Supporting Information

Synthesis and Structure-Activity Relationships of *N*-Benzyl Phenethylamines as 5-$HT_{2A/2C}$ Agonists

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Table of contents:

Binding affinities at 5-HT_{2A} and 5-HT_{2C} receptors S2

Functional activity and intrinsic activity at 5-HT_{2A} and 5-HT_{2C} receptors S3

Experimental section S5

Copies of ^{1}H- and ^{13}C-NMR spectra S24

References S72

Summary of ligand binding affinities at 5-HT2A and 5-HT2C receptors.

	pK_i		Selectivity
Ligand	h5-HT_{2A}	r5-HT_{2C}	5-HT_{2C}/5-HT_{2A}
2C-I	8.14	8.03	1.3
5-MeO-DMT[1]	6.04	6.38	0.5
1a	8.67	8.15	3.2
1b	9.15	8.85	2.0
1c	8.55	7.68	7.5
1d	9.22	7.66	36.7
2a	9.30	8.77	3.4
2b	9.47	8.33	13.6
2c	8.57	7.73	6.9
2d	9.22	7.95	18.6
3a	8.80	8.27	3.4
3b	9.21	8.21	10.1
3c	8.12	7.43	4.9
3d	9.00	7.67	21.8
4a	8.49	7.36	13.4
4b	8.34	7.16	15.0
4c	7.25	6.31	8.6
4d	7.92	6.59	21.6
5a	9.32	8.57	2.3
5b	9.18	8.49	3.3
5c	7.99	7.74	1.8
5d	9.00	7.93	17.9
6a	8.34	7.25	4.3
6b	8.88	6.88	99.8
6c	7.20	6.20	10.0
6d	7.79	6.86	8.5
7a	8.70	8.23	3.0
7b	8.96	7.92	10.9
7c	7.72	7.18	3.5
7d	8.59	7.43	14.4
8a	9.48	8.55	8.5
8b	9.54	8.47	11.7
8c	8.63	7.58	11.1
8d	9.40	7.92	30.1
9a	9.20	8.79	2.6
9b	9.28	8.51	5.9
9c	8.51	7.88	4.3
9d	9.20	8.13	11.7
10a	9.27	8.15	13.1
10b	9.42	8.29	13.3

10c	8.10	7.16	8.8
10d	9.15	7.56	39.1
11a	9.25	8.65	4.0
11b	9.21	8.72	3.2
11c	8.02	7.64	2.4
11d	9.40	8.04	23.0
12a	9.17	8.71	2.9
12b	9.17	8.66	3.2
12c	8.60	7.84	5.8
12d	9.02	8.06	9.2

Summary of ligand functional activity (pEC_{50}) and intrinsic activity in stimulation of PI-hydrolysis for *N*-benzyl phenethylamine agonists at human 5-HT_{2A} and 5-HT_{2C} receptors

	h5-HT_{2A} PI-hydrolysis		h5-HT_{2C} PI-hydrolysis		Selectivity
Ligand	pEC_{50}±SEM	Int. activity (%5-HT±SEM)	pEC_{50}±SEM	Int. activity (%5-HT±SEM)	(5-HT_{2C}/5-HT_{2A})
5-HT	8.02±0.04	100	8.36±0.09	100	0.6
DOI	8.54±0.02	93±5	7.56±0.07	100±2	4.3
5-MeO-DMT	7.73±0.03	84±4	7.10±0.05	96±2	9.9
1a	9.14±0.14	90±3	7.74±0.16	101±4	25.1
1b	10.13±0.03	93±3	7.50±0.11	101±4	449.8
1c	7.49±0.20	71±6	6.93±0.04	103±4	3.1
1d	6.87±0.12	76±12	6.42±0.21	87±3	4.1
2a	9.40±0.16	89±4	8.34±0.20	93±4	11.4
2b	9.24±0.17	81±3	8.27±0.12	89±1	8.7
2c	6.21±0.13	84±3	7.14±0.13	92±2	0.1
2d	7.98±0.17	71±2	6.66±0.06	84±6	17.5
3a	8.31±0.19	82±7	8.49±0.06	103±4	0.5
3b	9.43±0.12	88±1	7.78±0.11	85±4	43.7
3c	6.44±0.20	83±7	6.52±0.13	104±5	0.8
3d	8.05±0.20	70±4	7.44±0.07	85±4	3.5
4a	7.80±0.20	75±1	7.60±0.08	92±5	1.2
4b	8.06±0.03	82±4	6.86±0.06	94±2	16.2
4c	6.11±0.21	72±4	6.34±0.07	97±11	0.5
4d	6.69±0.16	68±1	6.09±0.13	84±6	3.8
5a	8.69±0.28	80±4	7.94±0.13	110±5	3.4
5b	9.49±0.22	85±2	7.45±0.13	119±16	84.9
5c	6.84±0.18	71±3	6.45±0.33	94±3	3.2
5d	8.80±0.20	74±28	6.43±0.16	84±3	225.8

