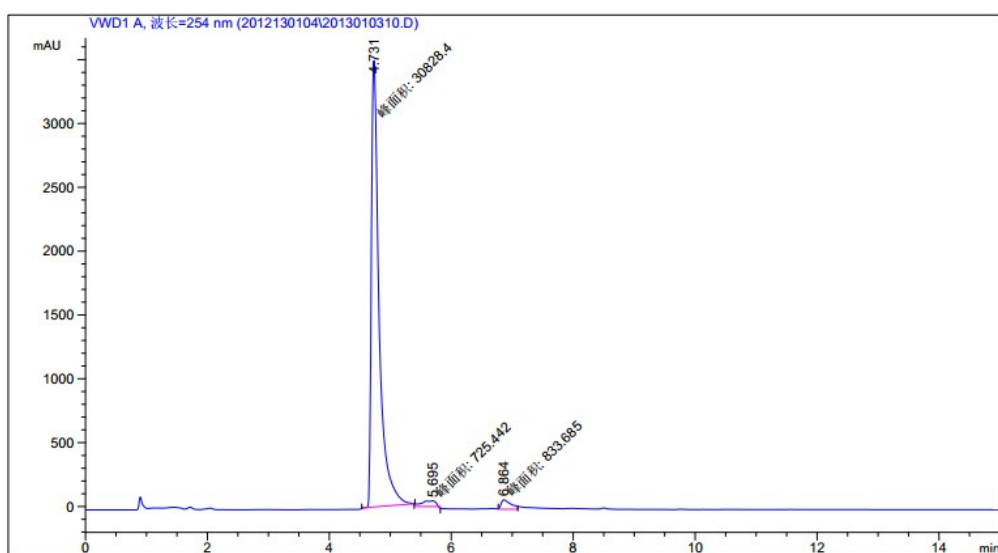


Fig. S3. The HR-ESIMS spectrum for **9a**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU * s	峰高 [mAU]	峰面积 %
1	4.731	MM	0.1469	3.08284e4	3496.65088	95.1860
2	5.695	MM	0.2726	725.44232	44.34676	2.2399
3	6.864	MM	0.1883	833.68469	73.78939	2.5741

Fig. S4. The HPLC analysis for **9a**

Compound 9b

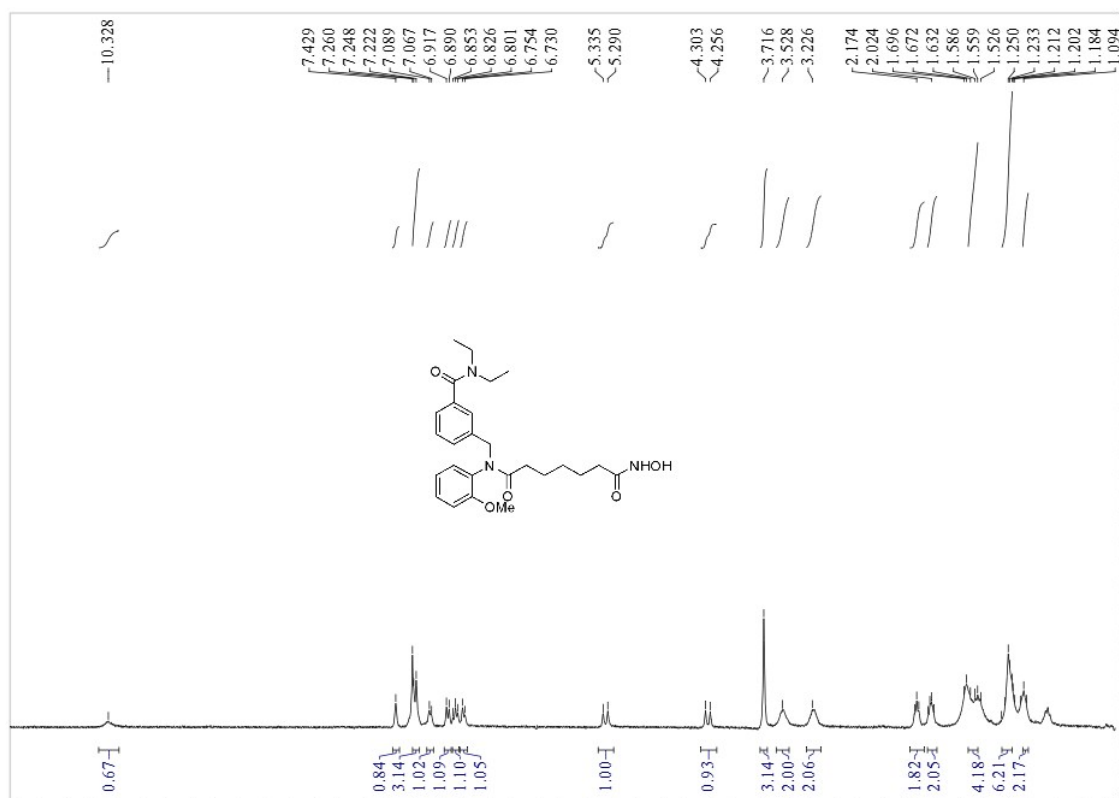


Fig. S5. The ¹H NMR spectrum for 9b

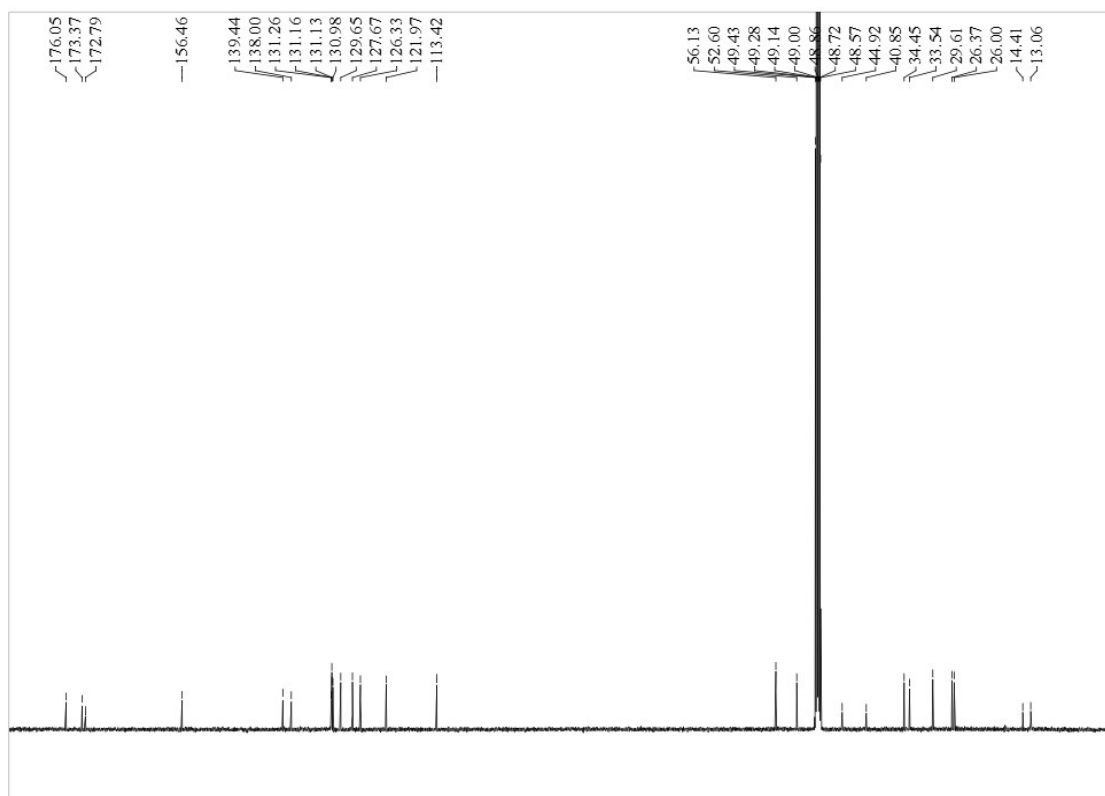


Fig. S6. The ¹³C NMR spectrum for 9b

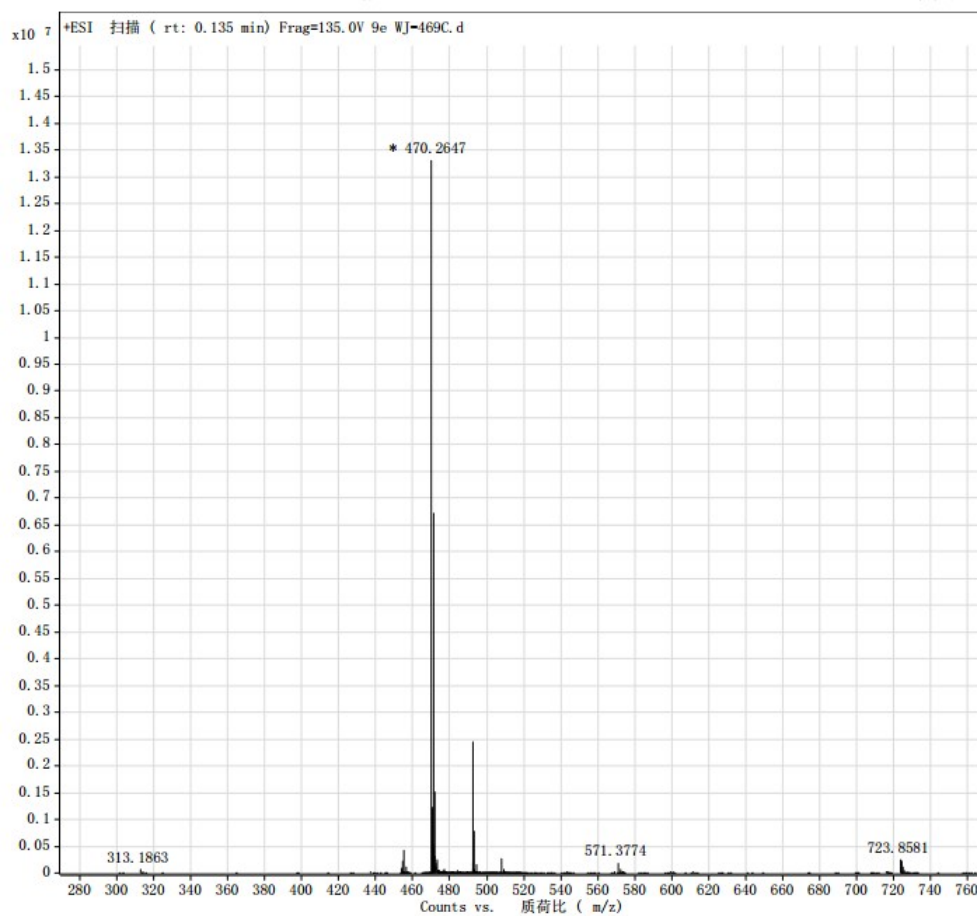
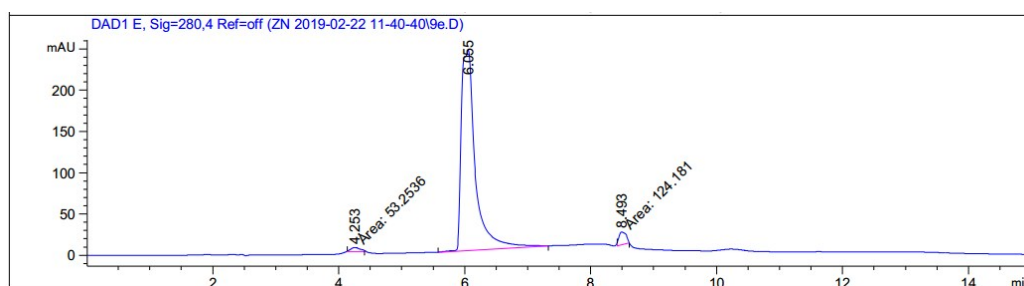


Fig. S7. The HR-ESIMS spectrum for **9b**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	4.253	MM	0.1795	53.25361	4.94464	1.3694
2	6.055	BB	0.2003	3711.28345	242.81841	95.4372
3	8.493	MP	0.1310	124.18118	15.79464	3.1934

Fig. S8. The HPLC analysis for **9b**

Compound 9c



Fig. S9. The ^1H NMR spectrum for **9c**

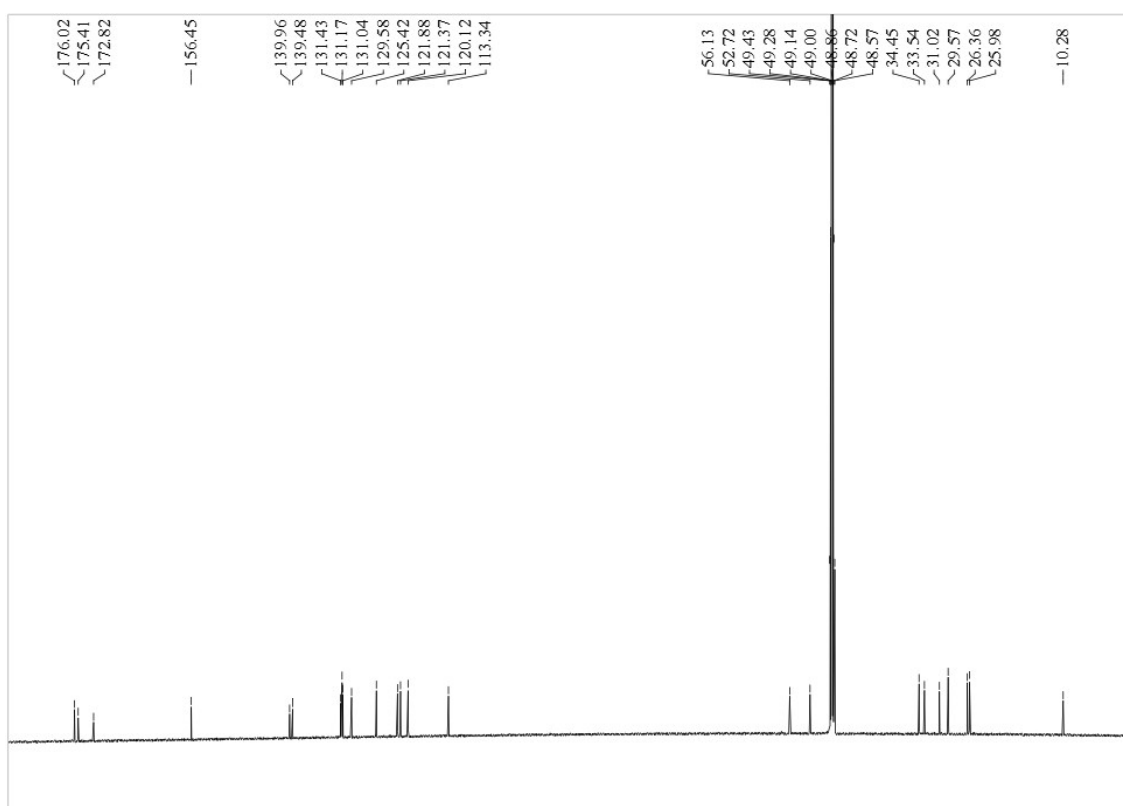


Fig. S10. The ^{13}C NMR spectrum for **9c**

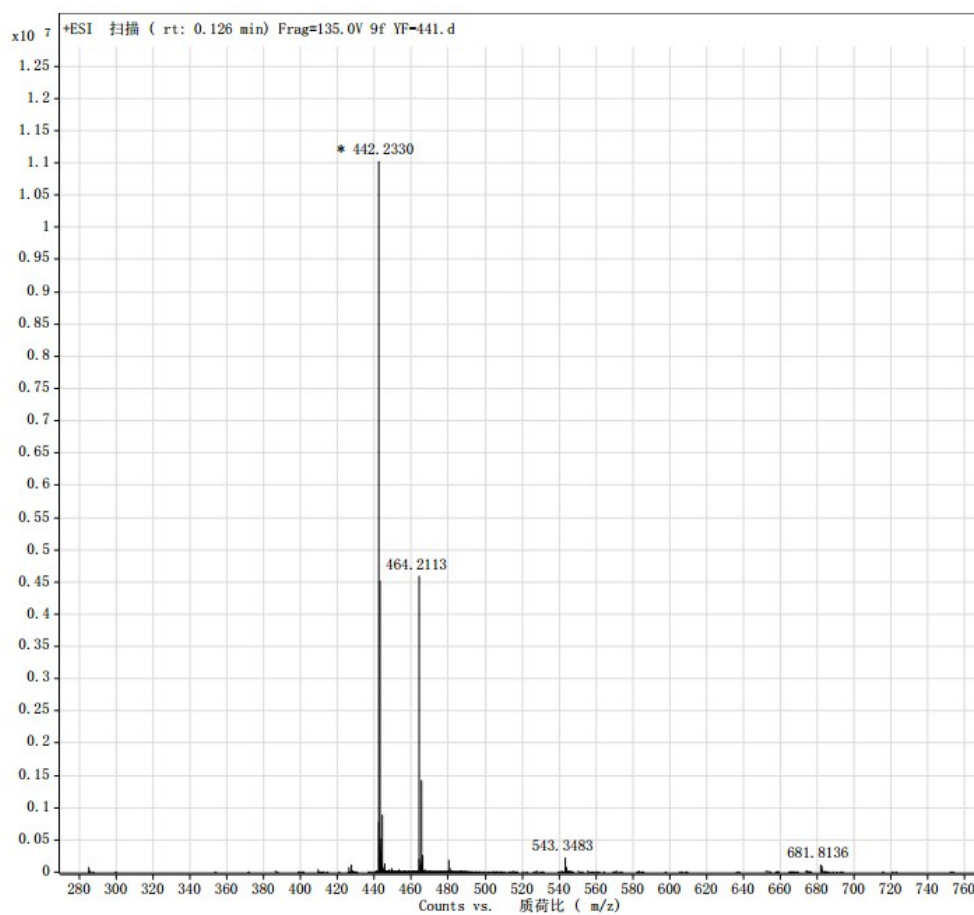
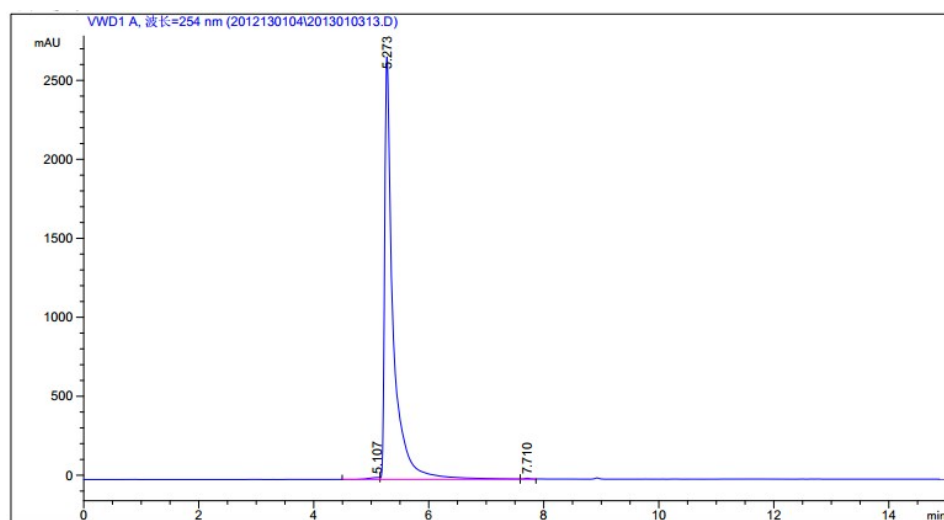


Fig. S11. The HR-ESIMS spectrum for **9c**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU *s	峰高 [mAU]	峰面积 %
1	5.107	BV	0.1834	157.59911	12.26621	0.5697
2	5.273	VV	0.1414	2.74423e4	2676.70703	99.2025
3	7.710	VV	0.1276	63.01712	6.85628	0.2278

