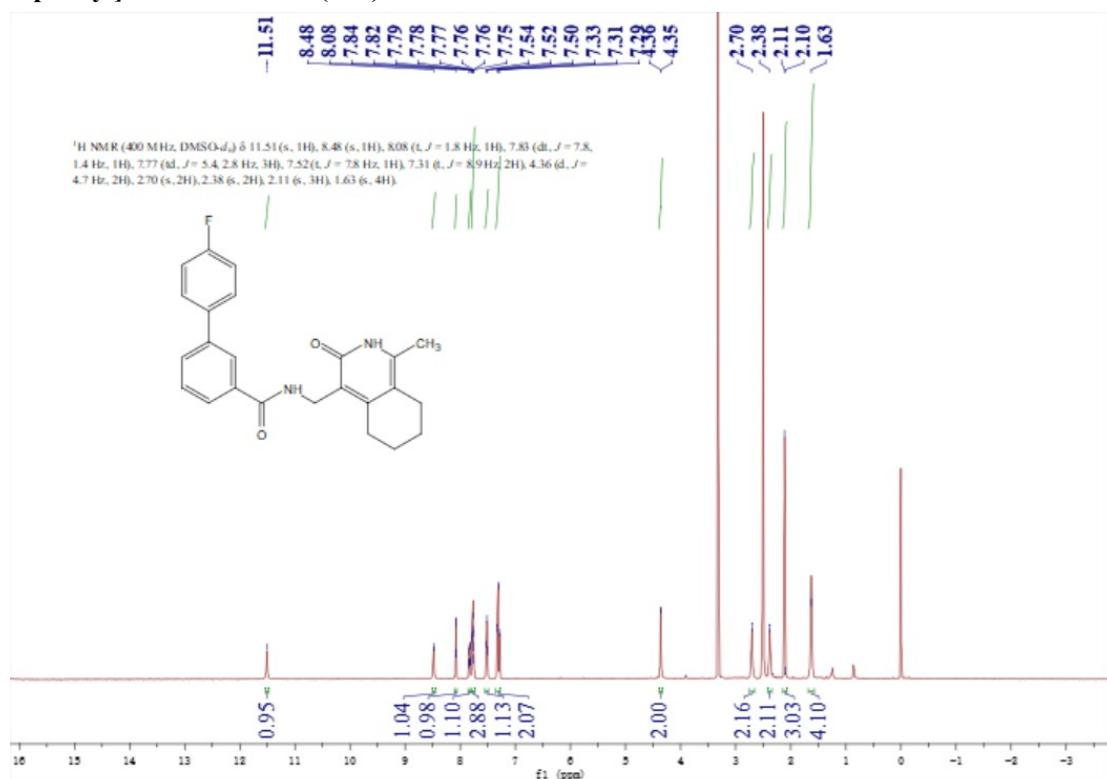


Discovery of Pyridine ketone derivatives as antimycobacterial agents

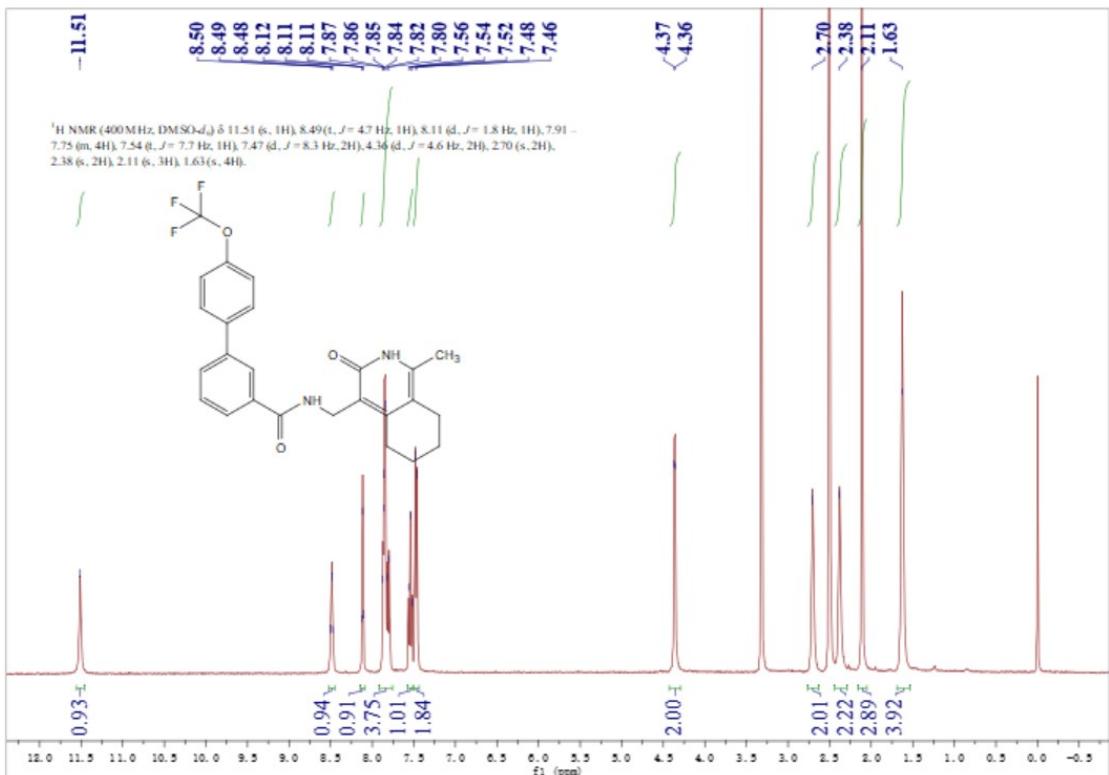
Supplementary Material:

¹H NMR and ¹³C NMR spectrums of compounds

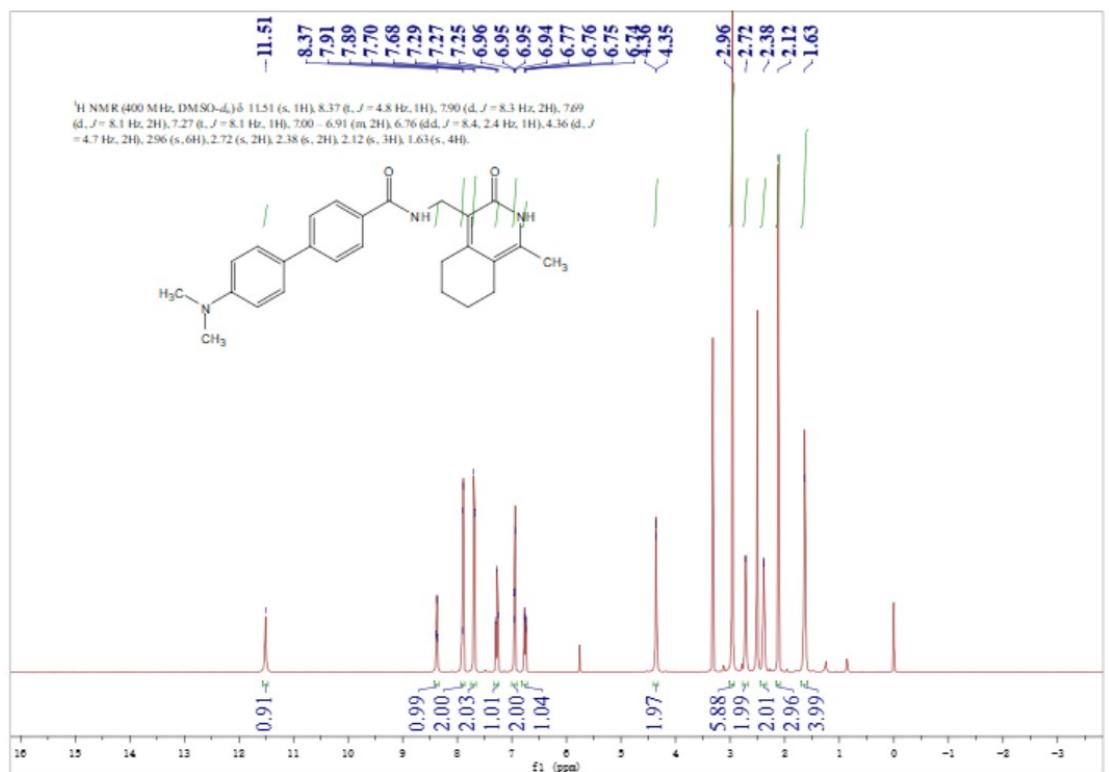
¹H NMR of 4'-fluoro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6b1)



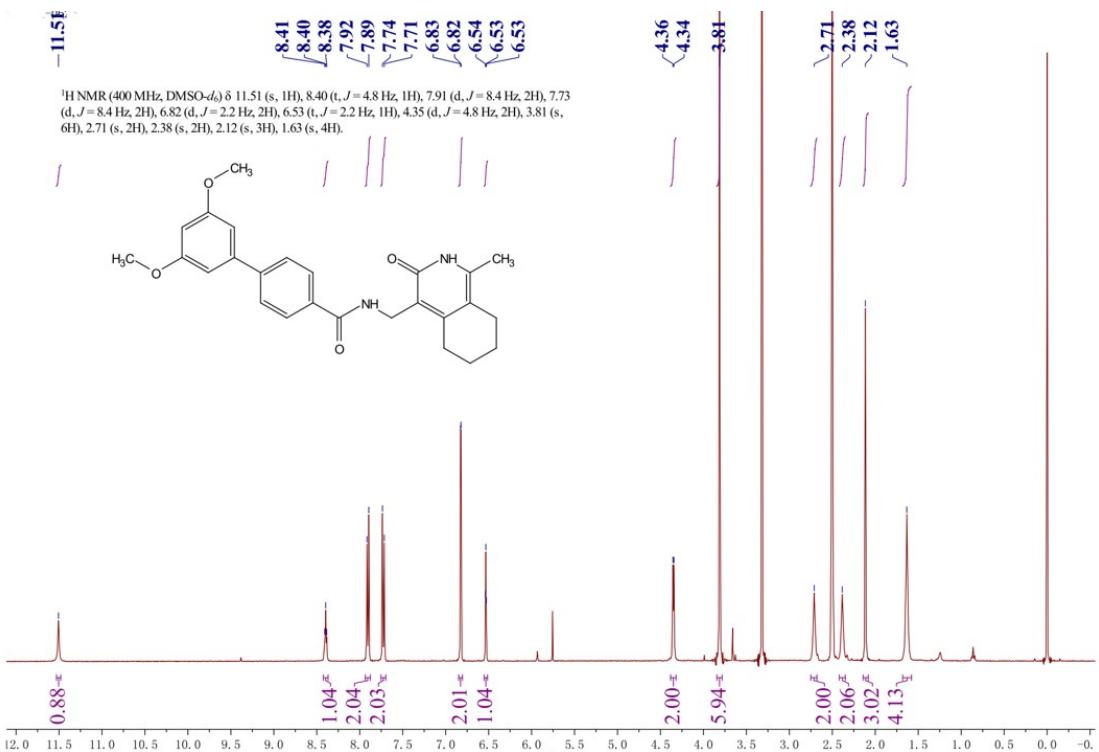
¹H NMR of N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-4'-(trifluoromethoxy)-[1,1'-biphenyl]-4-carboxamide (6b2)



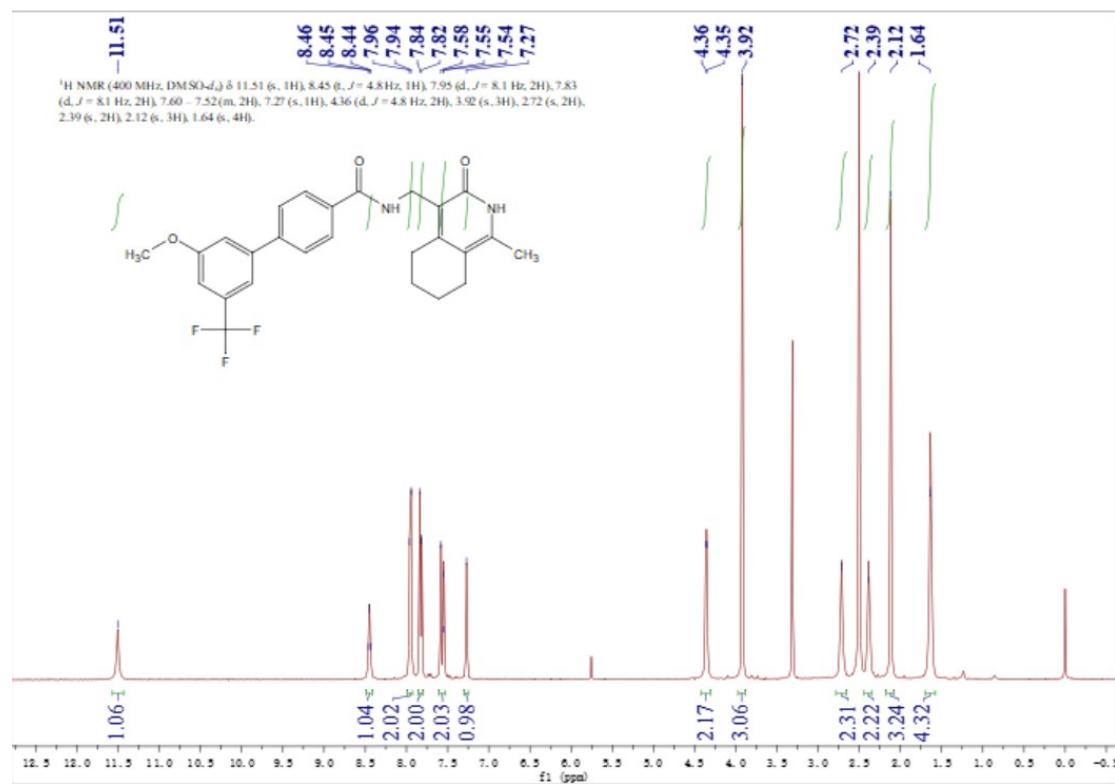
¹H NMR of 4'-(dimethylamino)-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6b3)



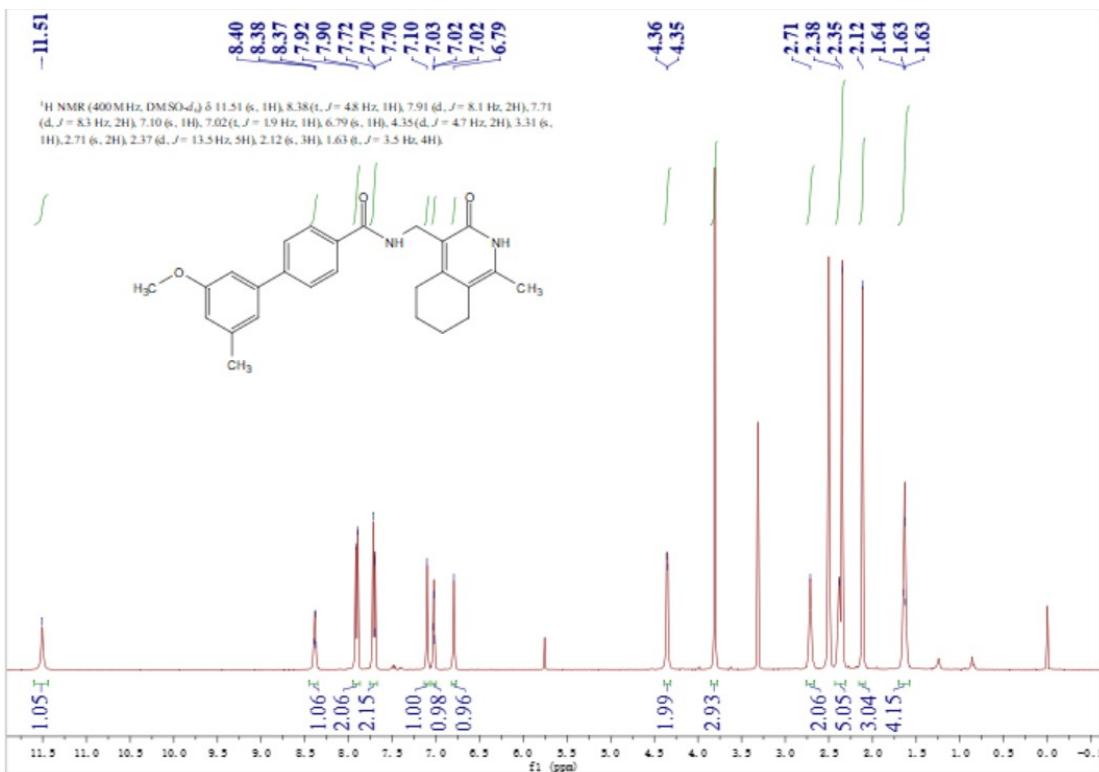
¹H NMR of 3',5'-dimethoxy-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6b6)



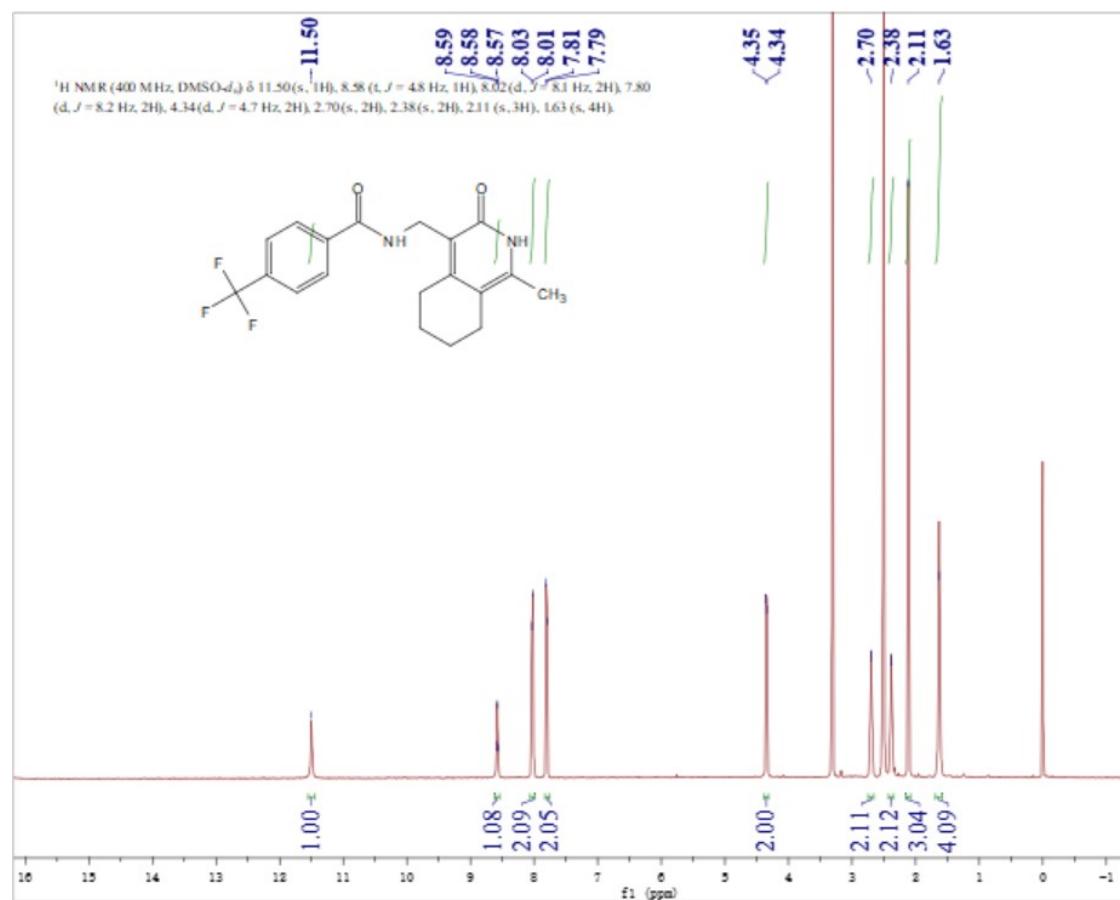
¹H NMR of 3'-methoxy-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-5'-(trifluoromethyl)-[1,1'-biphenyl]-4-carboxamide (6b8)



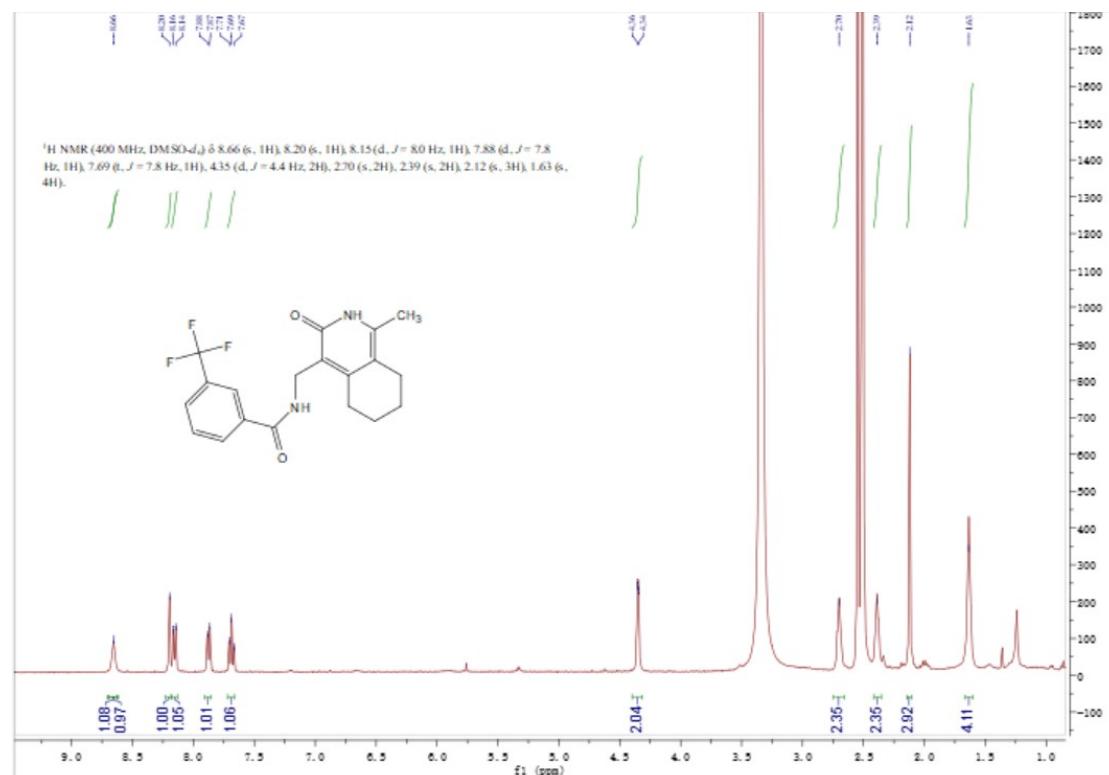
¹H NMR of 3'-methoxy-5'-methyl-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6b9)



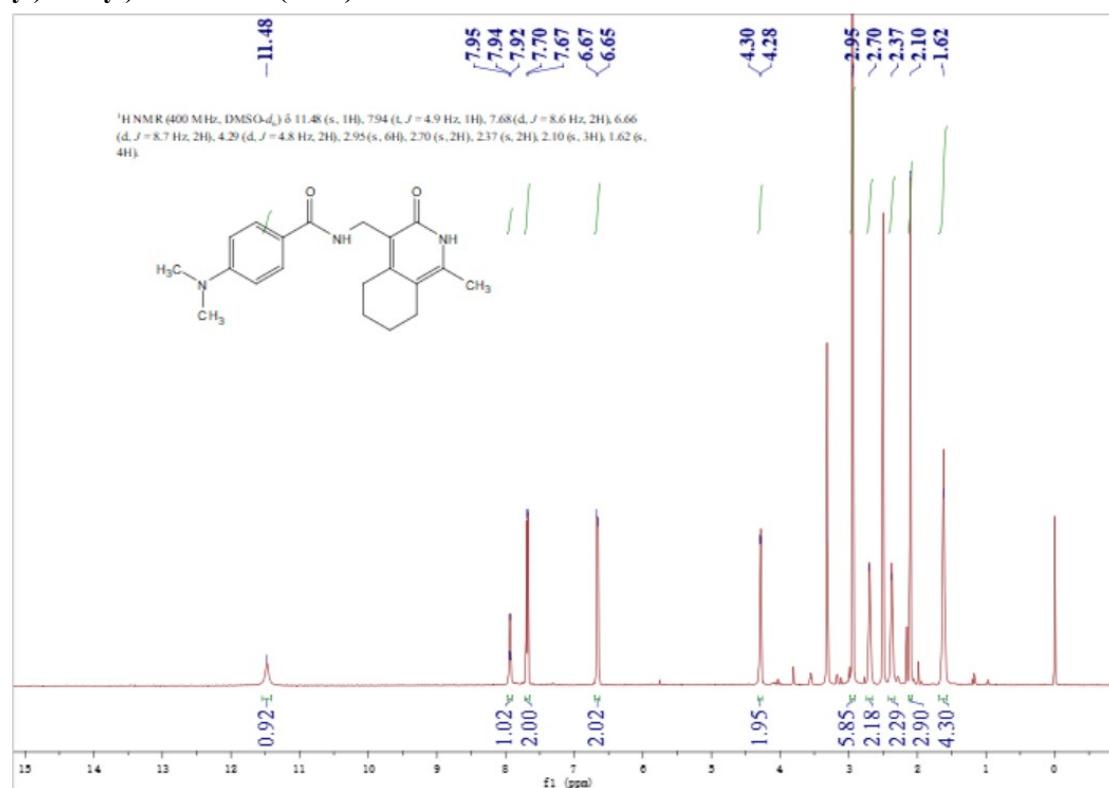
¹H NMR of *N*-(1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-4-(trifluoromethyl) benzamide (6b12)



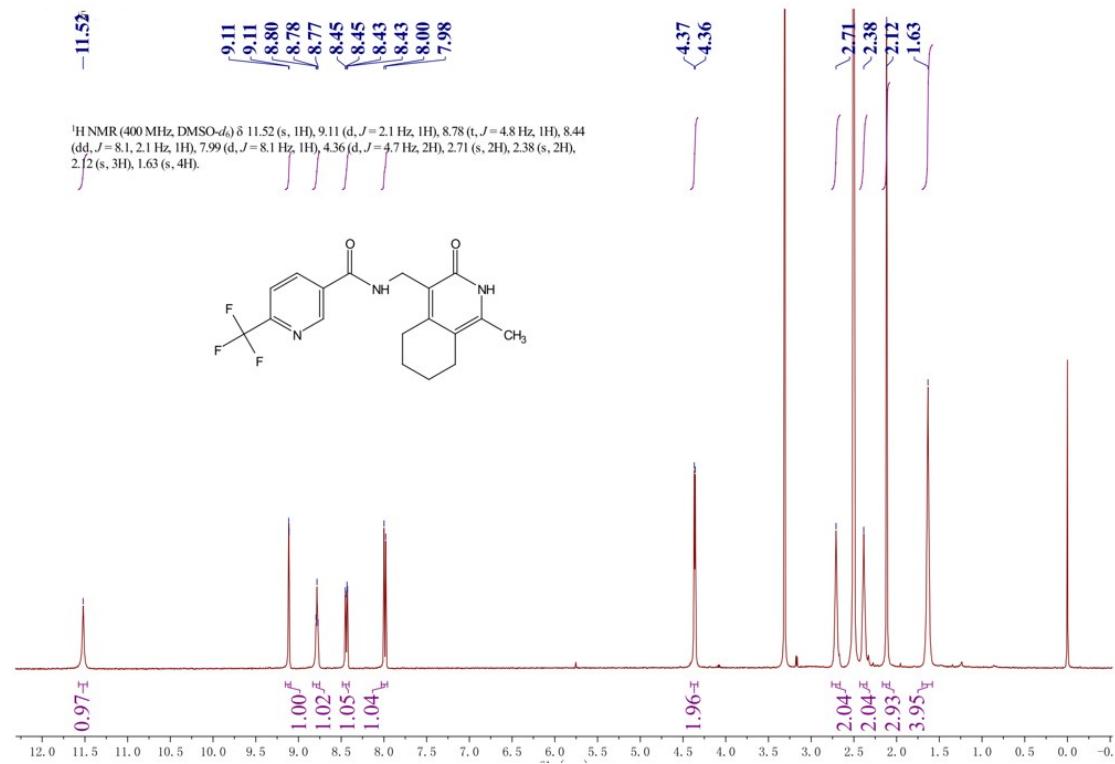
¹H NMR of N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-3-(trifluoromethyl) benzamide (6b14)



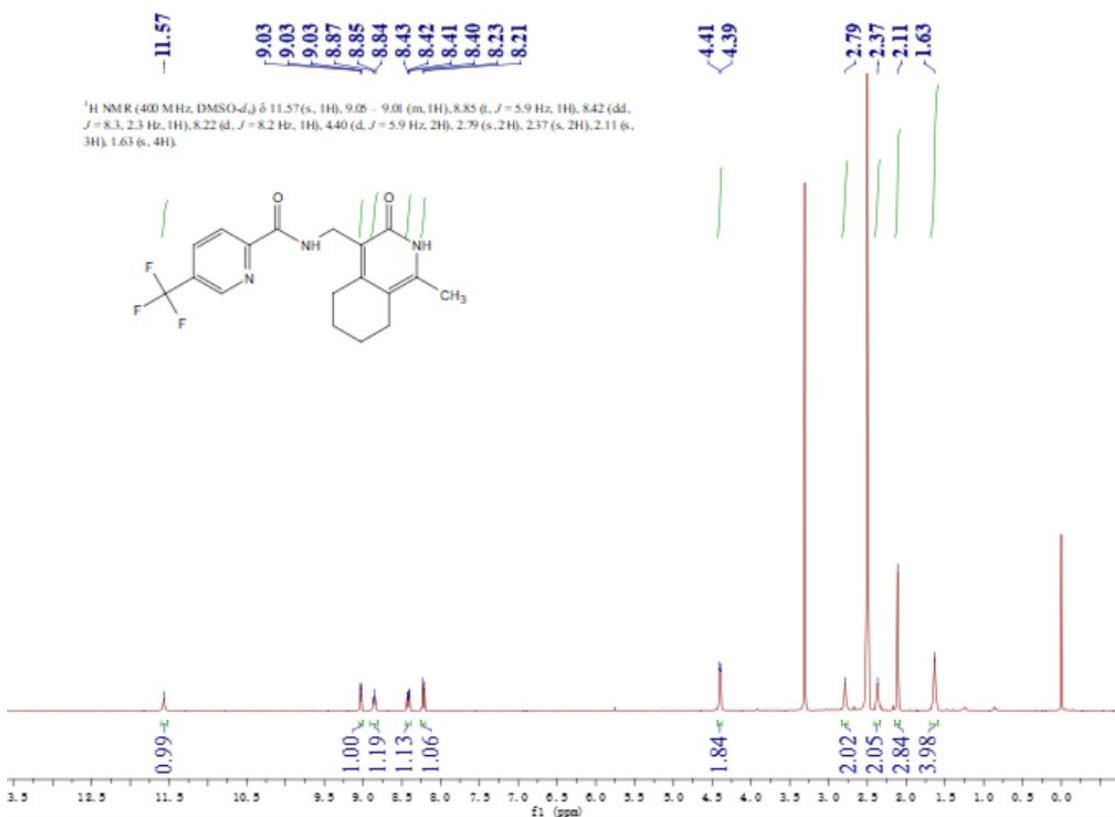
¹H NMR of 4-(dimethylamino)-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl) benzamide (6b18)