6a	8.46±0.10	86±2	6.87±0.10	91±3	39.0
6b	8.68±0.05	86±12	6.76±0.13	86±11	89.7
6c	7.09±0.06	70±4	5.85±0.05	79±6	17.5
6d	7.72±0.12	84±4	5.81±0.09	72±3	78.2
7a	8.45±0.09	77±4	7.94±0.20	97±3	3.7
7b	8.47±0.17	86±2	7.56±0.10	99±3	7.0
7c	6.91±0.21	70±3	6.70±0.16	98±9	1.4
7d	7.67±0.17	76±3	6.90±0.54	85±0	13.3
8a	8.55±0.14	80±2	8.01±0.36	101±3	5.3
8b	8.89±0.10	94±5	7.42±0.13	98±2	31.0
8c	6.47±0.10	84±6	6.76±0.18	91±4	0.6
8d	7.94±0.02	68±2	6.64±0.10	88±3	20.9
9a	7.20±0.14	94±4	7.60±0.07	109±3	0.4
9b	8.16±0.17	84±4	7.28±0.26	100±2	9.0
9c	6.61±0.13	89±6	6.81±0.25	105±4	0.8
9d	7.28±0.14	72±5	6.75±0.13	95±4	3.0
10a	8.63±0.20	86±3	7.67±0.05	103±4	7.8
10b	8.76±0.07	81±3	7.28±0.19	96±9	35.1
10c	7.16±0.18	67±2	6.48±0.16	94±2	5.1
10d	8.10±0.20	64±4	6.59±0.04	75±4	27.6
11a	8.36±0.20	81±2	7.92±0.17	103±4	2.4
11b	8.36±0.09	85±1	7.58±0.19	95±3	30.3
11c	7.47±0.12	74±4	7.15±0.18	99±7	2.6
11d	8.91±0.15	67±3	6.81±0.03	79±4	96.9
12a	7.41±0.11	84±3	7.72±0.27	95±3	0.8
12b	8.83±0.16	79±7	7.29±0.22	101±10	42.5
12c	7.18±0.11	72±6	7.07±0.19	99±5	1.6
12d	7.65±0.17	81±2	6.92±0.20	102±6	5.6

Experimental section

Melting points were determined on a Stanford Research Systems Optimelt apparatus and are uncalibrated. NMR spectra were recorded on a Varian Mercury 300BB, Varian Gemini 2000 or Bruker Avance III HD spectrometers. Residual solvent peaks (DMSO-d6) were used as internal standard (2.50 ppm for 1H and 39.52 ppm for 13C). Flash chromatography was performed on silica gel, pore size 60Å, particle size 230-400 mesh (40-63 µm). Thin-layer chromatography (TLC) was performed on aluminum sheets precoated with silica gel F254. Compounds were visualized by UV radiation (254 nm) or by heating after dipping in ninhydrin (1.5 g ninhydrin, 100 mL n-butanol, 3.0 mL AcOH). Unless otherwise mentioned, solvents were commercial HPLC grade and used without further purification. 1M ethanolic HCl was prepared by dropwise addition of acetyl chloride (20 mmol, 1.57 g, 1.43 mL) to EtOH (18 mL) with external cooling (ice bath), the volume was adjusted to 20 mL and the resulting solution may be used immediately or stored at 5° C.

General procedure A - for the synthesis of secondary amines.

Et_3N (1.0 equiv.) was added to a suspension of the phenethylamine hydrochloride (1.0 mmol) and aldehyde (1.1 equiv.) in EtOH (10 mL) and the reaction was stirred until formation of the imine was complete according to TLC or GC (30 minutes to 3 hrs). $NaBH_4$ (2.0 mmol) was added and the reaction was stirred for another 30 minutes. The reaction mixture was concentrated under reduced pressure and the residue was partitioned between CH_2Cl_2 and water (30 mL, 1:1). The organic layer was isolated and the aqueous layer was extracted with CH_2Cl_2 (2 × 15 mL). The combined organic extracts were dried (Na_2SO_4), filtered and evaporated under reduced pressure. The residue was purified by flash chromatography (CH_2Cl_2/MeOH/NH_3

98:2:0.04). The purified free base was dissolved in EtOH (2 mL) and there was added ethanolic HCl (1M, 2 mL) and the resulting solution was diluted with Et_2O until crystals formed. The crystals were collected by filtration and dried under reduced pressure.

2-(4-Iodo-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (1a)

Obtained from 2C-I[2] and 2-methoxybenzaldehyde by general procedure A in 88% yield as a colorless solid, mp. 162-166 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.18 (br s, 2H), 7.49 (dd, J = 7.5, 1.6 Hz, 1H), 7.41 (td, J = 8.3, 1.7 Hz, 1H), 7.32 (s, 1H), 7.09 (d, J = 7.8 Hz, 1H), 7.00 (td, J = 7.5, 0.9 Hz, 1H), 6.91 (s, 1H), 4.12 (s, 2H), 3.83 (s, 3H), 3.77 (s, 3H), 3.74 (s, 2H), 3.09 – 3.03 (m, 1H), 2.99 – 2.94 (m, 1H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 152.0, 151.8, 131.4, 130.7, 126.3, 121.4, 120.3, 119.7, 113.8, 111.1, 84.0, 56.8, 56.2, 55.6, 45.7, 44.8, 26.4.