Fig. S12. The HPLC analysis for **9c**

Compound 9d

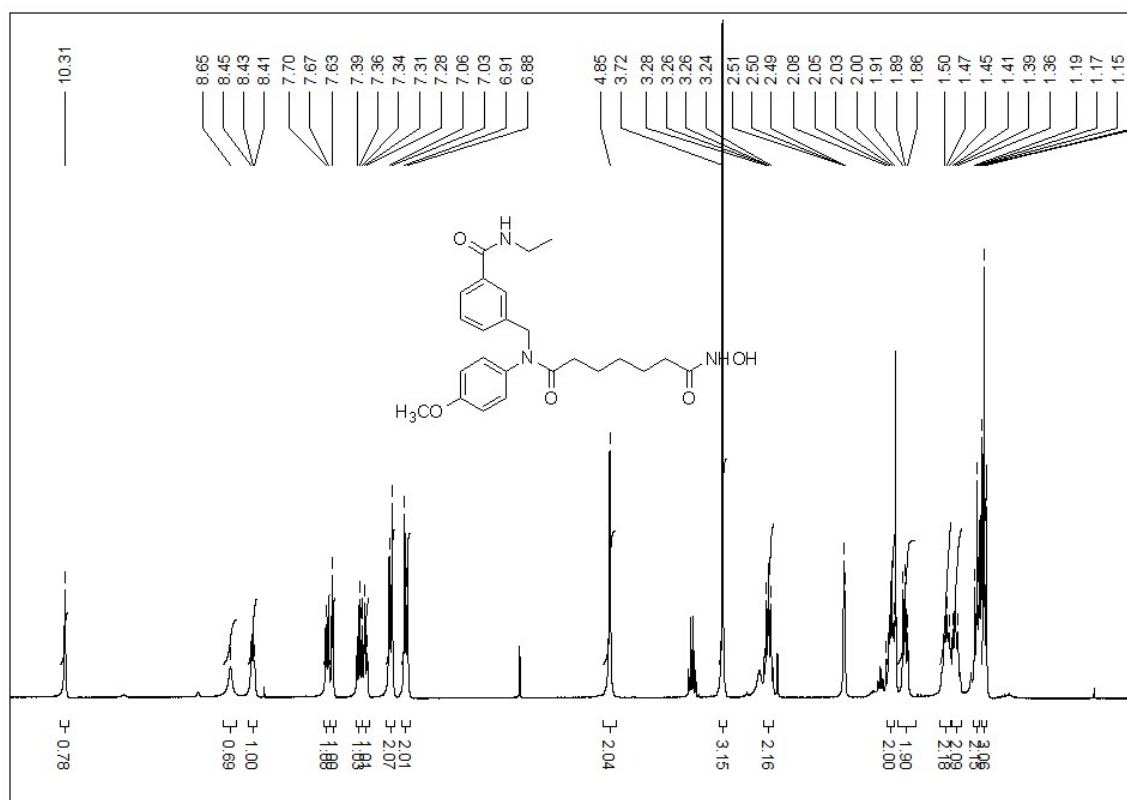


Fig. S13. The ¹H NMR spectrum for 9d

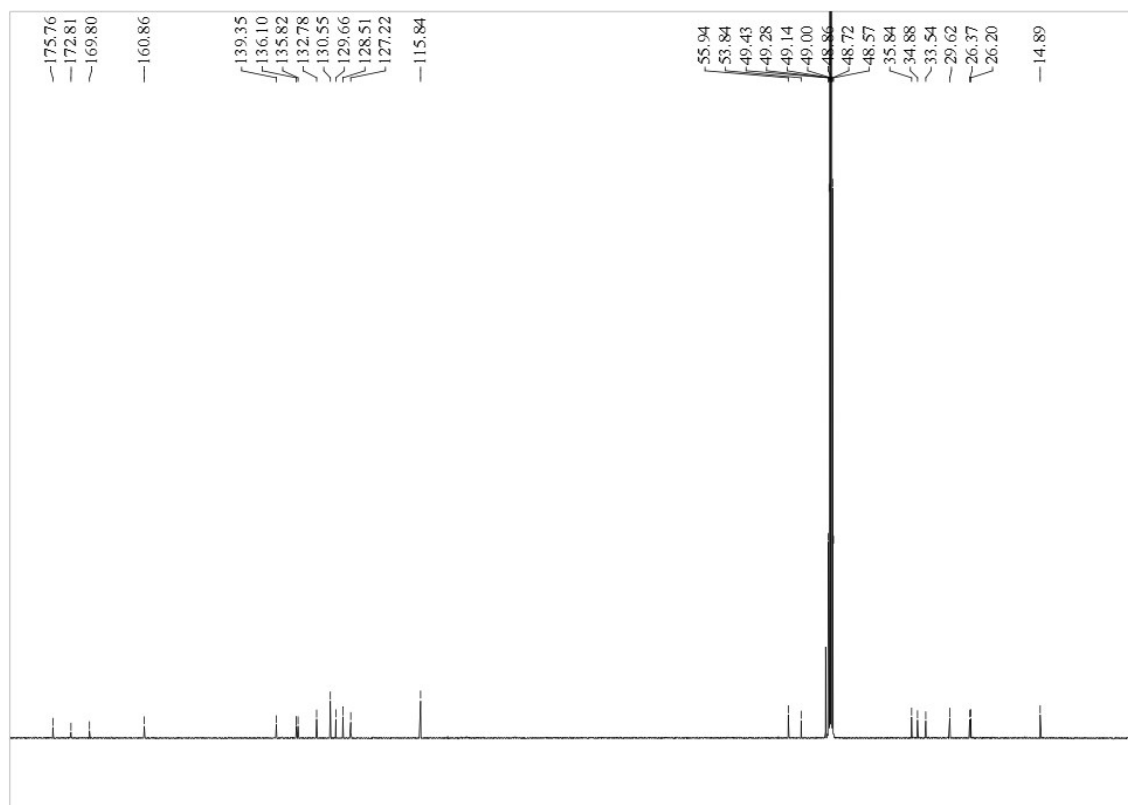


Fig. S14. The ¹³C NMR spectrum for 9d

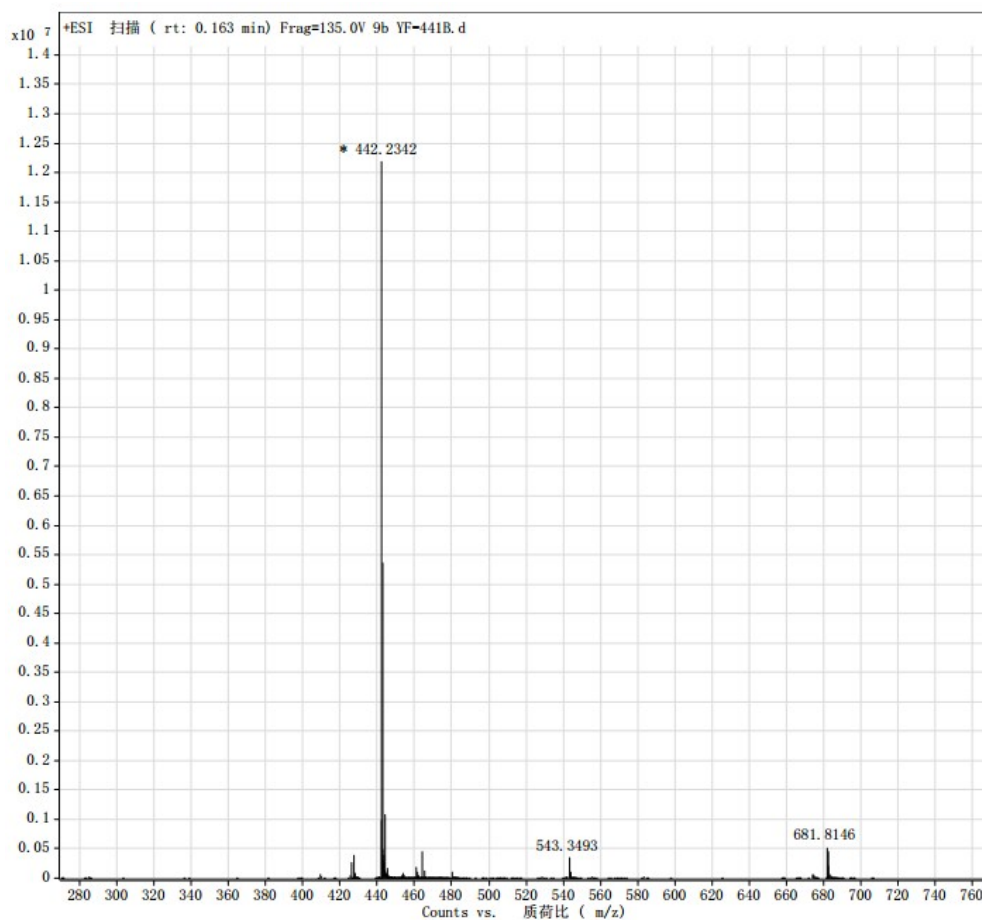
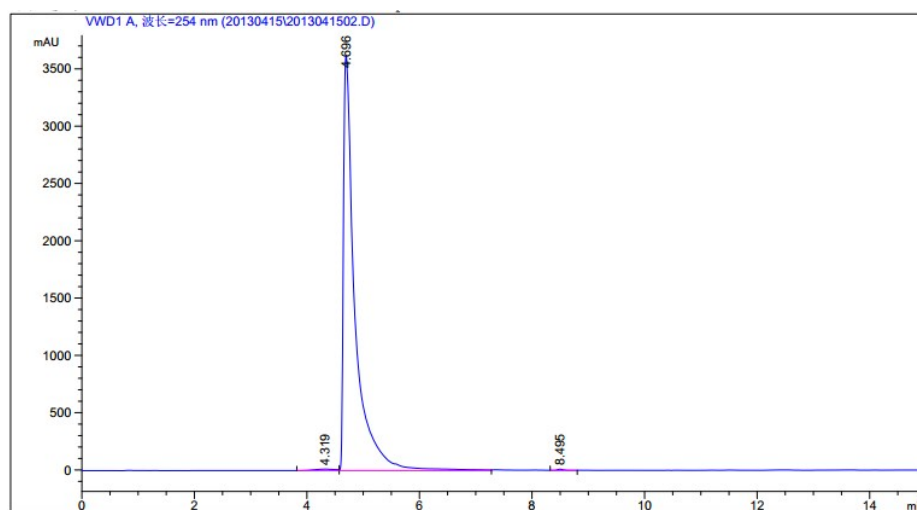


Fig. S15. The HR-ESIMS spectrum for **9d**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU *s	峰高 [mAU]	峰面积 %
1	4.319	BV	0.3935	316.63889	12.54346	0.6050
2	4.696	VV	0.2038	5.18833e4	3616.97949	99.1309
3	8.495	VB	0.1494	138.23090	12.50373	0.2641

Fig. S16. The HPLC analysis for **9d**

Compound 9e

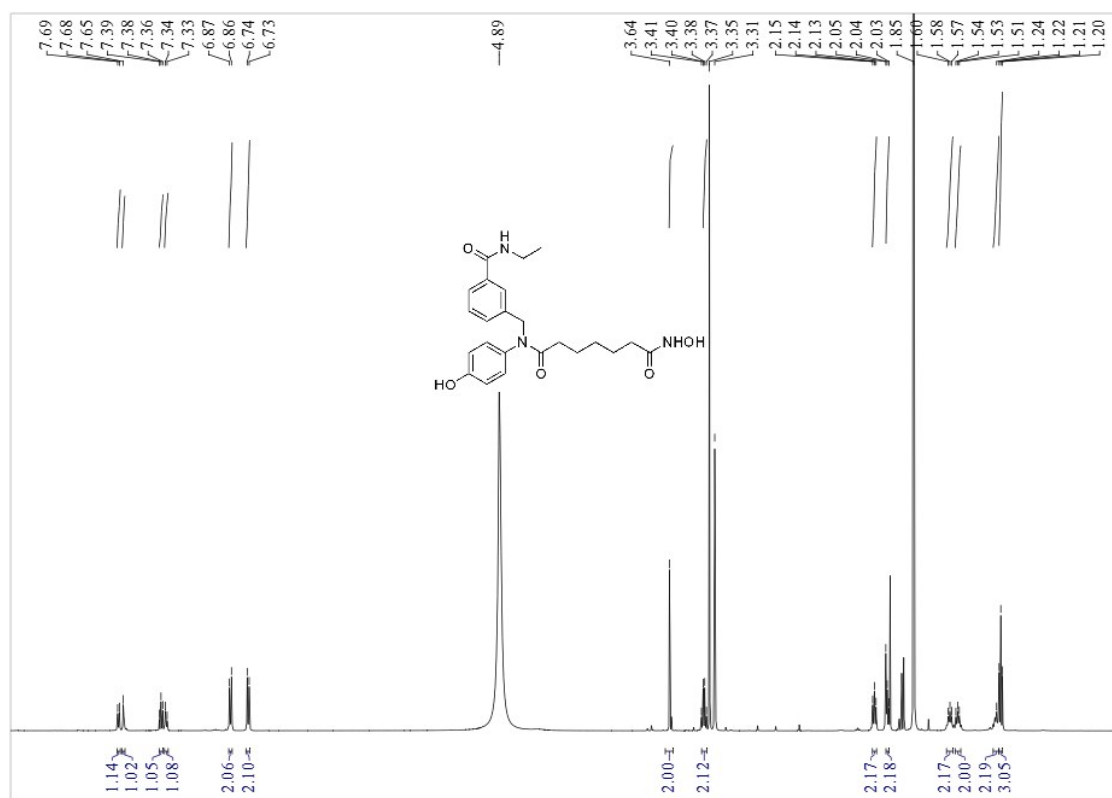


Fig. S17. The ¹H NMR spectrum for 9e

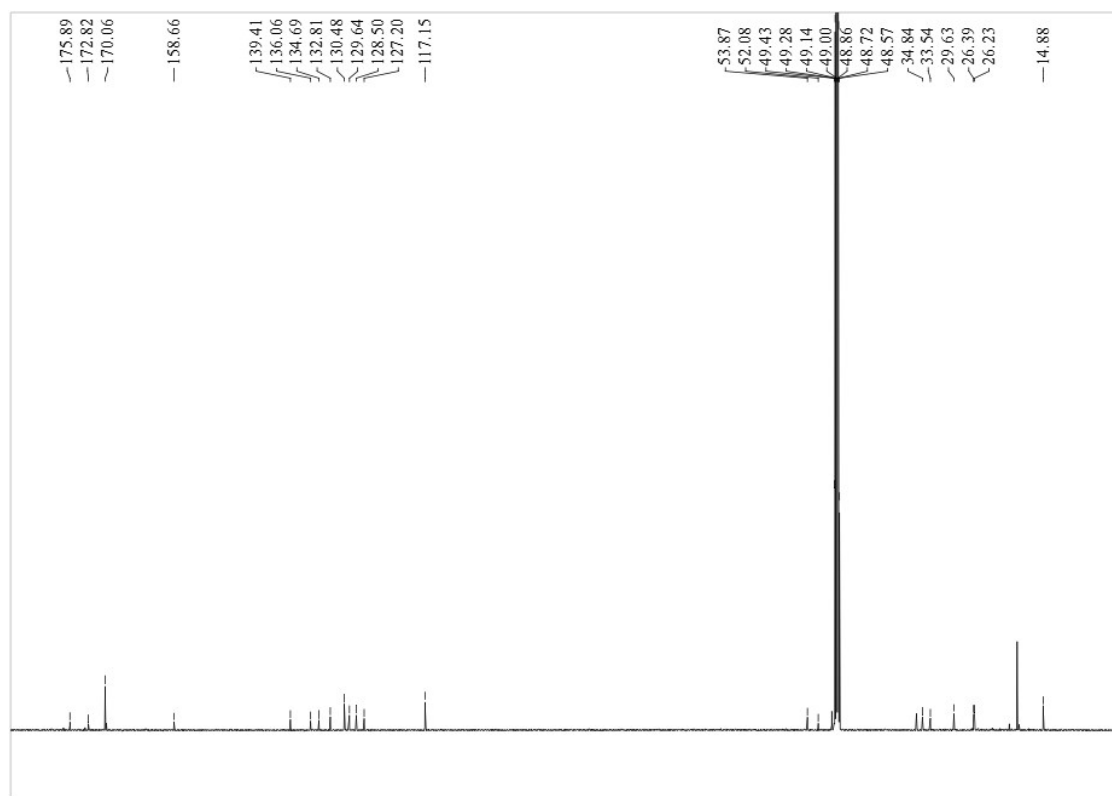


Fig. S18. The ¹³C NMR spectrum for 9e

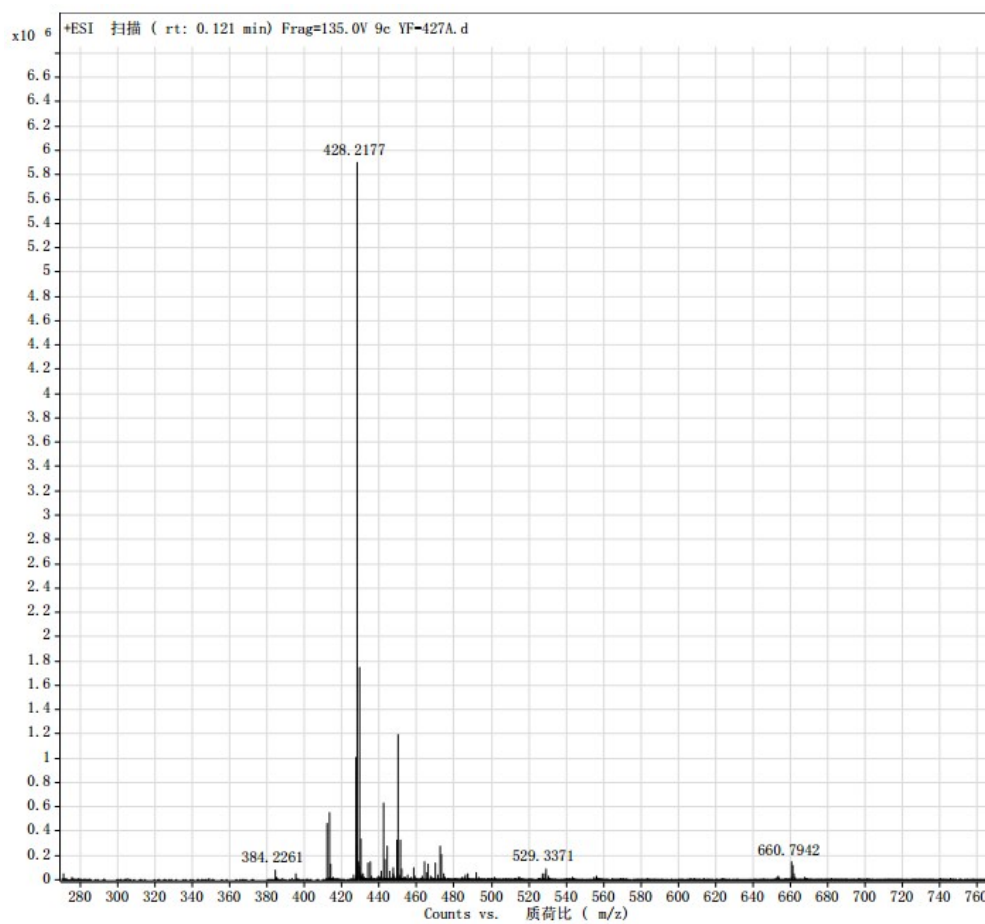
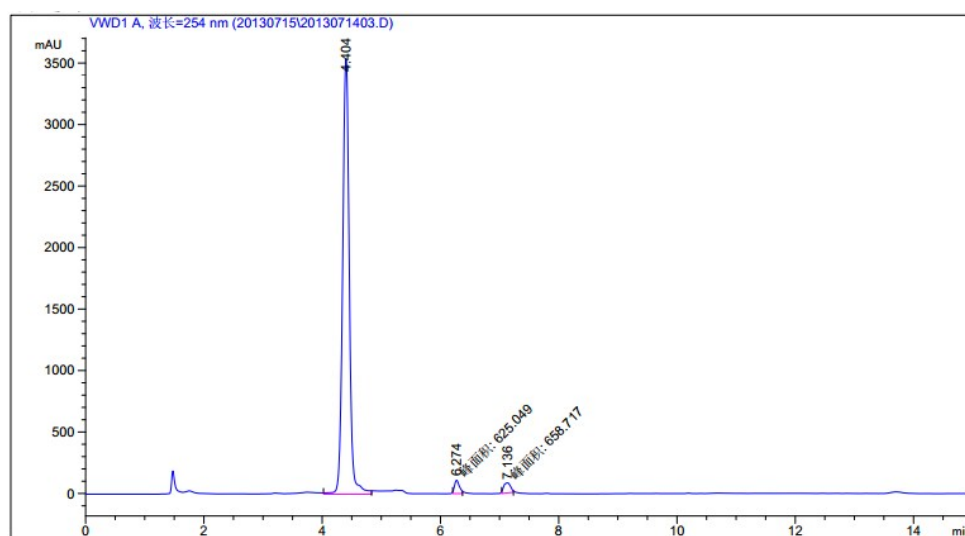


Fig. S19. The HR-ESIMS spectrum for **9e**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU *s	峰高 [mAU]	峰面积 %
1	4.404	VV	0.1204	2.76796e4	3538.55322	95.5676
2	6.274	MM	0.0959	625.04871	108.58409	2.1581
3	7.136	MM	0.1352	658.71680	81.18562	2.2743