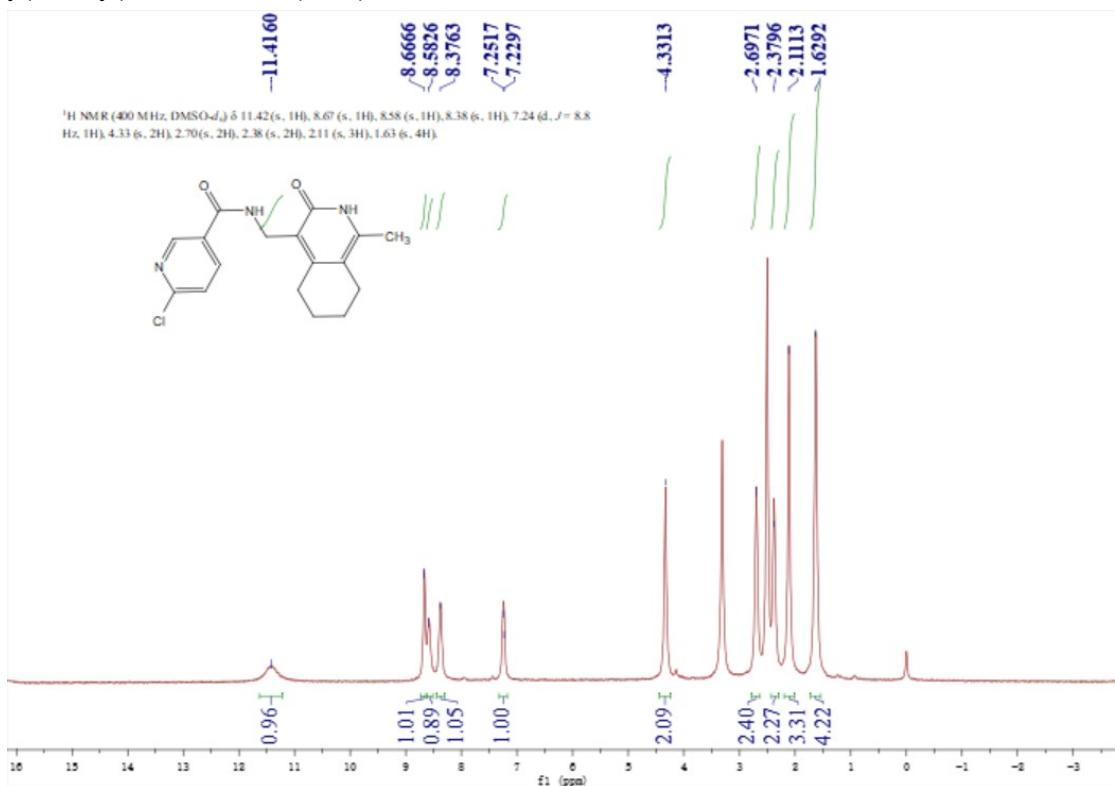
¹H NMR of N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-6-(trifluoromethyl) nicotinamide (6b21)



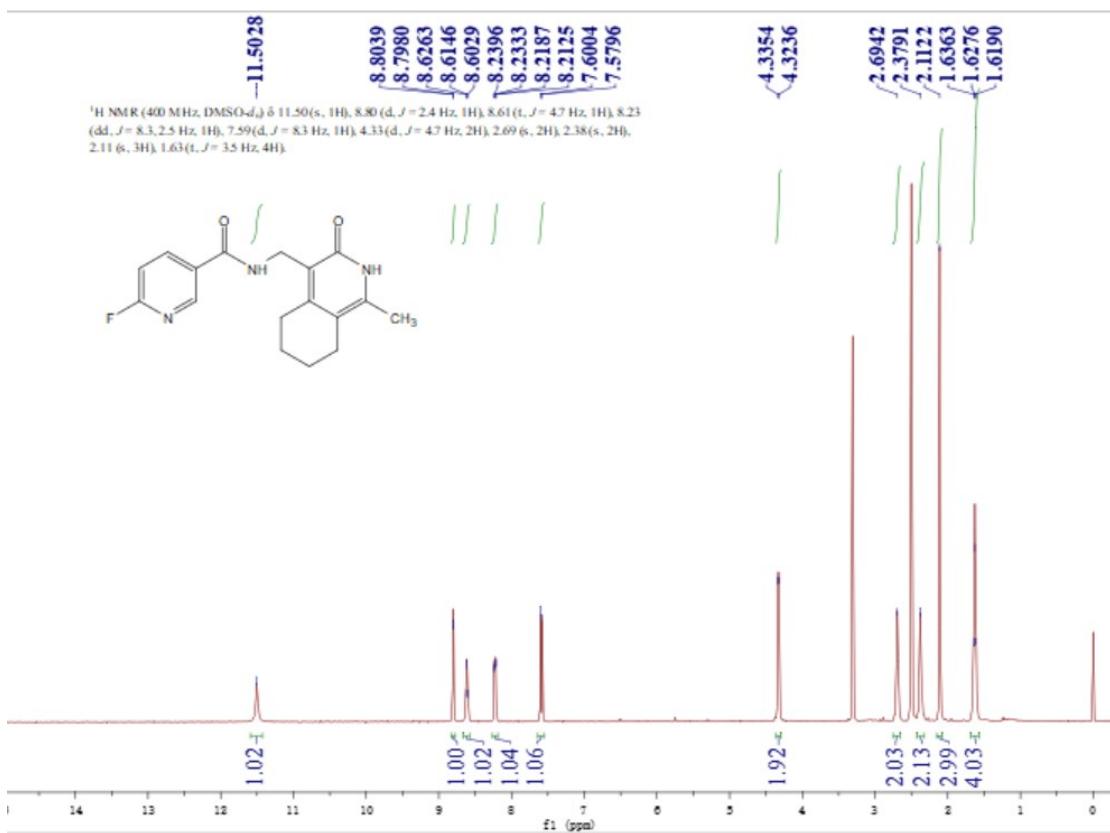
¹H NMR of N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-5-(trifluoromethyl) picolinamide (6b22)



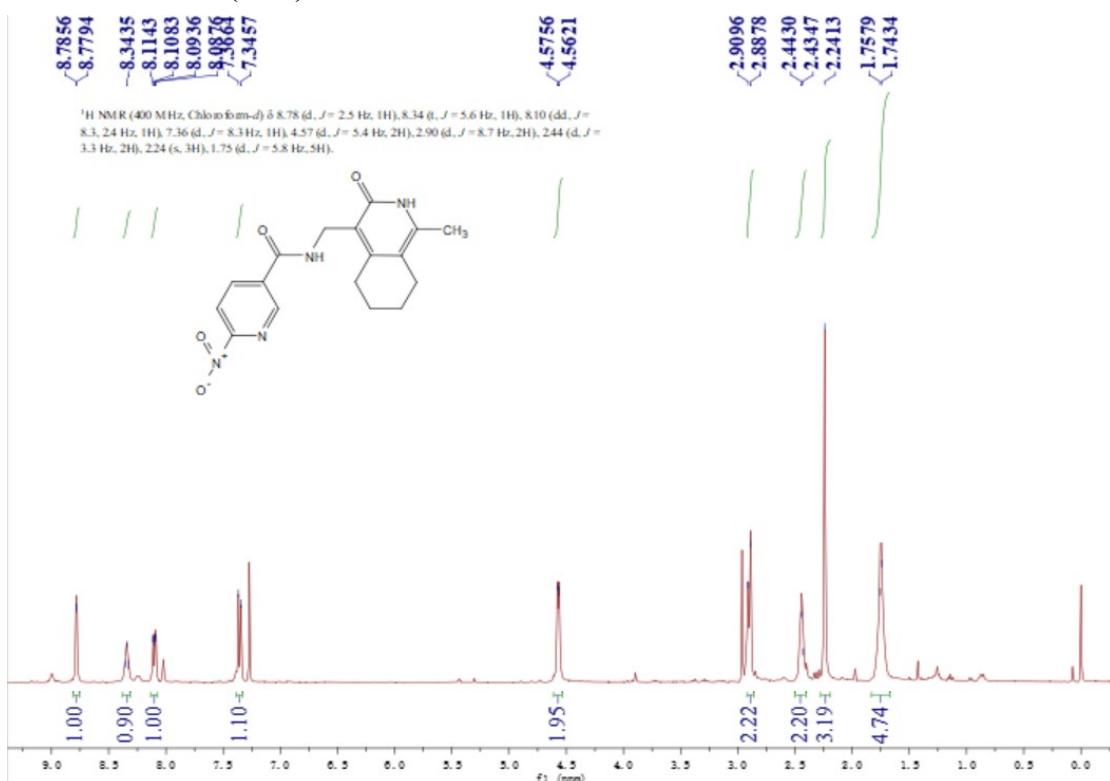
¹H NMR of 6-chloro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b24)



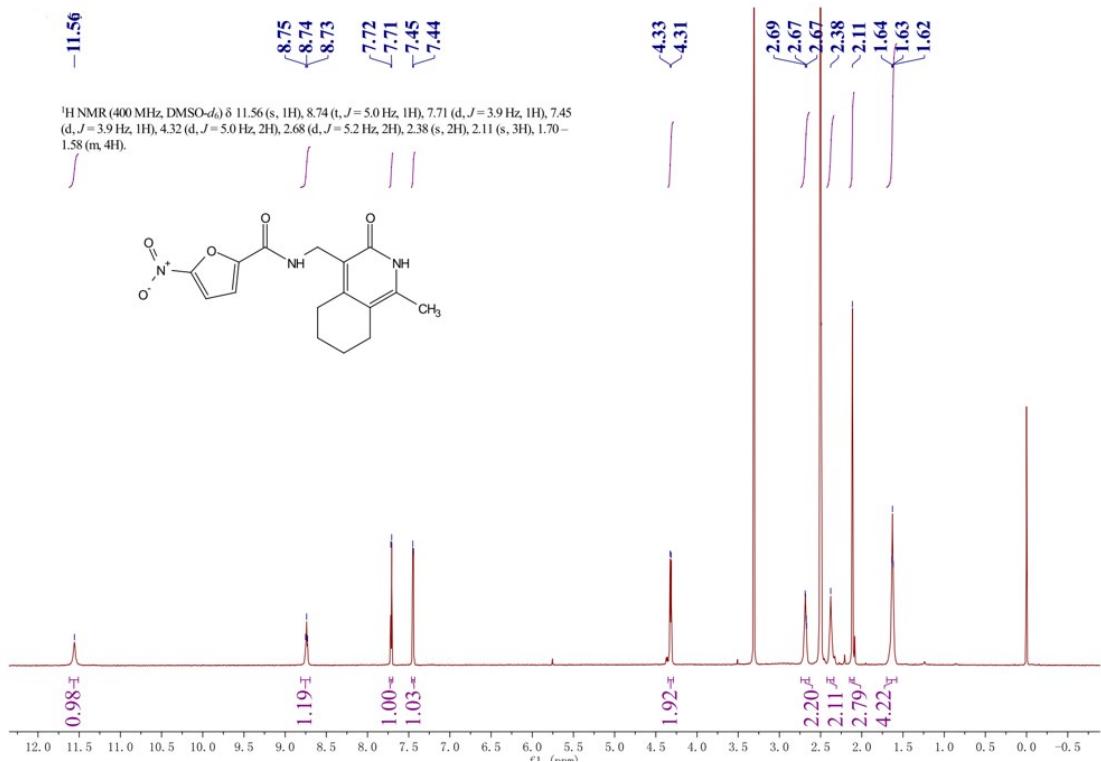
¹H NMR of 6-fluoro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b26)



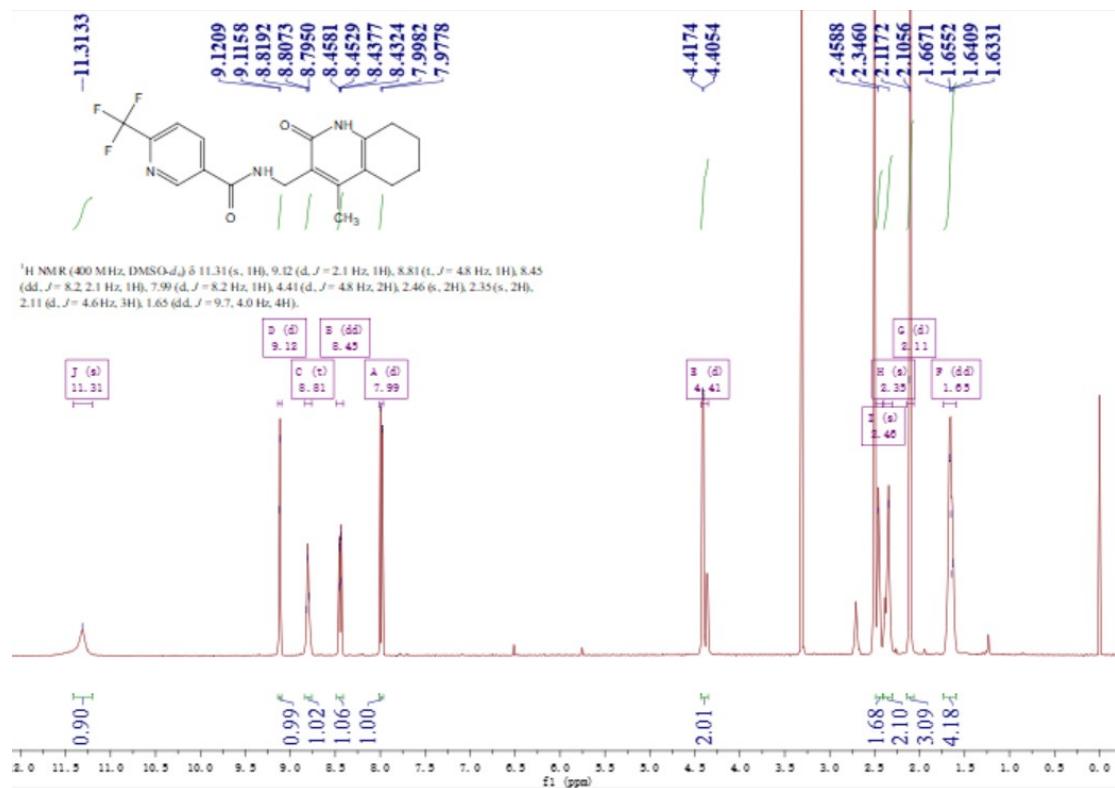
¹H NMR of N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-6-nitronicotinamide (6b28)



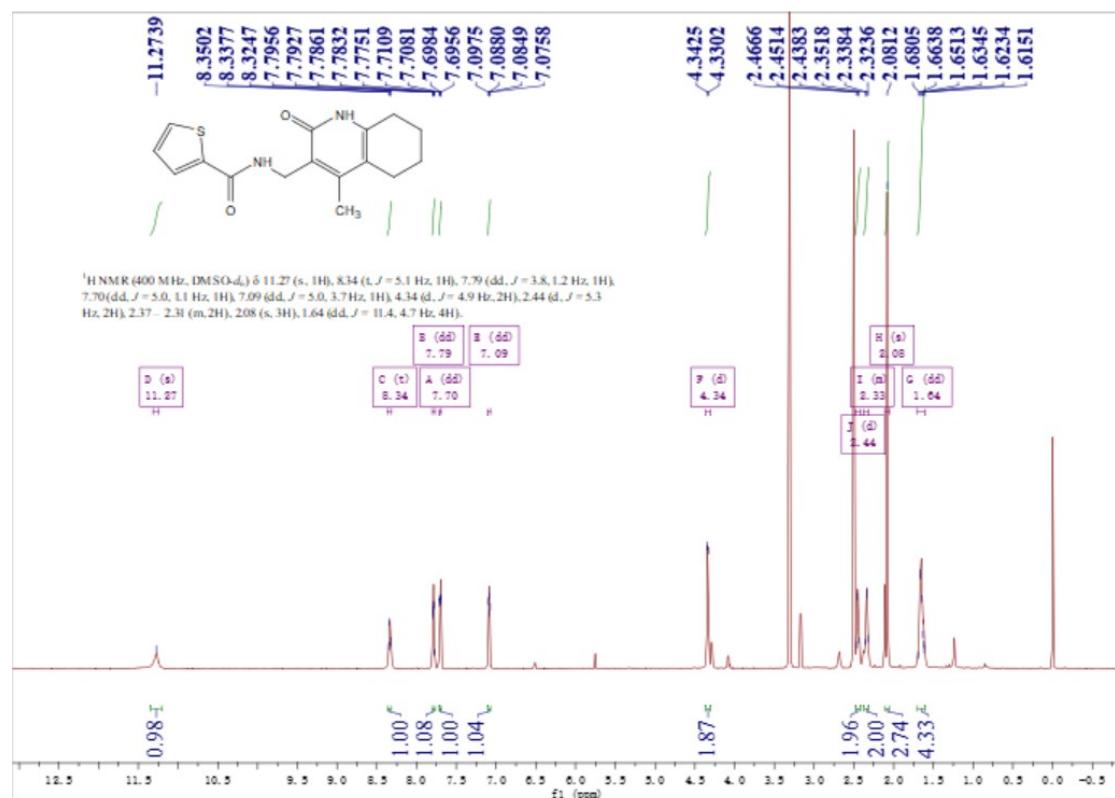
¹H NMR of N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-5-nitrofuran-2-carboxamide (6b29)



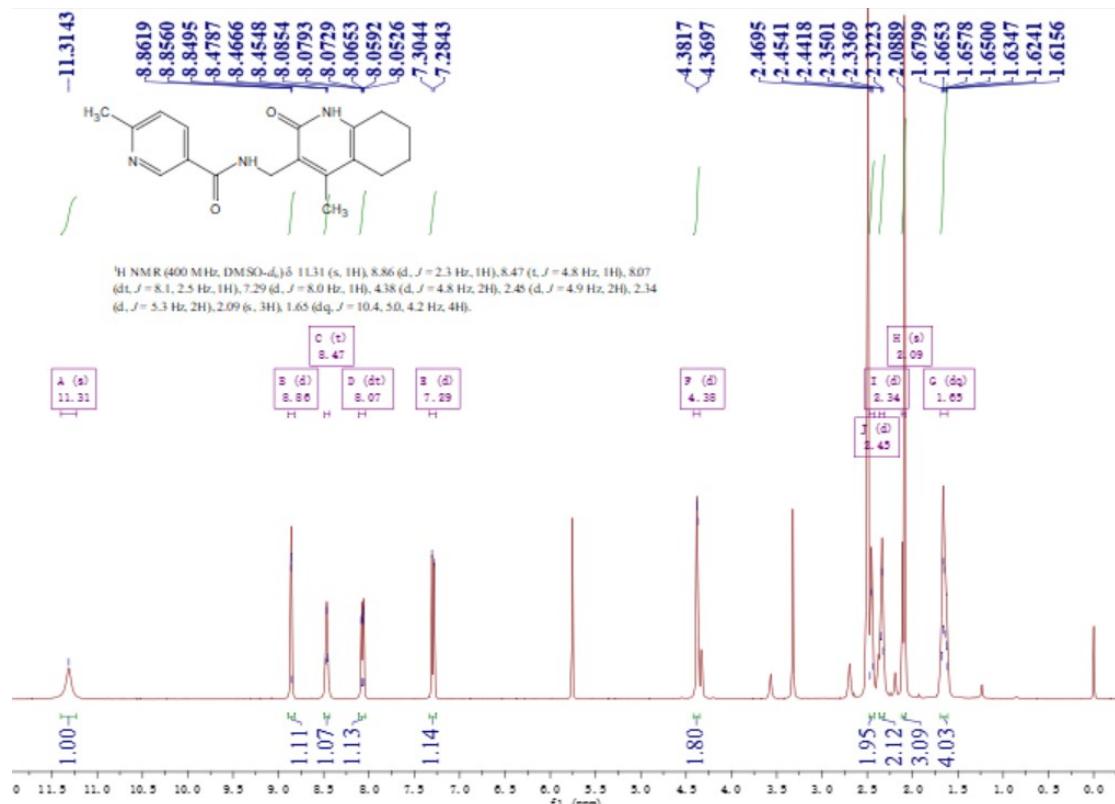
¹H NMR of 5-bromo-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)furan-2-carboxamide (6b31)



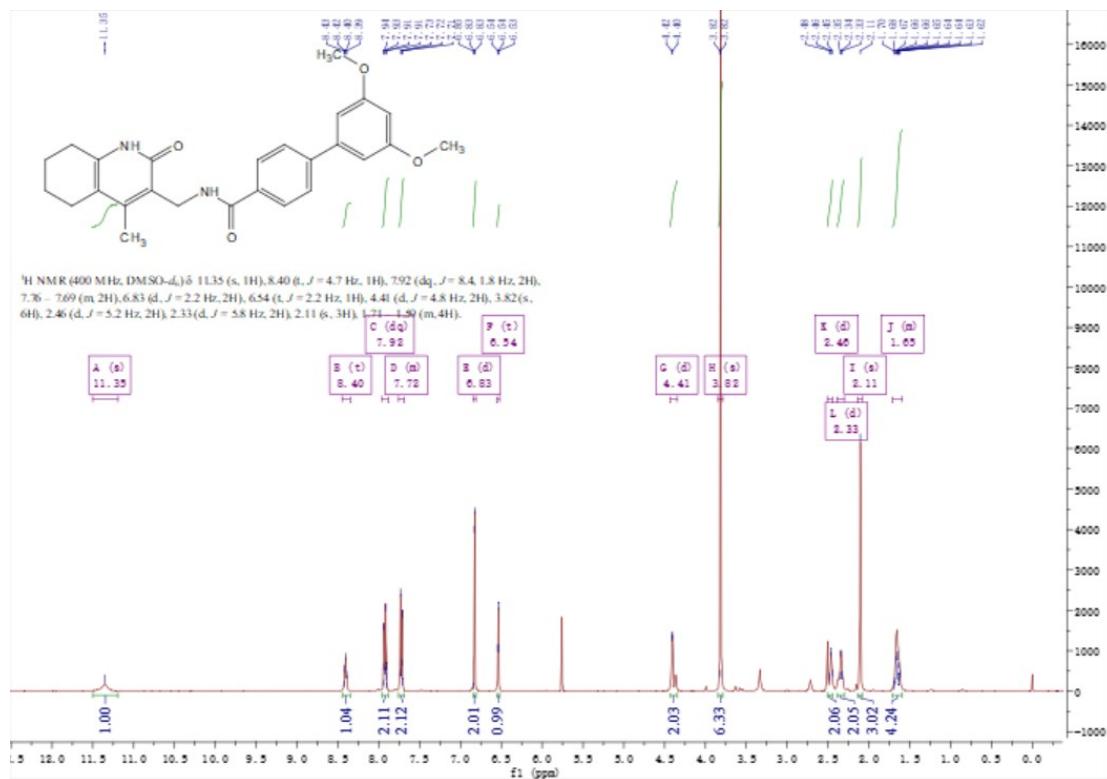
¹H NMR of *N*-(*(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl*)thiophene-2-carboxamide(6d2)



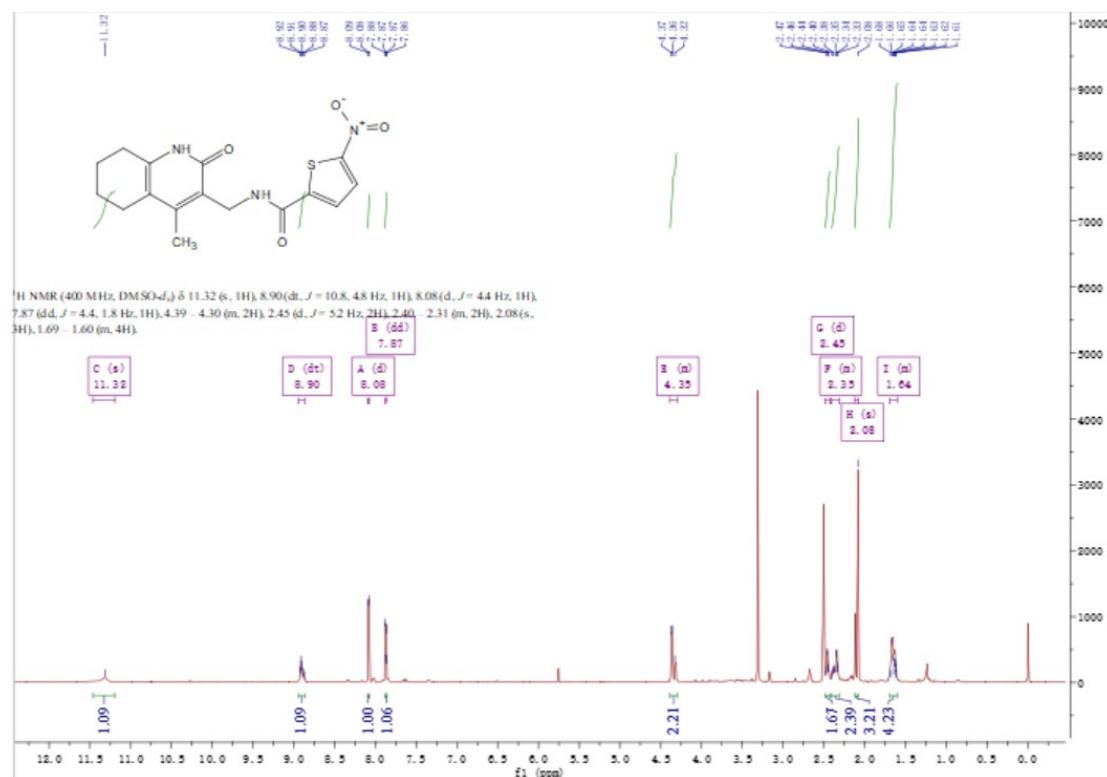
¹H NMR of 6-methyl-*N*-(*(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl*)nicotinamide (6d3)



¹H NMR of 3',5'-dimethoxy-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6d4)

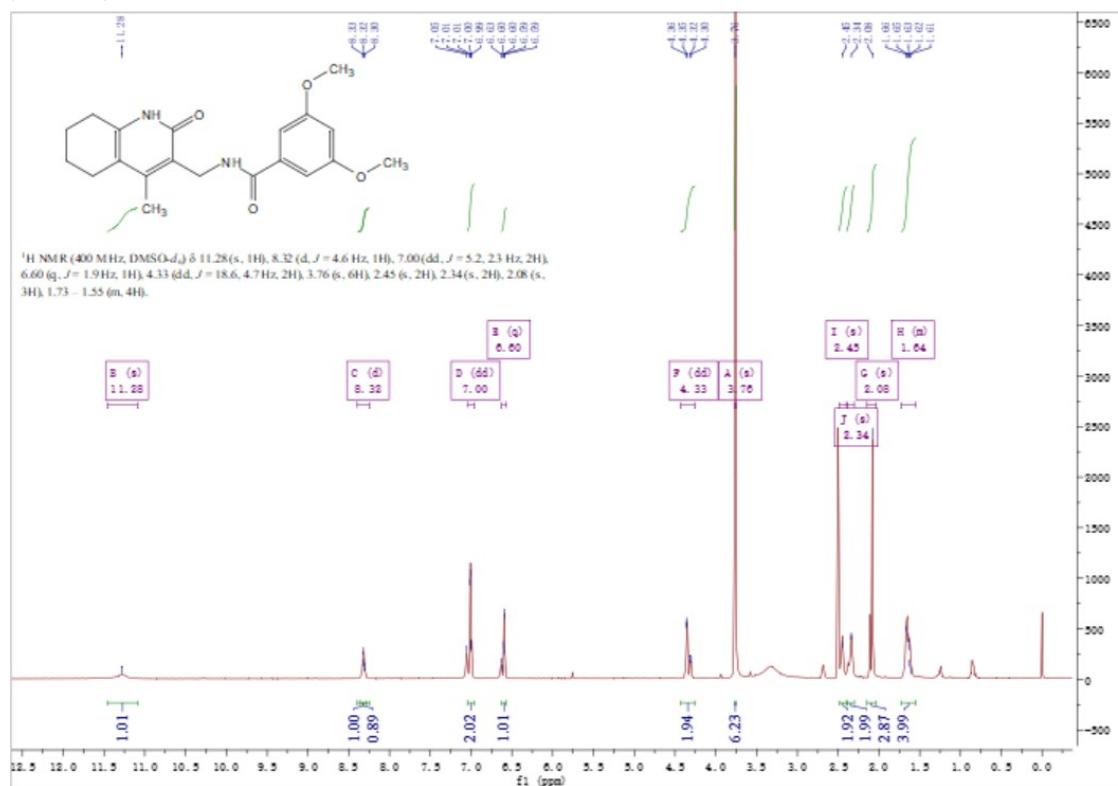


¹H NMR of N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-5-nitrothiophene-2-carboxamide (6d5)