2-((4-Iodo-2,5-dimethoxyphenethylamino)methyl)phenol hydrochloride (1b)

Obtained from 2C-I[2] and salicylaldehyde by general procedure A in 81% yield as a colorless solid, mp. 197 – 201 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 10.30 (s, 1H), 9.15 (br s, 2H), 7.39 (dd, J = 7.4, 1.4 Hz, 1H), 7.21 (ddd, J = 8.1, 7.5, 1.4 Hz, 1H), 7.30 (s, 1H), 6.98 (dd, J = 8.1, 0.9 Hz, 1H), 6.88 (s, 1H), 6.82 (ddd, J = 7.5, 7.4, 0.9 Hz, 1H), 4.08 (s, 2H), 3.78 (s, 3H), 3.73 (s, 3H), 3.11 – 2.90 (m, 4H). ^{13}C NMR (75 MHz, $CDCl_3$) δ 155.9, 151.8, 151.6, 131.5, 130.2, 126.2, 121.3, 118.9, 117.9, 115.3, 113.6, 83.9, 56.8, 56.2, 45.7, 44.9, 26.5

***N*-(2-Fluorobenzyl)-2-(4-iodo-2,5-dimethoxyphenyl)ethanamine hydrochloride (1c)**

Obtained from 2C-I[2] and 2-fluorobenzaldehyde by general procedure A in 84% yield as a colorless solid, mp 196 – 197 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.56 (br s, 2H), 7.73 (td, J = 7.6, 1.6 Hz, 1H), 7.52 – 7.44 (m, 1H), 7.32 (s, 1H), 7.31 – 7.27 (m, 2H), 6.92 (s, 1H), 4.20 (s, 2H), 3.77 (s, 3H), 3.74 (s, 3H), 3.17 – 3.07 (m, 2H), 3.02 – 2.92 (m, 2H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 160.5 (d, $^1J_{CF}$ = 247 Hz), 152.0, 151.9, 132.4 (d, $^3J_{CF}$ = 2.8 Hz), 131.4 (d, $^3J_{CF}$ = 8.3

Hz), 126.2, 124.7 (d, $^4J_{CF}$ = 3.4 Hz), 121.4, 119.1 (d, $^2J_{CF}$ = 14.6 Hz), 115.4 (d, $^2J_{CF}$ = 21.3 Hz), 113.6, 83.9, 56.8, 56.2, 45.9, 42.8, 26.5.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(4-iodo-2,5-dimethoxyphenyl)ethanamine hydrochloride (1d)**

Obtained from 2C-I[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 71% yield as a colorless solid, mp. 190 – 191 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.55 (br. s, 2H), 7.32 (s, 1H), 7.13 (dd, *J* = 8.0, 1.0 Hz, 1H), 6.97 (dd, *J* = 7.8, 1.1 Hz, 1H), 6.91 (s, 1H), 6.90 (t, *J* = 7.9 Hz, 1H), 6.06 (s, 2H), 4.09 (s, 2H), 3.77 (s, 3H), 3.74 (s, 3H), 3.13 – 3.06 (m, 2H), 3.00 – 2.93 (m, 2H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 152.0, 151.9, 147.1, 146.3, 126.2, 123.3, 121.8, 121.4, 113.8, 113.1, 109.1, 101.2, 84.0, 56.8, 56.2, 45.7, 43.5, 26.5.

2-(4-Bromo-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (2a)

Obtained from 2C-B[2] and 2-methoxybenzaldehyde by general procedure A in 85% yield as a colorless solid, mp. 179 – 181 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.34 (br s, 2H) , 7.50 (d, *J* = 7.4 Hz, 1H), 7.39 (t, *J* = 8,3 Hz, 1H), 7.17 (s, 1H), 7.06 (d, *J* = 8.3 Hz, 1H), 7.01 (s, 1H), 6.98 (t, *J* = 7.4 Hz, 1H), 4.10 (s, 2H), 3.79 (s ,3H), 3.73 (s, 3H), 2.93 – 3.11 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 157.3, 151.3, 149.2, 131.3, 130.6, 125.4, 120.2, 119.6, 115.7, 114.8, 110.9, 108.7, 56.6, 56.2, 55.6, 45.6, 44.7, 26.3.

2-((4-Bromo-2,5-dimethoxyphenethylamino)methyl)phenol hydrochloride (2b)

Obtained from 2C-B[2] and salicylaldehyde by general procedure A in 79% yield as a colorless solid, mp. 188 – 190 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 2.91 – 3.11 (m, 4H), 3.74 (s, 3H), 3.78 (s ,3H), 4.08 (m, 2H), 6.78 – 6.85 (m, 1H), 6.96 – 7.02 (m, 1H), 6.99 (s, 1H), 7.16 – 7.24 (m, 1H), 7.17 (s, 1H) 7.38 – 7.43 (m, 1H), 9.19 (br s, 2H), 10.31 (s, 1H). ^{13}C NMR (75 MHz,

DMSO d_6) δ 155.9, 151.3, 149.2, 131.5, 130.2, 125.4, 118.8, 117.9, 115.7, 115.3, 114.8, 108.7, 56.6, 56.2, 45.6, 44.8, 26.4.