Fig. S20. The HPLC analysis for **9e**

Compound 10a

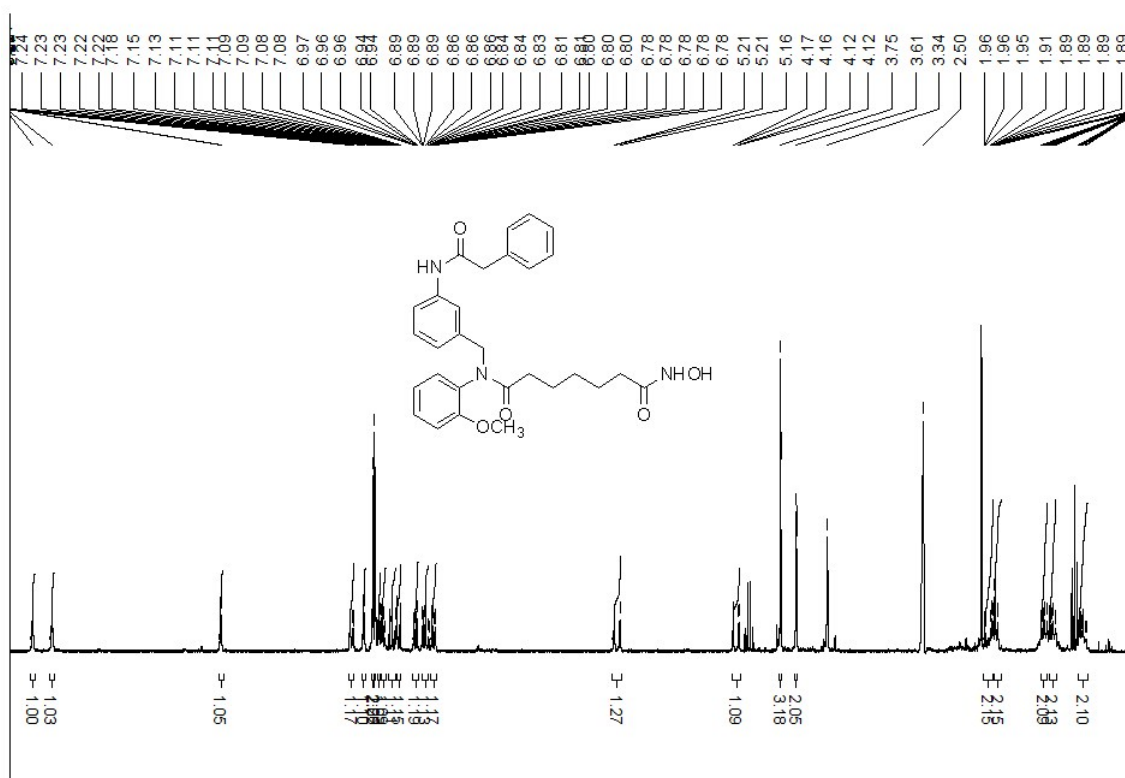


Fig. S21. The ^1H NMR spectrum for **10a**

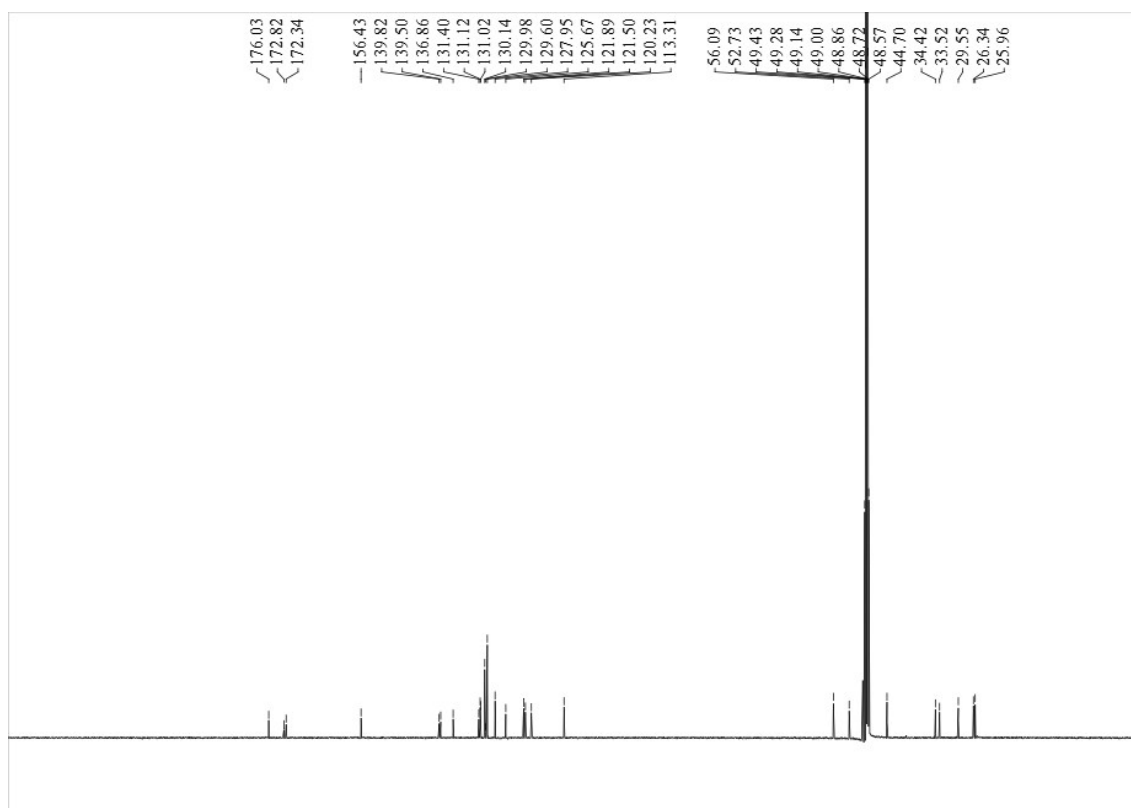


Fig. S22. The ^{13}C NMR spectrum for **10a**

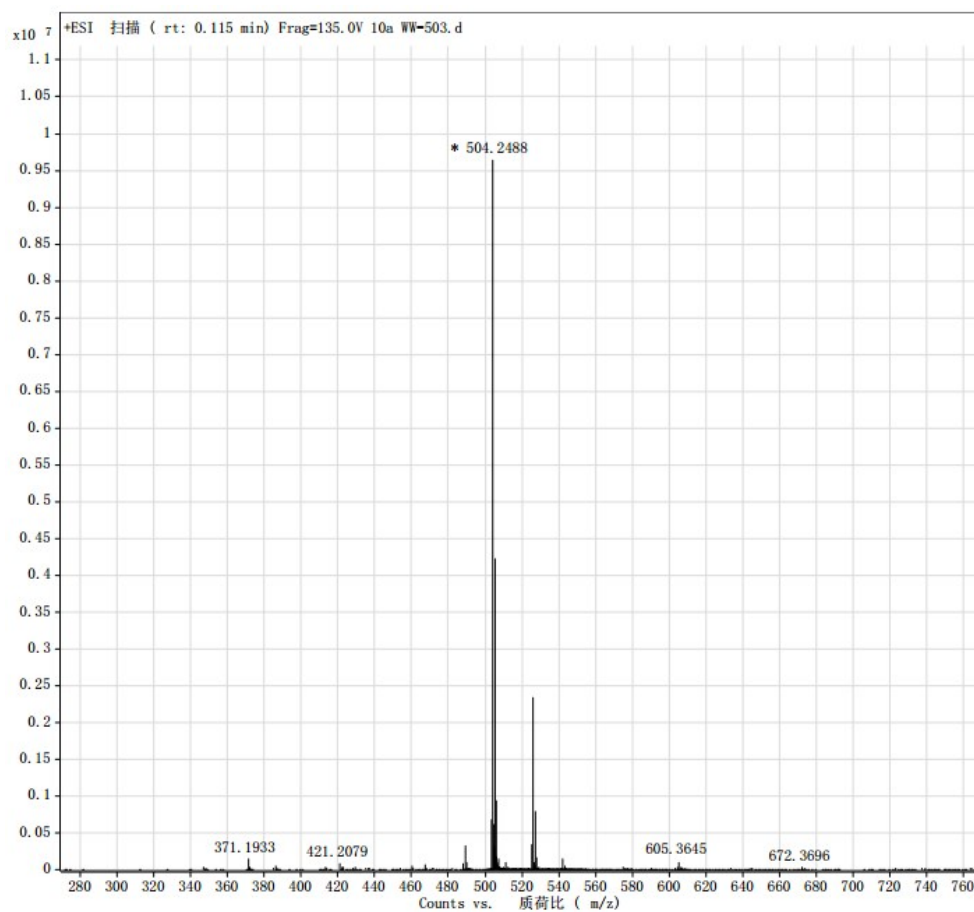
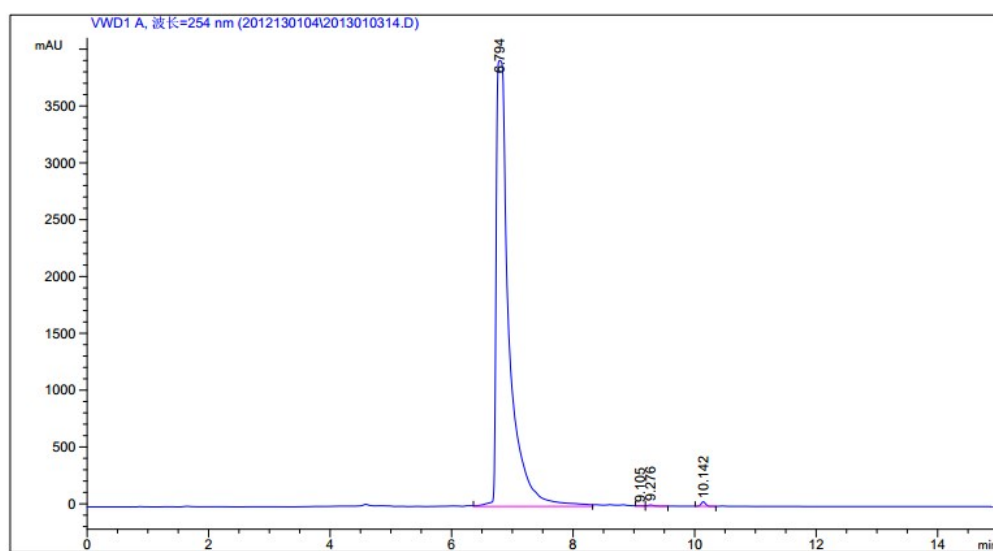


Fig. S23. The HR-ESIMS spectrum for **10a**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU * s	峰高 [mAU]	峰面积 %
1	6.794	VV	0.2165	5.81308e4	3924.18115	99.4581
2	9.105	VV	0.1299	39.38280	4.43235	0.0674
3	9.276	VB	0.1041	75.11185	10.46702	0.1285
4	10.142	VV	0.0778	202.24998	40.05320	0.3460