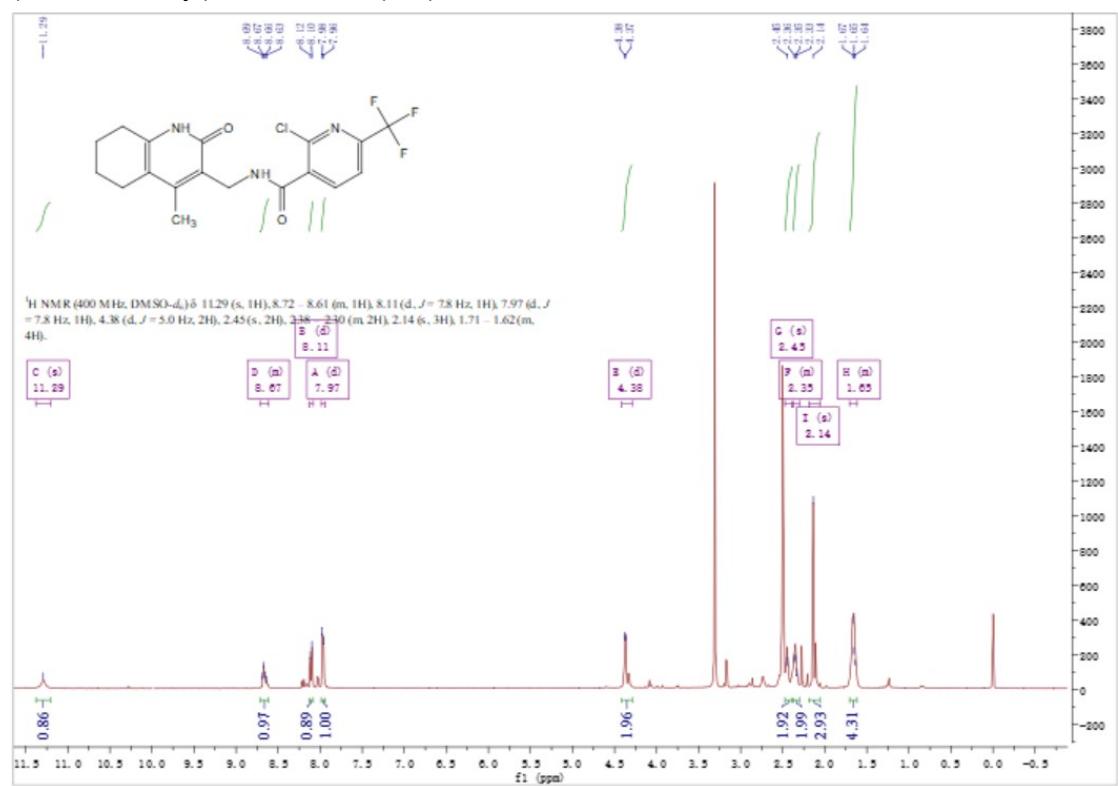


¹H NMR of 3,5-dimethoxy-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-

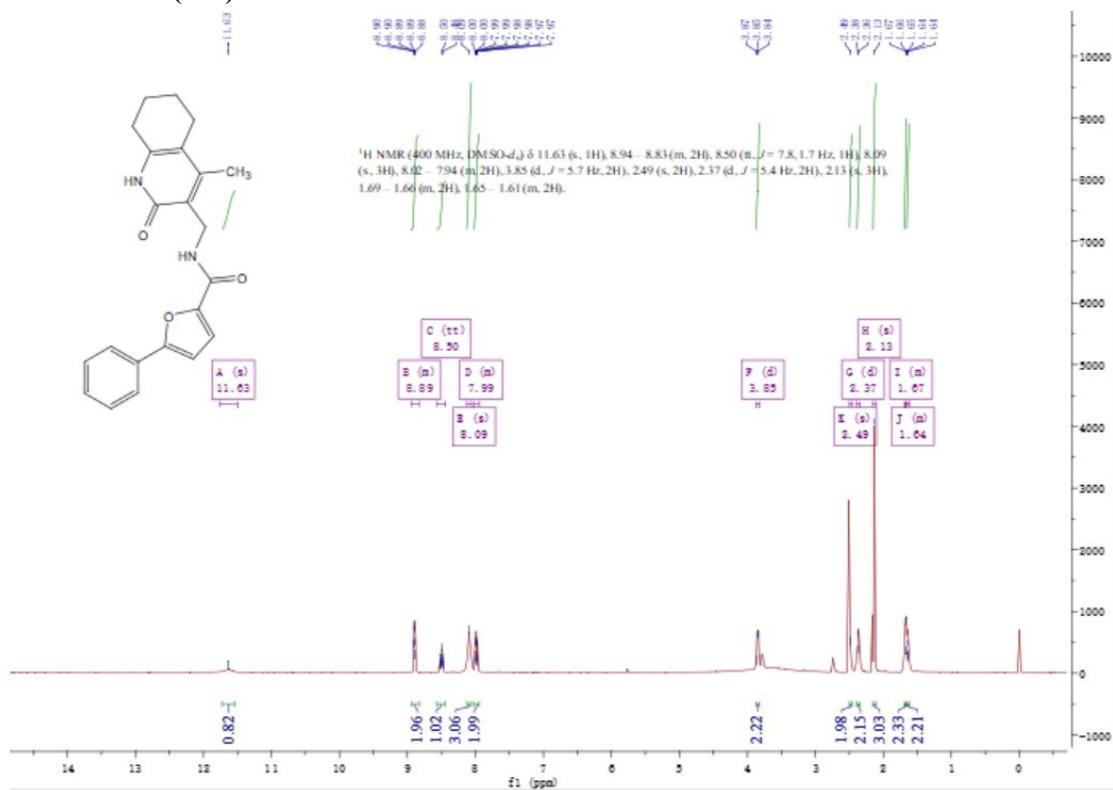
(yil)methyl)benzamide (6d6)



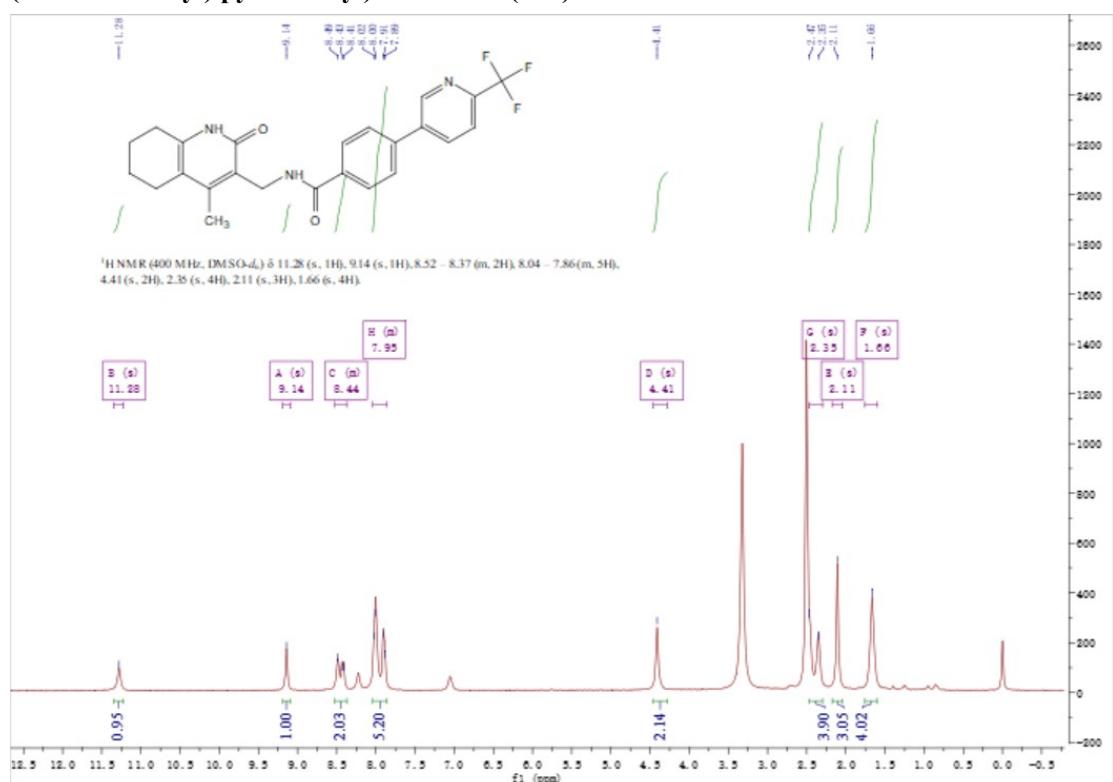
¹H NMR of 2-chloro-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-6-(trifluoromethyl)nicotinamide (6d7)



¹H NMR of *N*-(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-5-phenylfuran-2-carboxamide (6d8)



¹H NMR of *N*-(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-4-(6-(trifluoromethyl) pyridin-3-yl)benzamide (6d9)

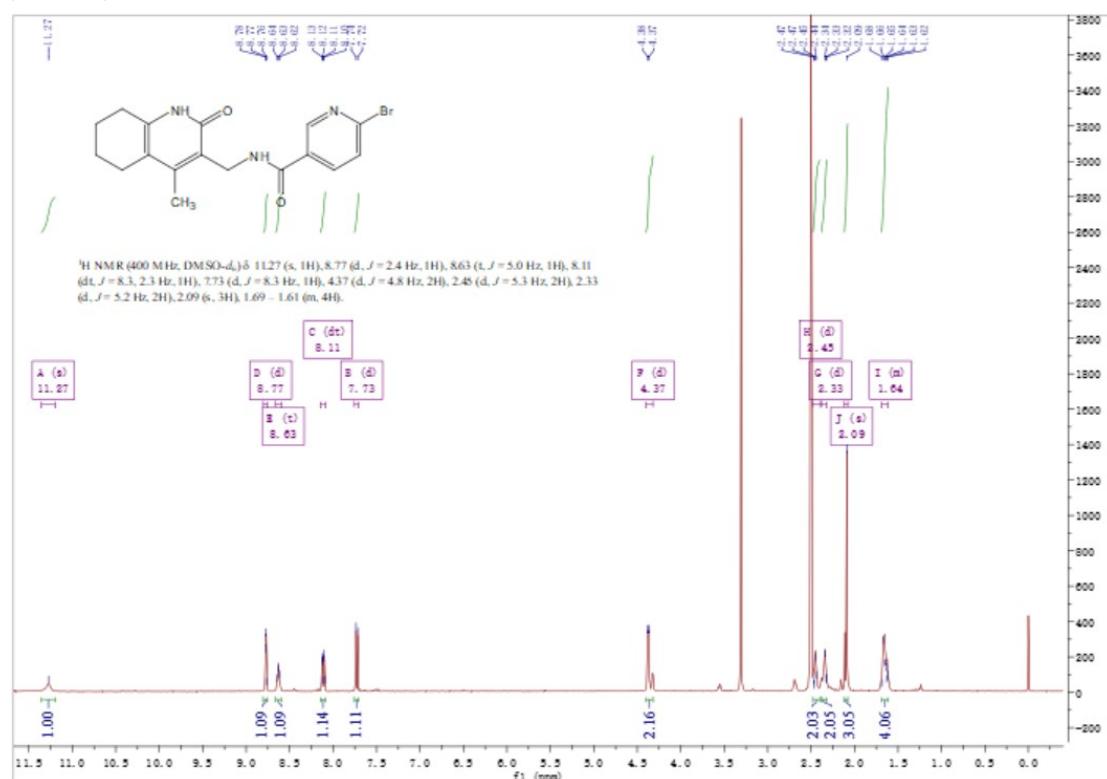


¹H NMR of 4-methyl-3-(((1-(4-(trifluoromethoxy)benzoyl)piperidin-4-yl)amino)methyl)-

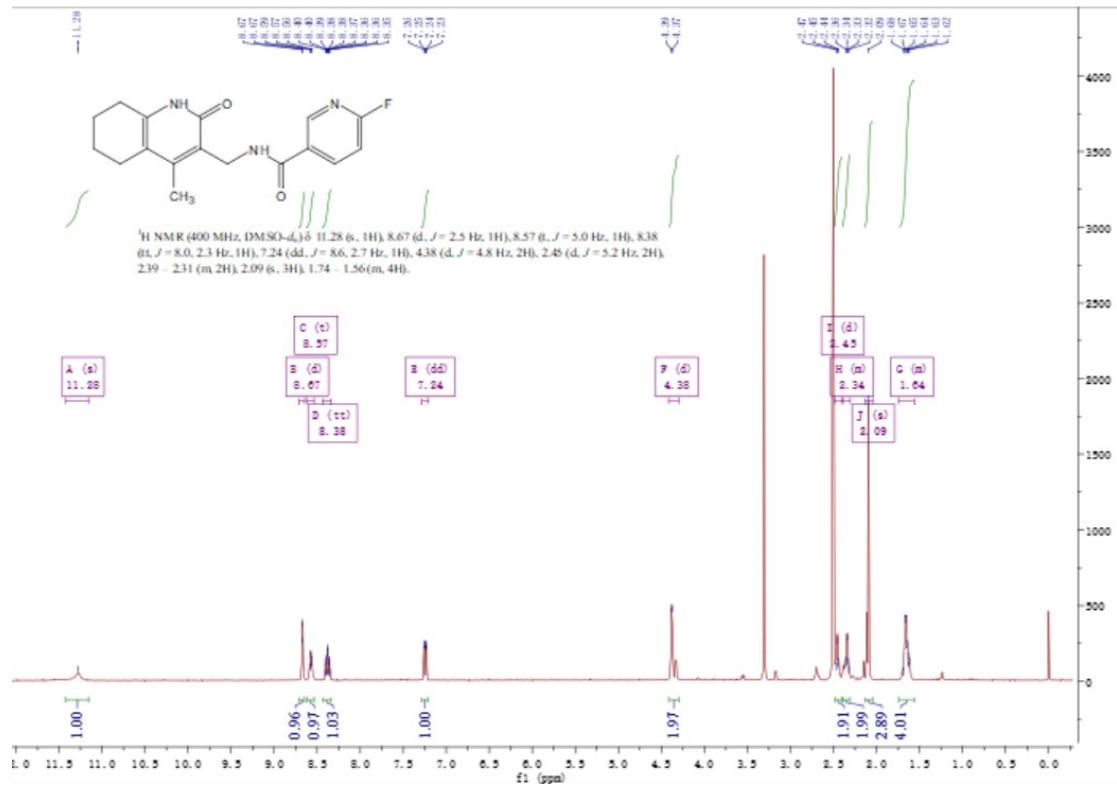
5,6,7,8-tetrahydroquinolin-2(1H)-one (6d10)



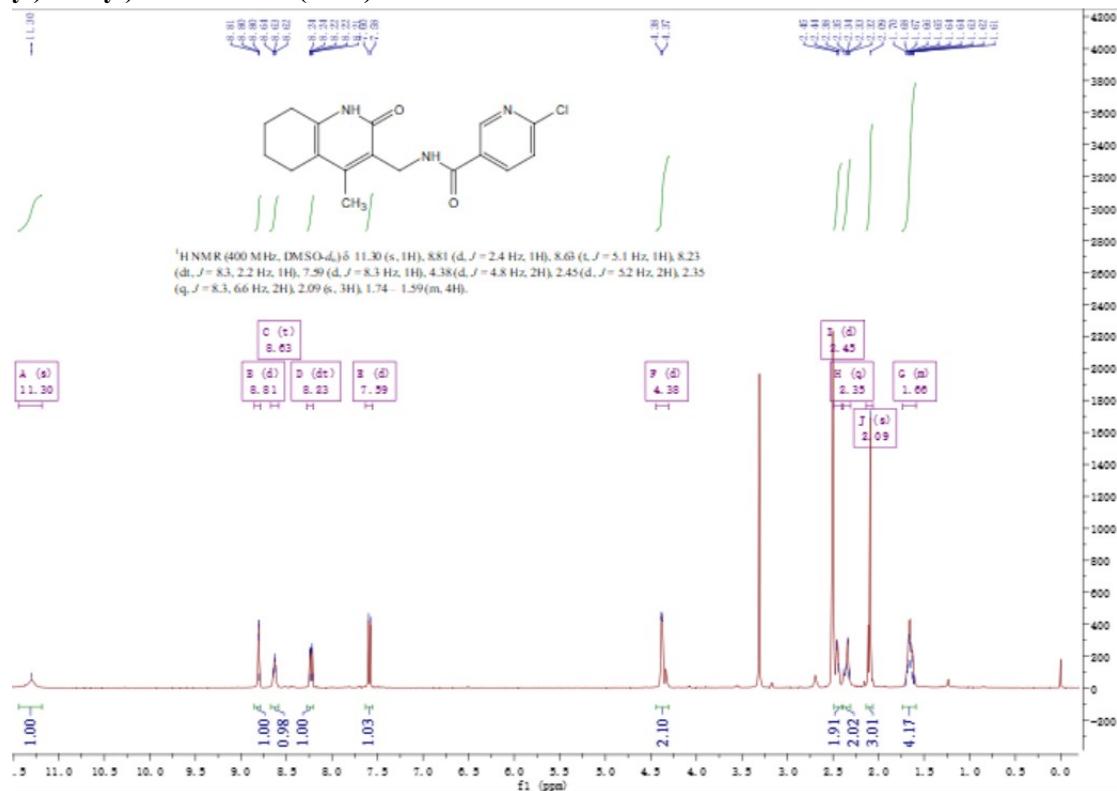
¹H NMR of 6-bromo-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d11)



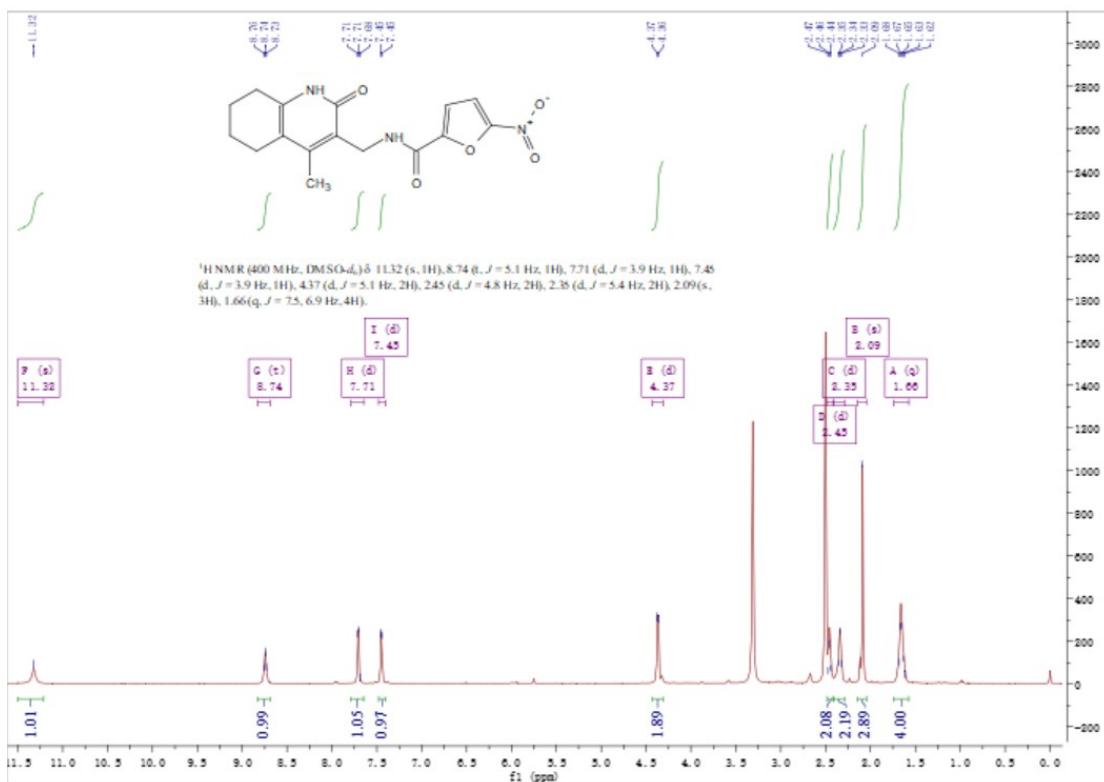
¹H NMR of 6-fluoro-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d12)



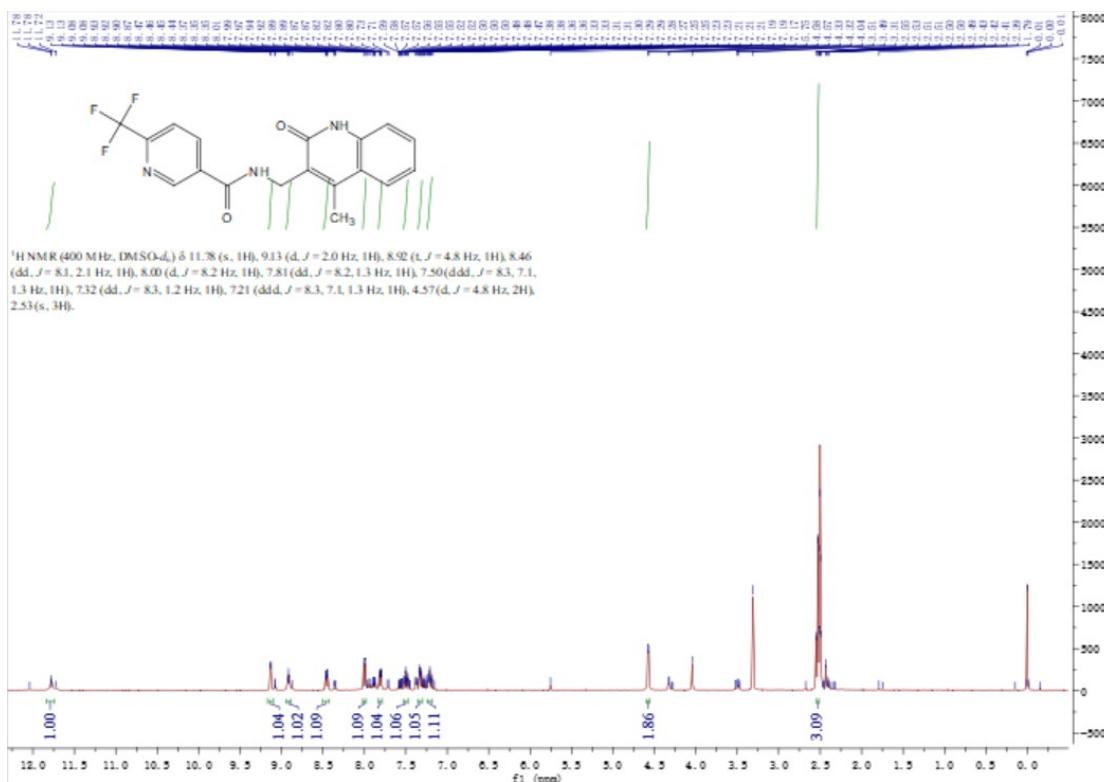
¹H NMR of 6-chloro-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d13)



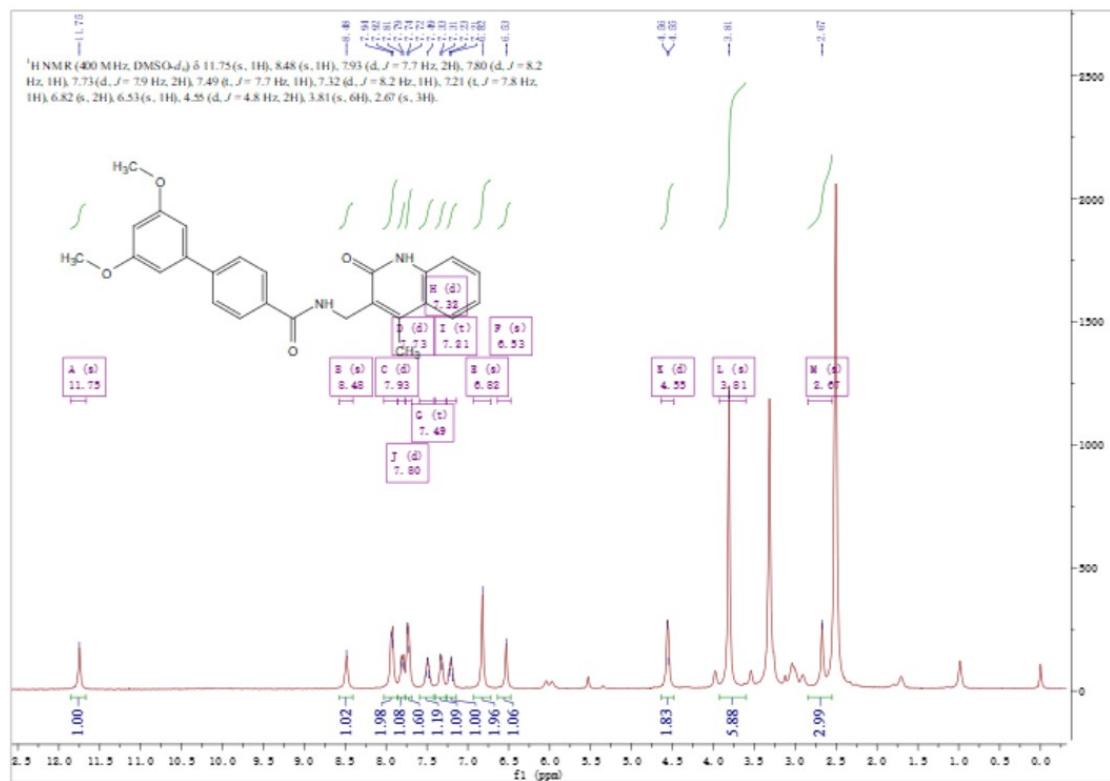
¹H NMR of N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-5-nitrofuran-2-carboxamide (6d14)



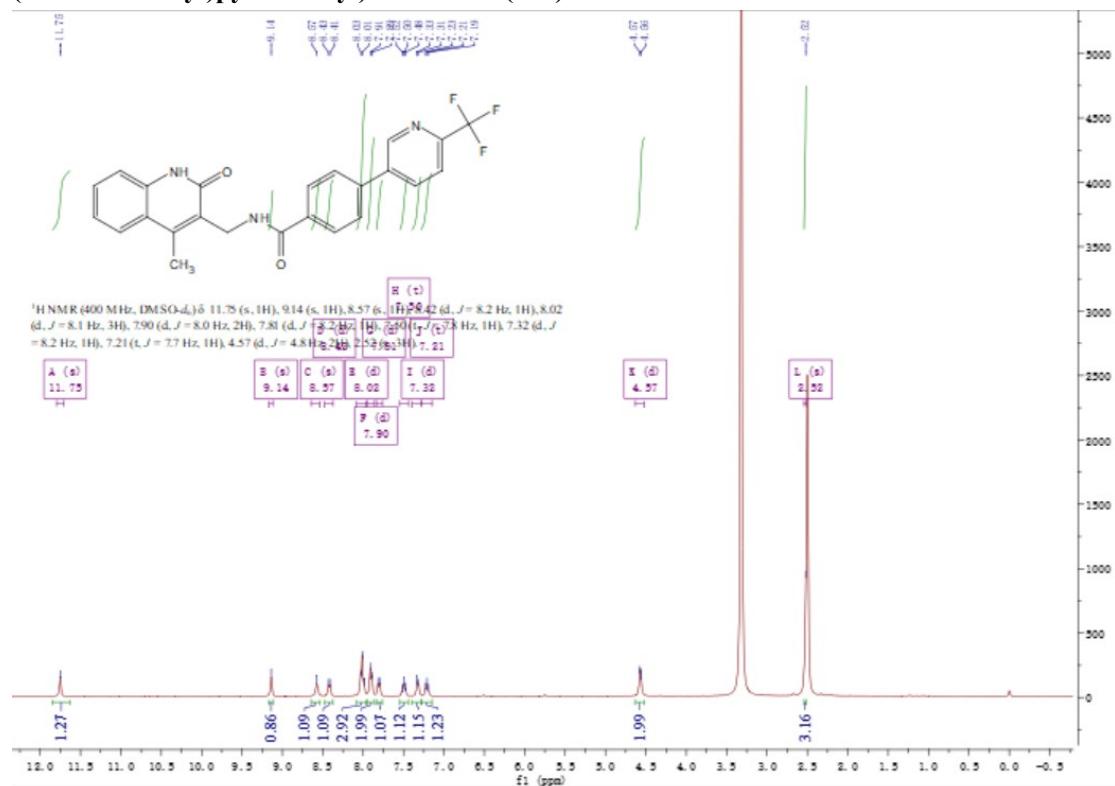
¹H NMR of *N*-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-6-(trifluoromethyl)nicotinamide (9a1)



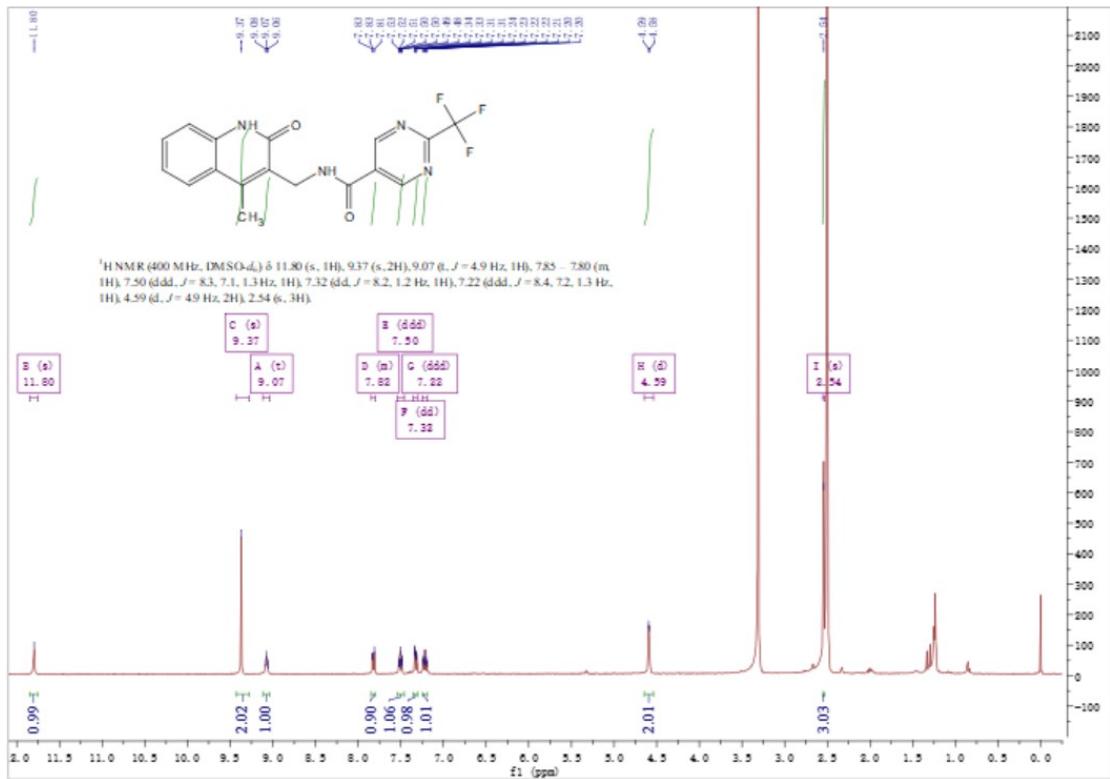
¹H NMR of 3',5'-dimethoxy-N-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (9a2)