2-(4-Bromo-2,5-dimethoxyphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (2c)

Obtained from 2C-B[2] and 2-fluorobenzaldehyde by general procedure A in 80% yield as a colorless solid, mp. 172 – 174 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.67 (br s, 2H), 7.75 (td, J = 7.6, 1.6 Hz, 1H), 7.51 – 7.42 (m, 1H), 7.32 – 7.23 (m, 2H), 7.18 (s, 1H), 7.02 (s, 1H), 4.19 (s, 2H), 3.79 (s, 3H), 3.74 (s, 3H), 3.18 – 2.93 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 160.3 (d, $^1J_{CF}$ = 246.6 Hz), 151.4, 149.2, 132.3 (d, $^3J_{CF}$ = 3.0 Hz), 131.2 (d, $^3J_{CF}$ = 8.4 Hz), 125.3, 124.5 (d, $^4J_{CF}$ = 3.7 Hz), 119.0 (d, $^2J_{CF}$ = 14.6 Hz), 115.7, 115.4 (d, $^2J_{CF}$ = 21.3 Hz), 114.8, 108.8, 56.6, 56.2, 45.9, 42.8 (d, $^3J_{CF}$ = 4.1 Hz), 26.4.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(4-bromo-2,5-dimethoxyphenyl)ethanamine hydrochloride (2d)**

Obtained from 2C-B[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 88% yield as a colorless solid, mp. 193 – 196 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.61 (br s, 2H), 7.18 (s, 1H), 7.13 (dd, 7.7, 1.3 Hz, 1H), 7.01 (s, 1H), 6.95 (dd, J = 7.7, 1.3 Hz, 1H), 6.88 (t, J = 7.7 Hz, 1H), 6.05 (s, 2H), 4.08 (s, 2H), 3.78 (s 3H), 3.74 (s, 3H), 3.15 – 2.91 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 151.3, 149.2, 146.9, 146.1, 125.3, 123.2, 121.7, 115.7, 114.8, 113.0, 109.0, 101.1, 56.6, 56.2, 45.7, 43.4, 26.4.

2-(4-Chloro-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (3a)

Obtained from 2C-C[2] and 2-methoxybenzaldehyde by general procedure A in 86% yield as a colorless solid, mp. 179 – 181 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.25 (s, 2H), 7.50 (dd, J = 7.5, 1.5 Hz, 1H), 7.41 (ddd, J = 8.3, 7.5, 1.6 Hz, 1H), 7.09 (dd, J = 8.3, 1.0 Hz, 2H), 7.08 (s, 1H),

7.04 (s, 1H), 6.99 (td, J = 7.5, 1.0 Hz, 1H), 4.12 (s, 2H), 3.83 (s, 3H), 3.80 (s, 3H), 3.74 (s, 3H), 3.09 – 3.03 (m, 2H), 3.00 – 2.96 (m, 2H). ^{13}C NMR (75 MHz, CD_3OD) δ ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 151.2, 148.4, 131.4, 130.7, 124.8, 120.3, 119.7, 119.6, 115.2, 113.1, 111.1, 56.5, 56.2, 55.6, 45.8, 44.7, 26.2.

.2-((4-Chloro-2,5-dimethoxyphenethylamino)methyl)phenol hydrochloride (3b)

Obtained from 2C-C[2] and salicylaldehyde by general procedure A in 83% yield as a colorless solid, mp. 167 – 170 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 10.30 (s, 1H), 9.14 (br s, 2H), 7.39 (dd, J = 7.5, 1.6 Hz, 1H), 7.20 (ddd, J = 8.1, 7.4, 1.6 Hz, 1H), 7.06 (s, 1H), 7.02 (s, 1H), 6.98 (dd, J = 8.1, 1.0 Hz, 1H), 6.82 (ddd, J = 7.5, 7.4, 1.0 Hz, 1H), 4.08 (s, 2H), 3.79 (s, 3H), 3.74 (s, 3H), 3.11 – 2.92 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 155.9, 151.0, 148.2, 131.5, 130.2, 124.7, 119.4, 118.9, 117.9, 115.3, 115.0, 113.0, 56.5, 56.2, 45.7, 44.9, 26.3.

2-(4-Chloro-2,5-dimethoxyphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (3c)

Obtained from 2C-C[2] and 2-fluorobenzaldehyde by general procedure A in 83% yield as a colorless solid, mp. 160 – 162 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.73 (br s, 2H), 7.80 – 7.73 (m, 1H), 7.51 – 7.41 (m, 1H), 7.31 – 7.22 (m, 2H), 7.06 (s, 1H), 7.05 (s, 1H), 4.19 (s, 2H), 3.79 (s, 3H), 3.74 (s, 3H), 3.18 – 2.96 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 160.3 (d, $^1J_{CF}$ = 246.7 Hz), 151.0, 148.2, 132.3 (d, $^3J_{CF}$ = 2.9 Hz), 131.23 (d, $^3J_{CF}$ = 8.3 Hz), 124.5 (d, $^3J_{CF}$ = 3.6 Hz), 124.6, 119.4, 119.0 (d, $^2J_{CF}$ = 14.5 Hz), 115.0, 115.4 (d, $^2J_{CF}$ = 21.4 Hz), 113.0, 56.5, 56.2, 46.0, 42.8 (d, $^3J_{CF}$ = 4.1 Hz), 26.2.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(4-chloro-2,5-dimethoxyphenyl)ethanamine hydrochloride (3d)**

Obtained from 2C-C[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 92% yield as a colorless solid, mp. 177 – 179 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.63 (br s, 2H),

7.14 (dd, J = 7.8, 1.0 Hz, 1H), 7.06 (s, 1H), 7.04 (s, 1H), 6.95 (dd, J = 7.7, 1.0 Hz, 1H), 6.88 (dd, J = 7.8, 7.7 Hz, 1H), 6.05 (s, 2H), 4.08 (s, 2H), 3.79, (s, 3H), 3.74 (s, 3H), 3.15 – 2.92 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 151.0, 148.2, 146.9, 146.1, 124.6, 123.2, 121.7, 119.4, 115.2, 115.0, 113.0, 109.0, 101.1, 56.4, 56.2, 45.86, 43.4, 26.3.