Fig. S24. The HPLC analysis for **10a**

Compound 10b

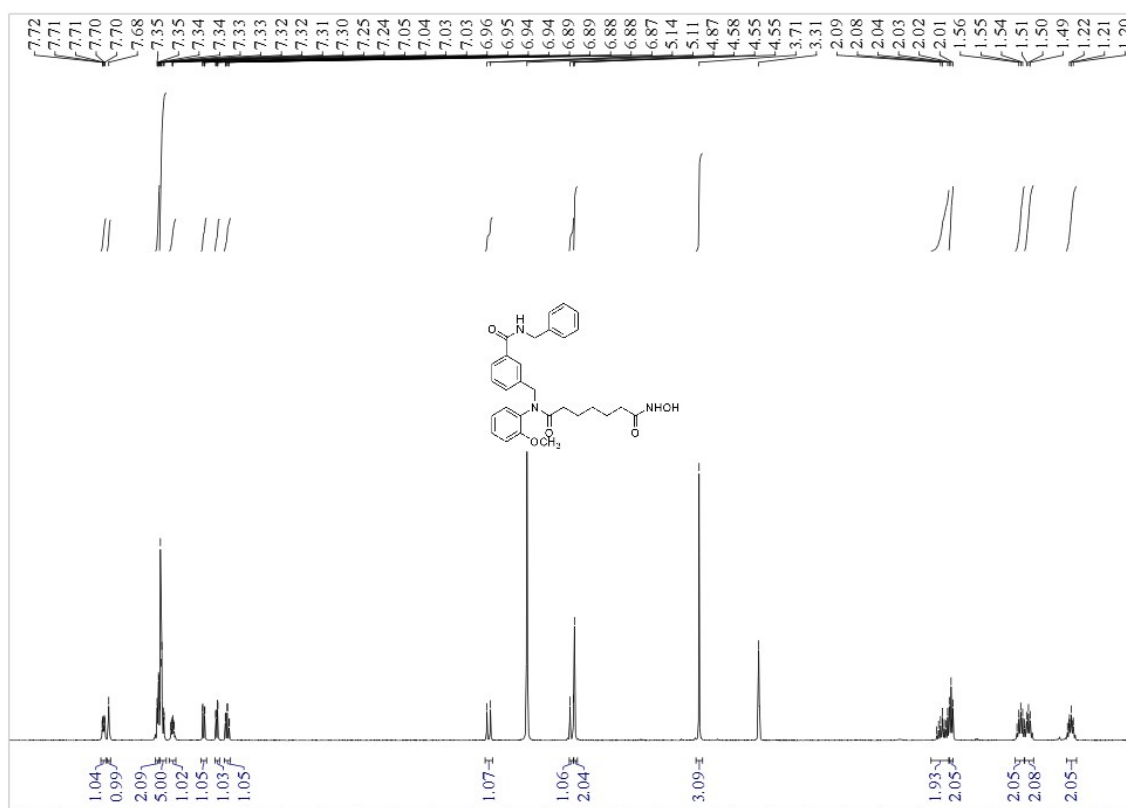


Fig. S25. The ¹H NMR spectrum for **10b**

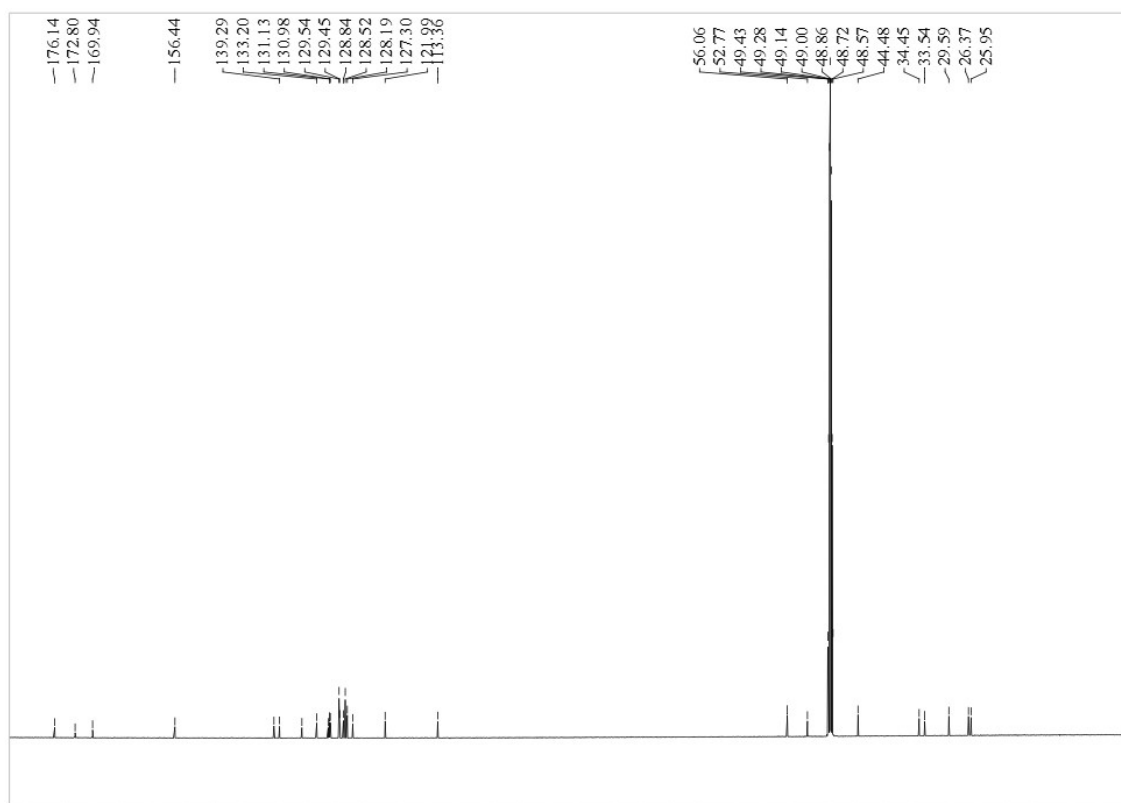


Fig. S26. The ¹³C NMR spectrum for **10b**

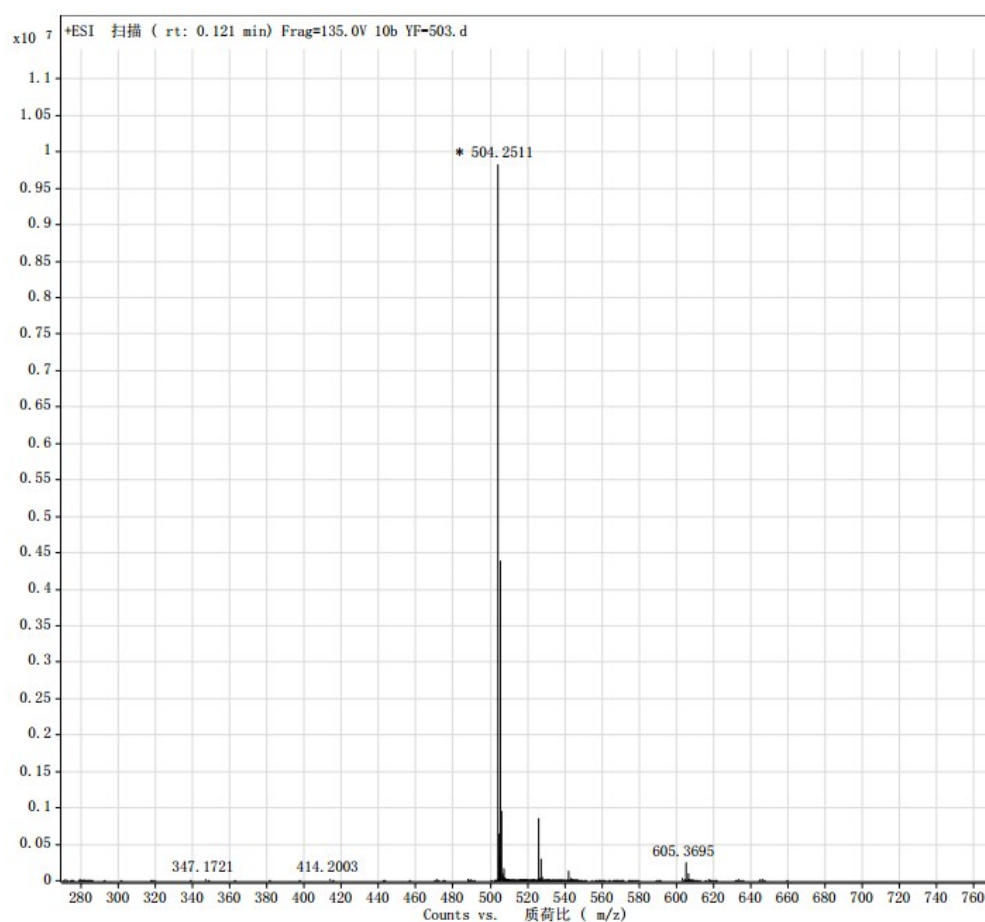


Fig. S27. The HR-ESIMS spectrum for **10b**

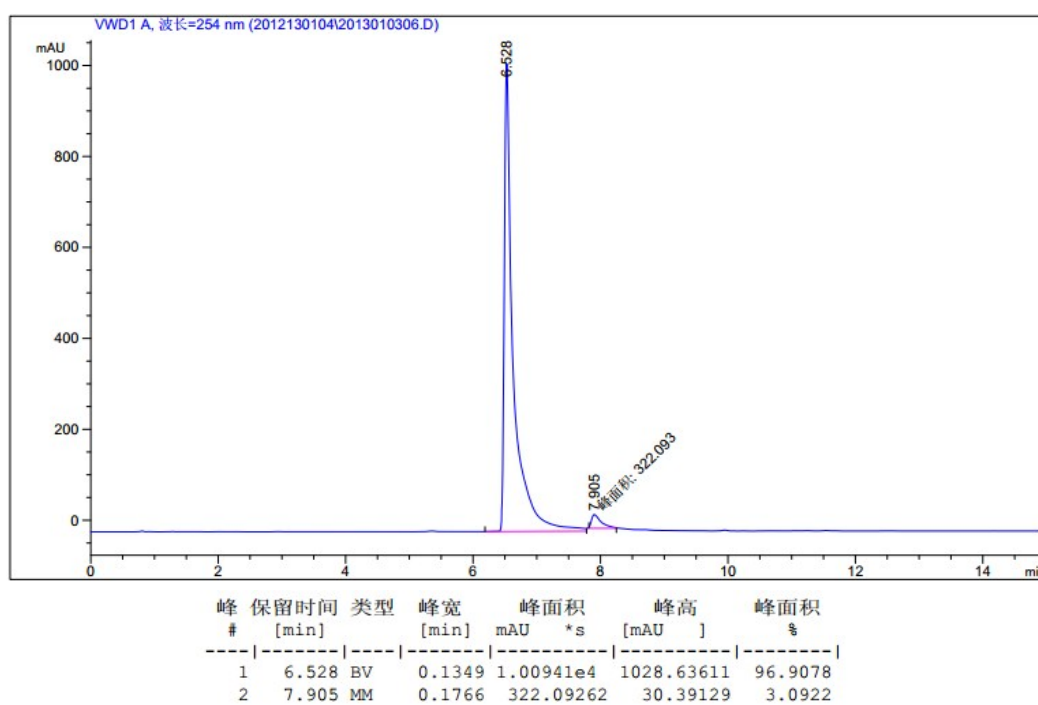


Fig. S28. The HPLC analysis for **10b**

Compound 10c

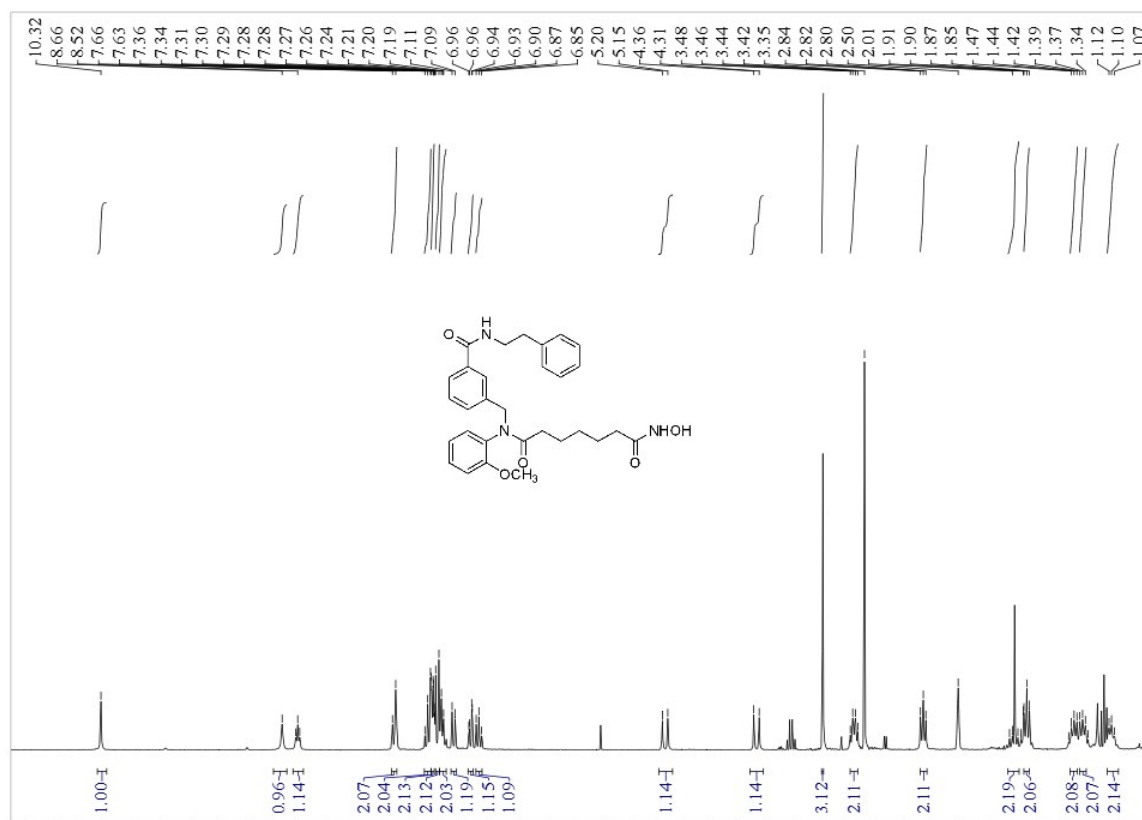


Fig. S29. The ¹H NMR spectrum for 10c

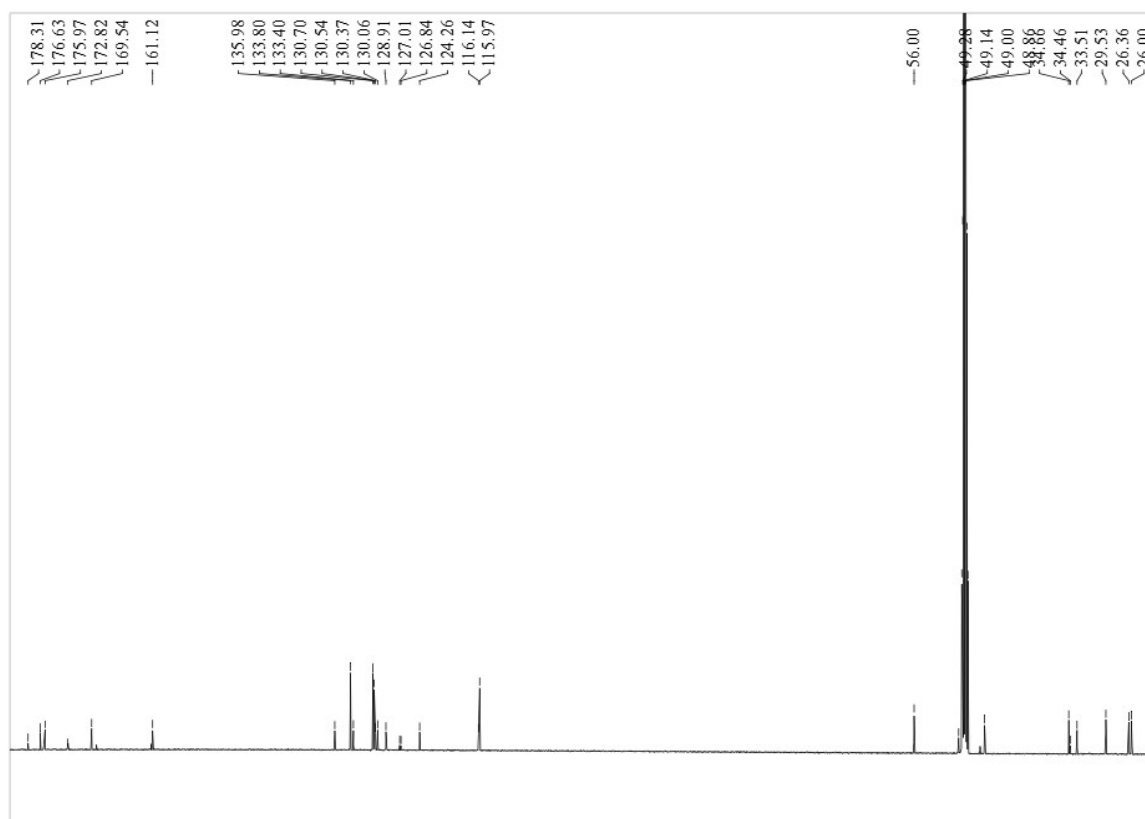


Fig. S30. The ¹³C NMR spectrum for 10c

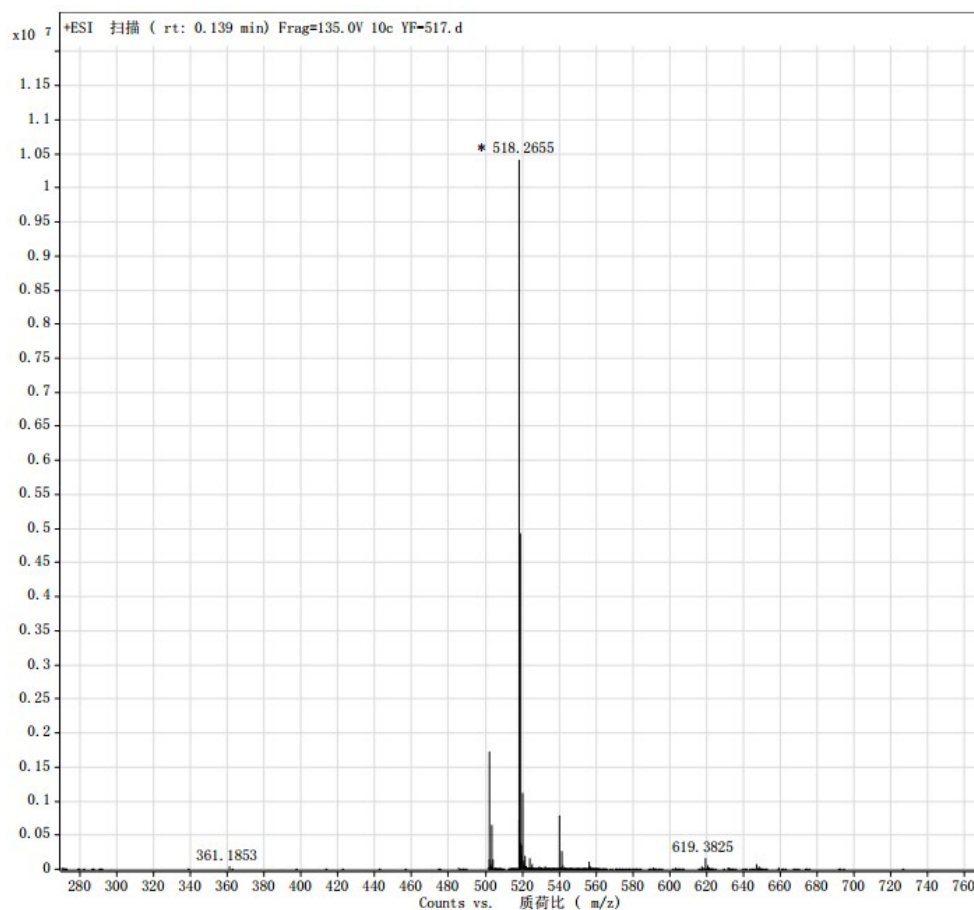
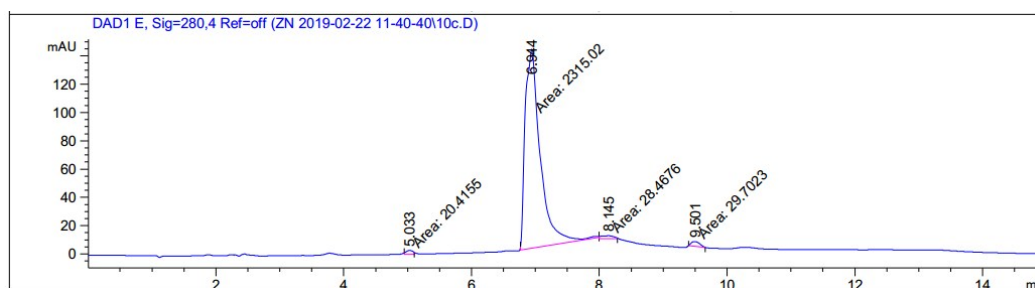


Fig. S31. The HR-ESIMS spectrum for **10c**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	5.033	MM	0.1233	20.41549	2.75852	0.8529
2	6.944	MM	0.2744	2315.01538	140.63506	96.7169
3	8.145	MM	0.2307	28.46764	2.05626	1.1893
4	9.501	PP	0.1514	29.70229	3.27054	1.2409

Fig. S32. The HPLC analysis for **10c**

Compound 10d

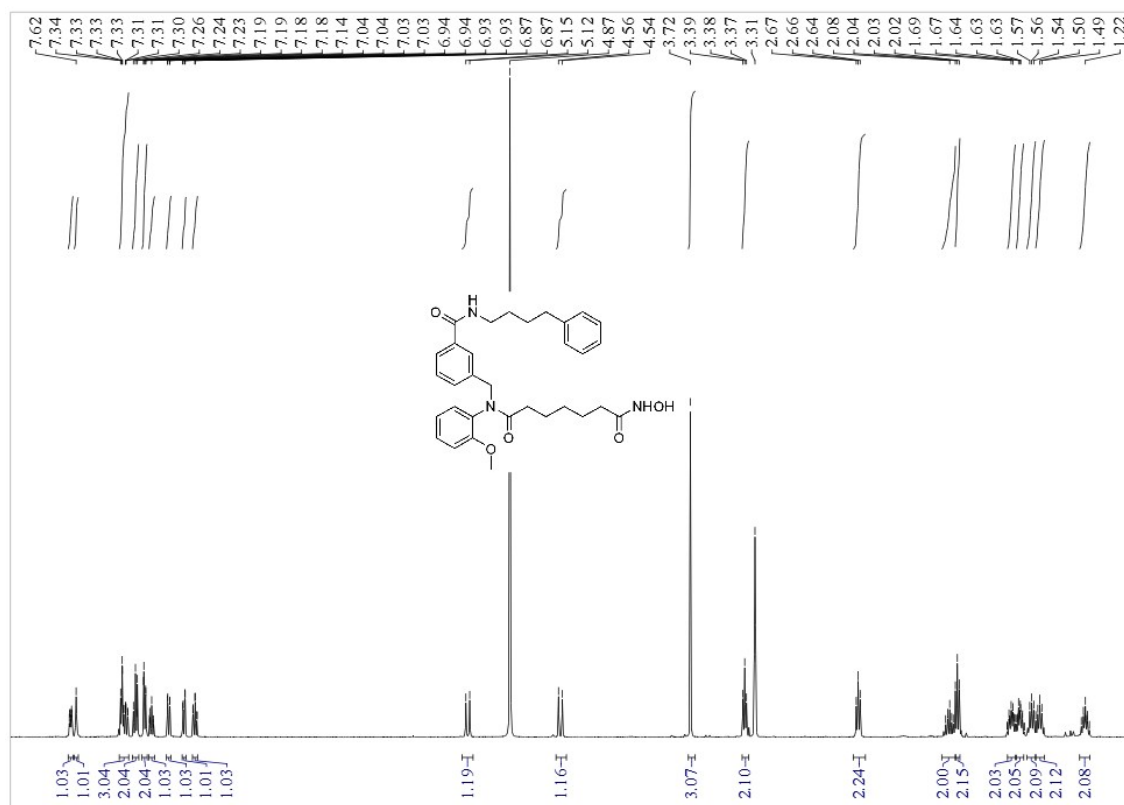


Fig. S33. The ^1H NMR spectrum for **10d**

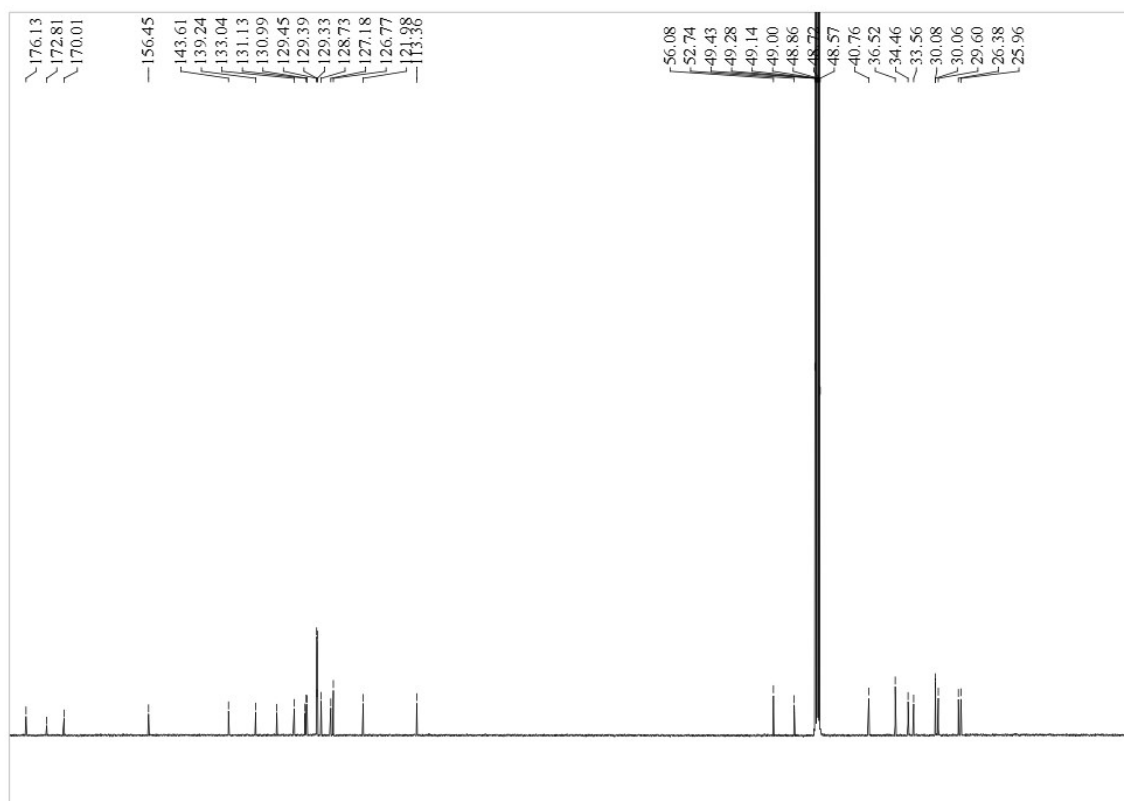


Fig. S34. The ^{13}C NMR spectrum for **10d**

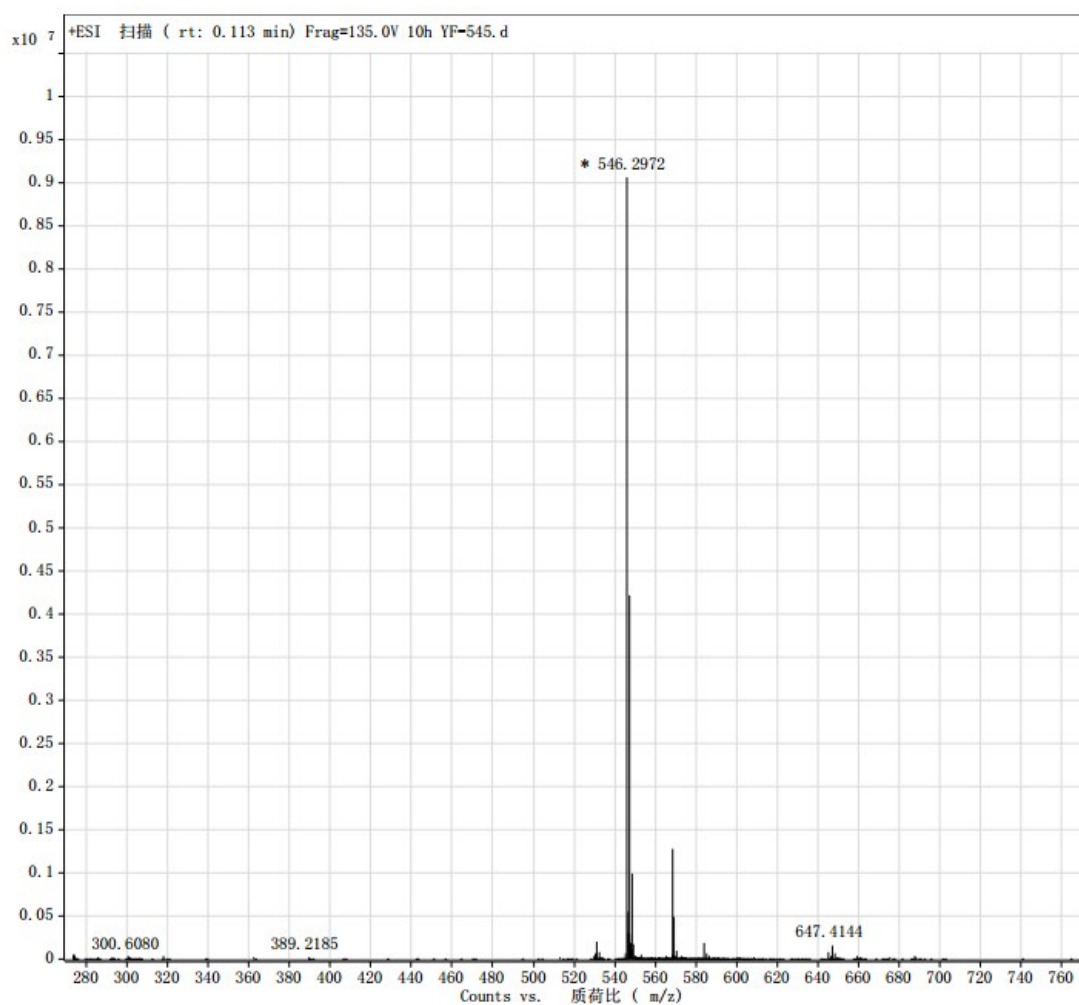
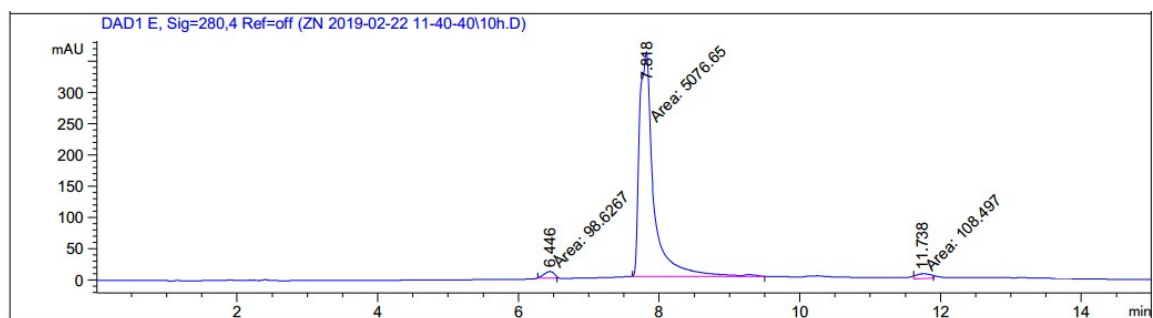


Fig. S35. The HR-ESIMS spectrum for **10d**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	6.446	MM	0.1597	98.62671	10.29518	1.8666
2	7.818	MM	0.2351	5076.64600	359.85120	96.0800
3	11.738	MM	0.2364	108.49726	7.64867	2.0534