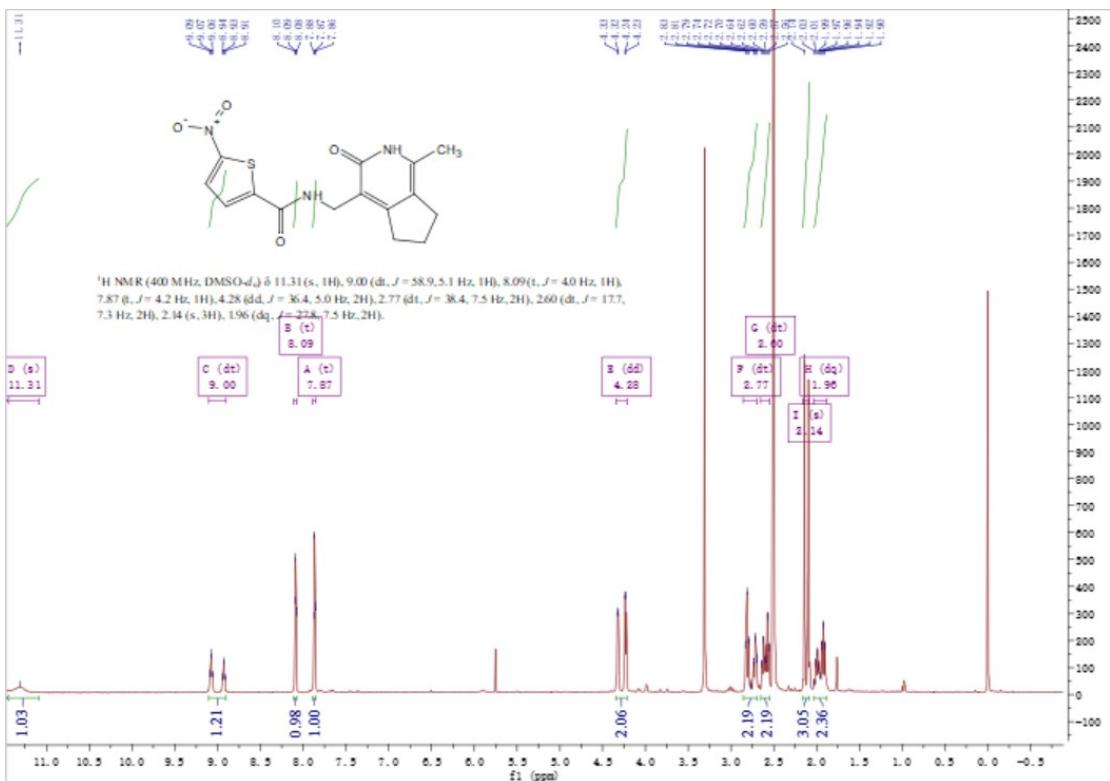
¹H NMR of N-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-4-(6-(trifluoromethyl)pyridin-3-yl)benzamide (9a3)



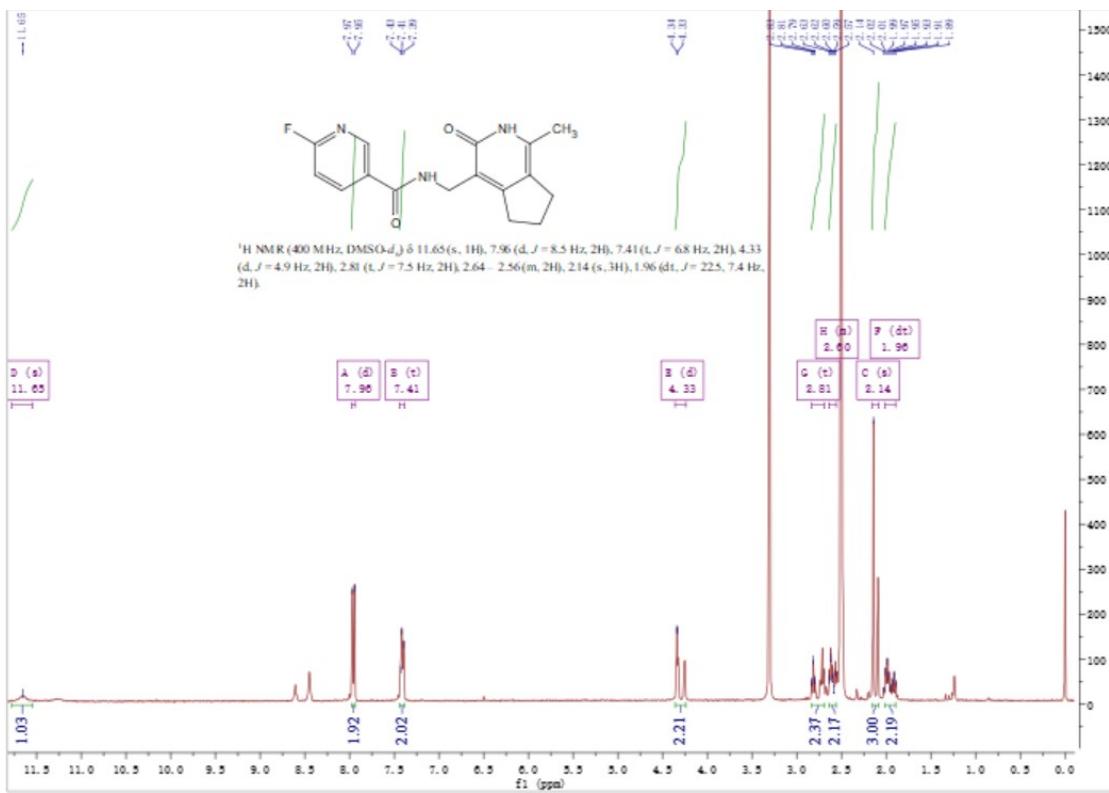
¹H NMR of N-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-2-(trifluoromethyl)pyrimidine-5-carboxamide (9a4)



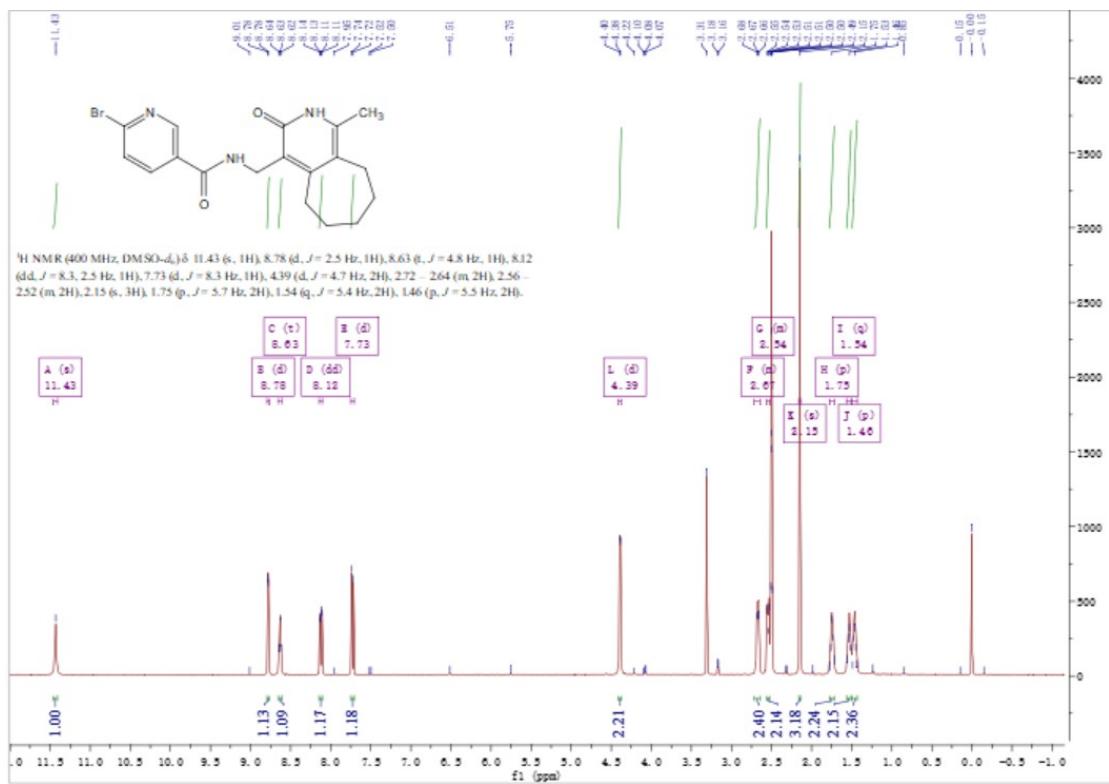
¹H NMR of *N*-(1-methyl-3-oxo-3,5,6,7-tetrahydro-2H-cyclopenta[c]pyridin-4-yl)methyl)-5-nitrothiophene-2-carboxamide (6a1)



¹H NMR of 6-fluoro-N-(1-methyl-3-oxo-3,5,6,7-tetrahydro-2H-cyclopenta[c]pyridin-4-yl)methyl)nicotinamide (6a2)

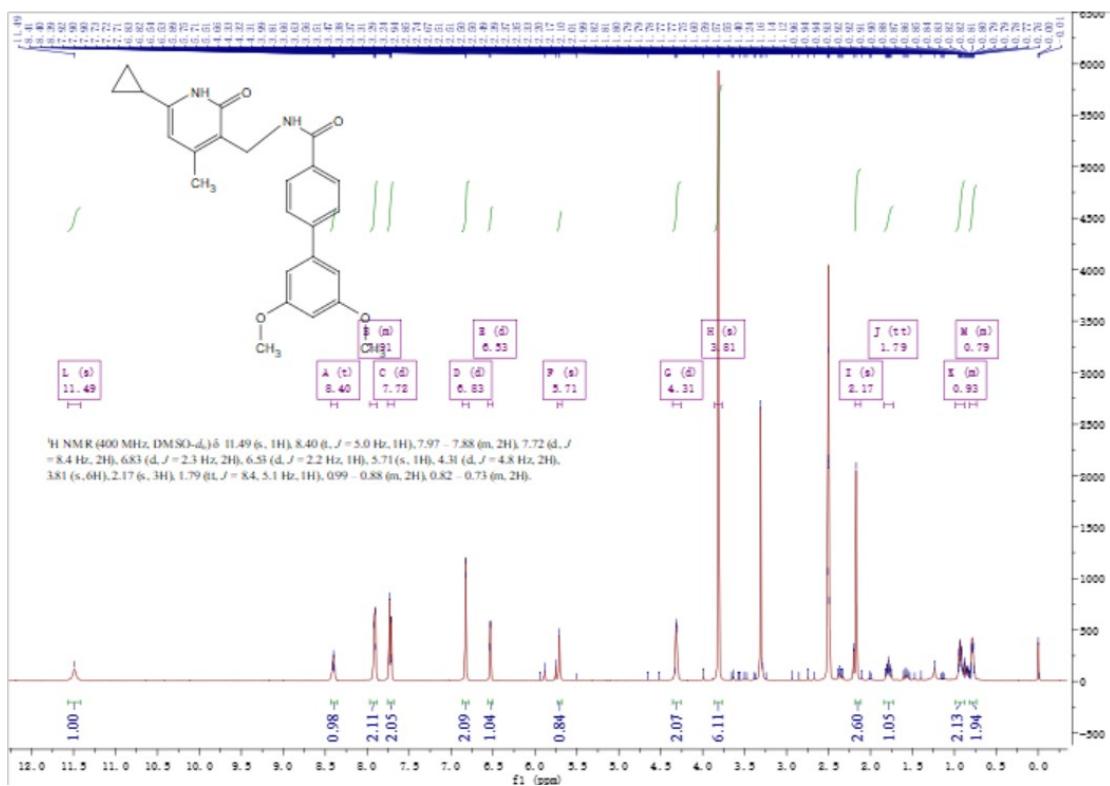


¹H NMR of 6-bromo-N-((1-methyl-3-oxo-3,5,6,7,8,9-hexahydro-2H-cyclohepta[c]pyridin-4-yl)methyl)nicotinamide (6c1)

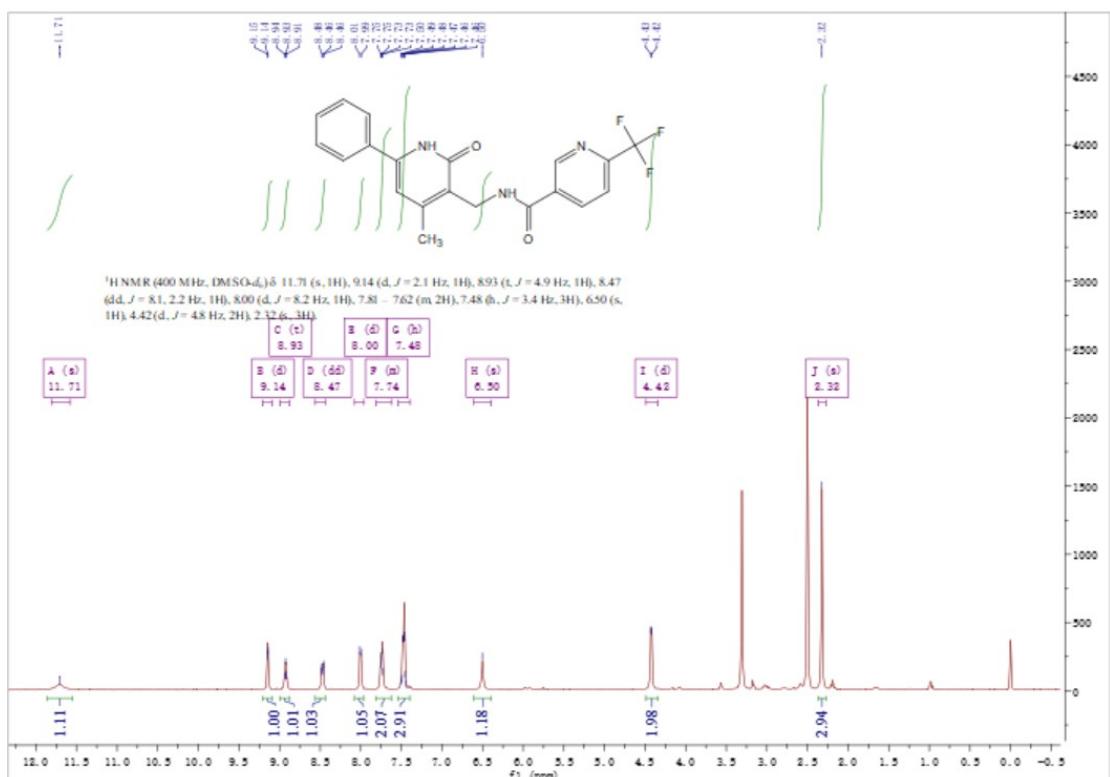


¹H NMR of N-((6-cyclopropyl-4-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-3',5'-

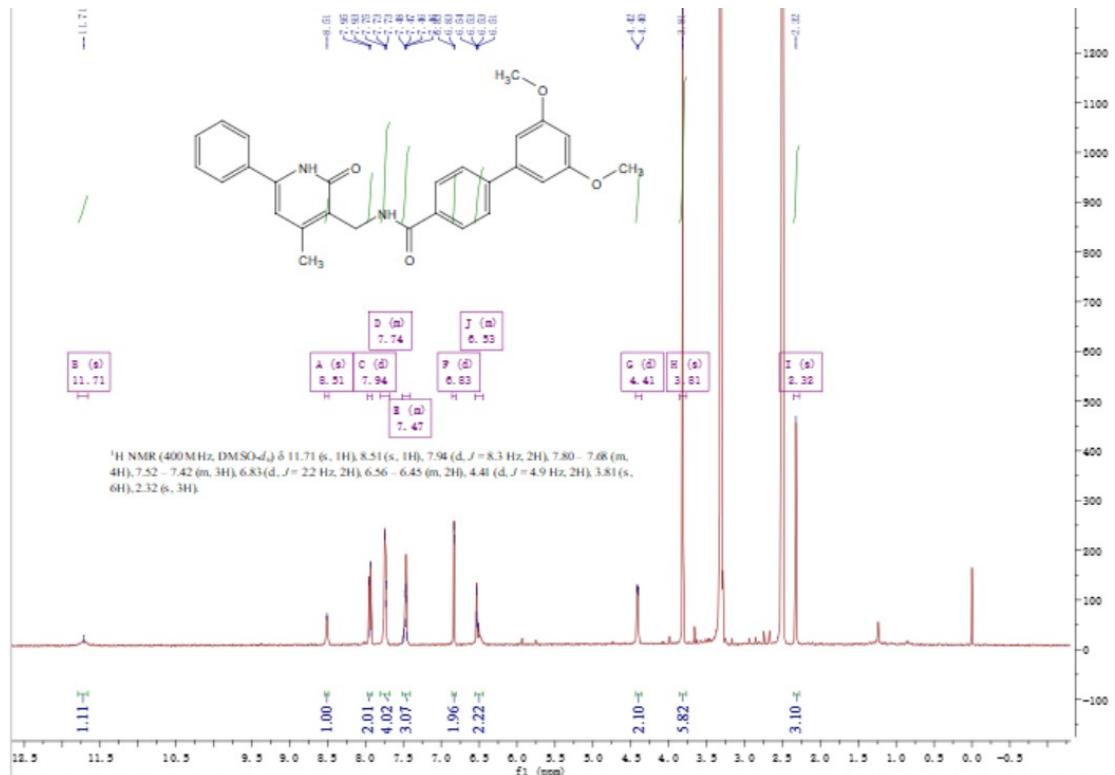
dimethoxy-[1,1'-biphenyl]-4-carboxamide (7a2)



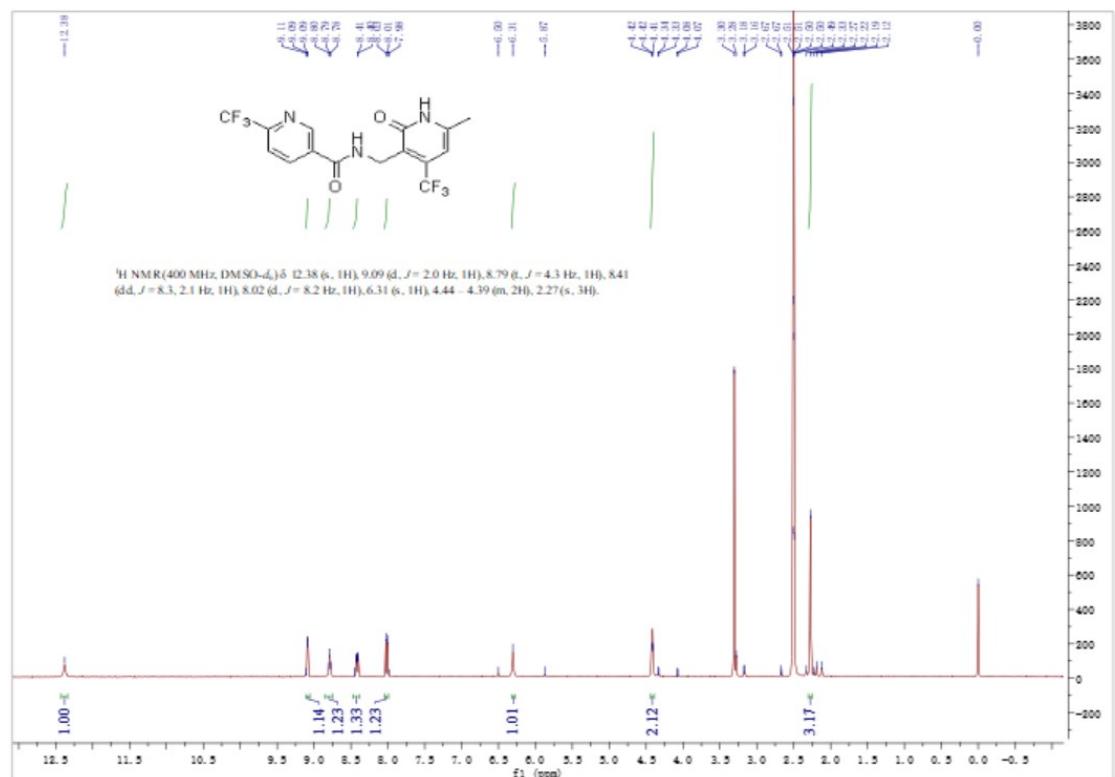
¹H NMR of N-((4-methyl-2-oxo-6-phenyl-1,2-dihydropyridin-3-yl)methyl)-6-(trifluoromethyl)nicotinamide (7b1)



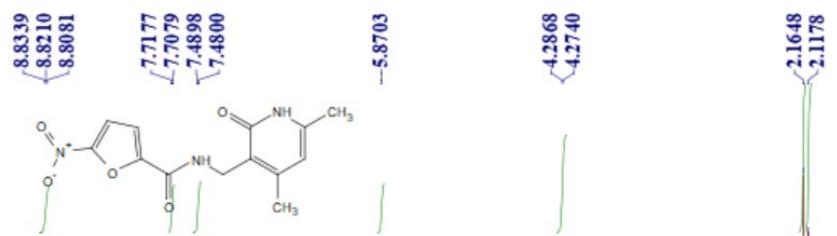
¹H NMR of 3',5'-dimethoxy-N-((4-methyl-2-oxo-6-phenyl-1,2-dihydropyridin-3-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (7b2)



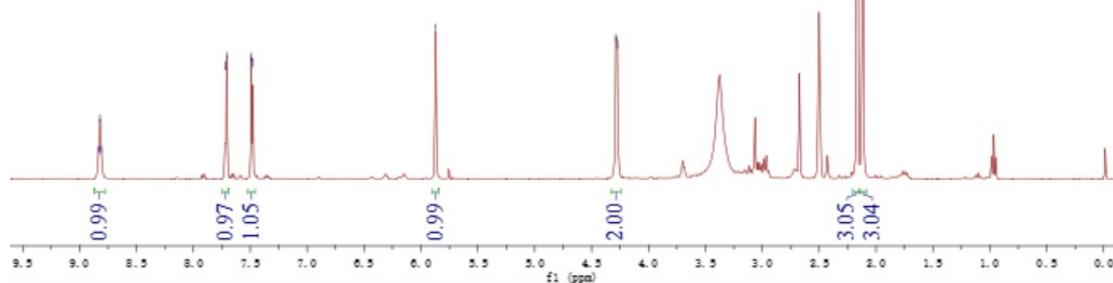
¹H NMR of *N*-((6-methyl-2-oxo-4-(trifluoromethyl)-1,2-dihydropyridin-3-yl)methyl)-6-(trifluoromethyl)nicotinamide (7c1)



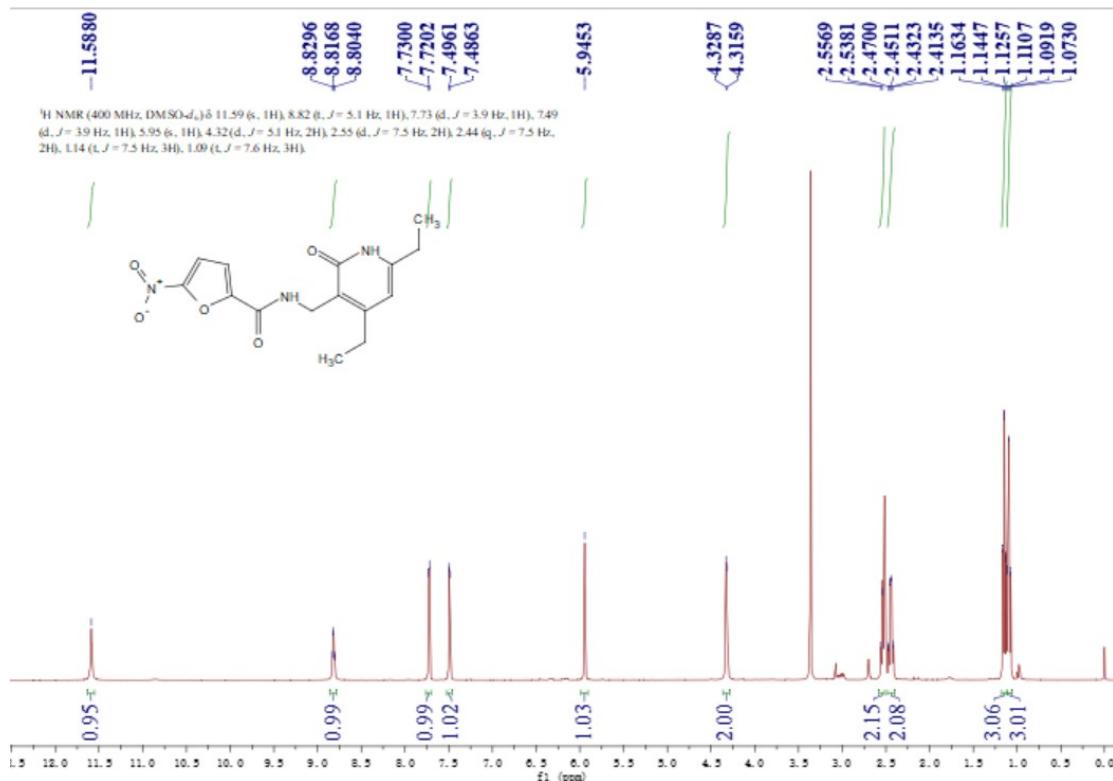
¹H NMR of *N*-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-5-nitrofuran-2-carboxamide (8a1)



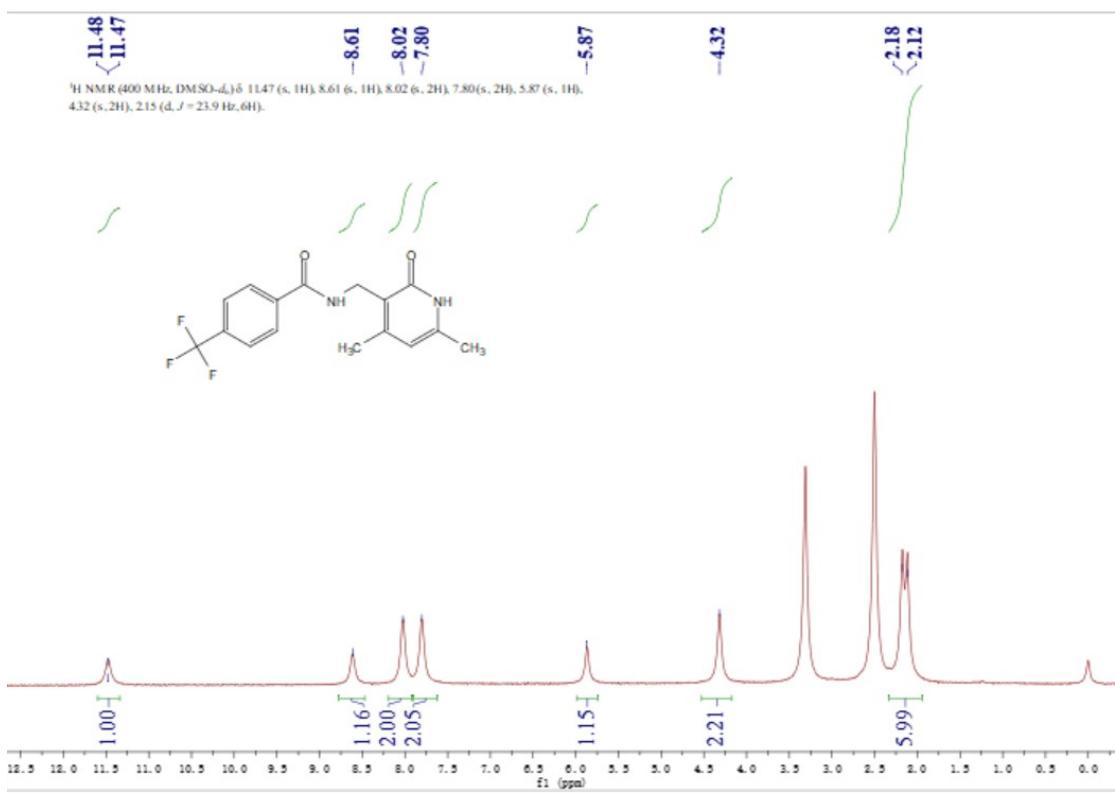
¹H NMR (400 MHz, Chloroform-d) δ 8.82 (t, *J* = 5.1 Hz, 1H), 7.71 (d, *J* = 3.9 Hz, 1H), 7.48 (d, *J* = 3.9 Hz, 1H), 5.87 (s, 1H), 4.28 (d, *J* = 5.1 Hz, 2H), 2.16 (s, 3H), 2.12 (s, 3H).