2-(4-Fluoro-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (4a)

Obtained from 2C-F[2] and 2-methoxybenzaldehyde by general procedure A in 79% yield as a colorless solid. mp. 143-146 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.15 (br s, 2H), 7.49 (dd, J = 7.5, 1.6 Hz, 1H), 7.41 (ddd, J = 8.3, 7.7, 1.7 1H), 7.09 (d, J = 8.3, 1.0 Hz), 7.04 (d, $^4J_{HF}$ = 9.7 Hz, 1H) 7.00 (ddd, J = 7.5, 7.5, 1.0 Hz, 1H), 6.98 (d, $^3J_{HF}$ = 13.3 Hz, 1H), 4.12 (s, 2H), 3.83 (s, 3H), 3.78 (s, 3H), 3.73 (s, 3H), 3.08 – 3.02 (m, 2H), 2.97 – 2.92 (m, 2H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 151.1 (d, $^3J_{CF}$ = 8.2 Hz), 150.8 (d, $^1J_{CF}$ = 243 Hz), 140.3 (d, $^2J_{CF}$ = 10.7 Hz), 131.4, 130.8, 120.5 (d, $^4J_{CF}$ = 3.6 Hz), 120.4, 119.7, 116.4 (d, $^3J_{CF}$ = 2.7 Hz), 111.1, 101.0 (d, $^2J_{CF}$ = 22.2 Hz), 56.7, 56.2, 55.6, 46.0, 44.8, 25.9.

2-((4-Fluoro-2,5-dimethoxyphenethylamino)methyl)phenol hydrochloride (4b)

Obtained from 2C-F[2] and salicylaldehyde by general procedure A in 66% yield as a colorless solid, mp. 190 – 192 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 10.25 (br s, 1H), 9.02 (br s, 2H), 7.39 (dd, J = 7.6, 1.6 Hz, 1H), 7.23 (ddd, J = 8.1, 7.5, 1.7 Hz, 1H), 7.03 (d, $^4J_{HF}$ = 9.8 Hz, 1H), 6.98 (d, $^3J_{HF}$ = 13.3 Hz, 1H), 6.97 (dd, J = 8.1, 1.0 Hz, 1H), 6.83 (ddd, J = 7.5, 7.6 1.0 Hz, 1H), 4.09 (s, 2H), 3.78 (s, 3H), 3.73 (s, 3H), 3.07 – 3.01 (m, 2H), 2.96 – 2.91 (m, 2H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 156.0, 150.8 (d, $^1J_{CF}$ = 243 Hz), 151.0 (d, $^3J_{CF}$ = 8.2 Hz), 140.4 (d, $^2J_{CF}$ = 10.7 Hz), 131.6, 130.4, 120.5 (d, $^4J_{\mathrm{CF}}$ = 3.6 Hz), 119.0, 118.0, 116.4 (d, $^3J_{CF}$ = 2.6 Hz), 115.4, 101.0 (d, $^2J_{CF}$ = 22.2 Hz), 56.7, 56.2, 46.0, 45.0, 26.0.

2-(4-Fluoro-2,5-dimethoxyphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (4c)

Obtained from 2C-F[2] and 2-fluorobenzaldehyde by general procedure A in 88% yield as a colorless solid, mp. 177 – 179 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.52 (br s, 2H), 7.73 (td, J = 7.6, 1.5 Hz, 1H), 7.51 – 7.47 (m, 1H), 7.32 – 7.27 (m, 2H), 7.05 (d, $^{4}J_{HF}$ = 9.8 Hz, 1H), 6.98 (d, $^{3}J_{HF}$ = 13.3 Hz, 1H), 4.21 (s, 2H), 3.79 (s, 3H), 3.73 (s, 3H), 3.14 – 3.08 (m, 2H), 2.98 – 2.93 (m, 2H); ^{13}C NMR (150 MHz, DMSO-d_6) δ 160.5 (d, $^{1}J_{CF}$ = 247 Hz), 151.1 (d, $^{3}J_{CF}$ = 8.3 Hz), 150.8 (d, $^{1}J_{CF}$ = 243 Hz), 140.4 (d, $^{2}J_{CF}$ = 10.8 Hz), 132.4 (d, $^{3}J_{CF}$ = 2.9 Hz), 131.4 (d, $^{3}J_{CF}$ = 8.3 Hz), 124.7 (d, $^{4}J_{CF}$ = 3.5 Hz), 120.4 (d, $^{4}J_{CF}$ = 3.6 Hz), 119.1 (d, $^{2}J_{CF}$ = 14.7 Hz), 116.3 (d, $^{3}J_{CF}$ = 2.7 Hz), 115.6 (d, $^{2}J_{CF}$ = 21.3 Hz), 101.0 (d, $^{2}J_{CF}$ = 22.2 Hz), 56.7, 56.2, 46.2, 42.9 (d, $^{3}J_{CF}$ = 3.9 Hz), 25.9.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(4-fluoro-2,5-dimethoxyphenyl)ethanamine hydrochloride (4d)**