Fig. S36. The HPLC analysis for **10d**

Compound 10e

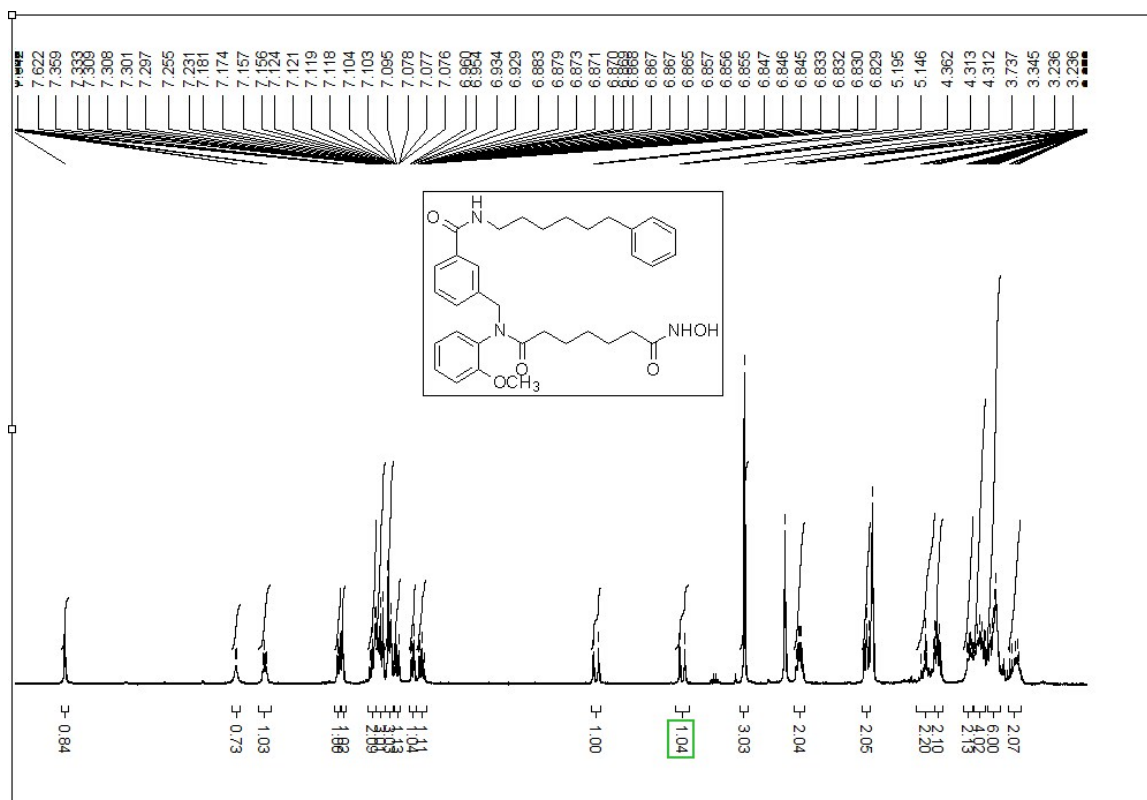


Fig. S37. The ¹H NMR spectrum for 10e

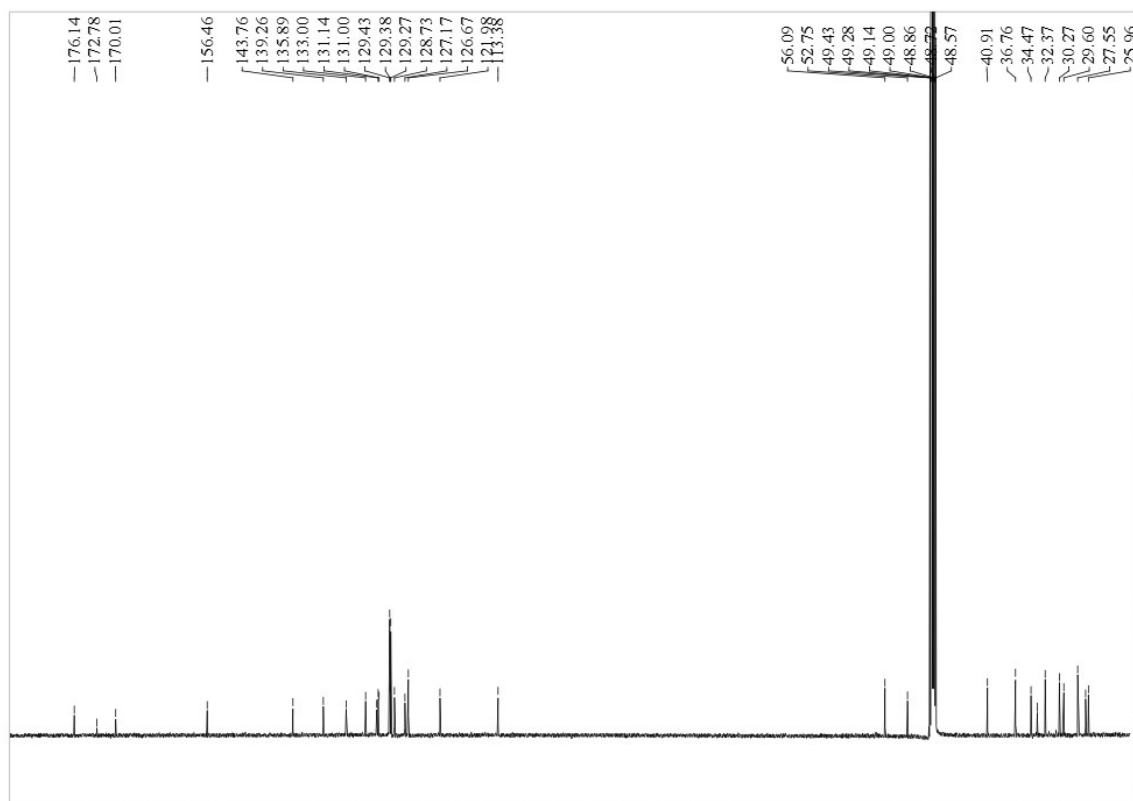


Fig. S38. The ¹³C NMR spectrum for 10e

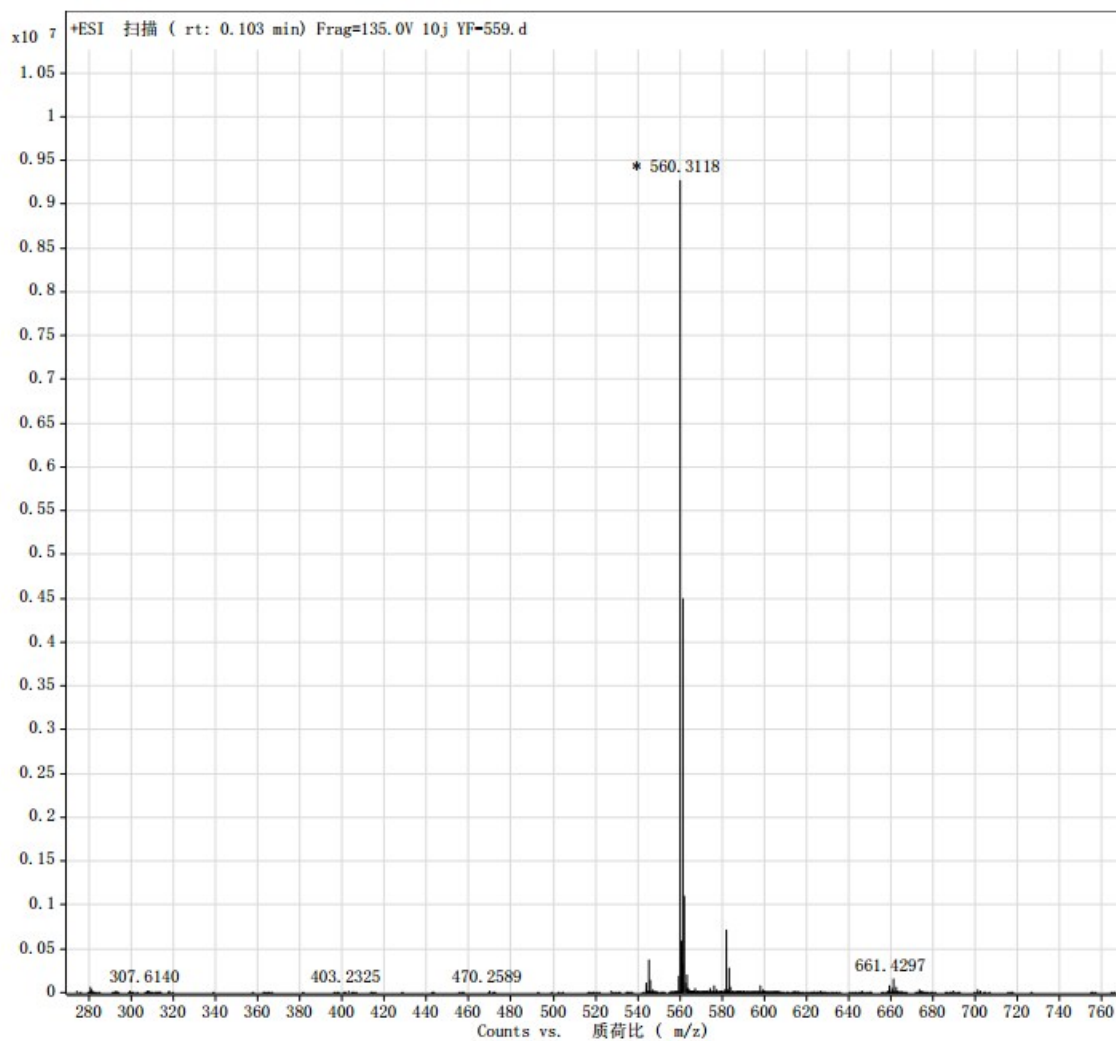


Fig. S39. The HR-ESIMS spectrum for **10e**

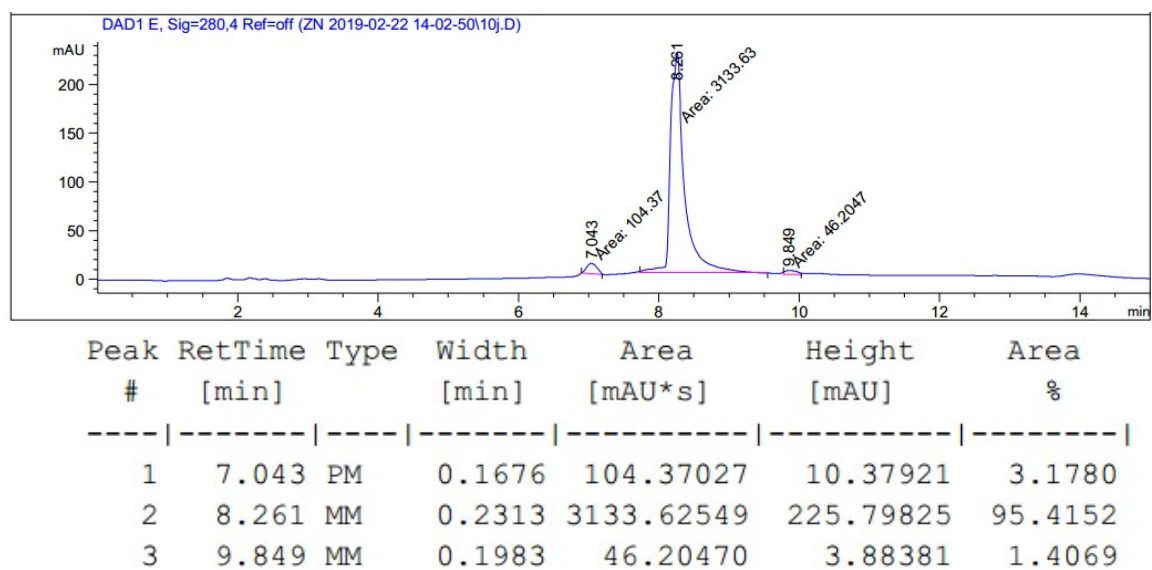


Fig. S40. The HPLC analysis for **10e**

Compound 10f

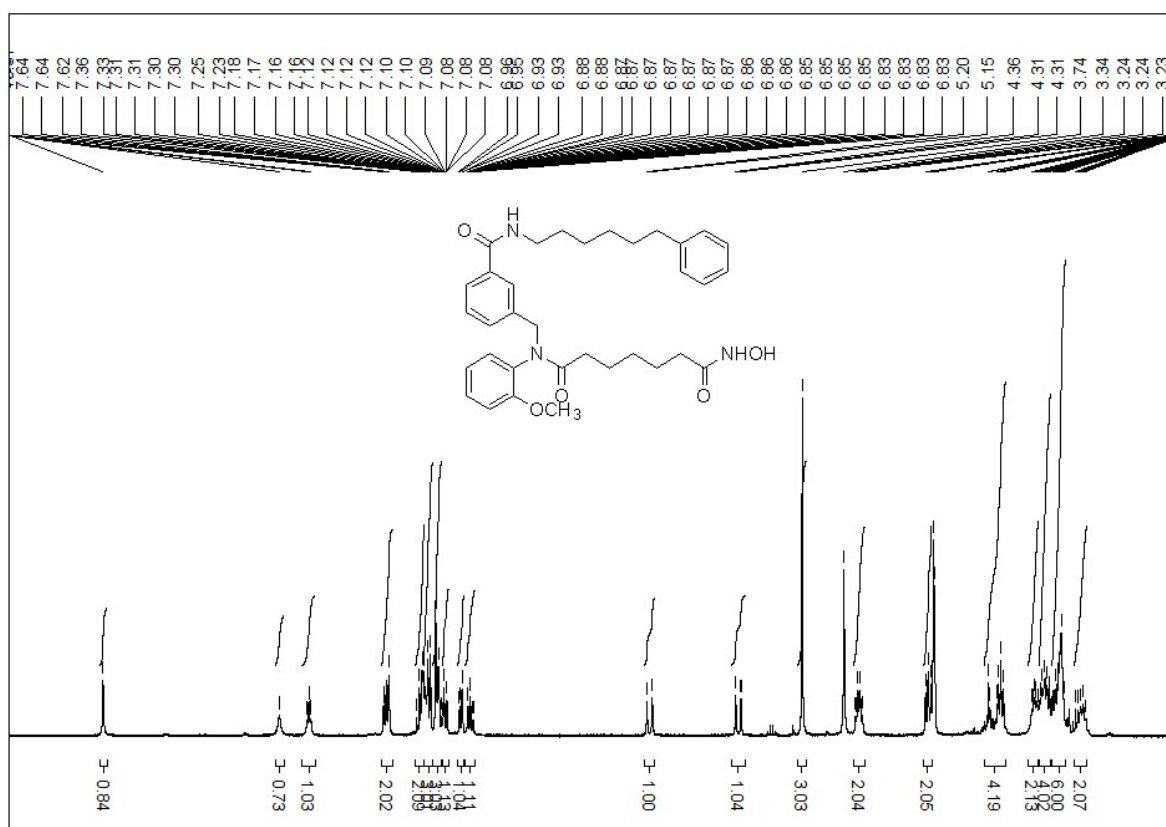


Fig. S41. The ¹H NMR spectrum for 10f

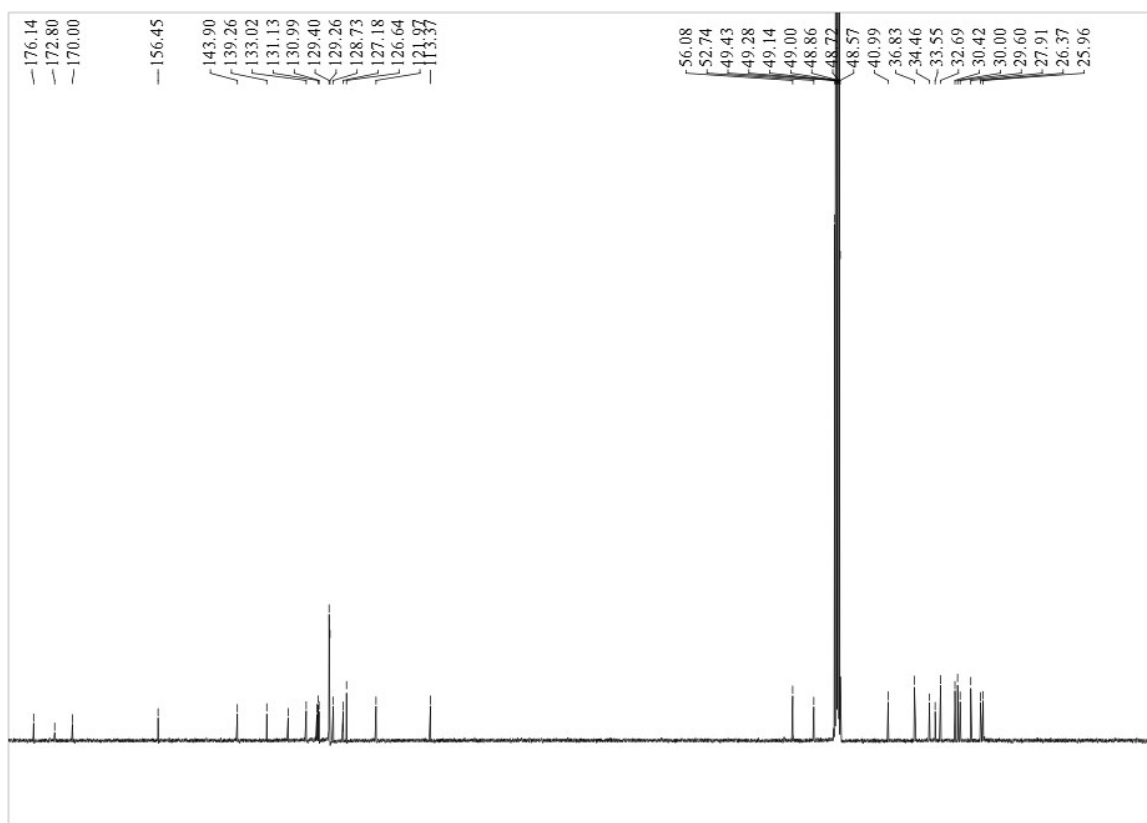


Fig. S42. The ¹³C NMR spectrum for 10f

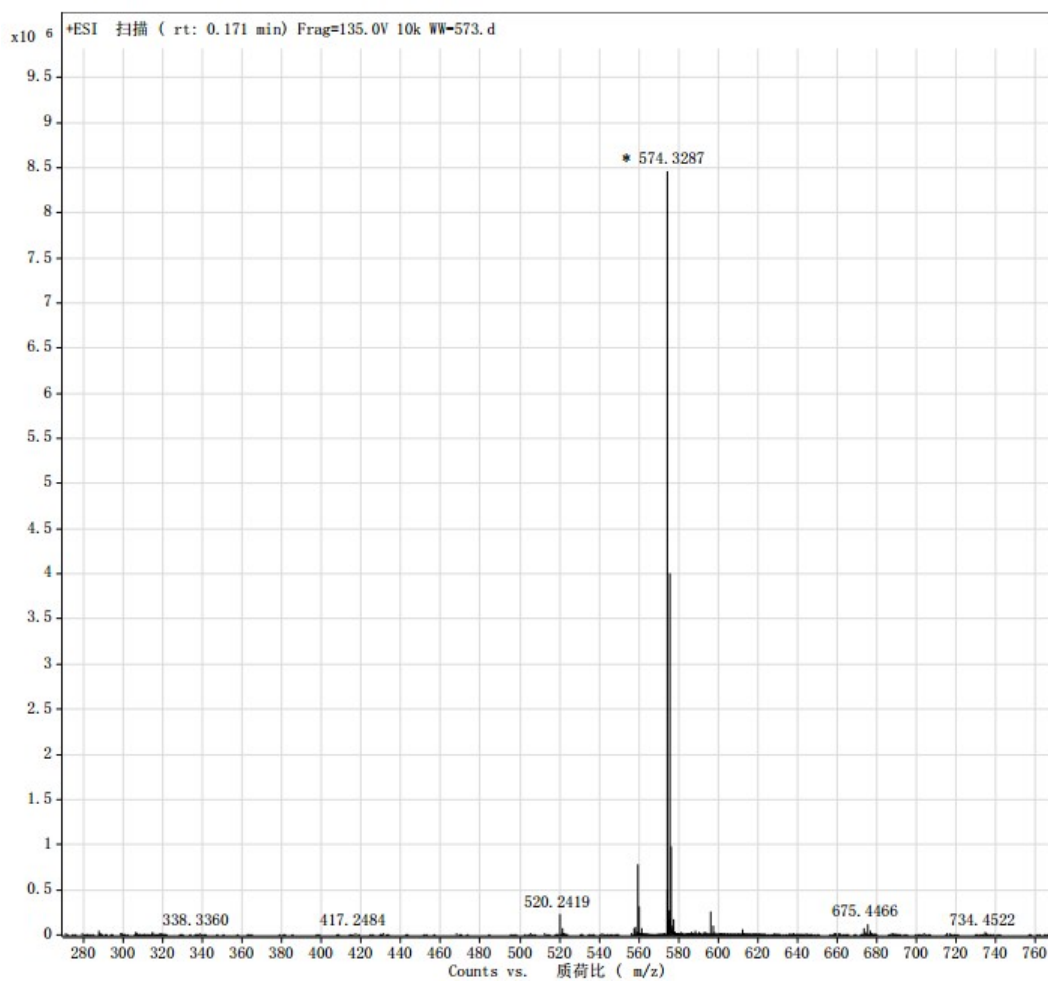
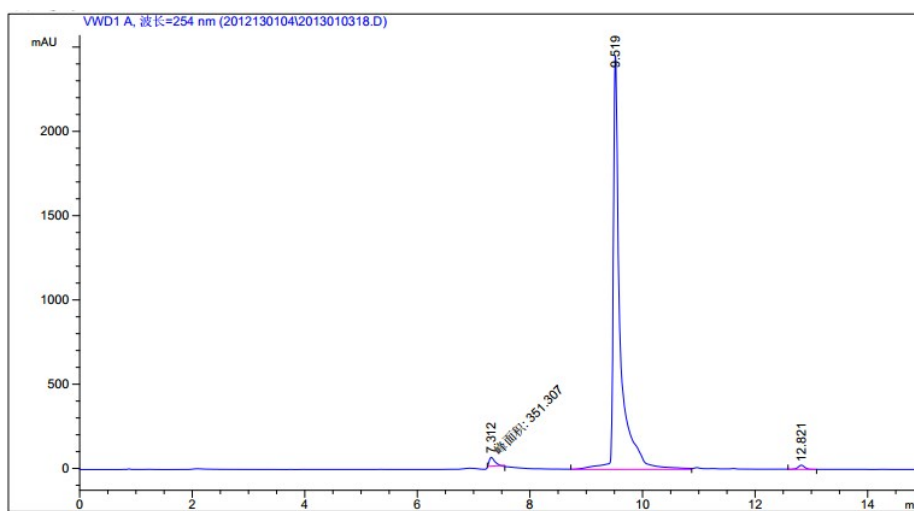


Fig. S43. The HR-ESIMS spectrum for **10f**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU	峰高 [mAU]	峰面积 %
1	7.312	MM	0.1116	351.30698	52.47123	1.6173
2	9.519	VV	0.1195	2.11656e4	2454.54517	97.4407
3	12.821	VV	0.1265	204.60693	24.50810	0.9420