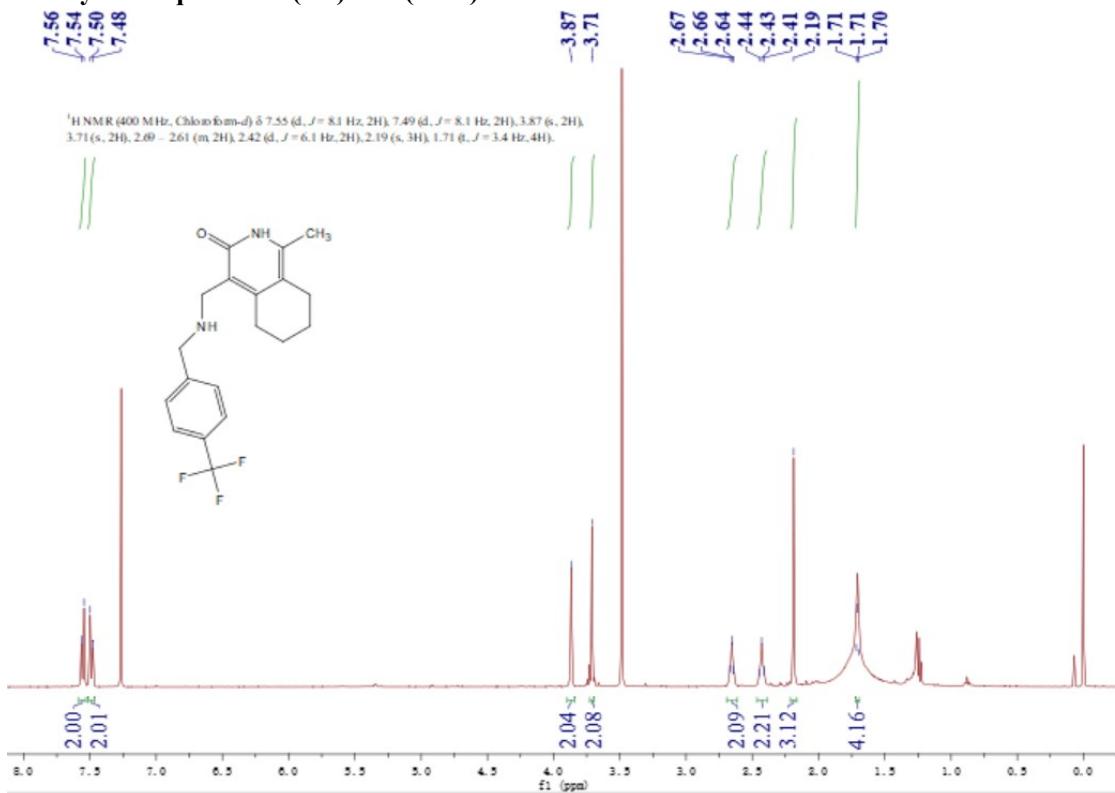
¹H NMR of N-((4,6-diethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-5-nitrofuran-2-carboxamide (8a3)



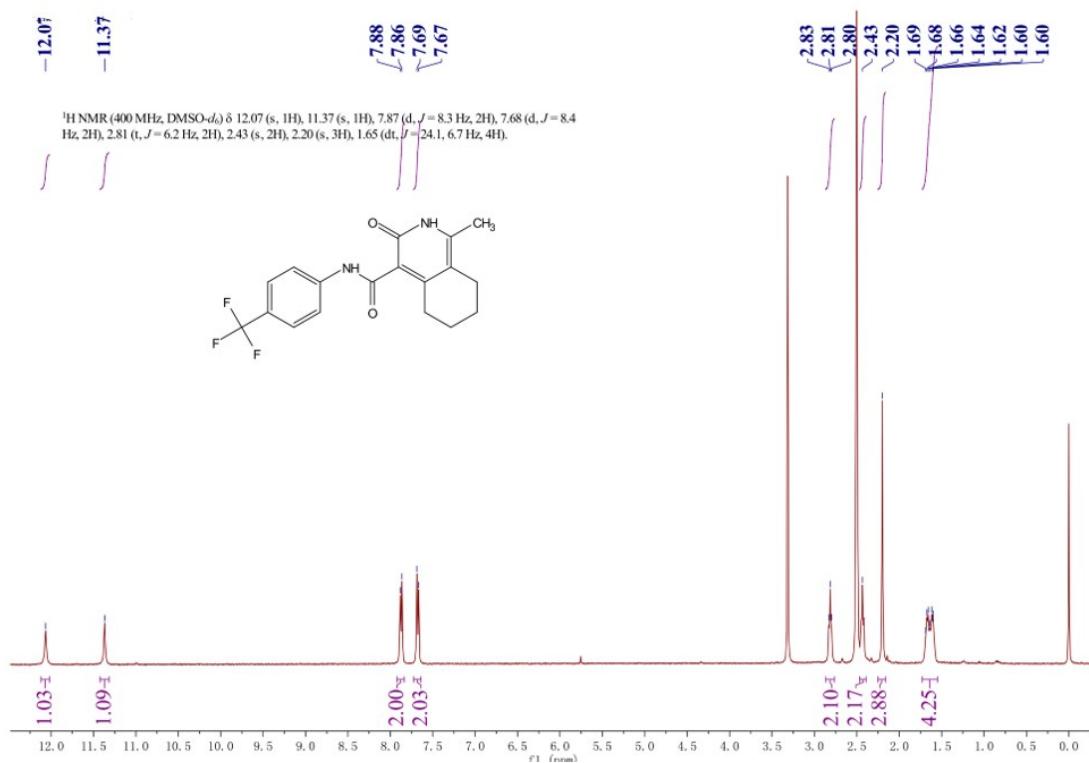
¹H NMR of N-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-4-(trifluoromethyl)benzamide (8a4)



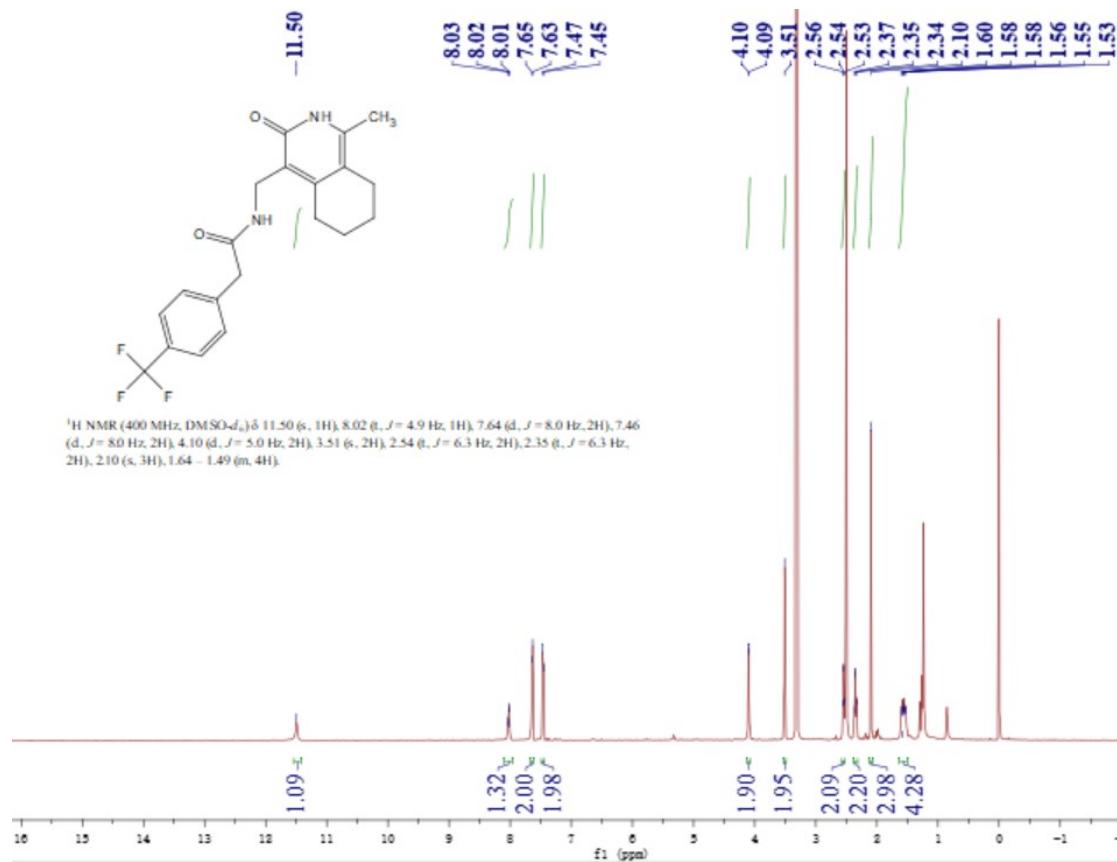
¹H NMR of 1-methyl-4-((4-(trifluoromethyl)benzyl)amino)methyl)-5,6,7,8-tetrahydroisoquinolin-3(2H)-one (10a1)



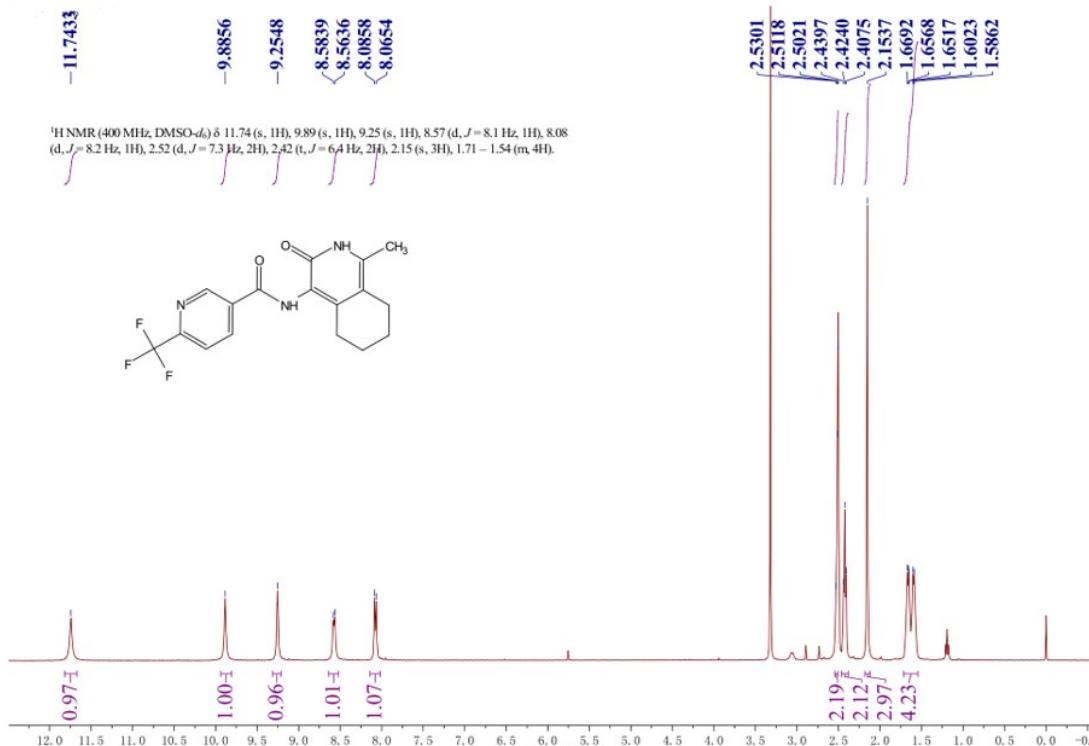
¹H NMR of 1-methyl-3-oxo-N-(4-(trifluoromethyl)phenyl)-2,3,5,6,7,8-hexahydroisoquinoline-4-carboxamide (10a4)



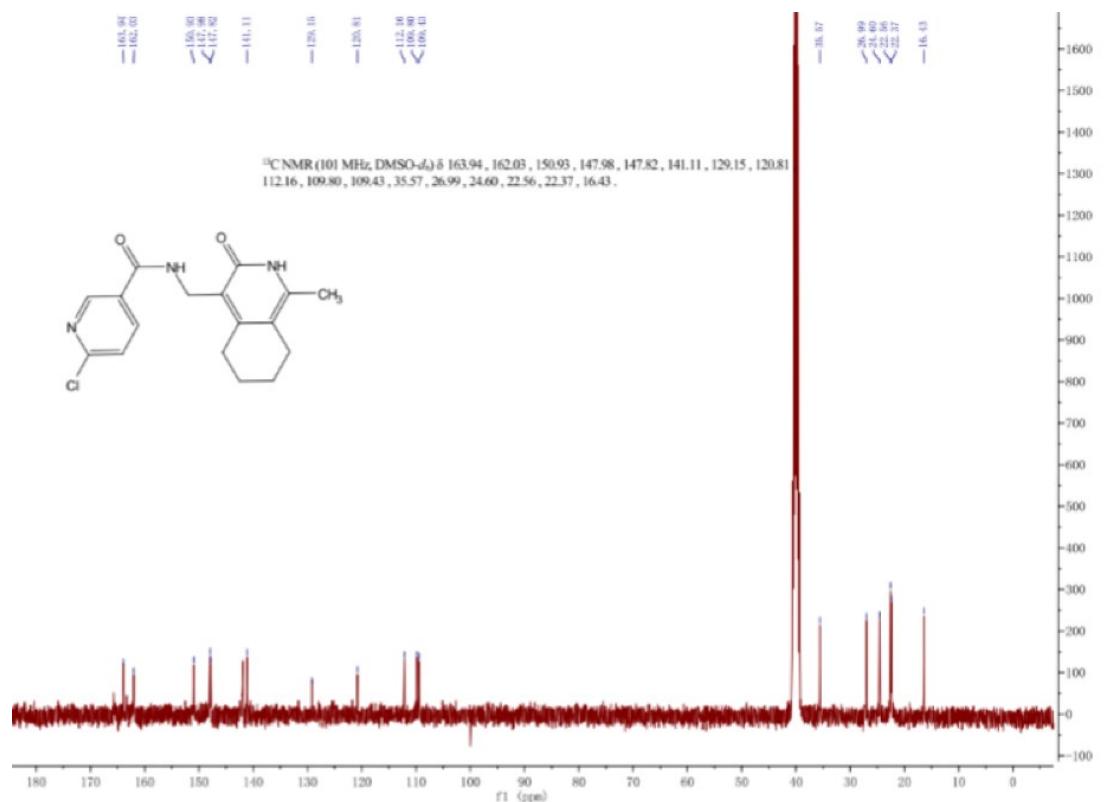
¹H NMR of *N*-(1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-2-(4-(trifluoromethyl)phenyl)acetamide (10a5)



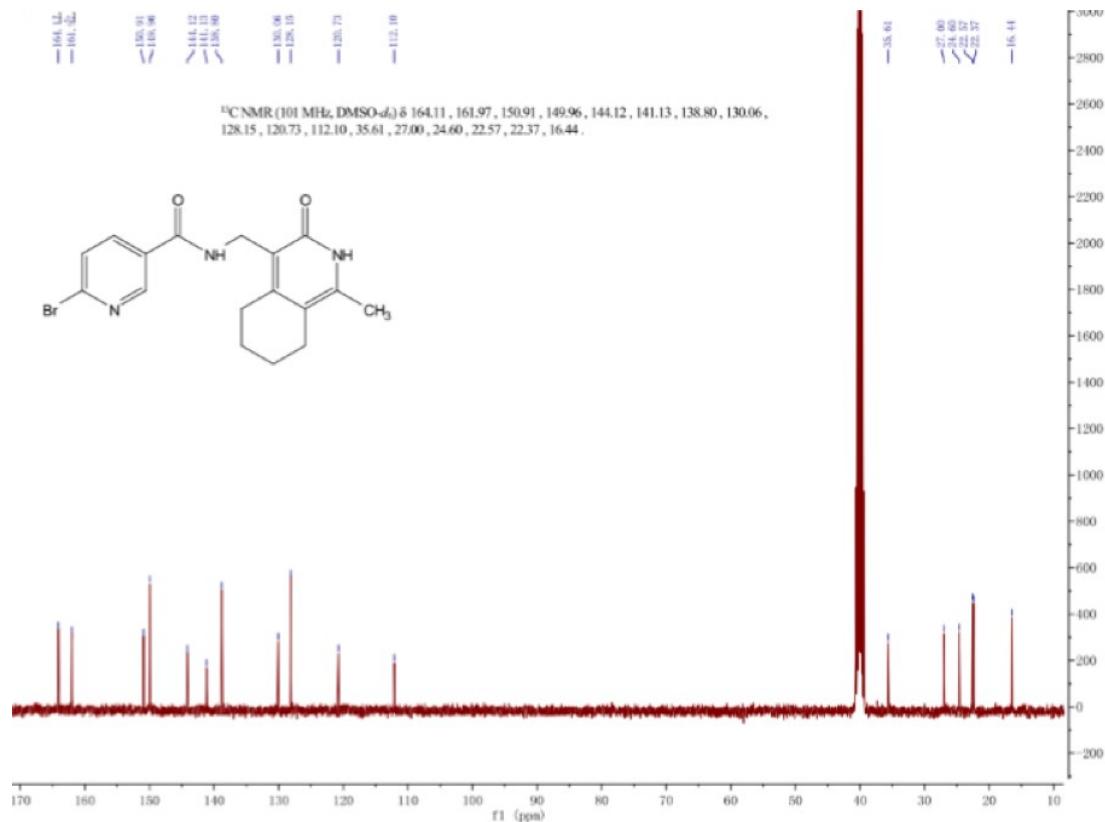
¹H NMR of *N*-(1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)-6-(trifluoromethyl)nicotinamide (10a6)



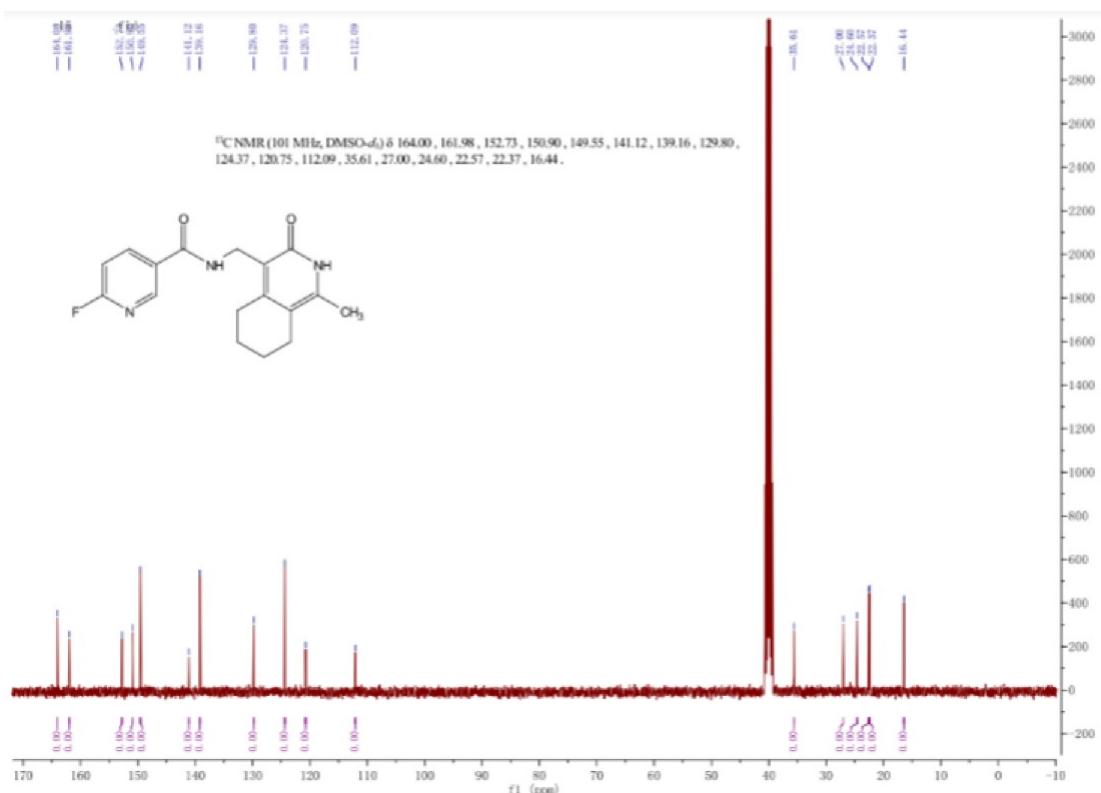
¹³C NMR of 6-chloro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b24)



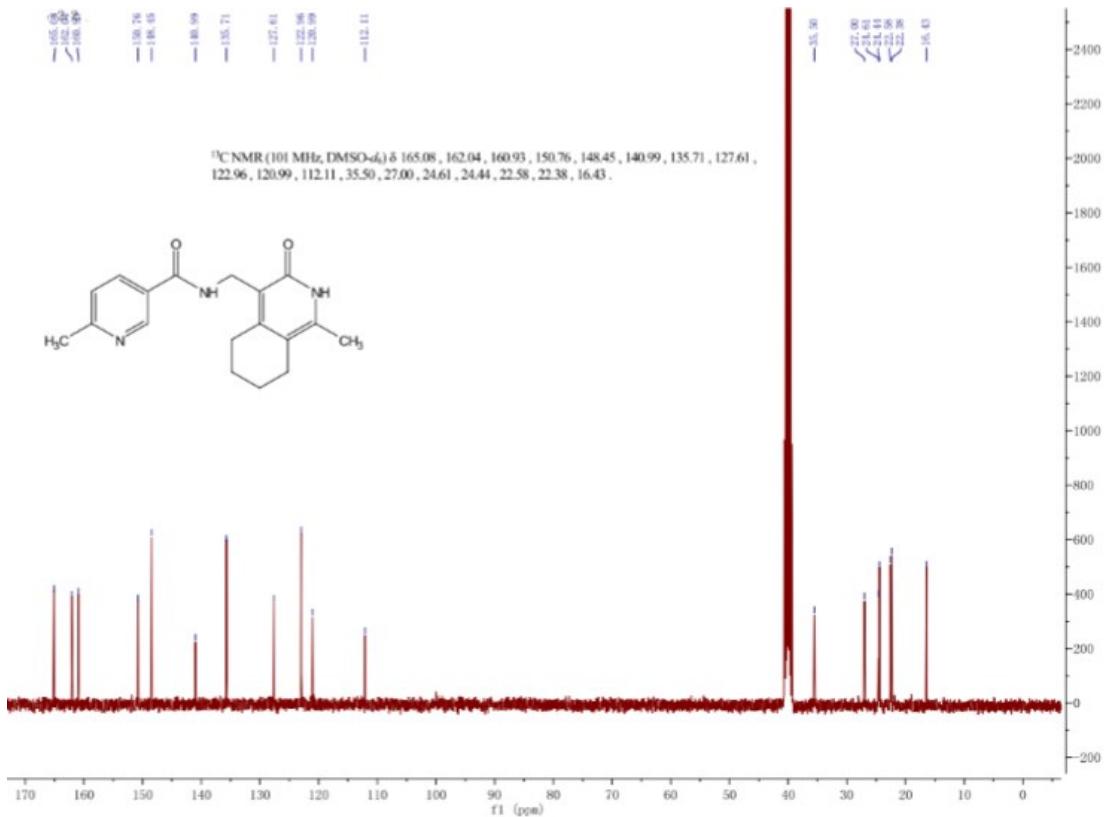
¹³C NMR of 6-bromo-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b25)



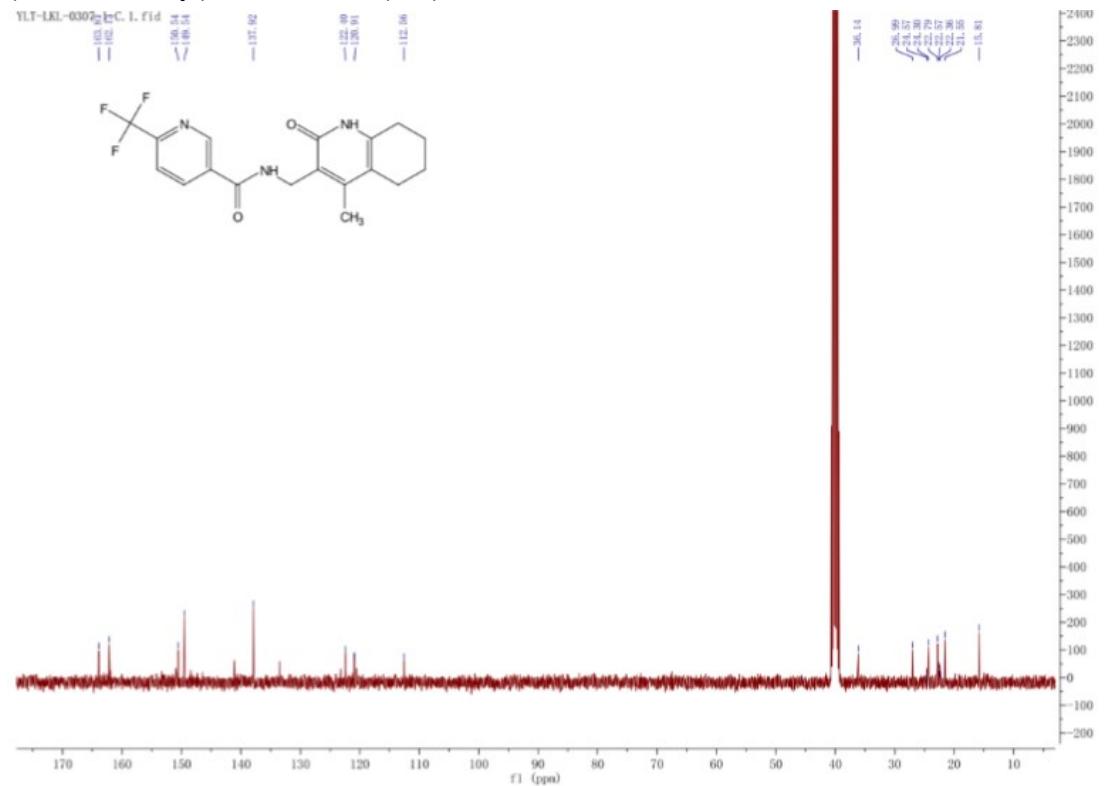
¹³C NMR of 6-fluoro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b26)



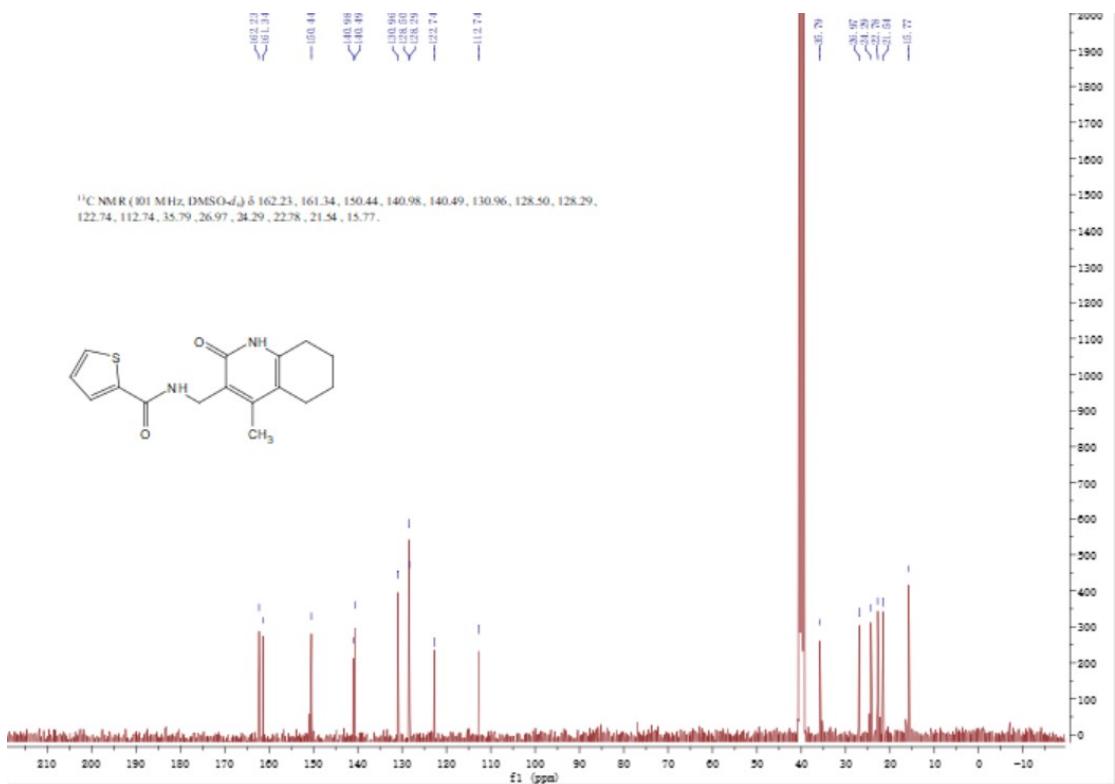
¹³C NMR of 6-methyl-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b27)



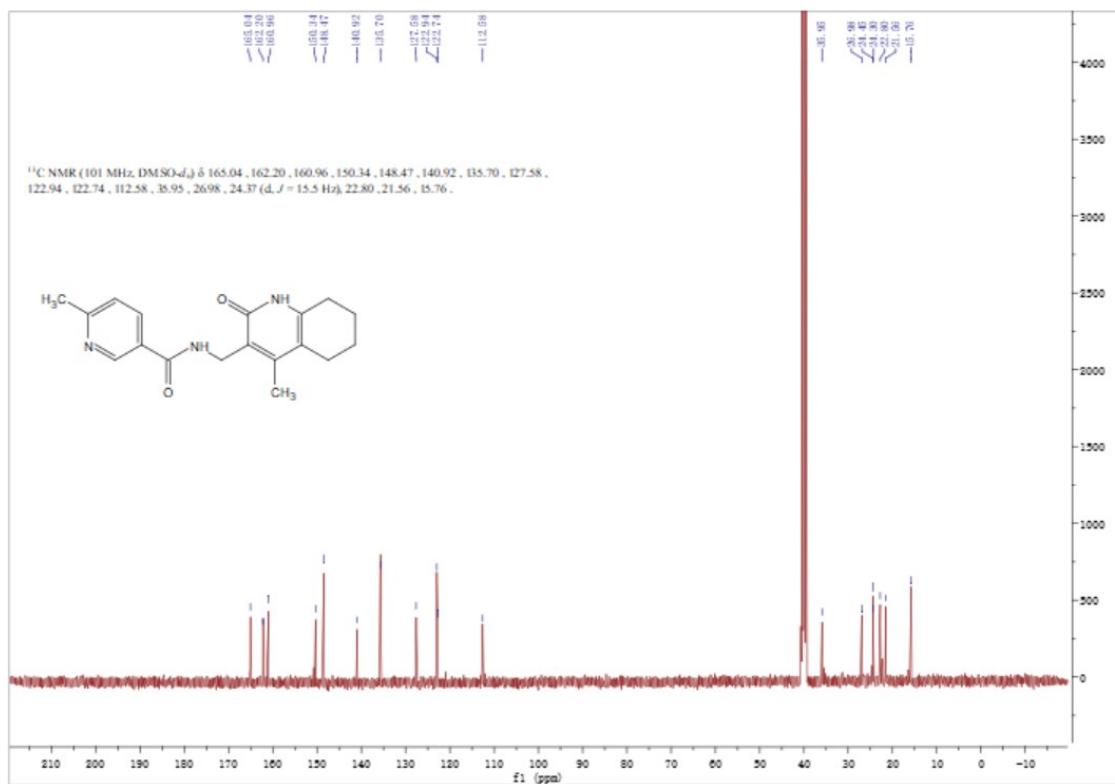
¹³C NMR of *N*-(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-6-(trifluoromethyl) nicotinamide (6d1)



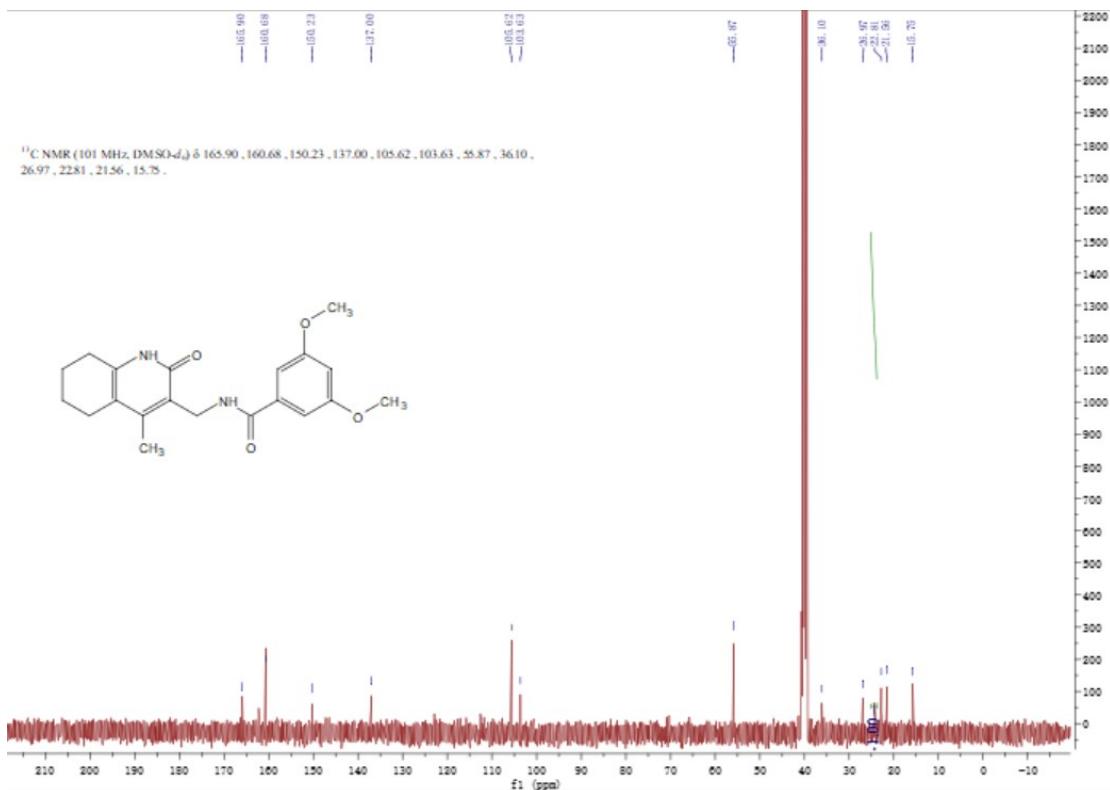
¹³C NMR of *N*-(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)thiophene-2-carboxamide (6d2)