Obtained from 2C-F[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 76% yield as a colorless solid, mp. 160 °C (dec). ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.37 (br s, 2H), 7.09 (dd, J = 7.9, 1.1 Hz, 1H), 7.05 (d, $^{4}J_{HF}$ = 9.8 Hz, 1H), 6.98 (d, $^{3}J_{HF}$ = 13.3 Hz, 1H), 6.96 (dd, J = 7.9, 1.1 Hz, 1H), 6.89 (t, J = 7.9 Hz, 1H), 6.07 (s, 2H), 4.10 (s, 2H), 3.78 (s, 3H), 3.73 (s, 3H), 3.13 – 3.06 (m, 2H), 2.97 – 2.91 (m, 2H); ^{13}C NMR (150 MHz, DMSO-d_6) δ 151.1 (d, $^{3}J_{CF}$ = 8.2 Hz), 150.8 (d, $^{1}J_{CF}$ = 243 Hz), 147.1, 146.3, 140.3 (d, $^{2}J_{CF}$ = 10.7 Hz), 123.3, 121.8, 120.3 (d, $^{4}J_{CF}$ = 3.6 Hz), 116.4 (d, $^{3}J_{CF}$ = 2.6 Hz), 113.1, 109.2, 101.2, 101.0 (d, $^{2}J_{CF}$ = 22.1 Hz), 56.7, 56.2, 46.1, 43.6, 26.0.

2-(2,5-Dimethoxy-4-(trifluoromethyl)phenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (5a)

Obtained from 2C-TFM[3] and 2-methoxybenzaldehyde by general procedure A in 77% yield as a colorless solid, mp. 204 – 205°C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.39 (br s, 2H), 7.49 – 7.54

(m, 1H), 7.36 – 7.42 (m, 1H), 7.18 (s, 1H) , 7.11 (s, 1H), 7.04 – 7.09 (m, 1H), 6.95 – 7.01 (m, 1H), 4.12 (s, 2H), 3.84 (s ,3H), 3.83 (s ,3H), 3.79 (s, 3H), 3.09 (s, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 157.3, 150.6, 150.3, 131.3, 131.1, 130.6, 123.5 (q, $^1J_{CF}$ = 271.6 Hz), 120.2, 119.6, 115.5, 115.4 (q, $^2J_{CF}$ = 30.3 Hz), 110.9, 109.0 (d, $^3J_{CF}$ = 5.5 Hz), 56.5, 56.1, 55.6, 45.5, 44.7, 26.5.

2-((2,5-Dimethoxy-4-(trifluoromethyl)phenethylamino)methyl)phenol hydrochloride (5b)

Obtained from 2C-TFM[3] and salicylaldehyde by general procedure A in 69% yield as a colorless solid, mp. 209 – 210 °C. ^{1}H NMR (300 MHz, DMSO) δ 10.30 (s, 1H), 9.20 (br s, 2H), 7.41 (dd, *J* = 7.5, 1.6 Hz, 1H), 7.21 (ddd, 8.1, 7.4, 1.7 Hz, 1H), 7.15 (s, 1H), 7.11 (s, 1H), 6.98 (dd, *J* = 8.1, 1.1 Hz, 1H), 6.82 (ddd, *J* = 7.5, 7.4, 1.1 Hz, 1H), 4.09 (s, 2H), 3.84 (s, 3H), 3.79 (s, 3H), 3.07 (s, 4H). ^{13}C NMR (75 MHz, DMSO) δ 155.9, 150,6 (q, $^3J_{CF}$ = 1.6 Hz), 150.3, 131.5, 131.1, 130.2, 123.5 (q, $^1J_{CF}$ = 271.7 Hz) 115.5, 115.5 (q, $^2J_{CF}$ = 30.3 Hz) 115.3, 109.0 (q, *J* = 5.1 Hz), 56.5, 56.1, 45.5, 44.9, 26.5.

2-(2,5-Dimethoxy-4-(trifluoromethyl)phenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (5c)

Obtained from 2C-TFM[3] and 2-fluorobenzaldehyde by general procedure A in 71% yield as a colorless solid. mp. 186 – 188 °C. ^{1}H NMR ($CDCl_3$) δ 9.72 (bs, 2H), 7.72 – 7.79 (m, 1H), 7.42 – 7.51 (m, 1H), 7.23 – 7.32 (m, 2H), 7.17 (s, 1H), 7.12 (s, 1H), 4.21 (s, 2H), 3.84 (s, 3H), 3.79 (s, 3H), 3.04 – 3.22 (m, 4H) ^{13}C NMR (75 MHz, DMSO-d_6) δ 160.4 (d, $^1J_{CF}$ = 246.6 Hz), 150.6 (q, $^3J_{CF}$ = 1.8 Hz), 150.3, 132.3 (d, $^3J_{CF}$ = 3.0 Hz), 131.3 (d, $^3J_{CF}$ = 8.3 Hz), 131.0, 124.5 (d, $^4J_{CF}$ = 3.6 Hz), 123.5 (q, $^1J_{CF}$ = 271.7 Hz), 119.0 (d, $^2J_{CF}$ = 14.5 Hz), 115.5, 115.5 (q, $^2J_{CF}$ = 30.3 Hz), 115.4 (d, $^2J_{CF}$ = 21.4 Hz), 109.0 (q, $^3J_{CF}$ = 5.5 Hz) 56.5, 56.2, 45.7, 42.9, 26.5.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(2,5-dimethoxy-4-(trifluoromethyl)phenyl)-ethanamine hydrochloride (5d)**