Fig. S44. The HPLC analysis for **10f**

Compound 10g

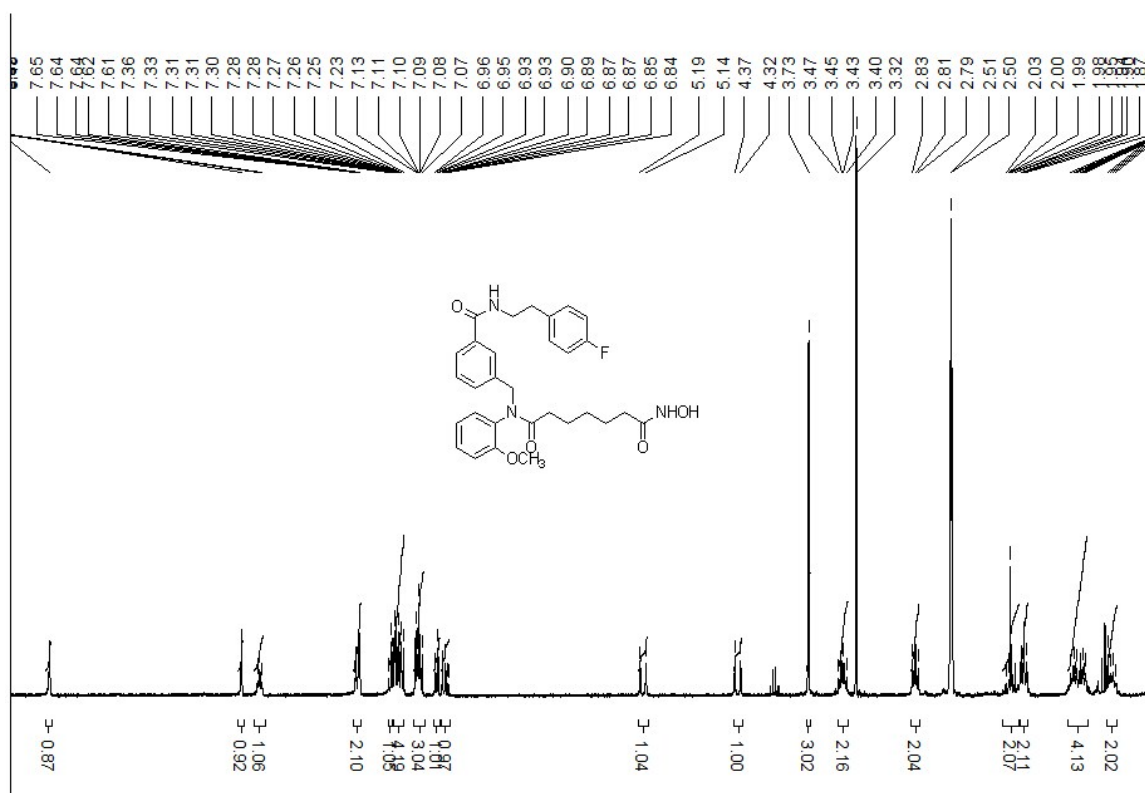


Fig. S45. The ^1H NMR spectrum for **10g**

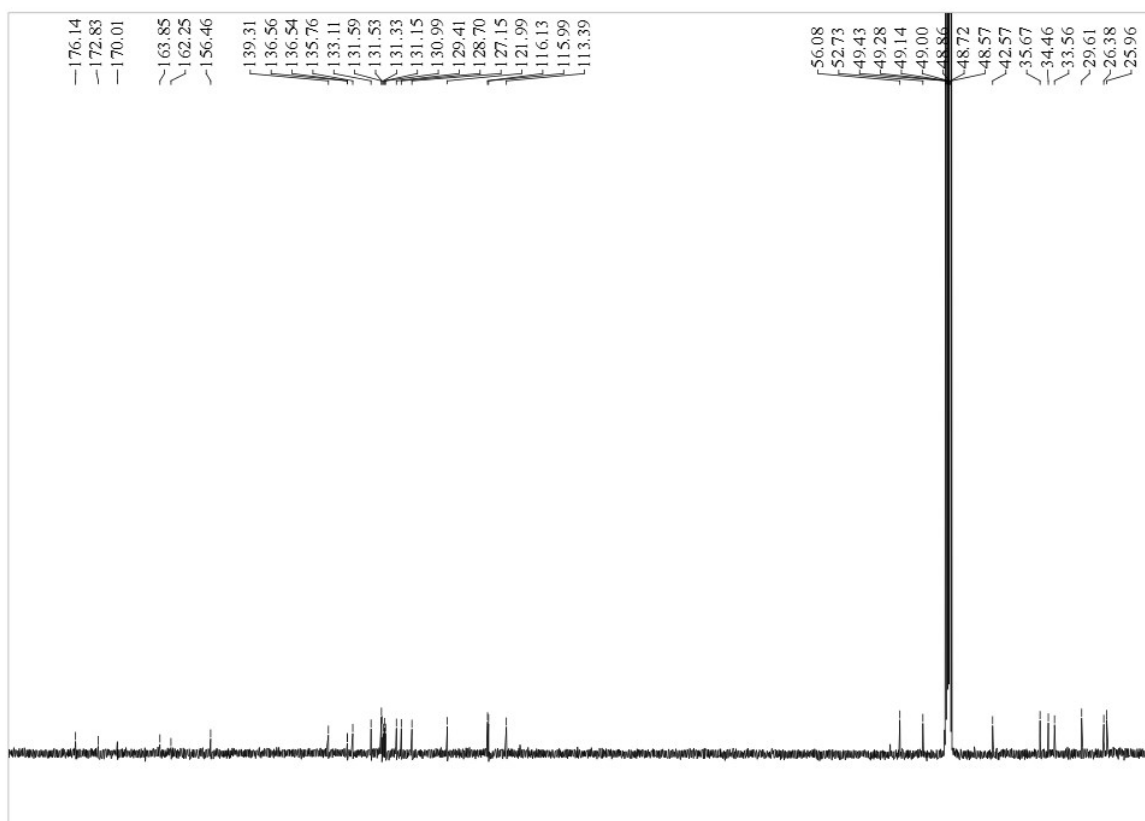


Fig. S46. The ^{13}C NMR spectrum for **10g**

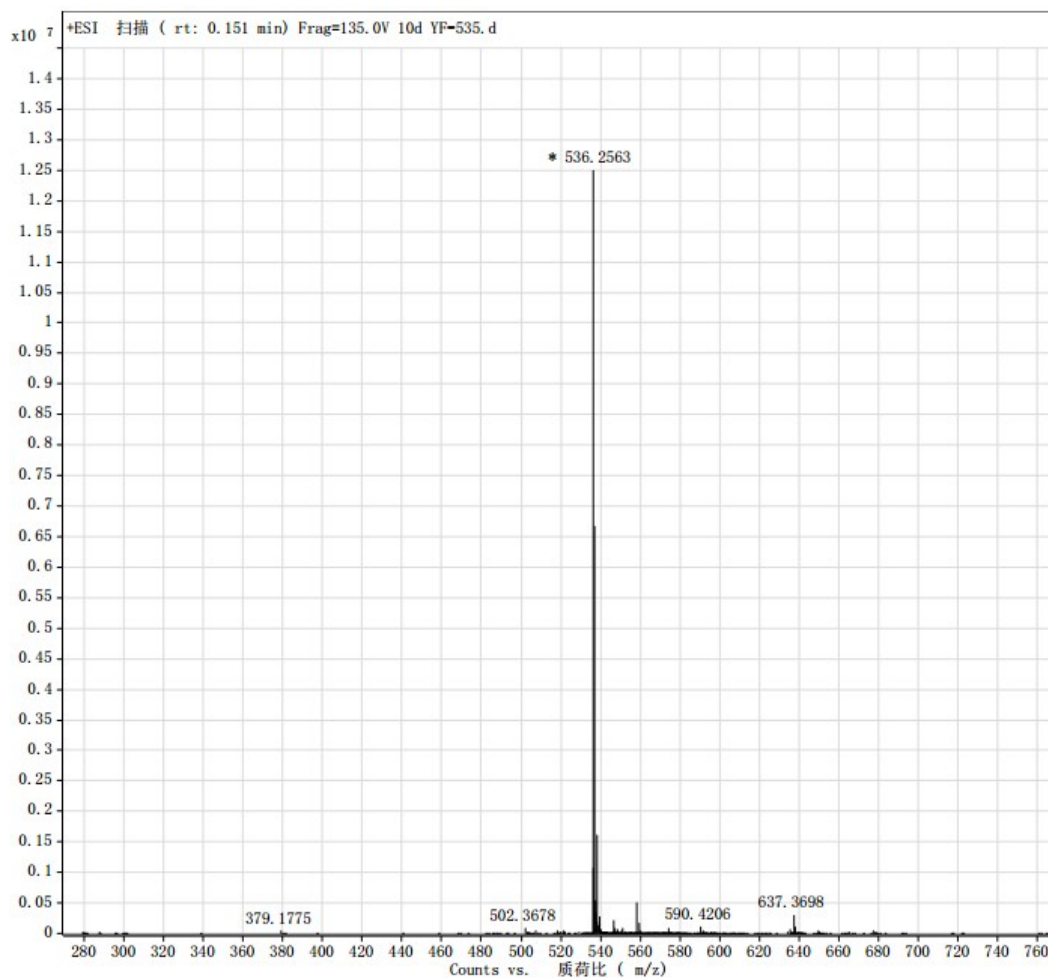
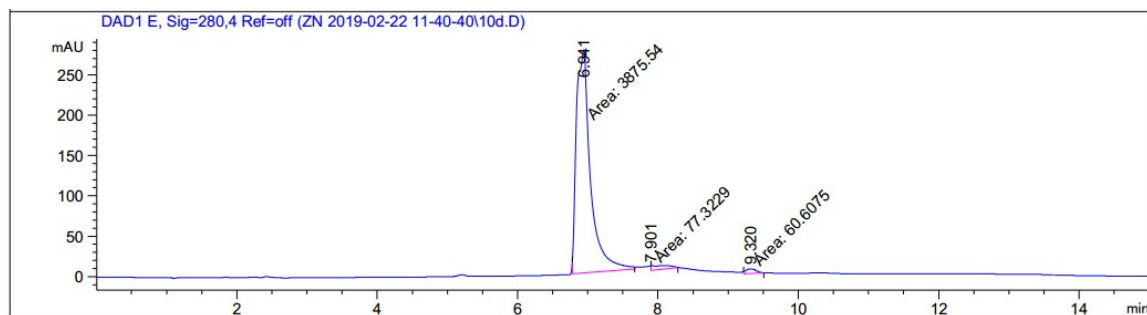


Fig. S47. The HR-ESIMS spectrum for **10g**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	6.941	MM	0.2338	3875.53564	276.28241	96.5633
2	7.901	MP	0.1826	77.32288	5.32730	1.9266
3	9.320	MP	0.1755	60.60754	5.75717	1.5101