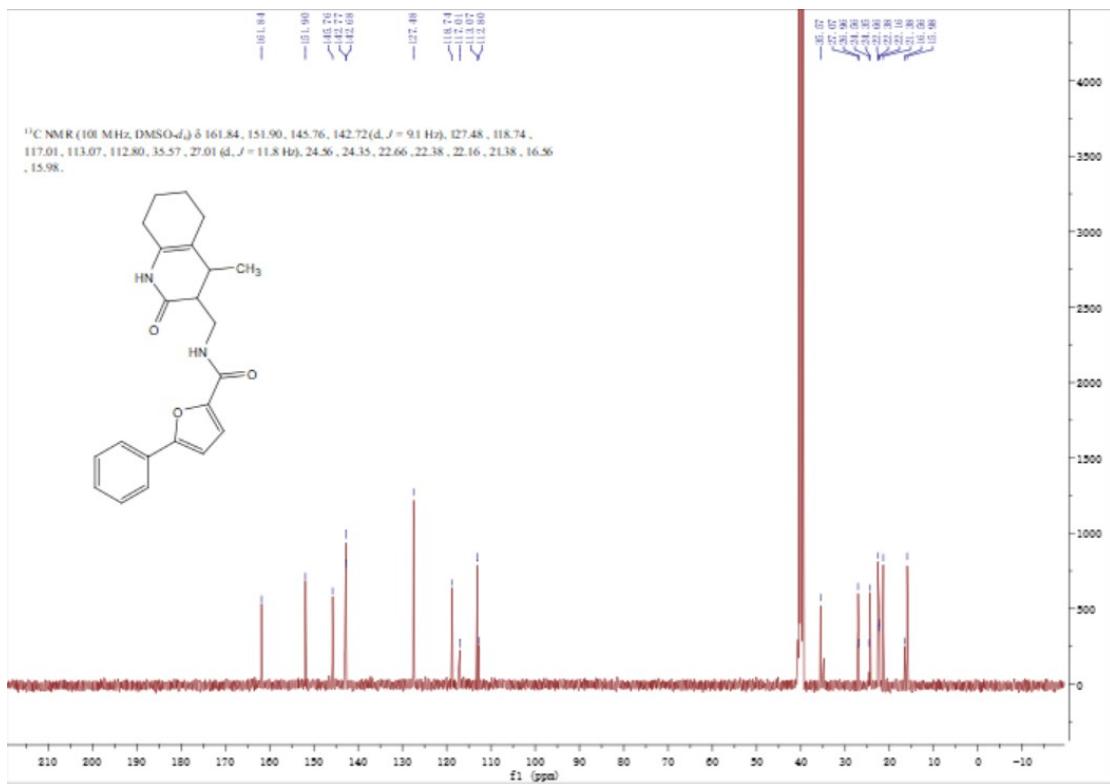
¹³C NMR of 6-methyl-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d3)



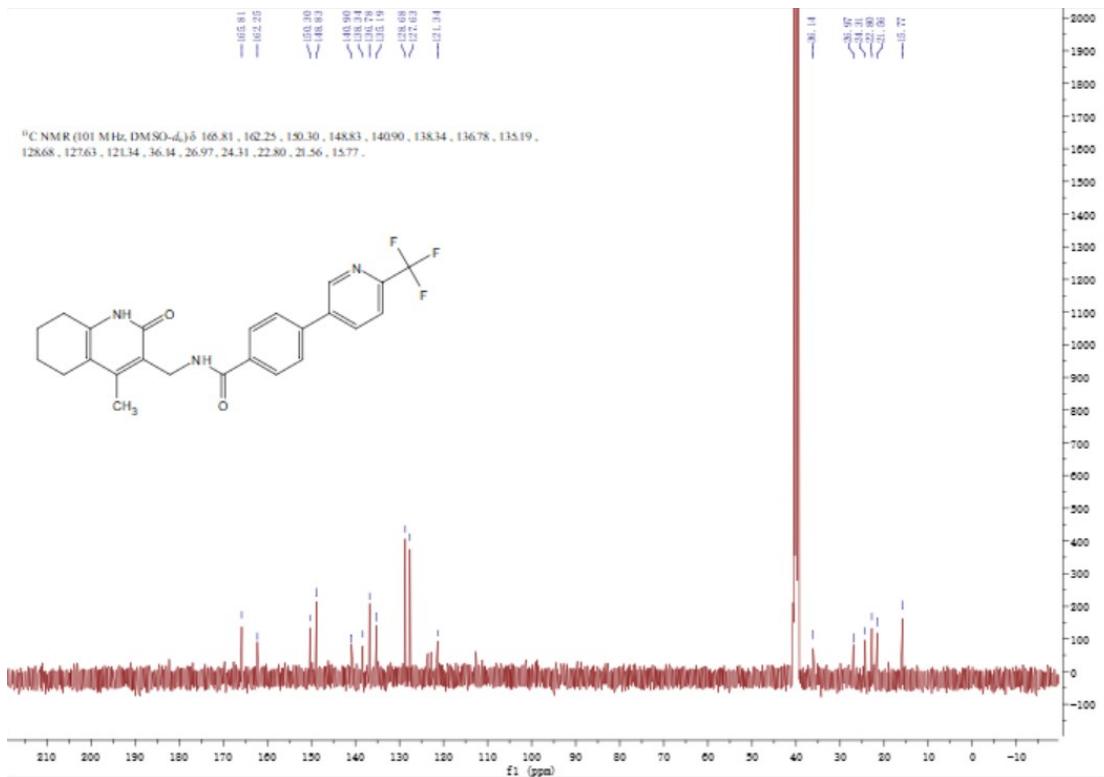
¹³C NMR of 3,5-dimethoxy-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)benzamide (6d6)



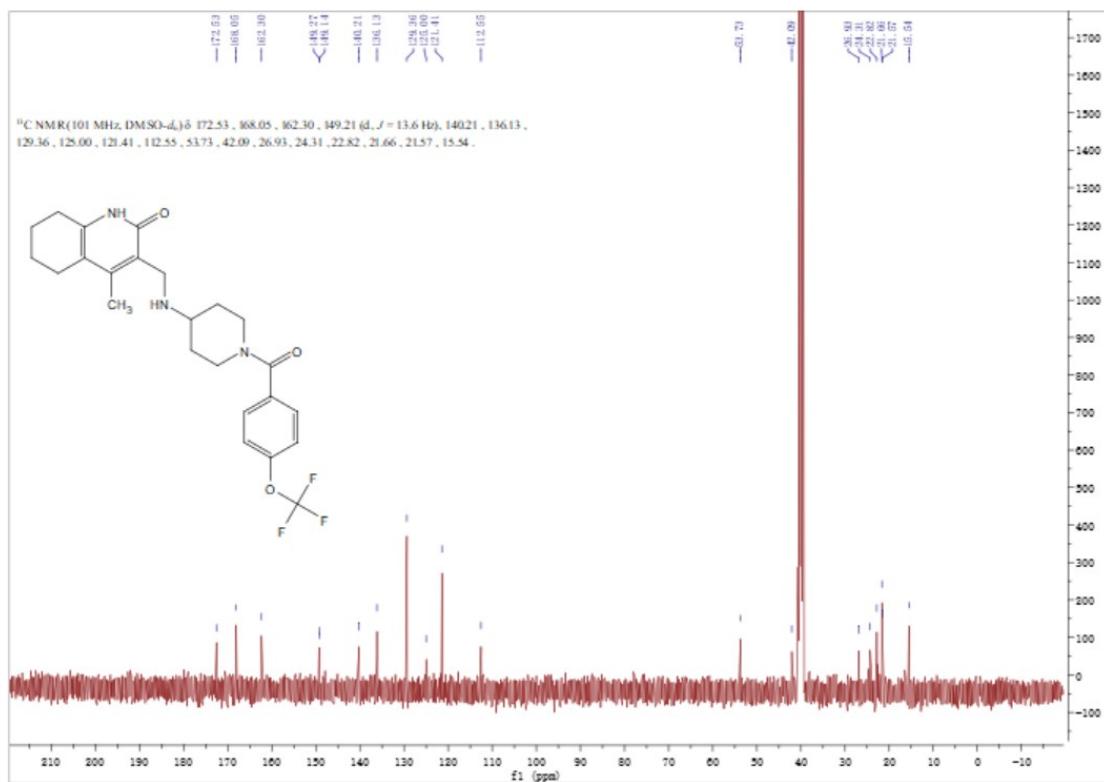
¹³C NMR of *N*-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-5-phenylfuran-2-carboxamide (6d8)



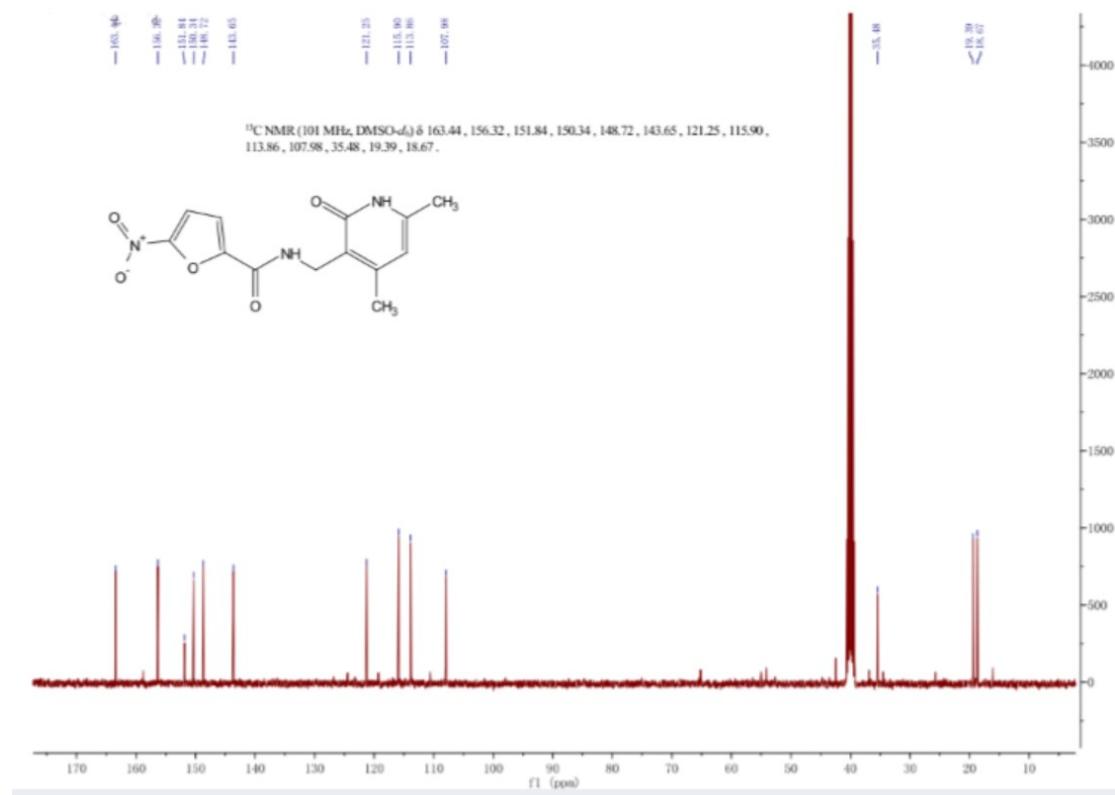
¹³C NMR of *N*-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-4-(6-(trifluoromethyl) pyridin-3-yl)benzamide (6d9)



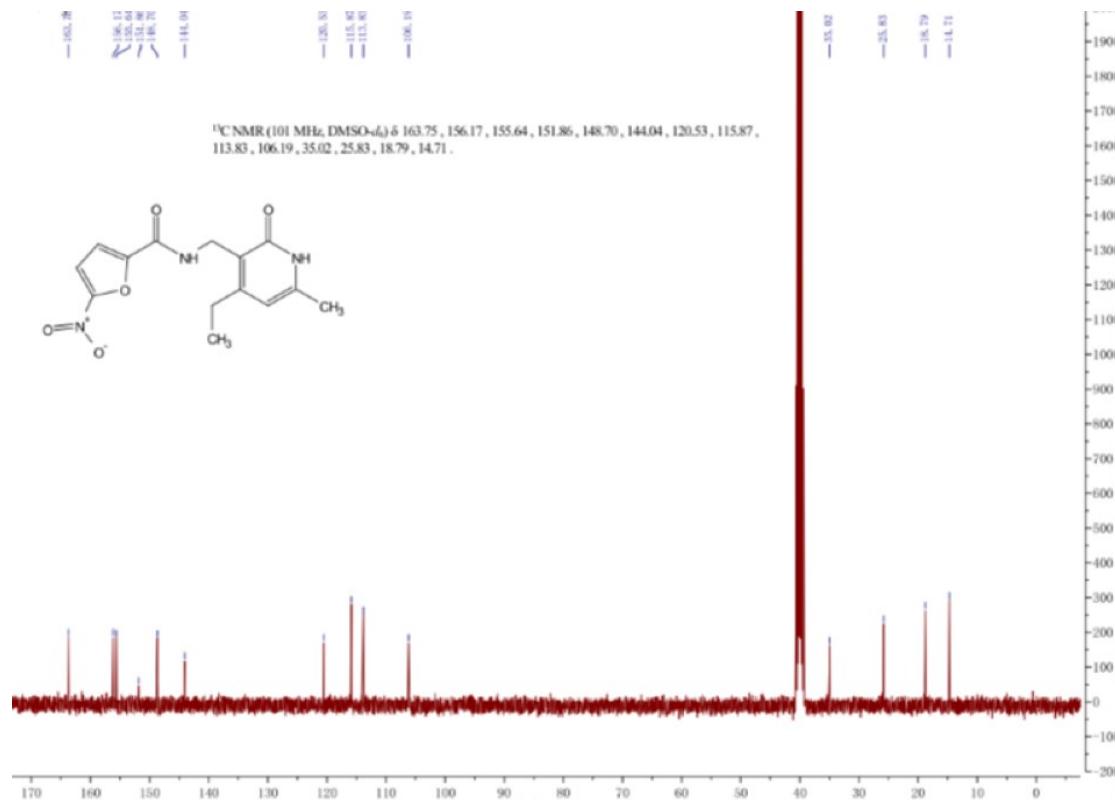
¹³C NMR of 4-methyl-3-(((1-(4-(trifluoromethoxy)benzoyl)piperidin-4-yl)amino)methyl)-5,6,7,8-tetrahydroquinolin-2(1H)-one (6d10)



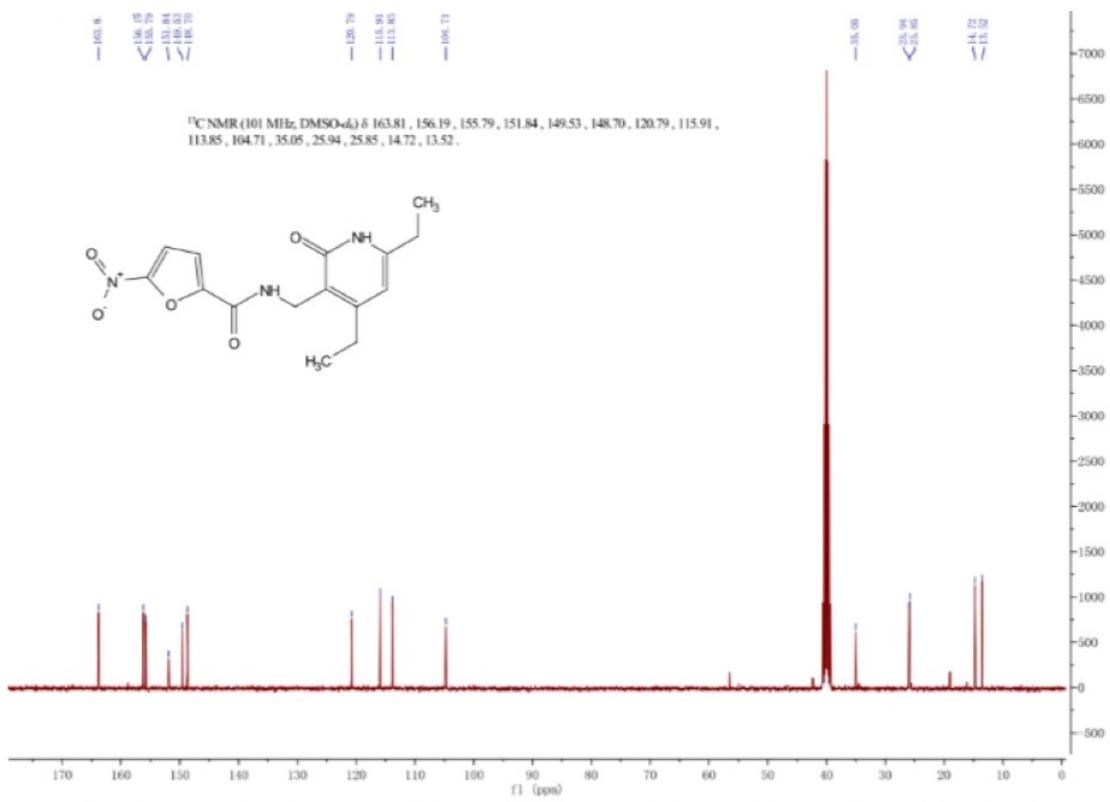
¹³C NMR of N-((4,6-dimethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-5-nitrofuran-2-carboxamide (8a1)



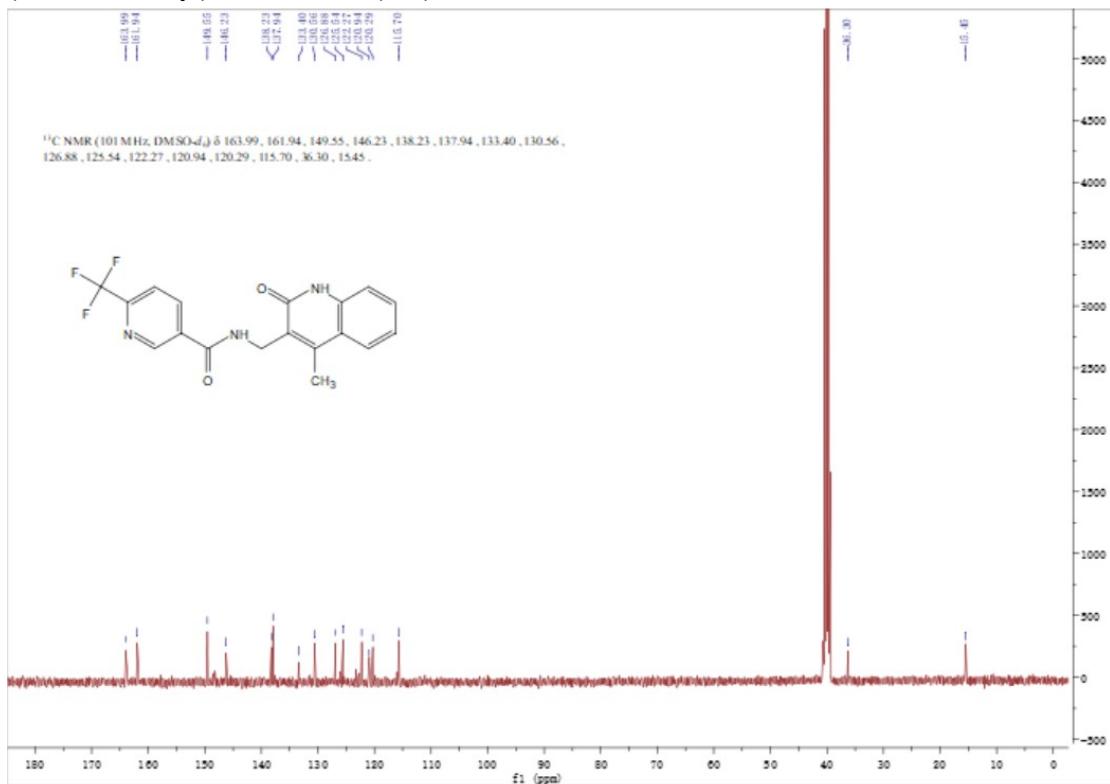
¹³C NMR of *N*-((6-ethyl-4-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-5-nitrofuran-2-carboxamide (8a2)



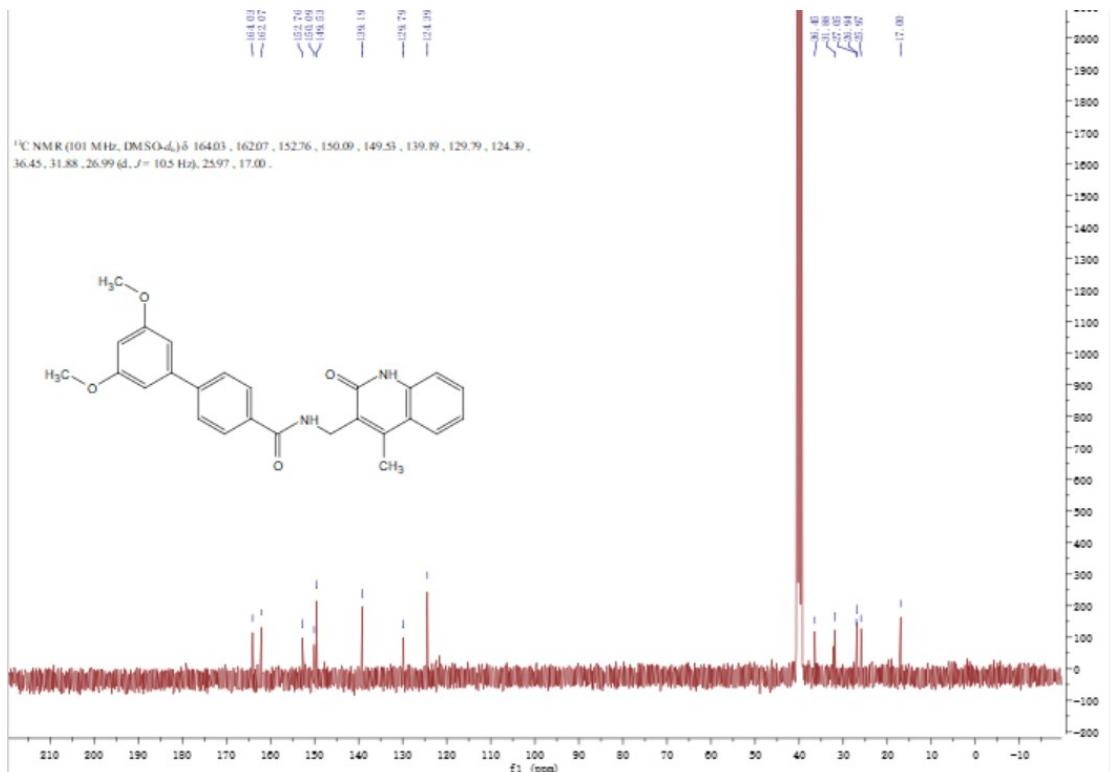
¹³C NMR of *N*-((4,6-diethyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-5-nitrofuran-2-carboxamide (8a3)



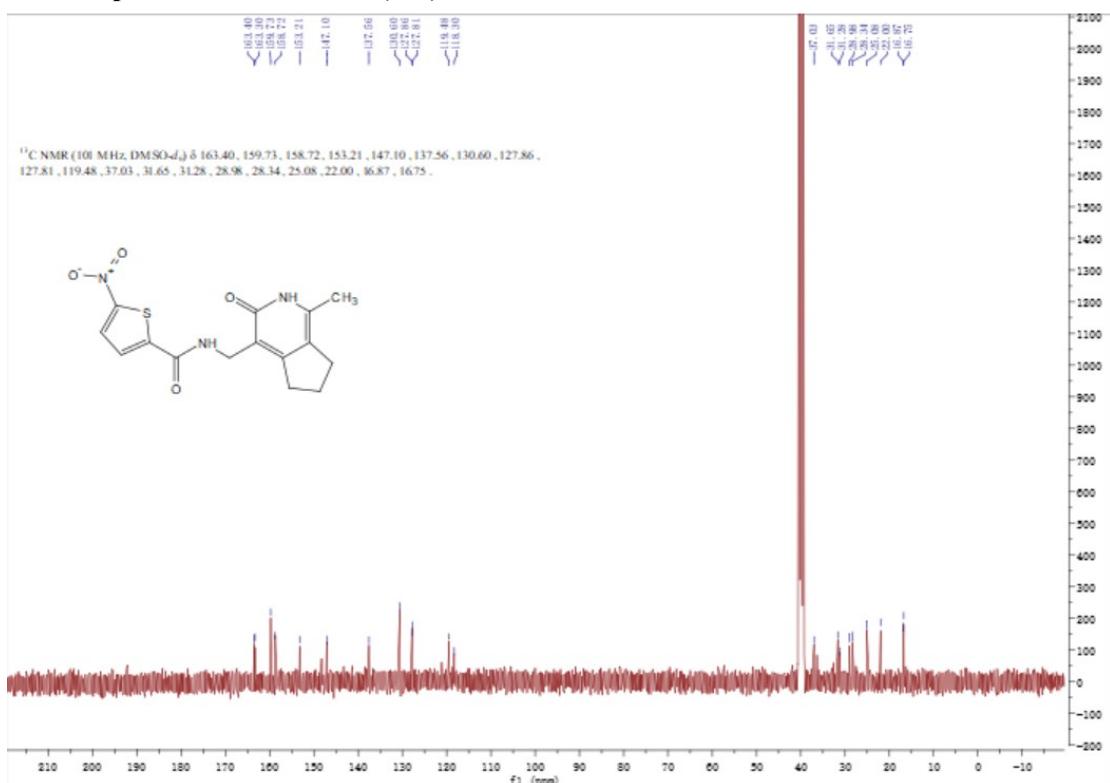
¹³C NMR of *N*-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-6-(trifluoromethyl)nicotinamide (9a1).