Obtained from 2C-TFM[3] and 2,3-methylenedioxybenzaldehyde by general procedure A in 67% yield as a colorless solid, mp. 188 – 189 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.72 (br s, 2H) , 7.18 (s, 1H), 7.16 (dd, 7.7, 1.3 Hz, 1H), 7.11 (s, 1H), 6.95 (dd, J = 7.7, 1.3 Hz, 1H), 6.88 (t, J = 7.7 Hz, 1H), 6.05 (s, 2H), 4.09 (s, 2H), 3.84 (s, 3H), 3.79 (s, 3H), 3.02 – 3.21 (m, 4H). ^{13}C NMR (75 MHz, DMSO) δ 150.6 (q, $^{3}J_{CF}$ = 1.9 Hz), 150.3, 146.9, 146.1, 131.0, 123.5 (q, $^{1}J_{CF}$ = 271.7 Hz), 123.3, 121.6, 115.5, 115.5 (q, $^{2}J_{CF}$ = 30.6 Hz), 113.0, 109.0, 109.0 (d, $^{3}J_{CF}$ = 5.4 Hz), 101.1, 56.5, 56.1, 45.5, 43.4, 26.5.

2,5-Dimethoxy-4-(2-(2-methoxybenzylamino)ethyl)benzonitrile hydrochloride (6a)

Obtained from 2C-CN[4] and 2-methoxybenzaldehyde by general procedure A in 72% yield as a colorless solid, mp. 204 – 205 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.38 (br s, 2H), 7.50 (d, J = 7.3 Hz, 1H), 7.39 (dd, 8.3, 7.5 Hz, 1H), 7.33 (s, 1H), 7.15 (s, 1H), 7.07 (d, J = 8.3 Hz, 1H), 6.98 (dd, J = 7.5, 7.3 Hz, 1H), 4.11(s, 2H), 3.87 (s, 3H), 3.82 (s, 3H), 3.77 (s, 3H), 3.08 (s, 4H). 13C NMR (75 MHz, DMSO-d_6) δ 157.3, 155.0, 150.7, 132.9, 131.3, 130.6, 120.2, 119.5, 116.3, 114.7, 114.4, 111.0, 98.3, 56.5, 56.3, 55.6, 45.3, 44.7, 26.8.

4-(2-(2-Hydroxybenzylamino)ethyl)-2,5-dimethoxybenzonitrile hydrochloride (6b)

Obtained from 2C-CN[4] and salicylaldehyde by general procedure A in 87% yield as a colorless solid, mp. 216 – 218 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 10.31 (s, 1H), 9.25 (br s, 2H), 7.41 (dd, J = 7.5, 1.6 Hz, 1H), 7.20 (ddd, J = 8.2, 7.4, 1.6 Hz, 1H), 7.31 (s, 1H), 7.14 (s, 1H), 6.99 (dd, J = 8.2, 0.9 Hz, 1H), 6.81 (ddd, J = 7.5, 7.4, 0.9 Hz, 1H), 4.08 (s, 2H), 3.86 (s, 3H), 3.76 (s, 3H), 3.07 (s, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 155.9, 155.0, 150.7, 133.0, 131.5, 130.2, 118.9, 117.9, 116.3, 115.3, 114.7, 114.5, 98.3, 56.5, 56.3, 45.3, 44.9, 26.9.

4-(2-(2-Fluorobenzylamino)ethyl)-2,5-dimethoxybenzonitrile hydrochloride (6c)

Obtained from 2C-CN[4] and 2-fluorobenzaldehyde by general procedure A in 78% yield as a colorless solid, mp. 195 – 196 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.74 (br s, 2H), 7.76 (td, J = 7.6, 1.5 Hz, 1H), 7.51 – 7.41 (m, 1H), 7.33 (s, 1H), 7.31 – 7.23 (m, 2H) 7.17 (s, 1H), 4.20 (s, 2H), 3.87 (s, 3H), 3.77 (s, 3H), 3.23 – 3.04 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 160.3 (d, $^{1}J_{CF}$ = 246.7 Hz), 155.0, 150.7, 132.3 (d, $^{3}J_{CF}$ = 2.8 Hz), 131.4 (d, $^{3}J_{CF}$ = 8.3 Hz), 124.6, 119.0 (d, $^{3}J_{CF}$ = 14.5 Hz), 116.3, 115.4 (d, $^{2}J_{CF}$ = 21.2 Hz), 114.6 (d, $^{2}J_{\mathrm{CF}}$ = 19.1 Hz), 98.3, 56.5, 56.3, 45.6, 42.9, 26.8.