Fig. S48. The HPLC analysis for **10g**

Compound 10h

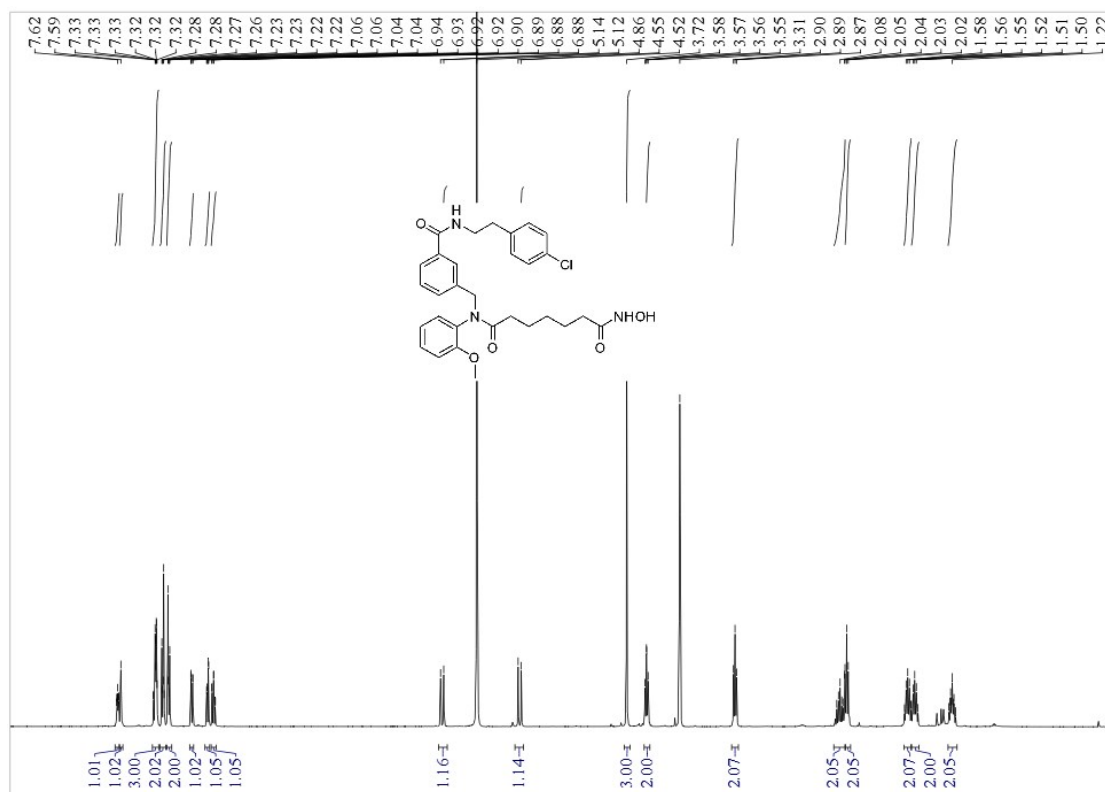


Fig. S49. The ^1H NMR spectrum for 10h

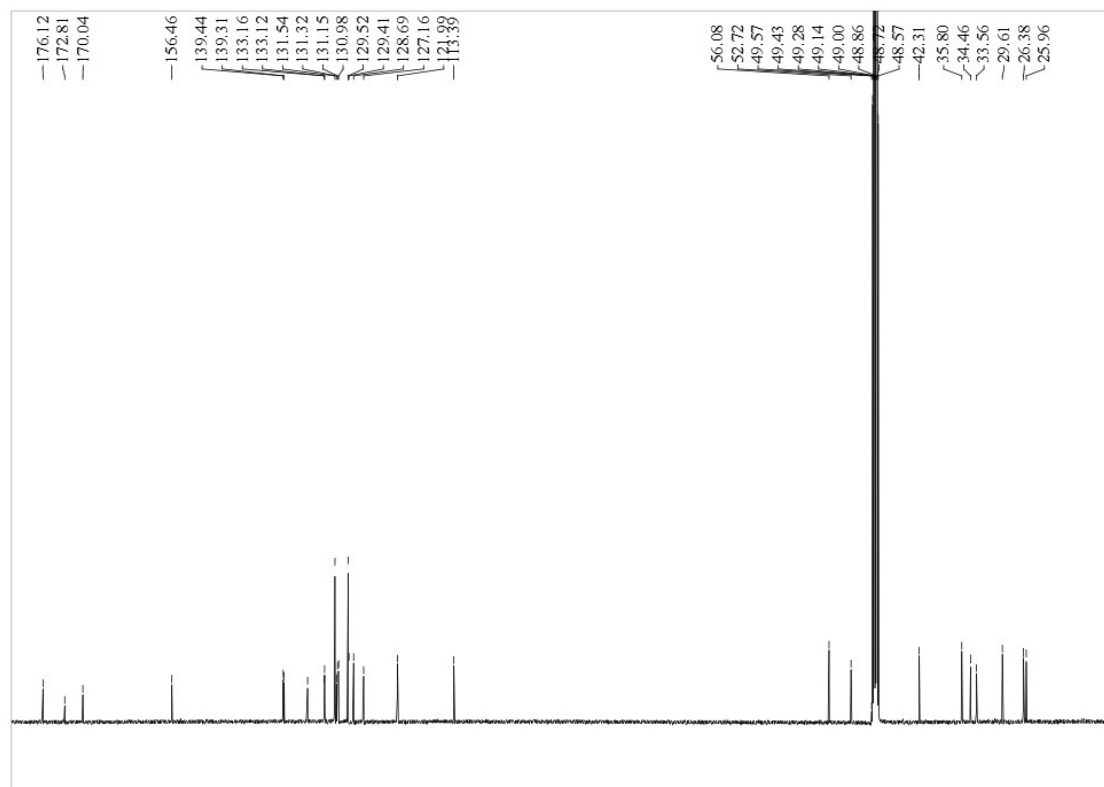


Fig. S50. The ^{13}C NMR spectrum for 10h

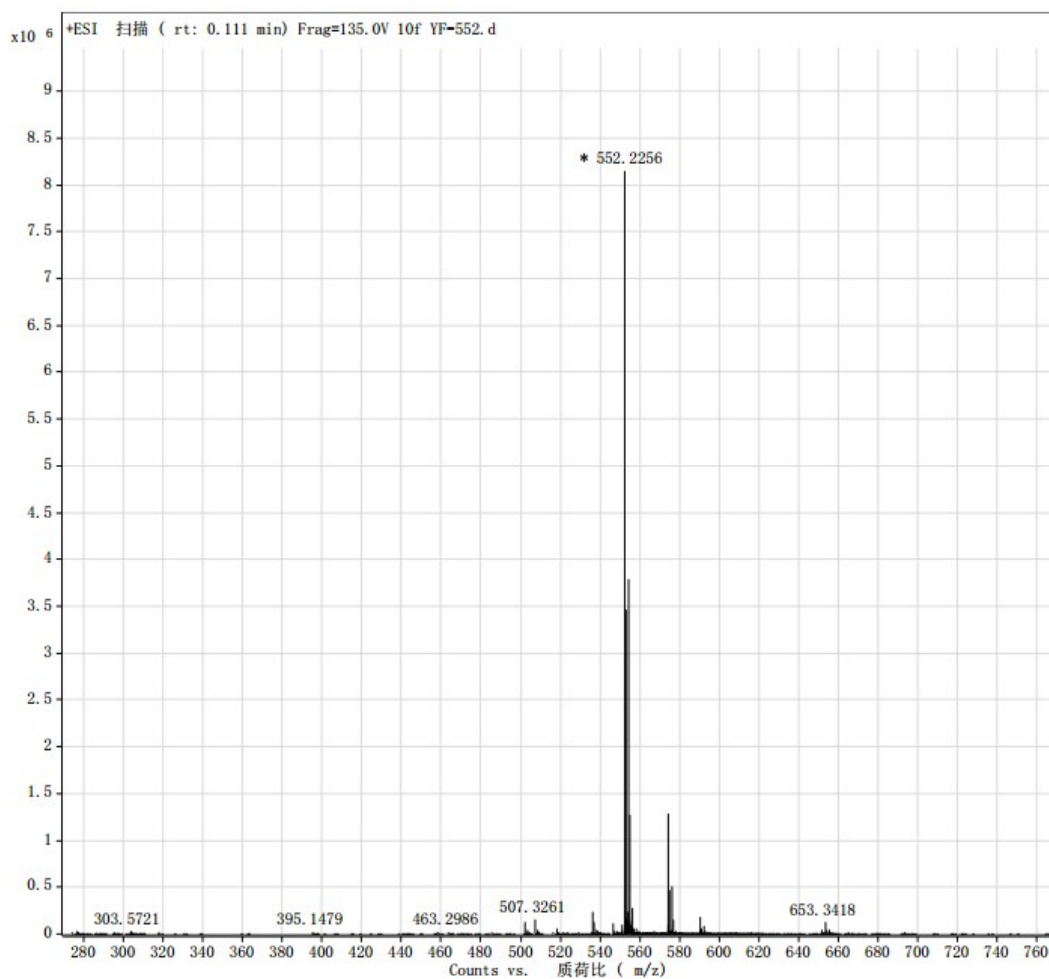


Fig. S51. The HR-ESIMS spectrum for **10h**

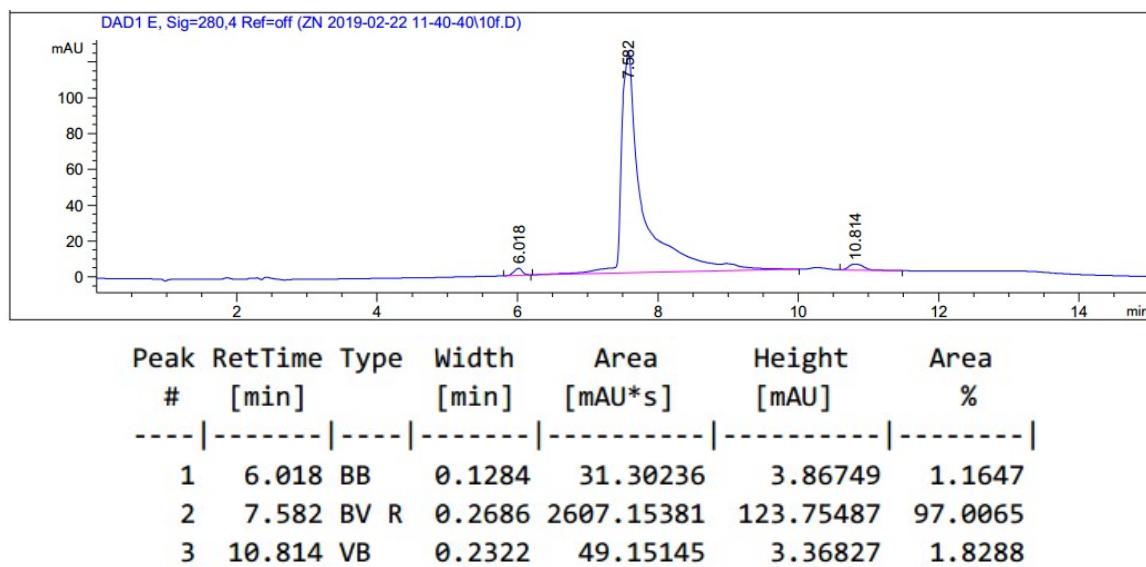


Fig. S52. The HPLC analysis for **10h**

Compound 10i

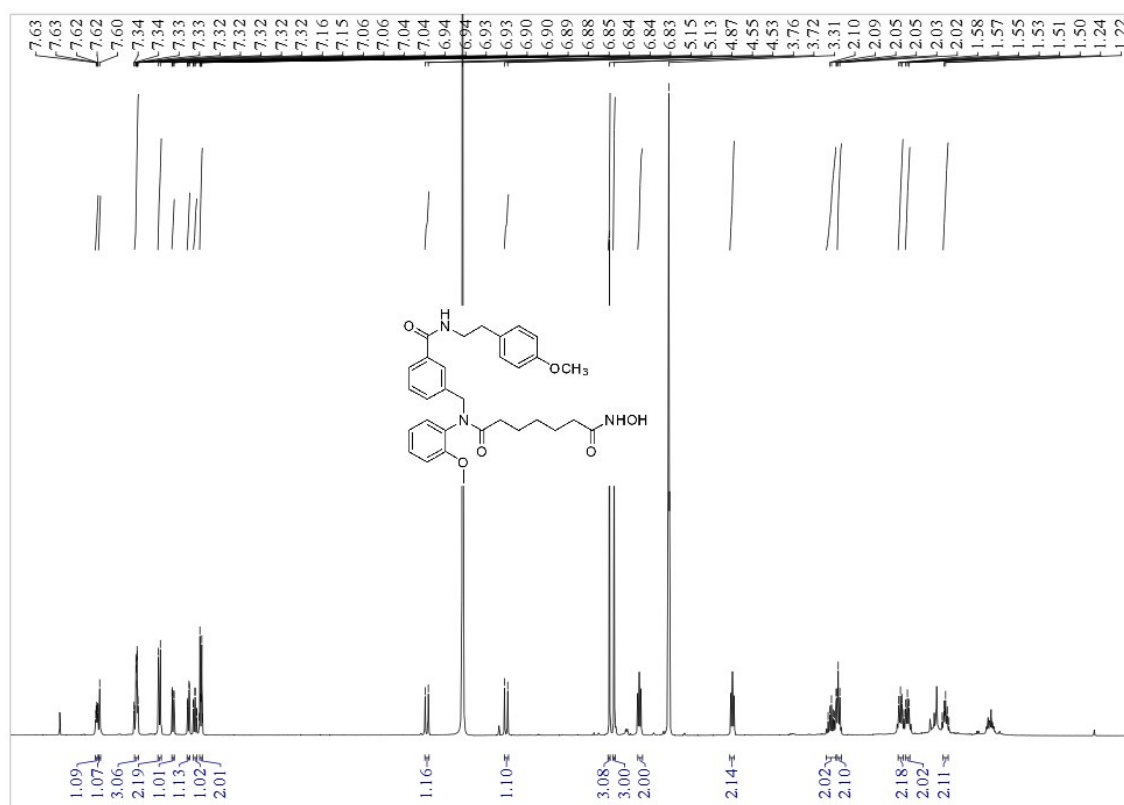


Fig. S53. The ^1H NMR spectrum for **10i**

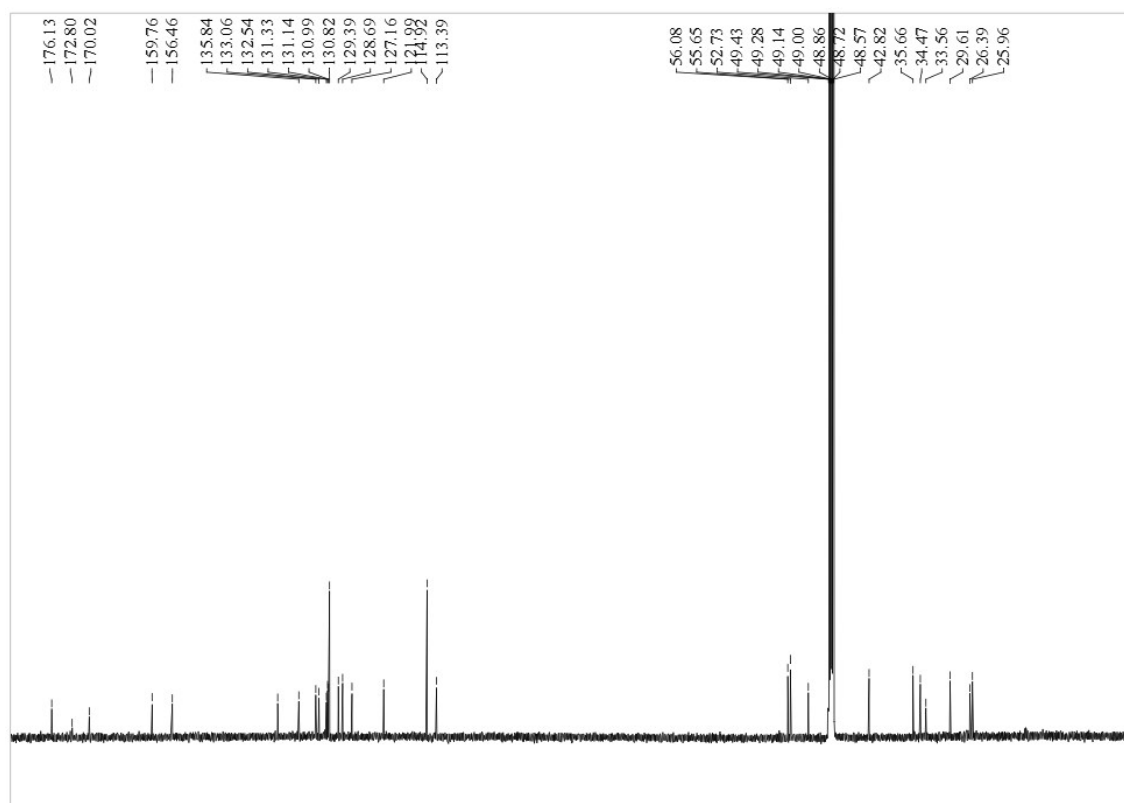


Fig. S54. The ^{13}C NMR spectrum for **10i**

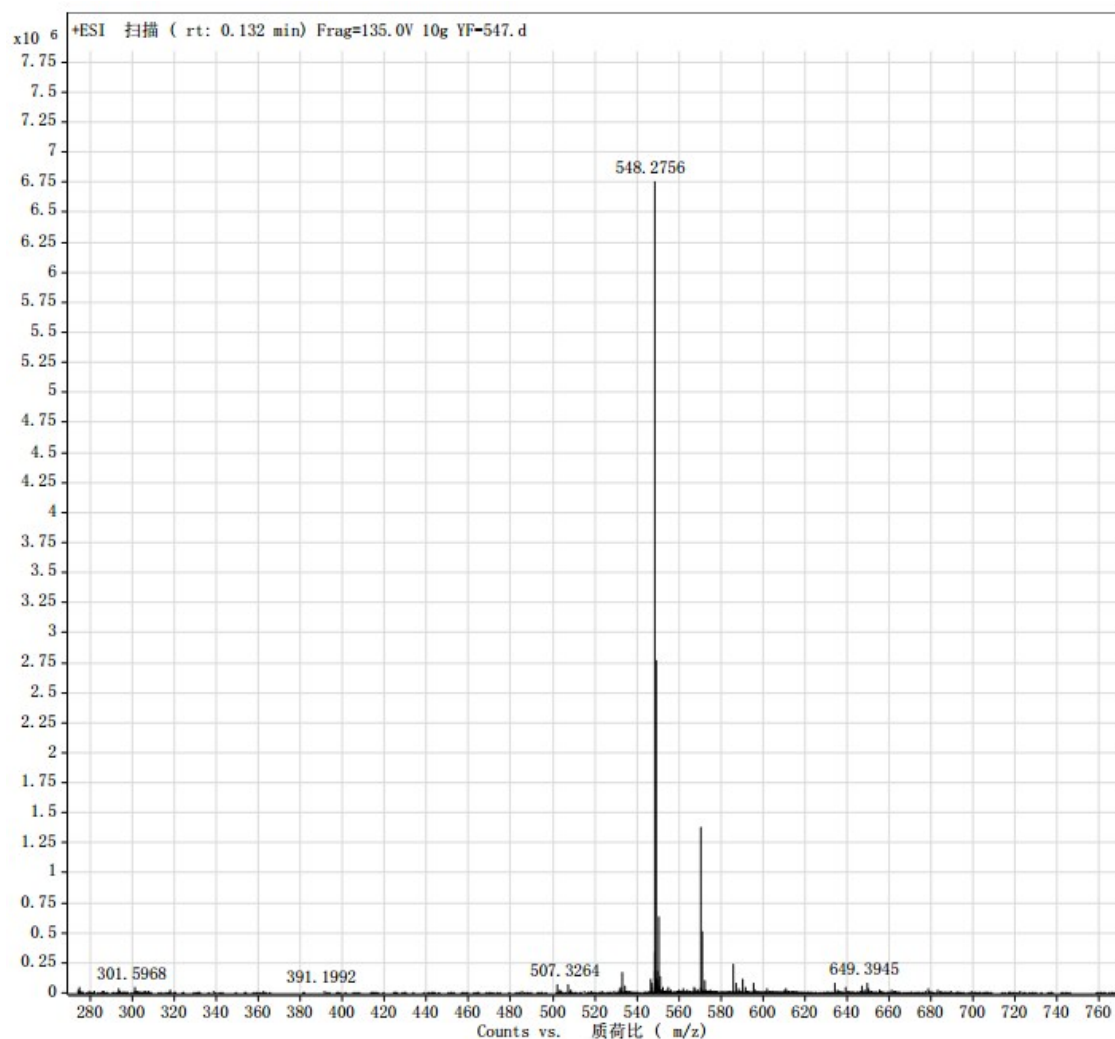
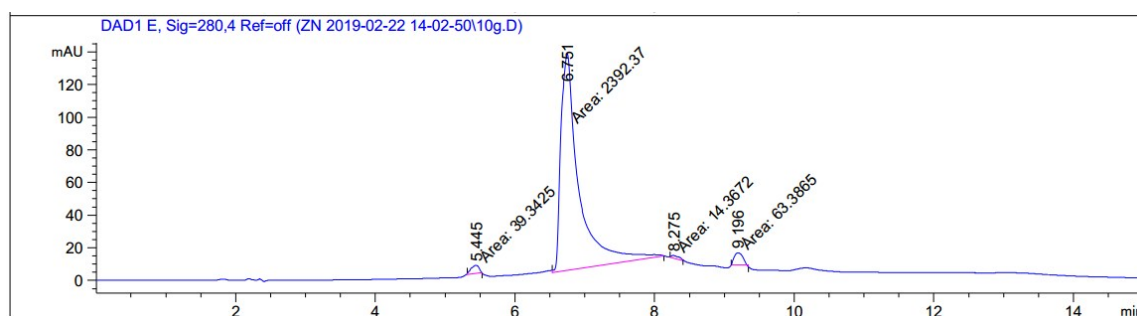


Fig. S55. The HR-ESIMS spectrum for **10i**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	5.445	MM	0.1317	39.34248	4.98017	1.5678
2	6.751	MM	0.3003	2392.36768	132.77191	95.3338
3	8.275	MM	0.1447	14.36718	1.65436	0.5725
4	9.196	MM	0.1405	63.38653	7.51945	2.5259

Fig. S56. The HPLC analysis for **10i**

Compound 10j

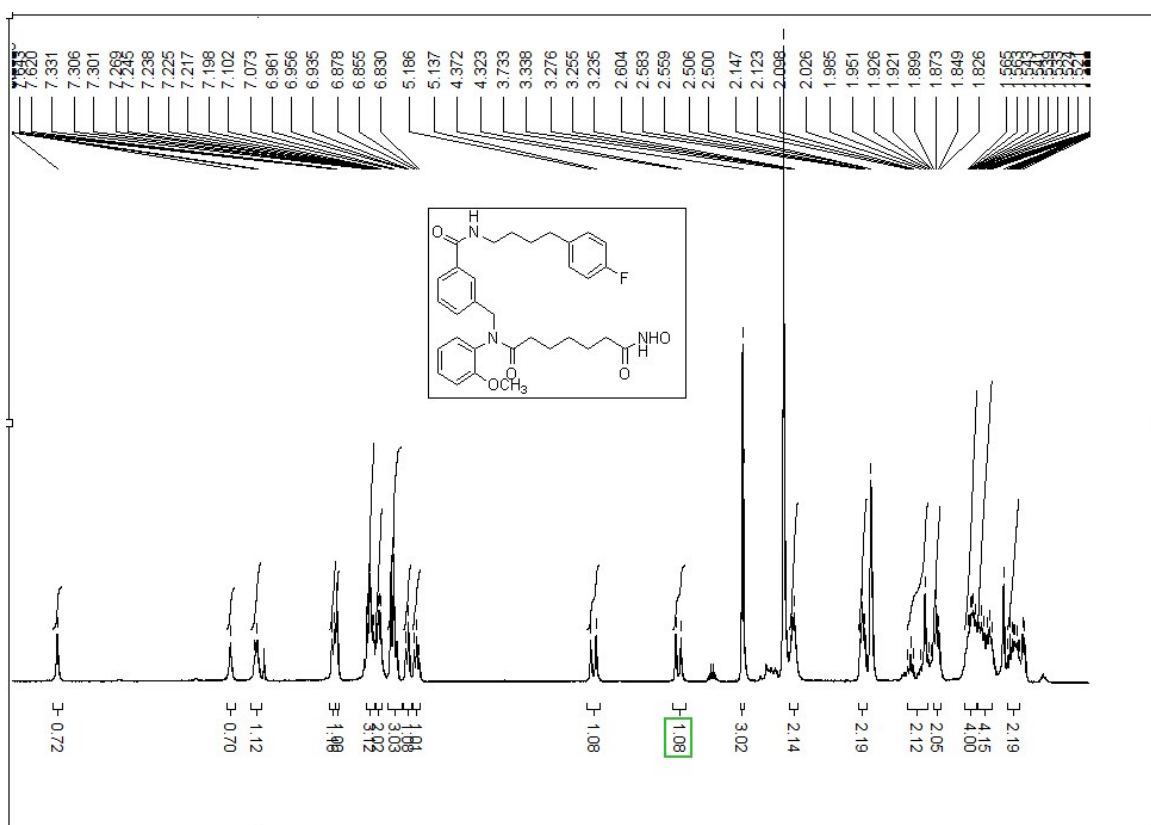


Fig. S57. The ^1H NMR spectrum for 10j

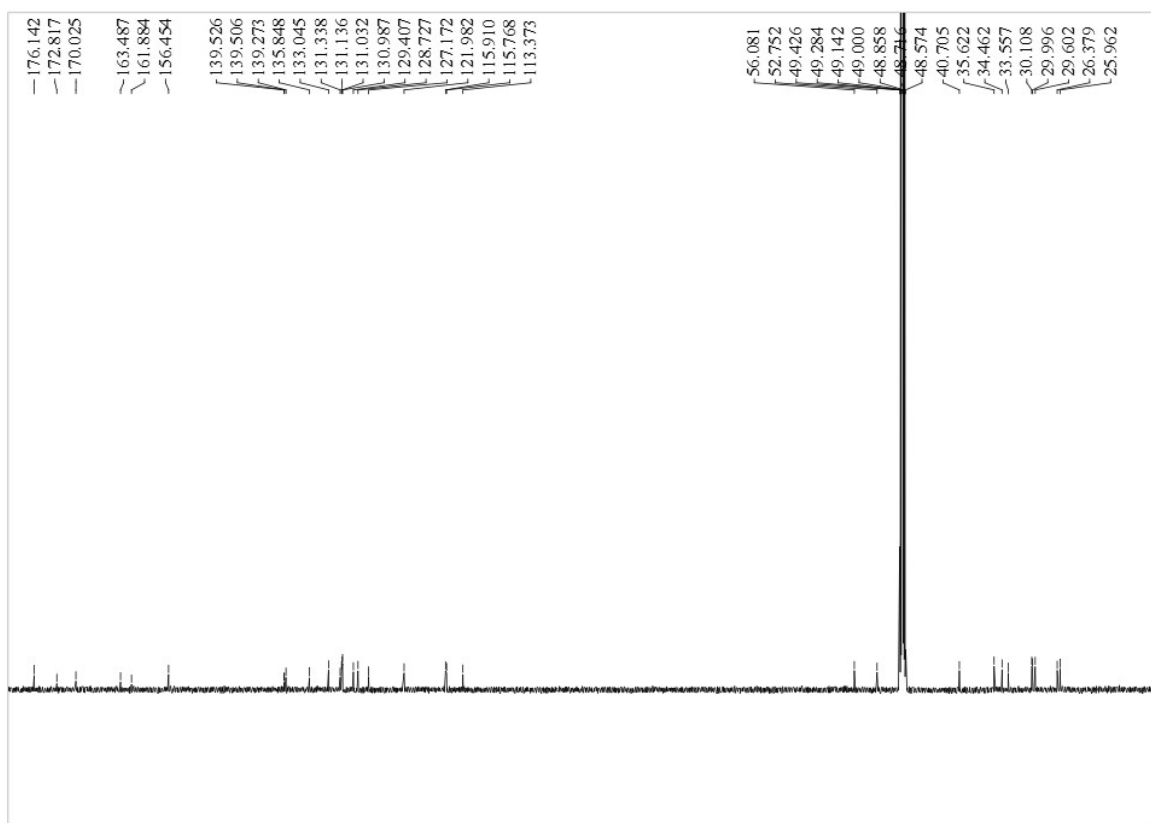


Fig. S58. The ^{13}C NMR spectrum for 10j

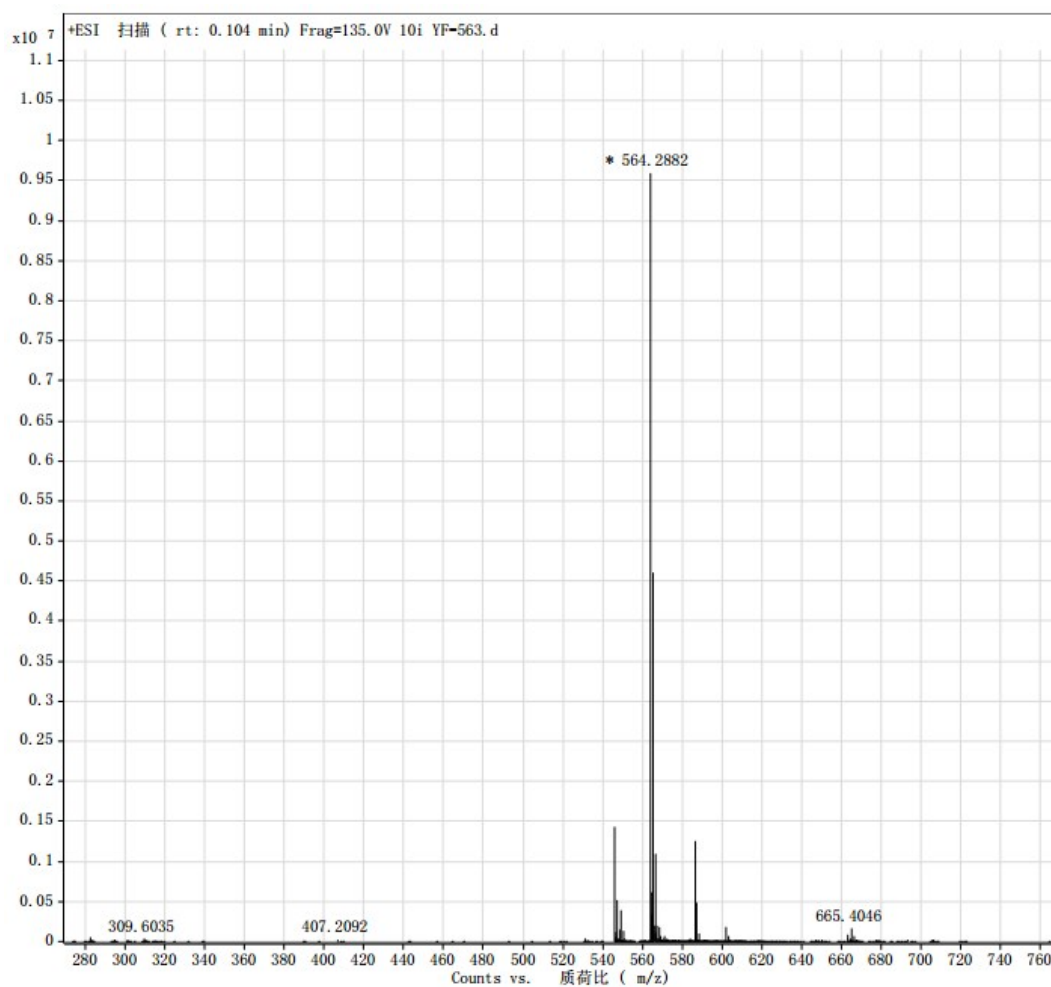
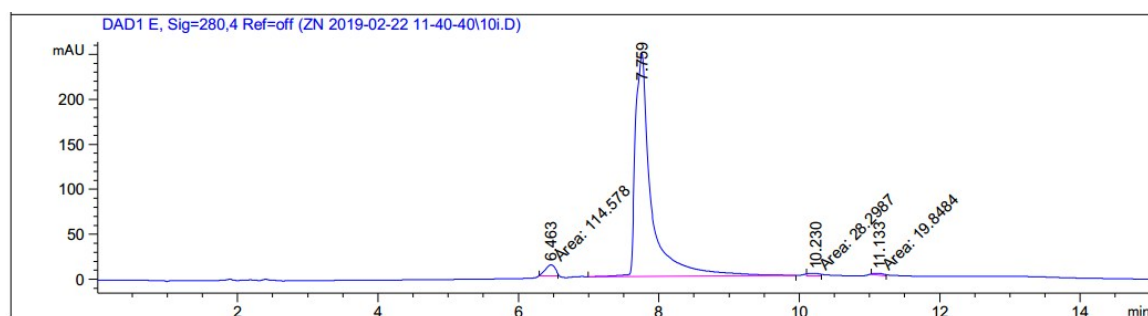


Fig. S59. The HR-ESIMS spectrum for **10j**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	6.463	PM	0.1574	114.57778	12.13442	2.8406
2	7.759	BB	0.2021	3870.80225	248.04732	95.9657
3	10.230	MM	0.1859	28.29867	2.53735	0.7016
4	11.133	MM	0.1720	19.84836	1.92328	0.4921