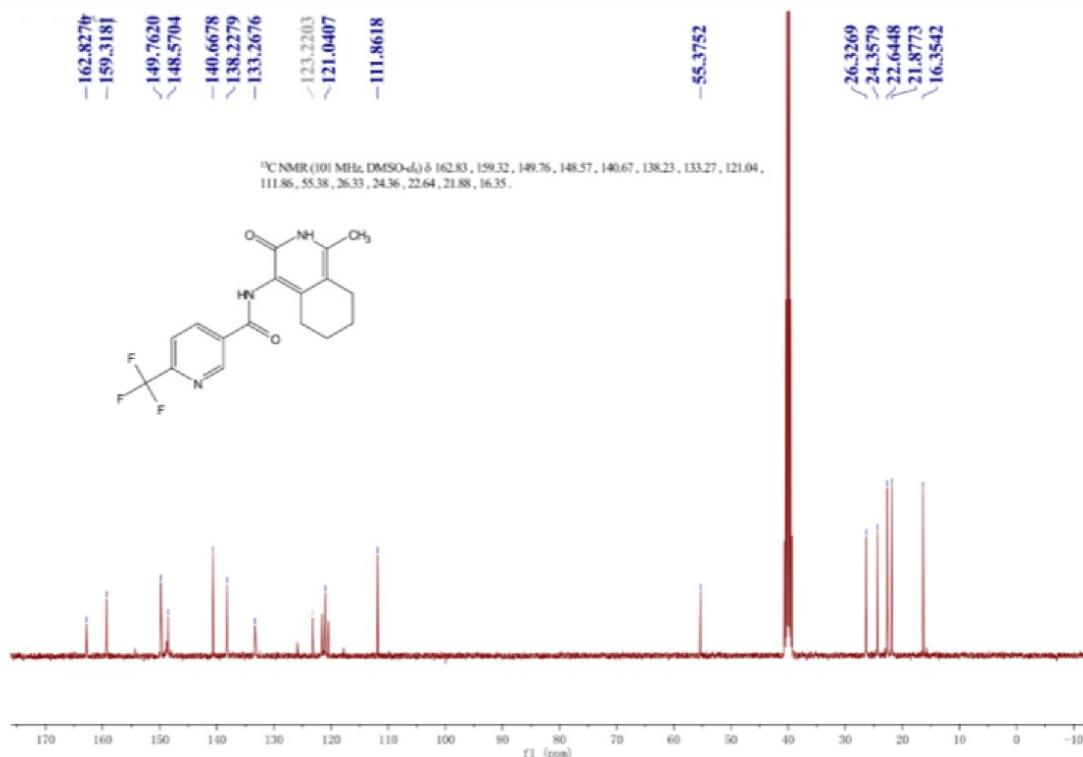
¹³C NMR of 3',5'-dimethoxy-*N*-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-[1,1'biphenyl]-4-carboxamide (9a2)



¹³C NMR of *N*-((1-methyl-3-oxo-3,5,6,7-tetrahydro-2H-cyclopenta[c]pyridin-4-yl)methyl)-5-nitrothiophene-2-carboxamide (6a1)

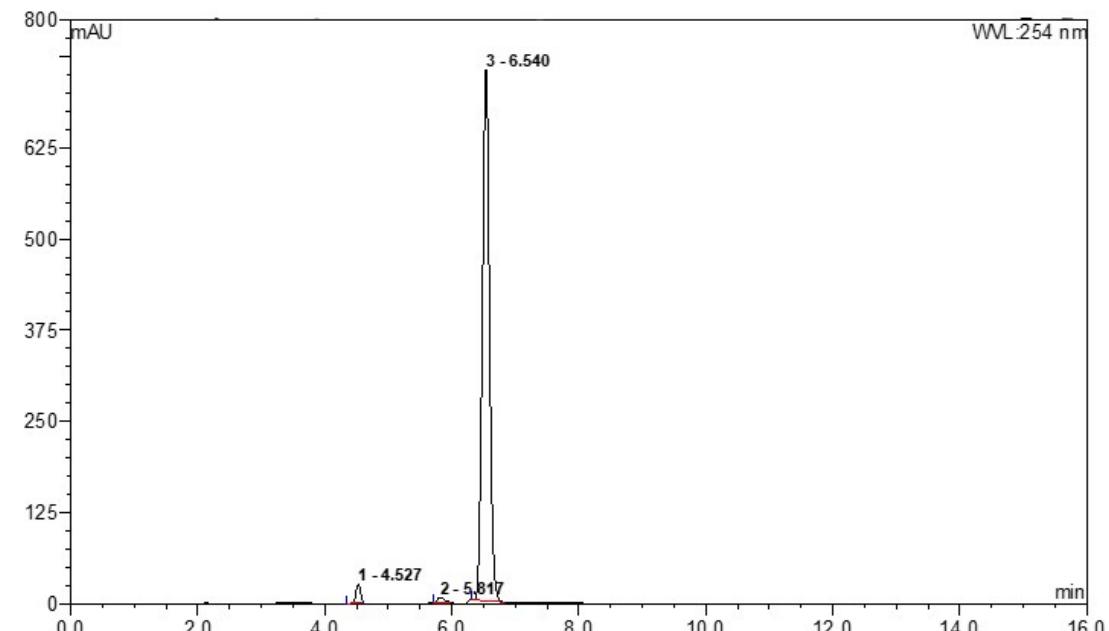


¹³C NMR of *N*-(1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)-6-(trifluoromethyl)nicotinamide (10a6)



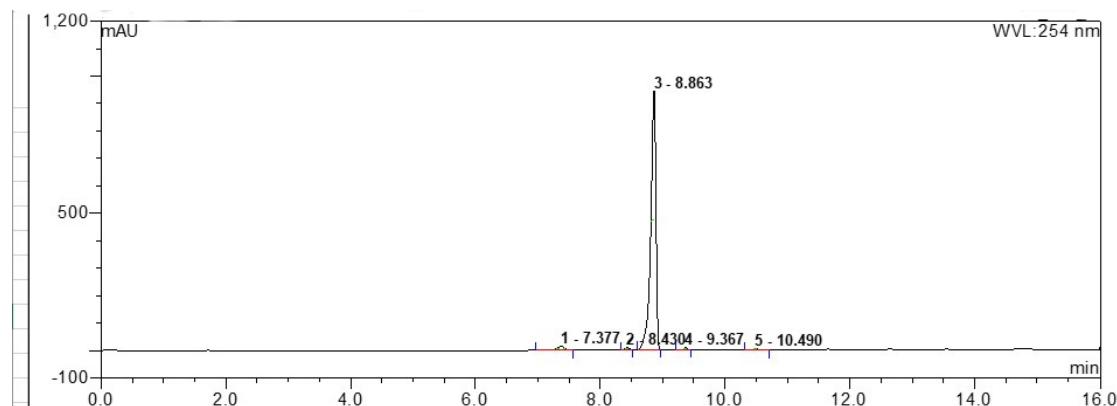
HPLC purity of compounds

3',5'-dimethoxy-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6b6)



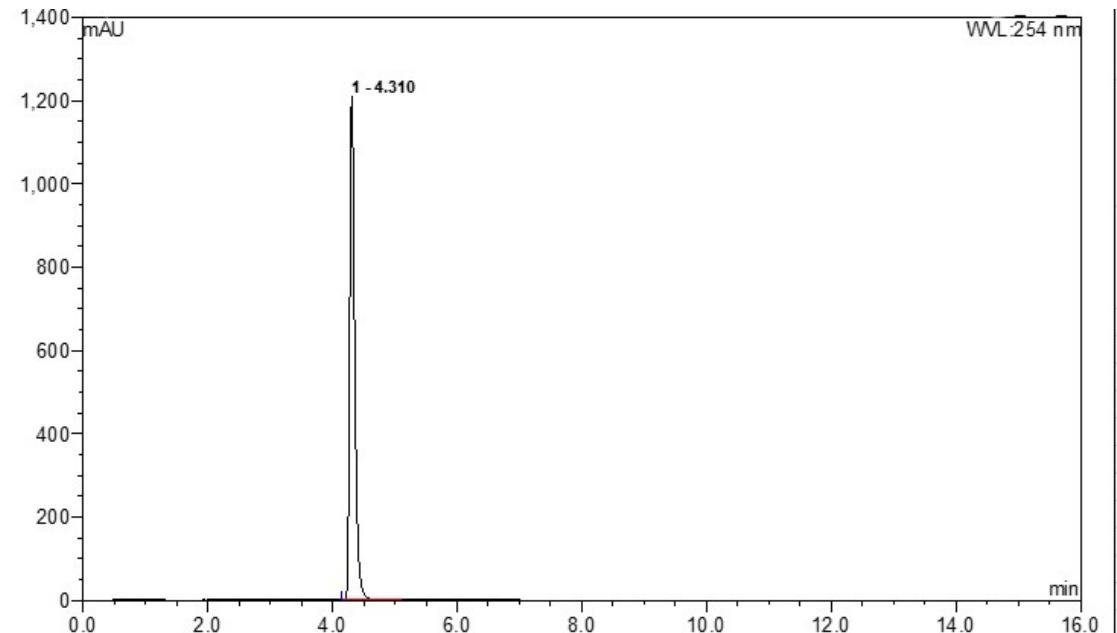
No.	Ret. Time min	Peak Name	Height mAU	Area mAU·min	Rel.Area %	Amount	Type
1	4.53	n.a.	24.569	1.910	1.96	n.a.	BMB*
2	5.82	n.a.	7.491	0.875	0.90	n.a.	BMB*
3	6.54	n.a.	727.897	94.526	97.14	n.a.	BMB*
Total:			759.957	97.311	100.00	0.000	

3'-methoxy-5'-methyl-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (6b9)



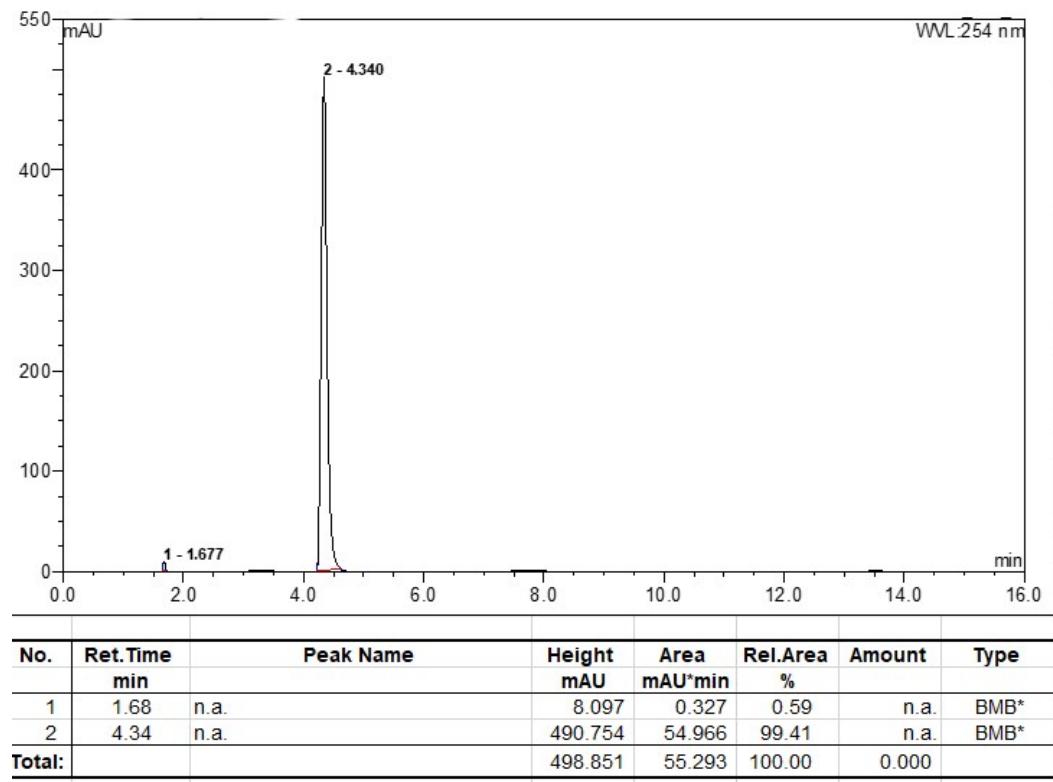
No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	7.38	n.a.	14.005	2.442	2.59	n.a.	BMB
2	8.43	n.a.	7.617	0.569	0.60	n.a.	BMB
3	8.86	n.a.	941.827	90.282	95.67	n.a.	BMB
4	9.37	n.a.	8.035	0.568	0.60	n.a.	BMB
5	10.49	n.a.	5.616	0.511	0.54	n.a.	BMB
Total:			977.100	94.372	100.00	0.000	

N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-4-(trifluoromethyl)benzamide (6b12)

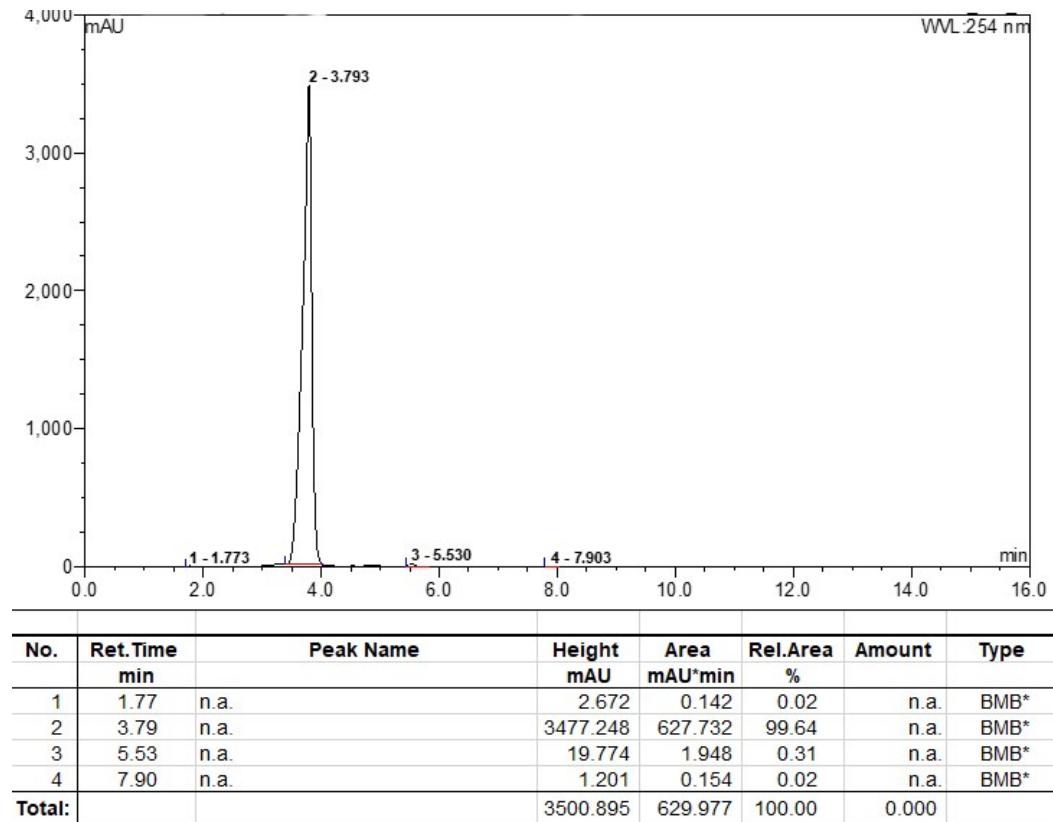


No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	4.31	n.a.	1210.629	113.528	100.00	n.a.	BMB
Total:			1210.629	113.528	100.00	0.000	

N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-6-(trifluoromethyl)nicotinamide (6b21)

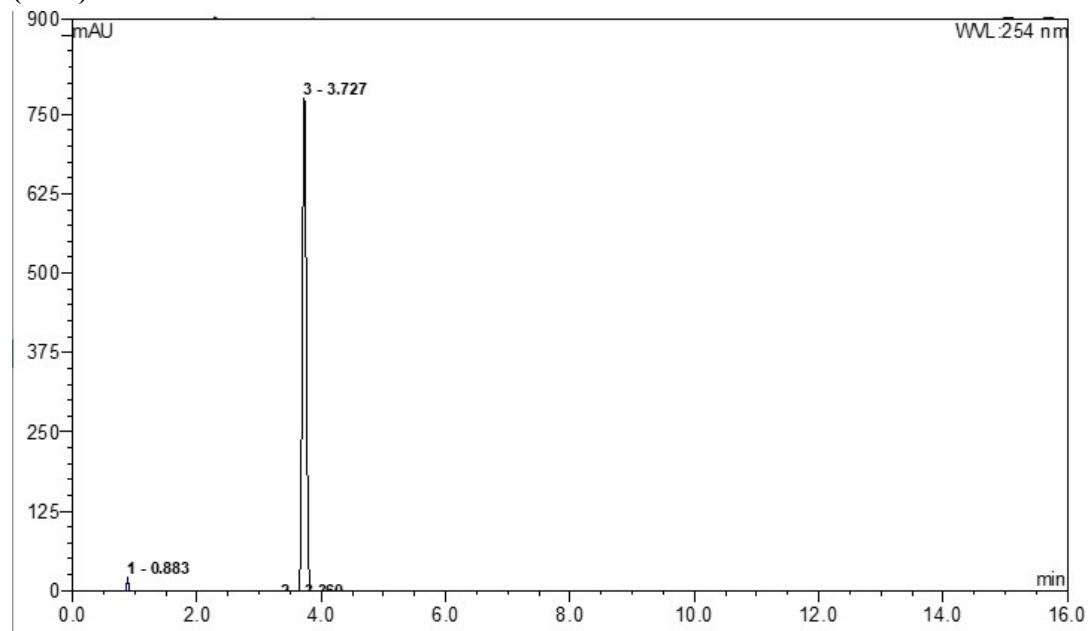


6-chloro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide (6b24)



6-bromo-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide

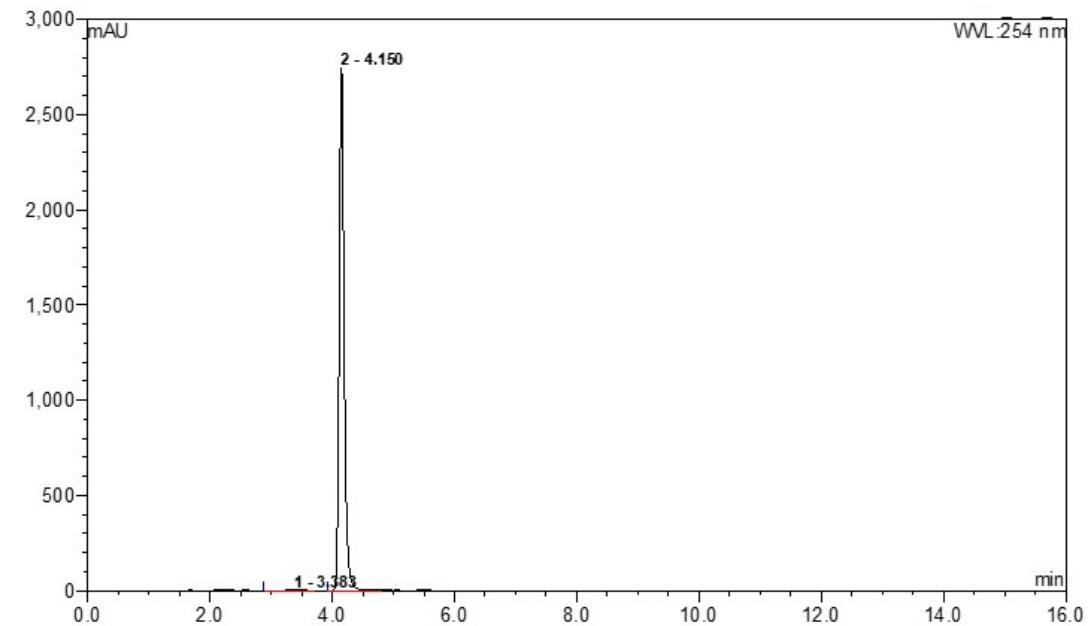
(6b25)



No.	Ret. Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	0.88	n.a.	25.614	0.484	0.77	n.a.	BMB*
2	3.36	n.a.	5.794	0.890	1.42	n.a.	BMB*
3	3.73	n.a.	798.377	61.312	97.81	n.a.	BMB*
Total:			829.785	62.685	100.00	0.000	

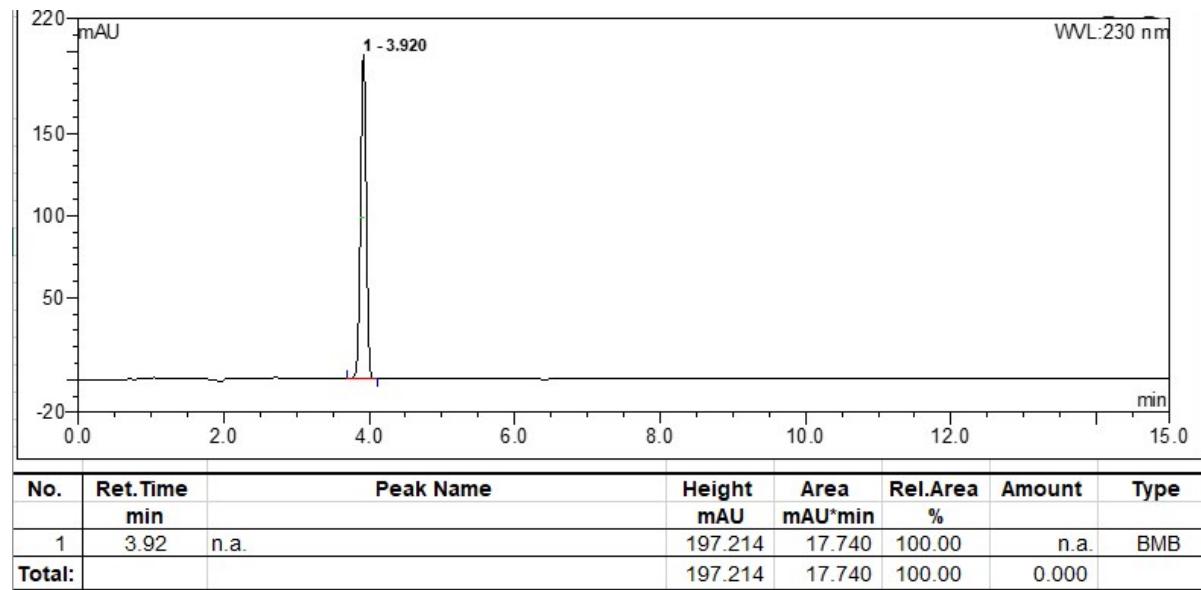
6-fluoro-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide

(6b26).

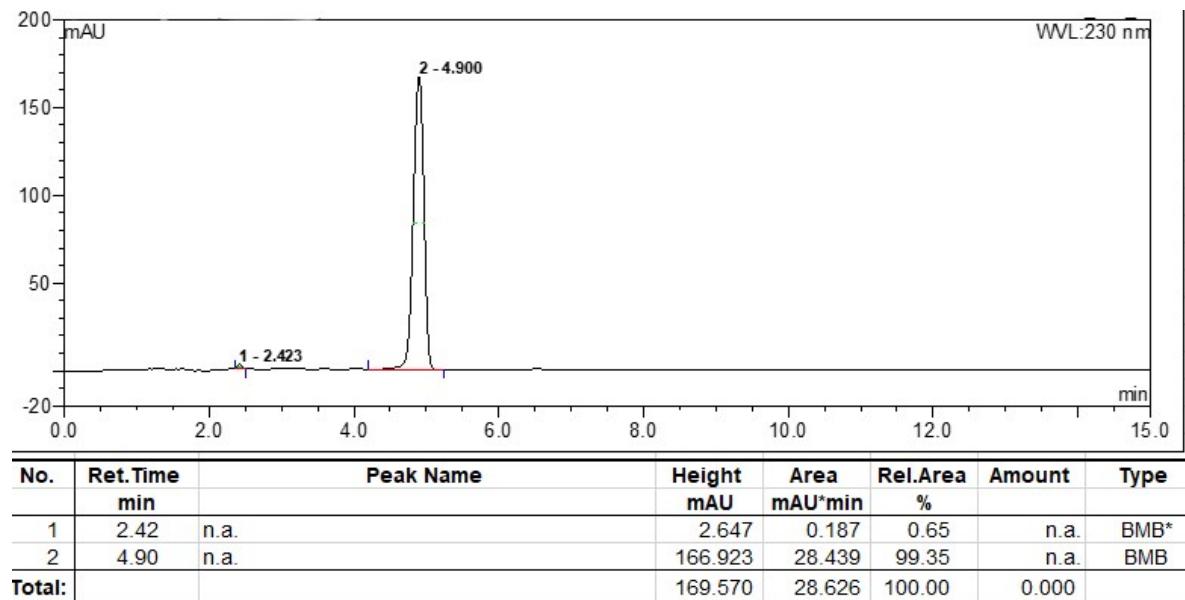


No.	Ret. Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	3.38	n.a.	1.646	0.624	0.24	n.a.	BMB
2	4.15	n.a.	2745.863	256.932	99.76	n.a.	BMB
Total:			2747.509	257.556	100.00	0.000	

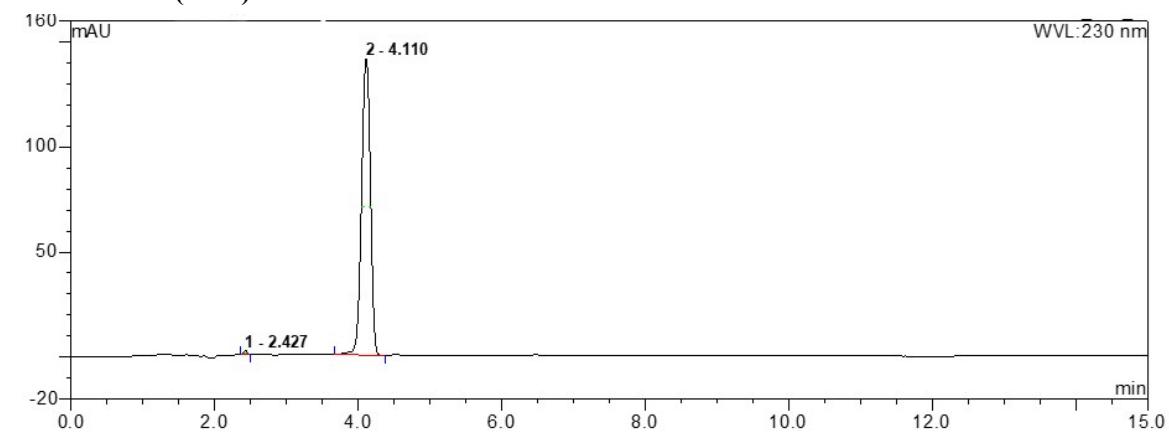
**6-methyl-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)nicotinamide
(6b27).**



**N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-6-nitronicotinamide
(6b28)**

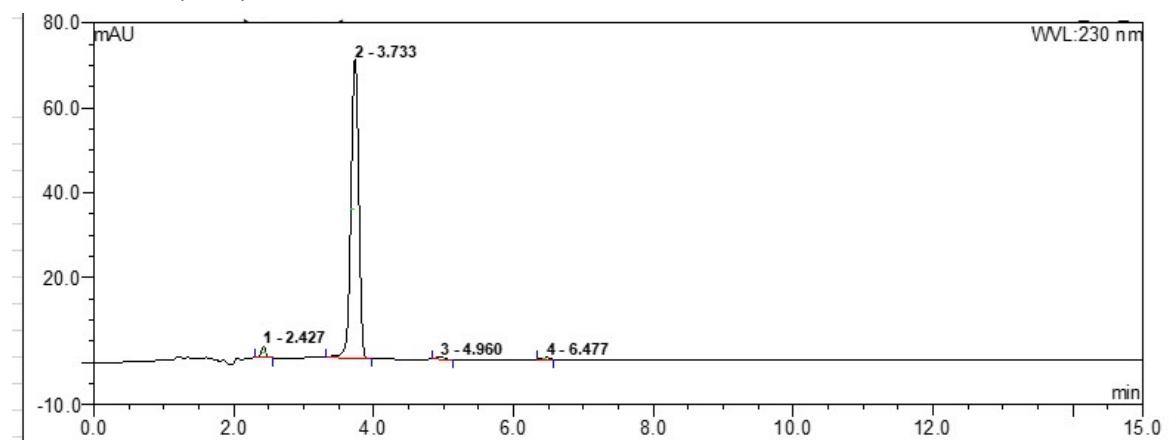


N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-5-nitrofuran-2-carboxamide (6b29)



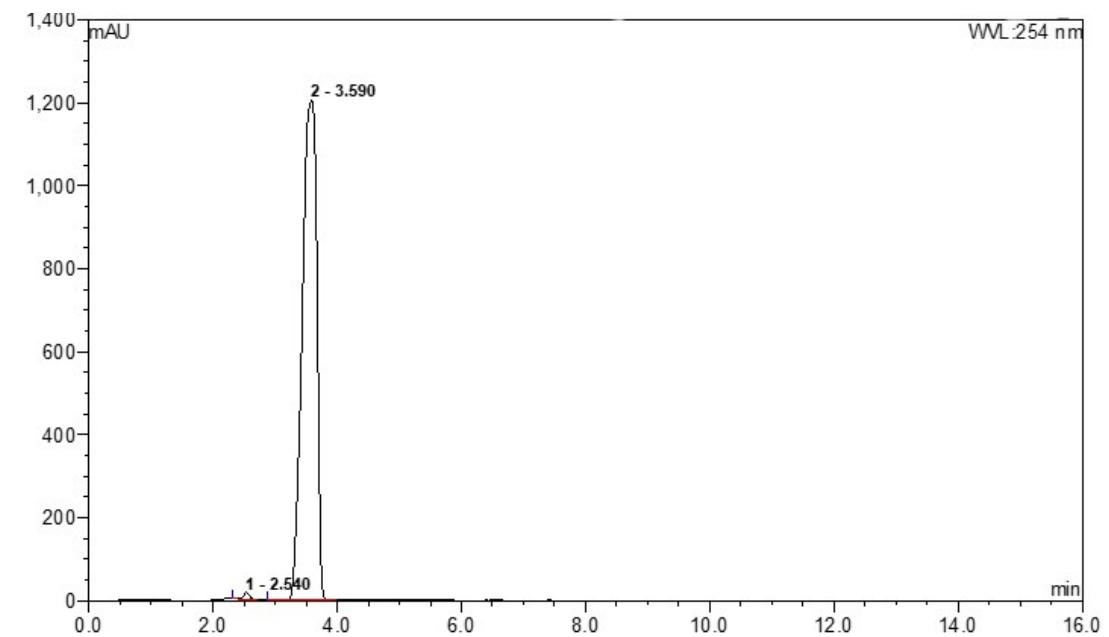
No.	Ret. Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	2.43	n.a.	2.006	0.128	0.63	n.a.	BMB*
2	4.11	n.a.	141.226	20.184	99.37	n.a.	BMB
Total:			143.232	20.313	100.00	0.000	

5-bromo-N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)furan-2-carboxamide (6b31).

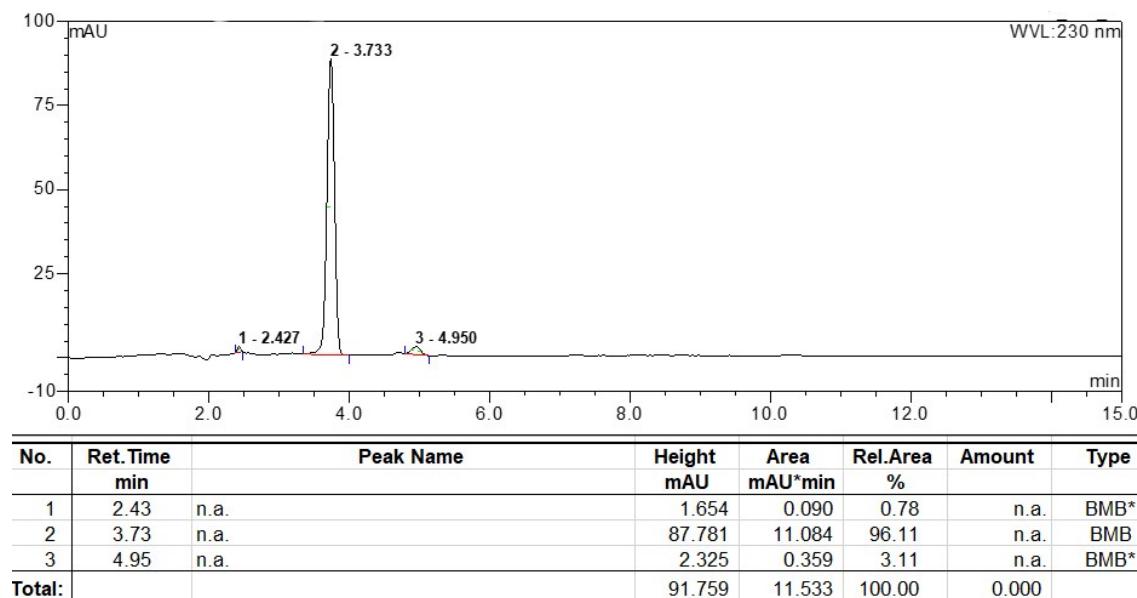


No.	Ret. Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	2.43	n.a.	2.506	0.176	1.87	n.a.	BMB*
2	3.73	n.a.	70.315	9.087	96.86	n.a.	BMB
3	4.96	n.a.	0.441	0.064	0.68	n.a.	BMB*
4	6.48	n.a.	0.458	0.055	0.58	n.a.	BMB*
Total:			73.720	9.382	100.00	0.000	

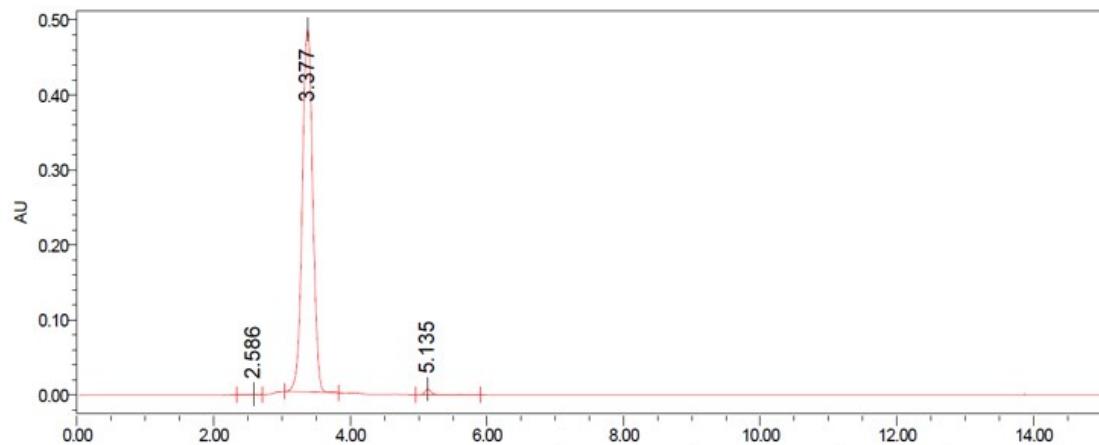
N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-5-nitrothiophene-2-carboxamide (6b32)



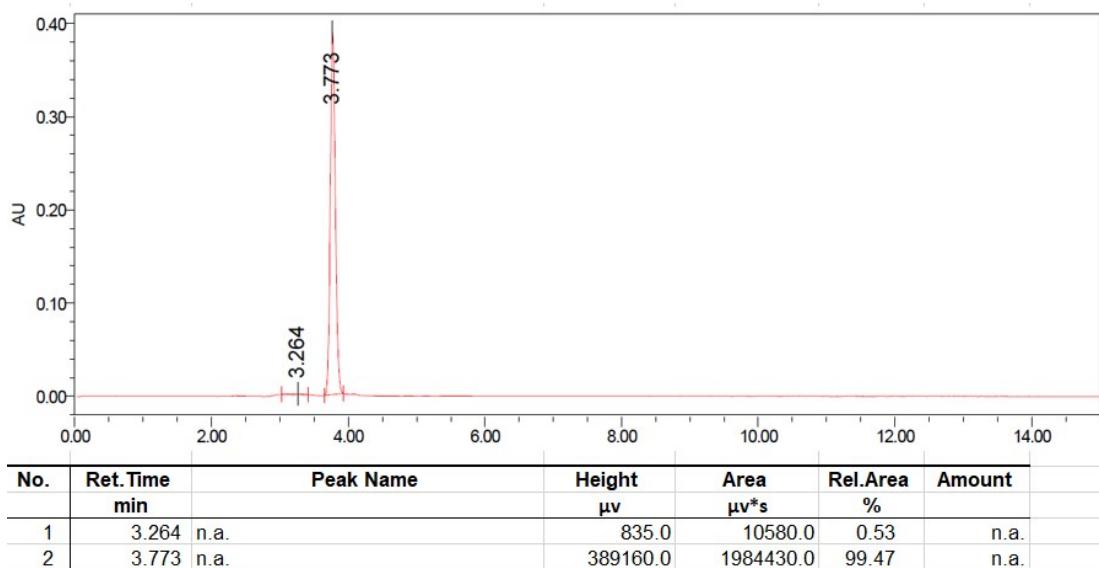
N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-5-(trifluoromethyl)furan-2-carboxamide (6b33).



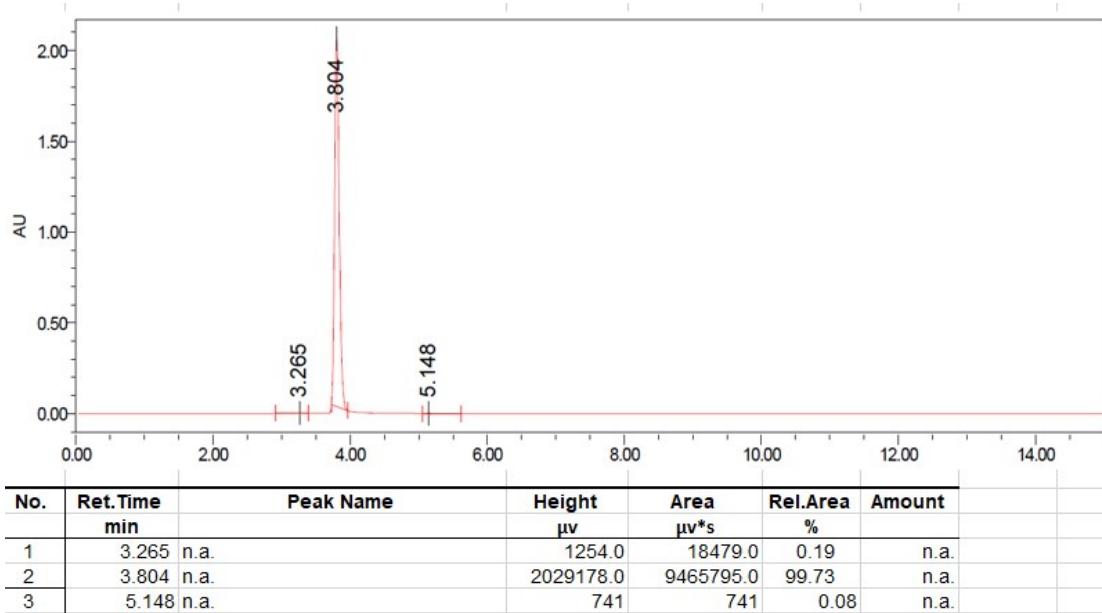
N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-1*H*-pyrazole-4-carboxamide (6b35).



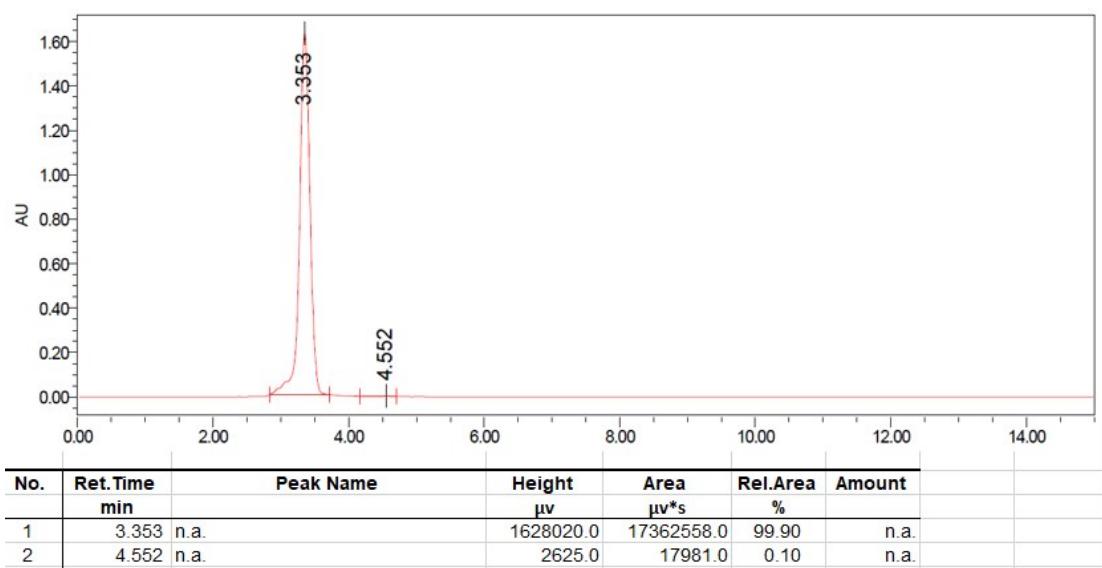
N-((1-methyl-3-oxo-3,5,6,7-tetrahydro-2*H*-cyclopenta[c]pyridin-4-yl)methyl)-5-nitrothiophene-2-carboxamide (6a1).



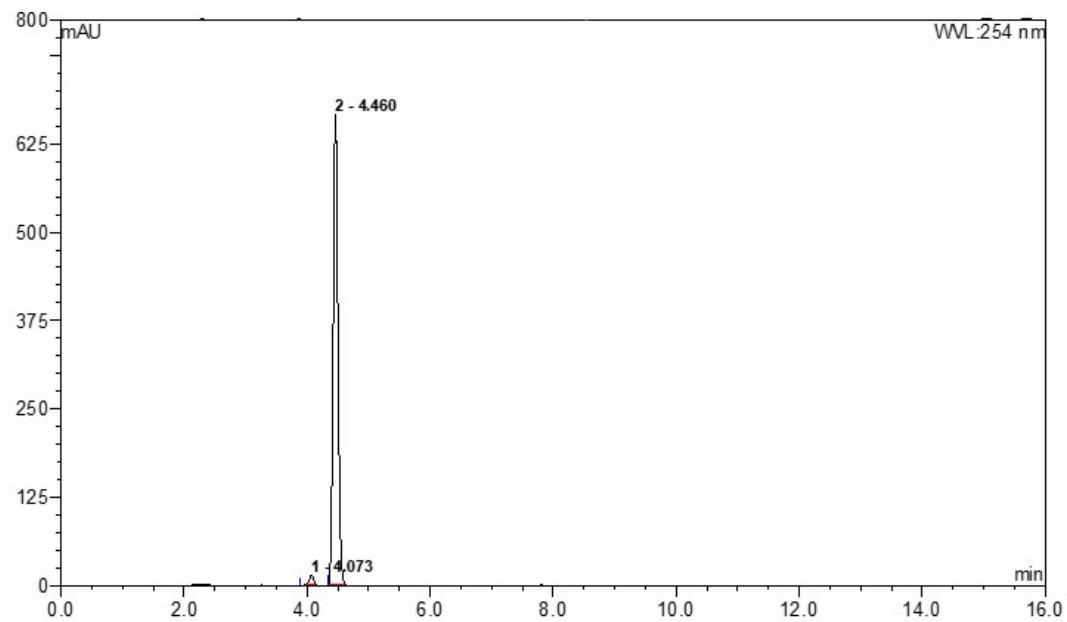
6-bromo-*N*-((1-methyl-3-oxo-3,5,6,7,8,9-hexahydro-2*H*-cyclohepta[c]pyridin-4-yl)methyl)nicotinamide (6c1).



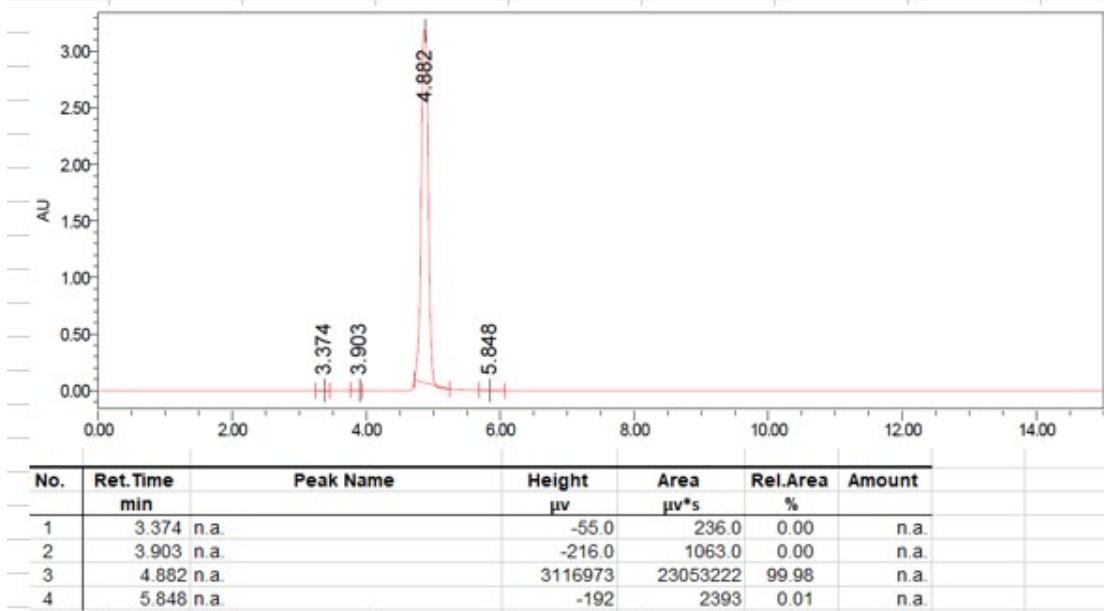
N-(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)thiophene-2-carboxamide (6d2).



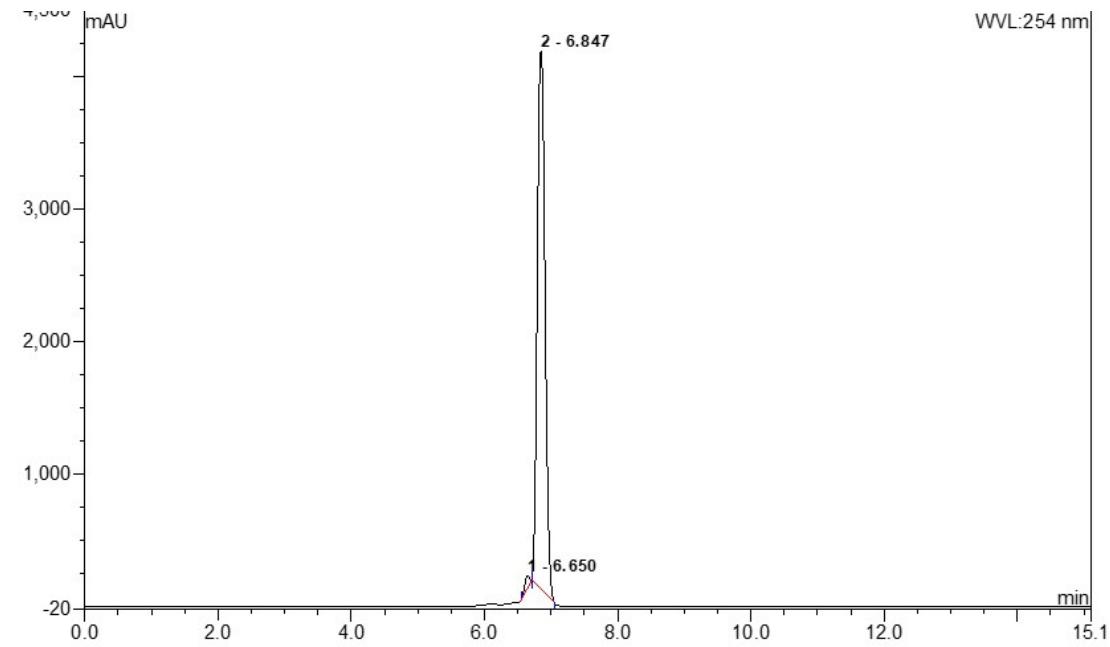
N-(4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-5-nitrothiophene-2-carboxamide (6d5)



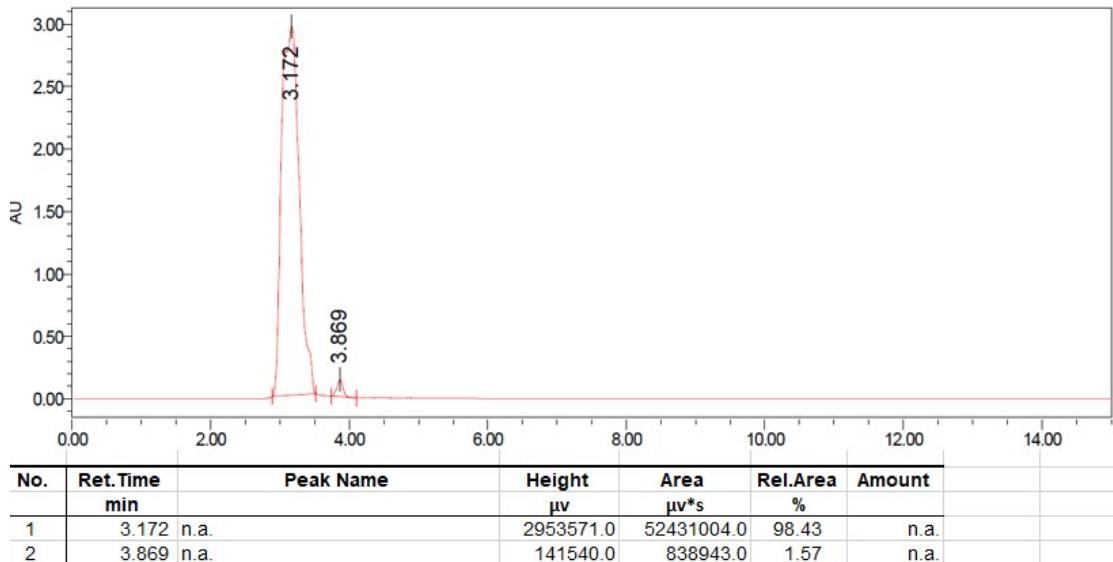
N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)-4-(6-(trifluoromethyl)pyridin-3-yl)benzamide (6d9)



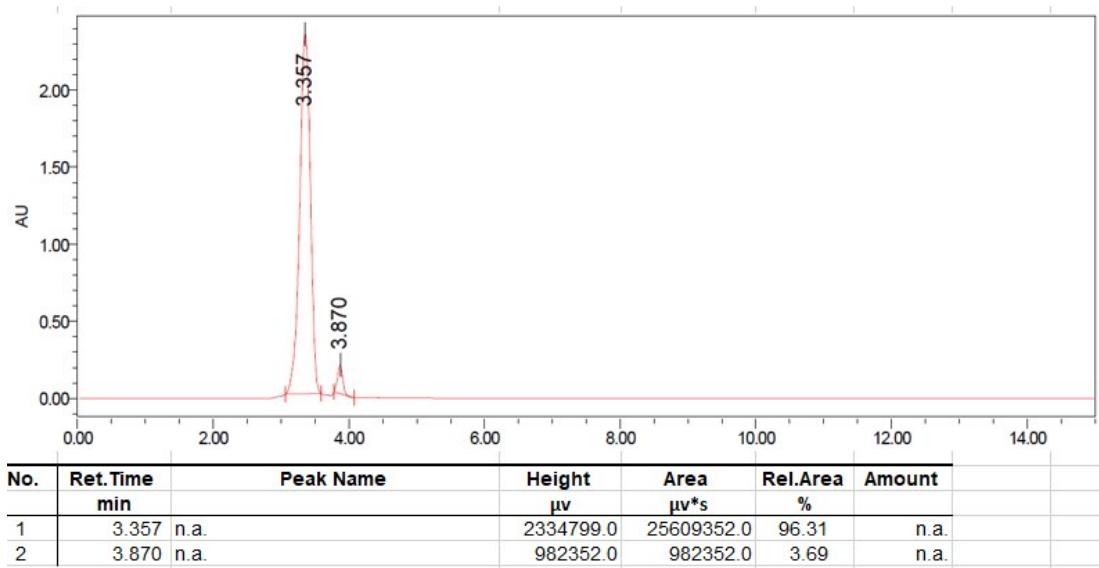
6-bromo-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d11).



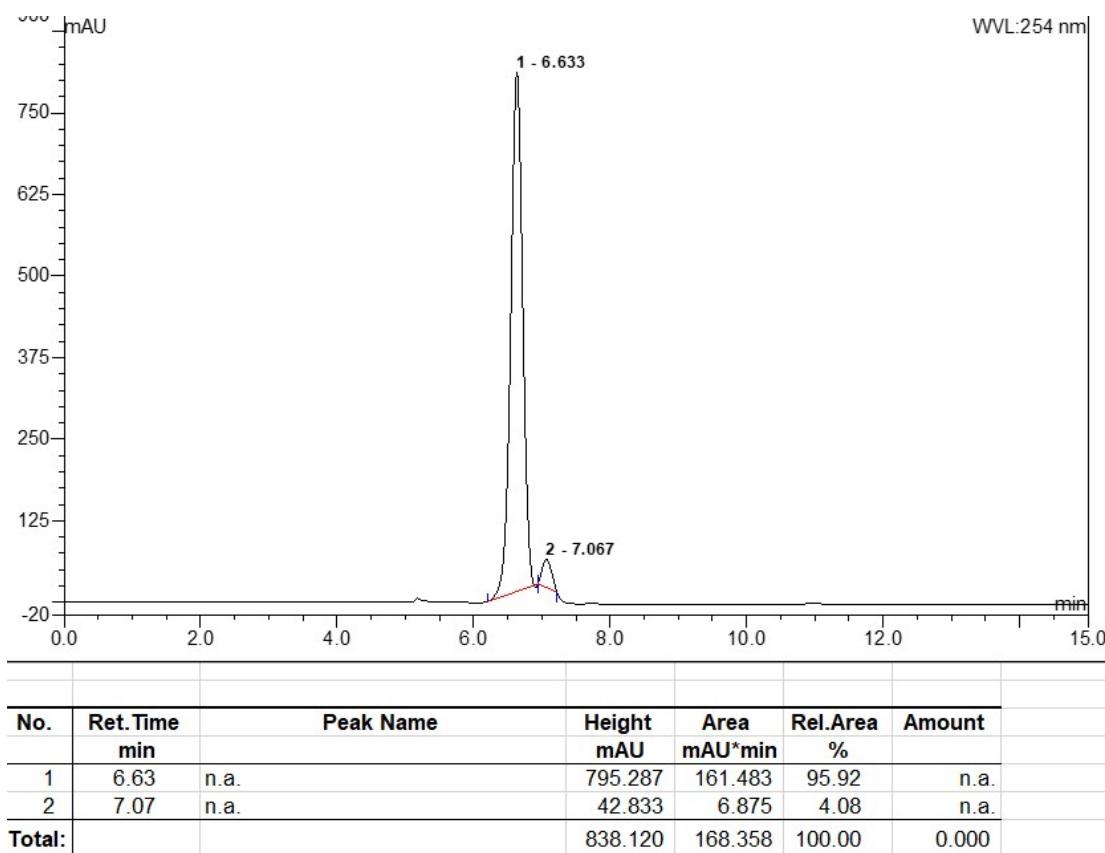
6-fluoro-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d12)



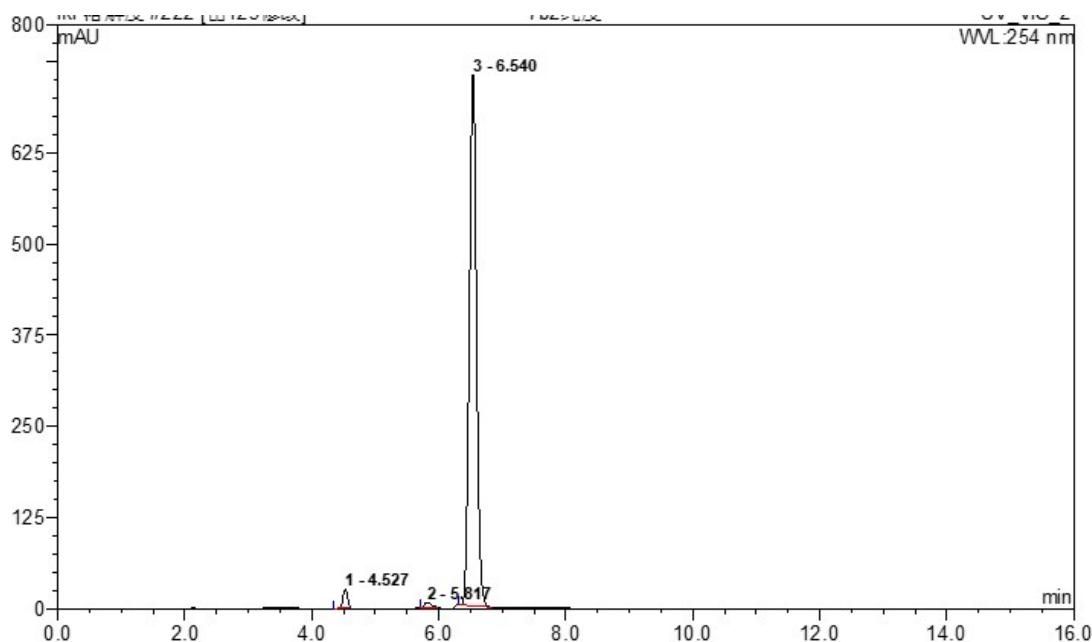
6-chloro-N-((4-methyl-2-oxo-1,2,5,6,7,8-hexahydroquinolin-3-yl)methyl)nicotinamide (6d13).



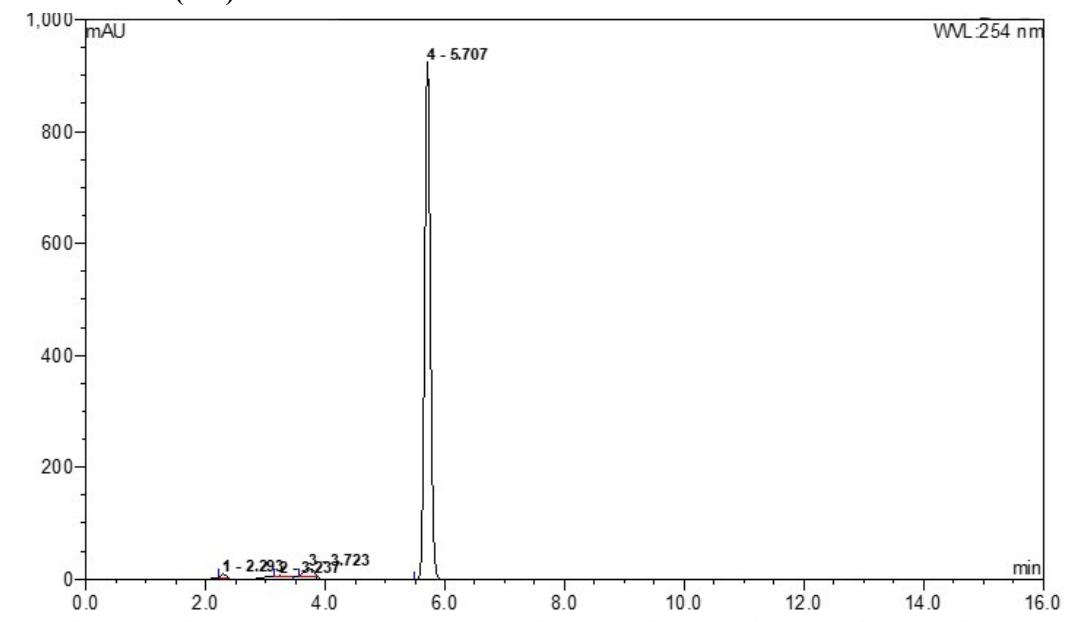
N-((6-cyclopropyl-4-methyl-2-oxo-1,2-dihydropyridin-3-yl)methyl)-6-(trifluoromethyl)nicotinamide (7a1)



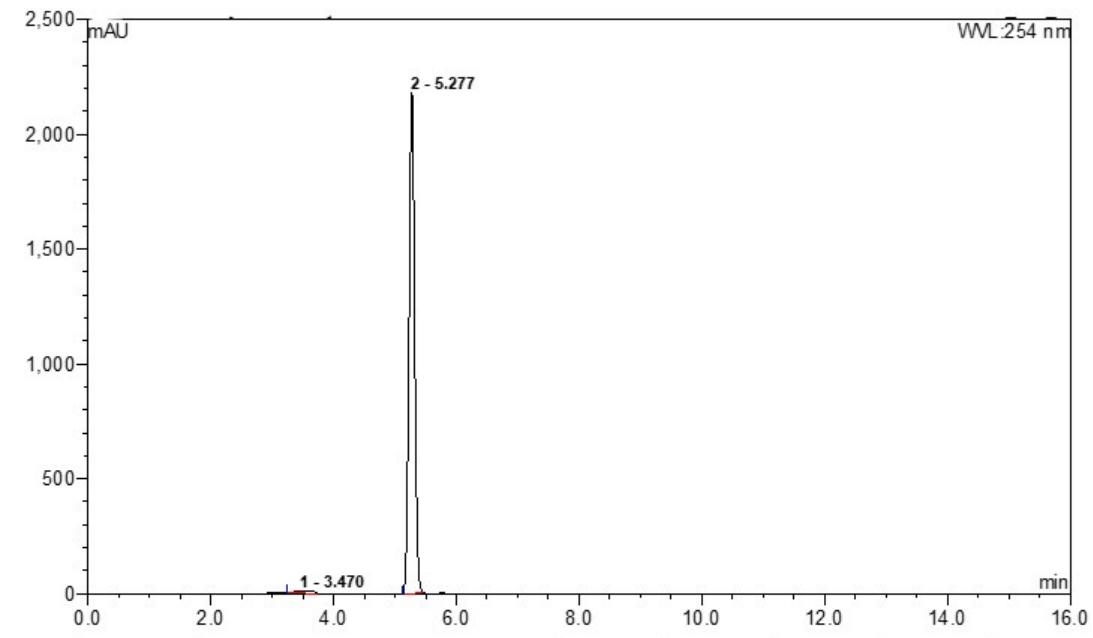
3',5'-dimethoxy-*N*-(4-methyl-2-oxo-6-phenyl-1,2-dihydropyridin-3-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (7b2)



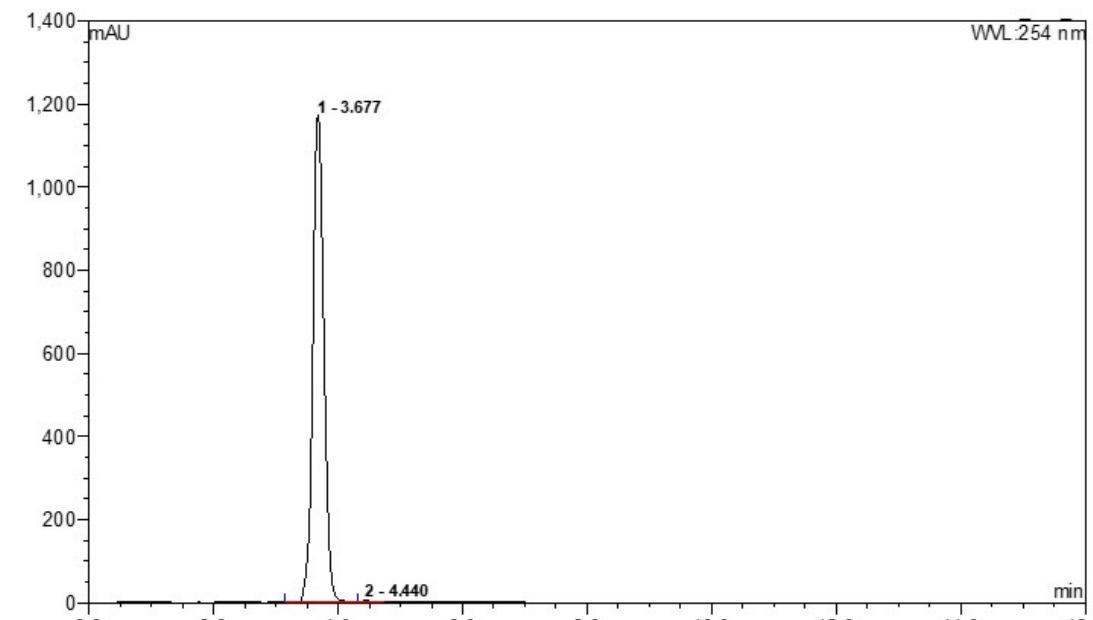
3',5'-dimethoxy-N-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-[1,1'-biphenyl]-4-carboxamide (9a2)



N-((4-methyl-2-oxo-1,2-dihydroquinolin-3-yl)methyl)-4-(6-(trifluoromethyl)pyridin-3-yl)benzamide (9a3)



N-((1-methyl-3-oxo-2,3,5,6,7,8-hexahydroisoquinolin-4-yl)methyl)-6-(trifluoromethyl)pyridine-3-sulfonamide (10a2)



No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount	Type
1	3.68	n.a.	1171.721	242.182	99.73	n.a.	BM
2	4.44	n.a.	5.022	0.653	0.27	n.a.	MB
Total:			1176.744	242.835	100.00	0.000	