Fig. S60. The HPLC analysis for **10j**

Compound 10k

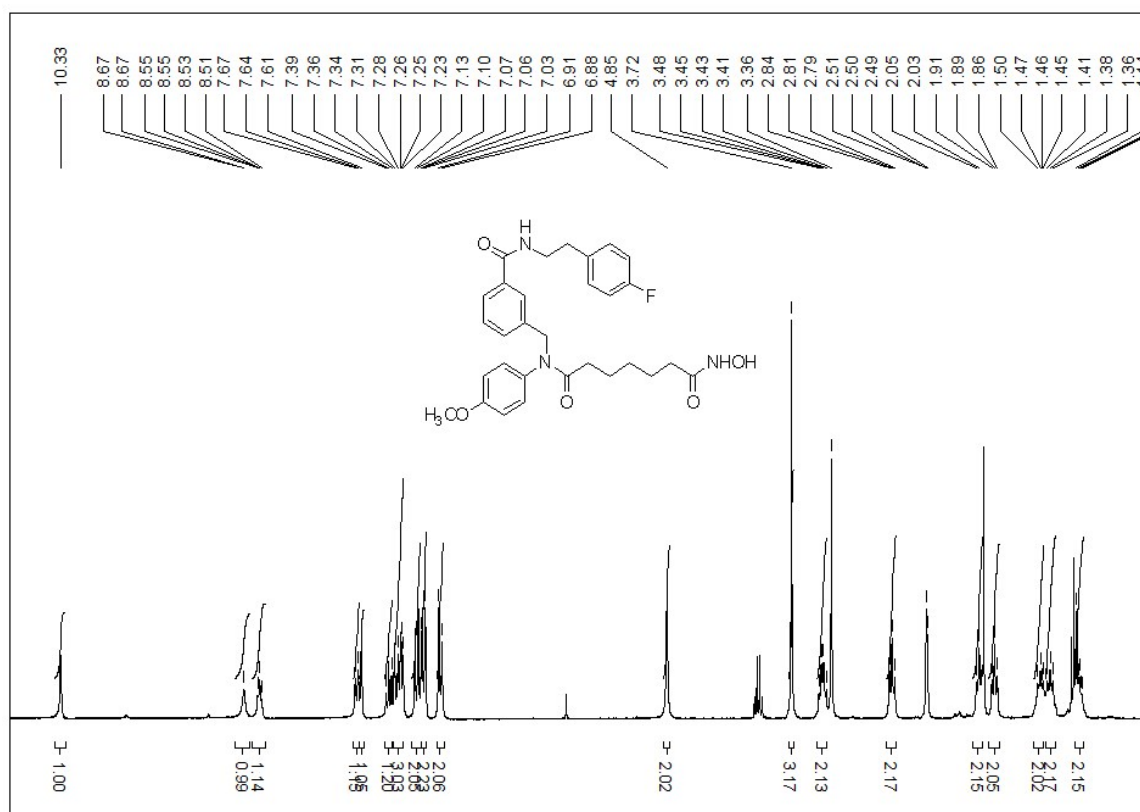


Fig. S61. The ¹H NMR spectrum for **10k**

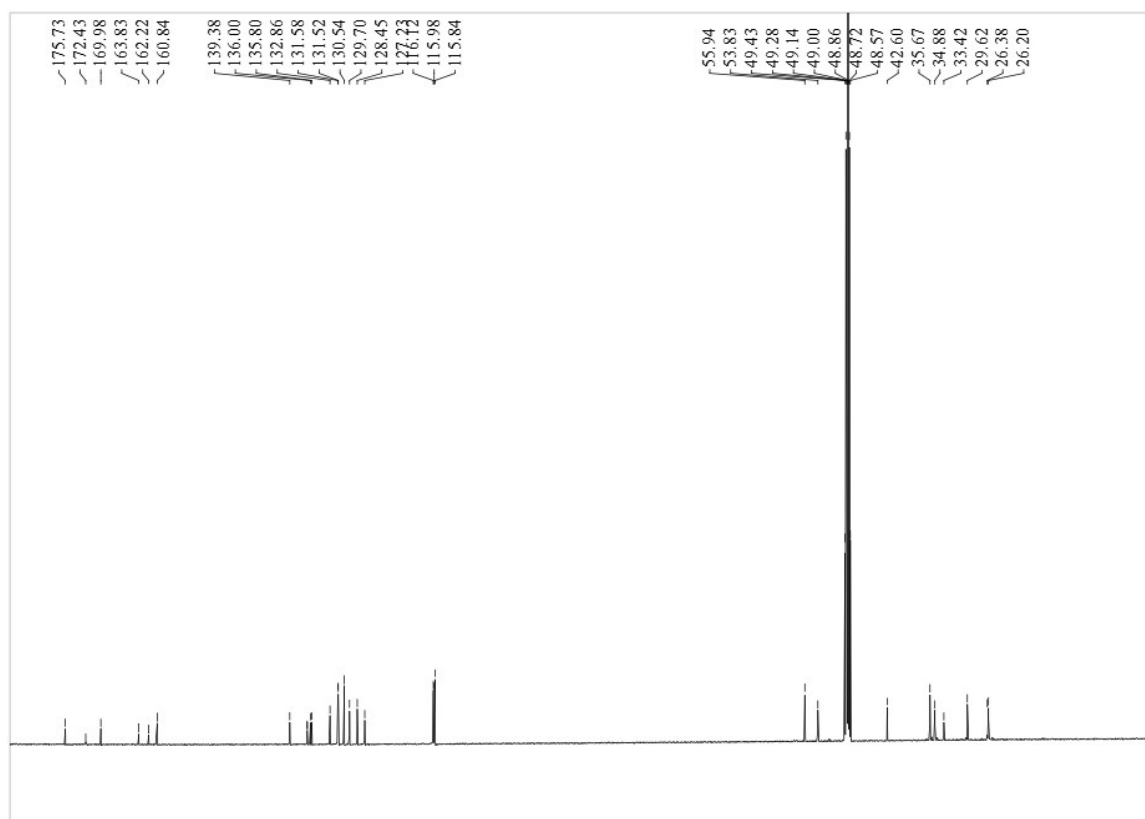


Fig. S62. The ¹³C NMR spectrum for **10k**

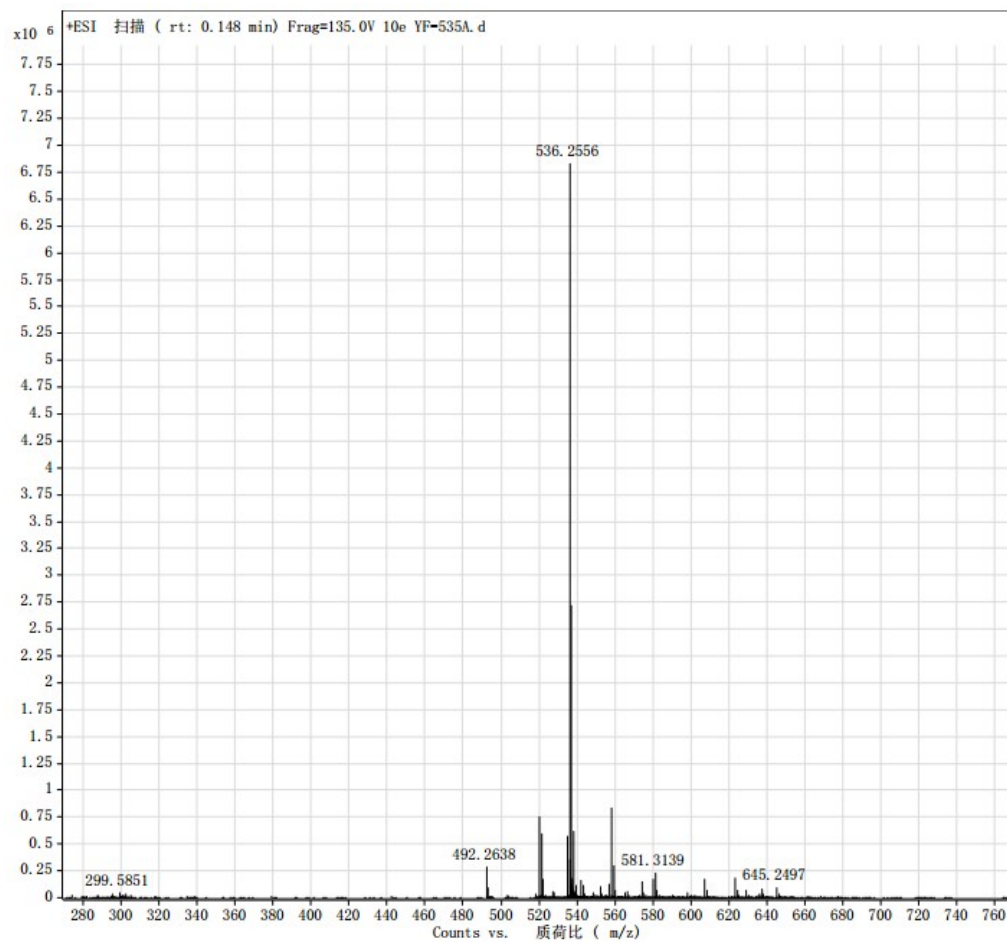
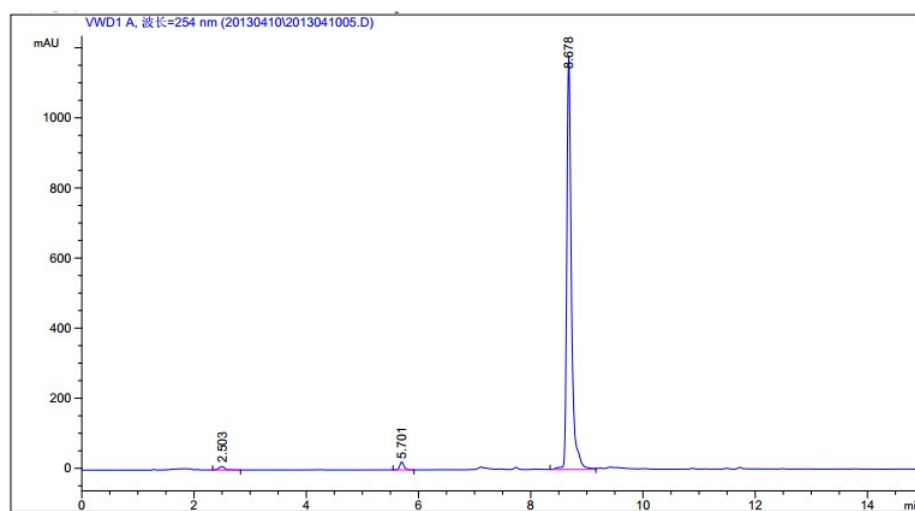


Fig. S63. The HR-ESIMS spectrum for **10k**



峰 #	保留时间 [min]	类型	峰宽 [min]	峰面积 mAU * s	峰高 [mAU]	峰面积 %
1	2.503	BB	0.1189	74.32178	9.81799	1.0709
2	5.701	VB	0.0780	116.96055	22.54900	1.6853
3	8.678	VV	0.0858	6748.93750	1177.49634	97.2439

Fig. S64. The HPLC analysis for **10k**

Compound 10l

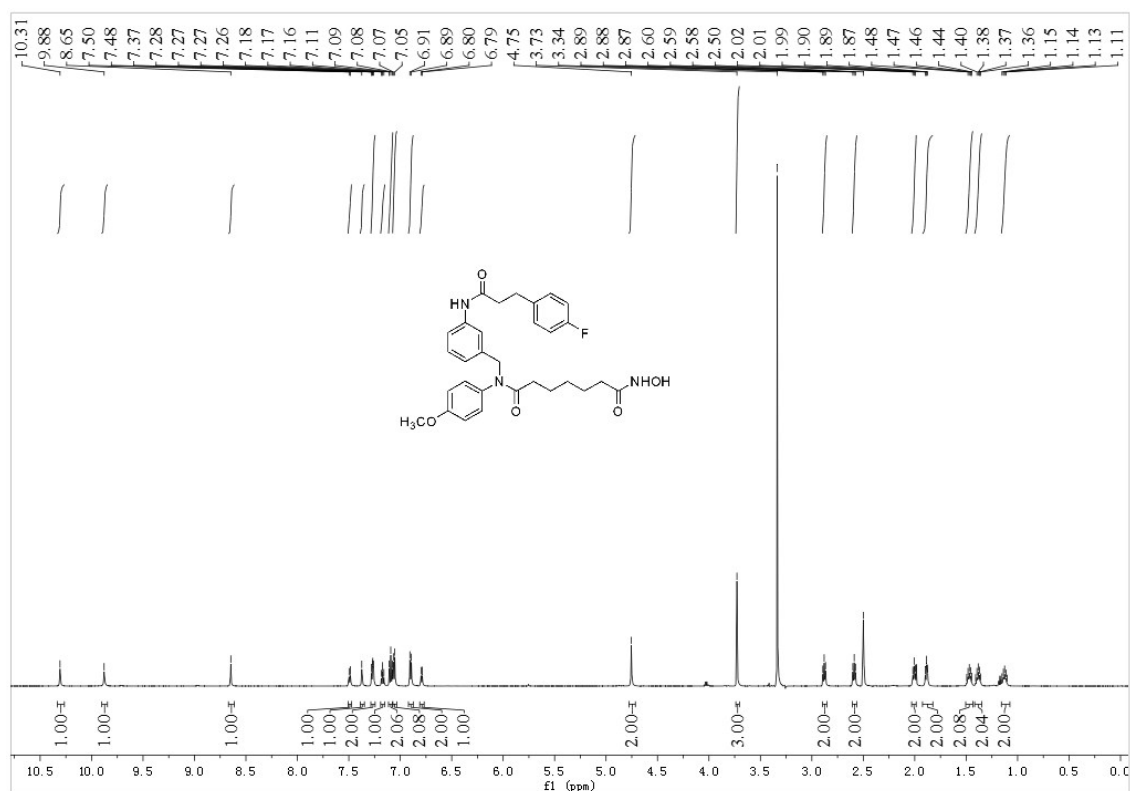


Fig. S65. The ¹H NMR spectrum for **10l**

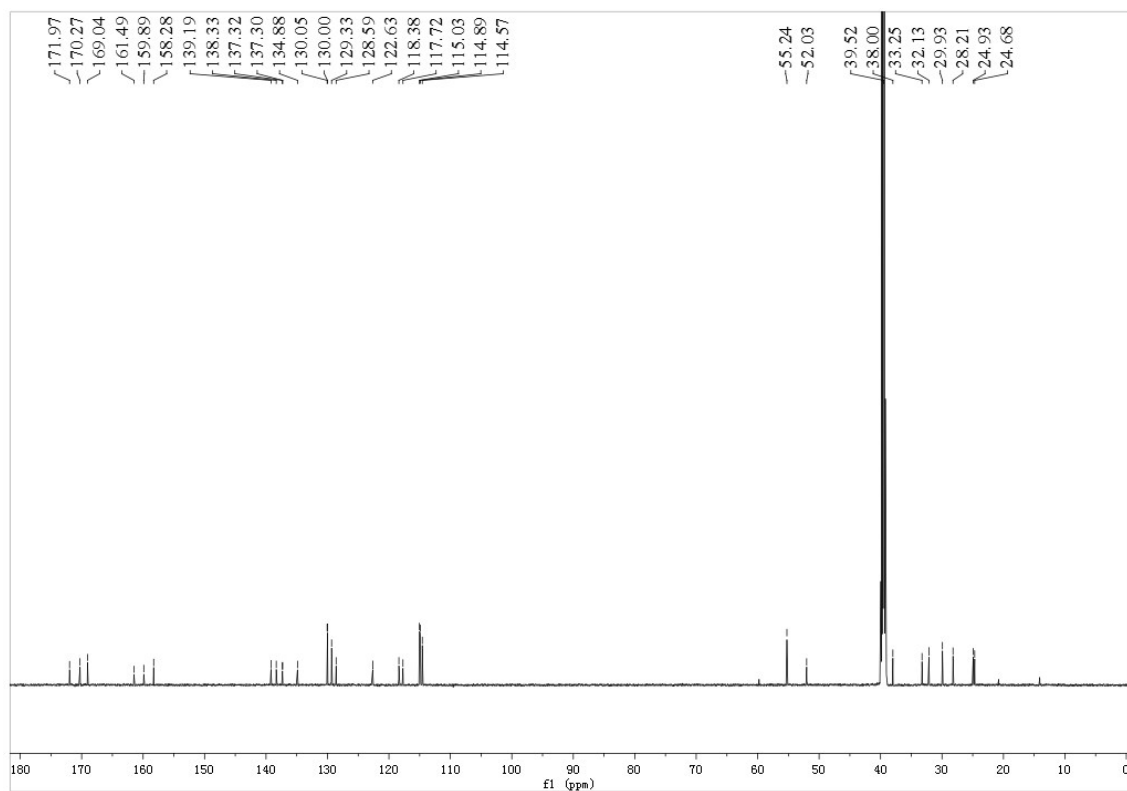


Fig. S66. The ¹³C NMR spectrum for **10l**

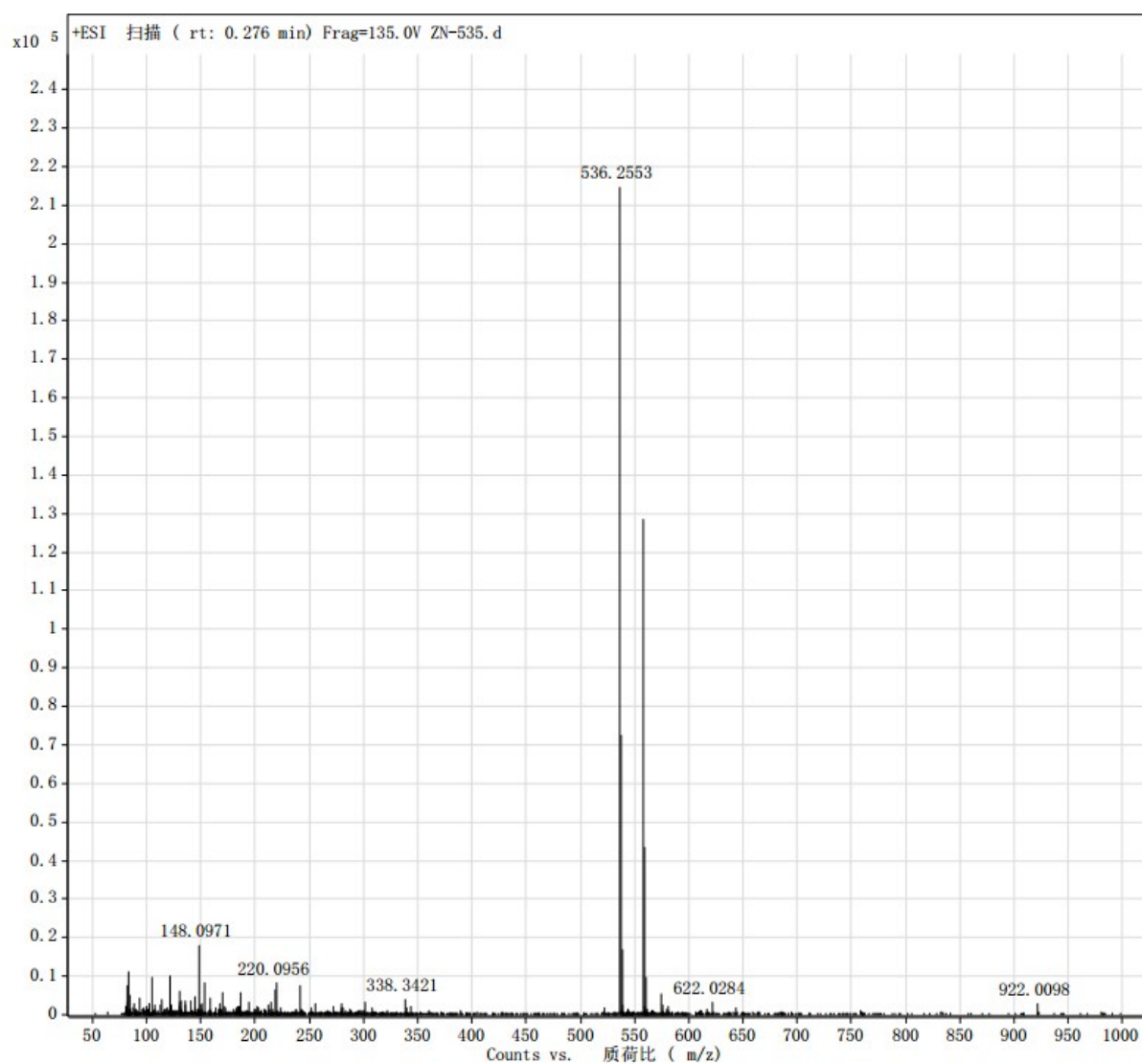
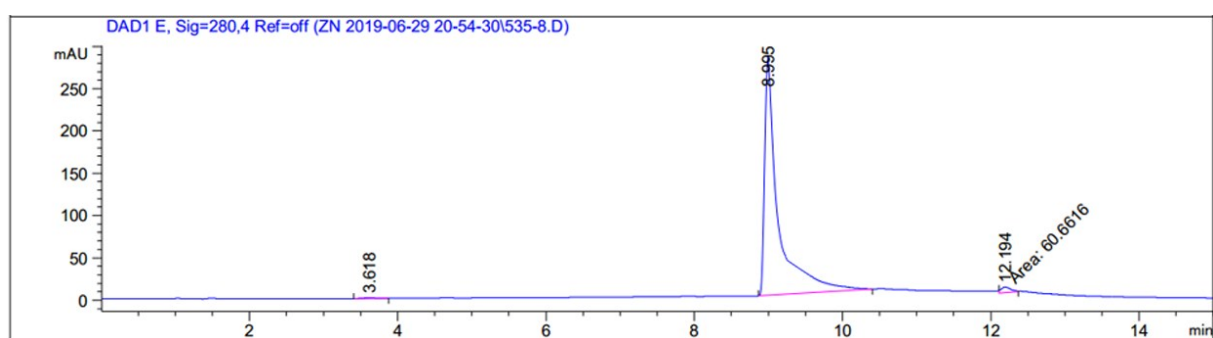


Fig. S67. The HR-ESIMS spectrum for **10I**



Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	3.618	BB	0.1426	10.71415	1.12979	0.2831
2	8.995	BB	0.1820	3713.43213	281.37161	98.1142
3	12.194	MM	0.1526	60.66164	6.62399	1.6028

Fig. S68. The HPLC analysis for **10I**