4-(2-(Benzo[*d*][1,3]dioxol-4-ylmethylamino)ethyl)-2,5-dimethoxybenzonitrile hydrochloride (6d)

Obtained from 2C-CN[4] and 2,3-methylenedioxybenzaldehyde by general procedure A in 71% yield as a colorless solid, mp. 214 – 215 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.67 (br s, 2H), 7.33 (s, 1H), 7.16 (s, 1H), 7.14 (dd, J = 7.9, 1.3 Hz, 1H), 6.95 (dd, J = 7.8, 1.3 Hz, 1H), 6.88 (dd, J = 7.9, 7.8 Hz, 1H), 6.05 (s, 2H), 4.08 (s, 2H), 3.87 (s, 3H), 3.77 (s, 3H), 3.21 – 3.01 (m, 4H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 155.0, 150.8, 146.9, 146.1, 132.8, 123.2, 121.7, 116.3, 114.7, 114.5, 113.0, 109.0, 101.1, 98.3, 56.5, 56.3, 45.3, 43.5, 26.9.

2-(2,5-Dimethoxy-4-methylphenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (7a)

Obtained from 2C-D[2] and 2-methoxybenzaldehyde by general procedure A in 90% yield as a colorless solid, mp. 166 – 168 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.36 (br s, 2H), 7.48 – 7.53(m, 1H), 7.35 – 7.42 (m, 1H), 7.04 – 7.08 (m, 1H), 6.94 – 7.01 (m, 1H), 6.80 (s, 1H), 6.76 (s, 1H), 4.10 (t, J = 5.3 Hz, 2H), 3.82 (s ,3H), 3.72 (s ,3H), 3.69 (s, 3H), 2.90 – 3.07 (m, 4H), 2.12 (s, 3H) ^{13}C NMR (75 MHz, DMSO-d_6) δ 157.3, 150.9, 150.4, 131.4, 130.5, 124.7, 122.5, 120.2, 119.6, 113.8, 112.6, 110.9, 55.83, 55.6, 55.6, 46.1, 44.6, 26.4, 16.1.

2-((2,5-Dimethoxy-4-methylphenethylamino)methyl)phenol hydrochloride (7b)

Obtained from 2C-D[2] and salicylaldehyde by general procedure A in 78% yield as a colorless solid, mp. 174 – 175 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 2.12 (s, 3H), 2.88 – 3.08 (m, 4H), 3.70 (s, 3H), 3.72 (s ,3H), 4.08 (s, 2H), 6.74 (s, 1H), 6.78 – 6.86 (m, 1H), 6.80 (s, 1H), 6.96 – 7.02 (m, 1H), 7.17 – 7.24 (m, 1H), 7.36 – 7.42 (m, 1H), 9.16 (br s, 2H), 10.31 (s, 1H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 155.9, 150.9, 150.4, 131.5, 130.2, 124.2, 122.5, 118.8, 118.0, 115.3, 113.8, 112.7, 55.9, 55.7, 46.1, 44.8, 26.4, 16.1

2-(2,5-Dimethoxy-4-methylphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (7c)

Obtained from 2C-D[2] and 2-fluorobenzaldehyde by general procedure A in 89% yield as a colorless solid, mp. 164 – 166 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.72 (br s, 2H), 7.71 – 7.78 (m, 1H), 7.22 – 7.31 (m, 1H), 6.94 – 7.01 (m, 2H), 6.80 (s, 1H), 6.77 (s, 1H), 4.15 – 4.23 (m, 2H), 3.72 (s ,3H), 3.70 (s, 3H), 2.92 – 3.14 (m, 4H), 2.12 (s, 3H). ^{13}C NMR (75 MHz, DMSO) δ 160.4 (d, $^{1}J_{CF}$ = 246.6 Hz), 150.9, 150.5, 132.4 (d, $^{3}J_{CF}$ = 2.9 Hz), 131.2 (d, $^{3}J_{CF}$ = 8.4 Hz), 124.7, 124.5 (d, $^{4}J_{CF}$ = 3.4 Hz), 122.4, 119.1 (d, $^{2}J_{CF}$ = 14.7 Hz), 115.4 (d, $^{2}J_{CF}$ = 21.3 Hz), 113.8, 112.7, 55.8, 55.6, 46.3, 42.8, 26.4, 16.1.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(2,5-dimethoxy-4-methylphenyl)ethanamine hydrochloride (7d)**

Obtained from 2C-D[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 94% yield as a colorless solid, mp. 184 – 185 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 9.61 (br s, 2H), 7.14 (dd, J = 7.8, 1.2 Hz, 1H), 6.95 (dd, J = 7.7, 1.2 Hz, 1H), 6.88 (dd, J = 7.7, 7.8 Hz, 1H), 6.80 (s, 1H), 6.76 (s, 1H), 6.05 (s, 2H), 4.08 (s, 2H), 3.72 (s ,3H), 3.70 (s, 3H), 3.11 – 2.90 (m, 4H), 2.12 (s, 3H). ^{13}C NMR (75 MHz, DMSO-d_6) δ 150.9, 150.5, 146.9, 146.1, 124.7, 123.3, 122.4, 121.7, 113.8, 113.0, 112.7, 109.0, 101.10, 55.8, 55.6, 46.1, 43.4, 26.4, 16.1.

2-(4-Ethyl-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine (8a)

Obtained from 2C-E[2] and 2-methoxybenzaldehyde by general procedure A in 74% yield as a colorless solid, mp. 160 – 161 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.08 (br s, 2H), 7.48 (dd, J = 7.5, 1.6 Hz, 1H), 7.40 (ddd, J = 8.3, 7.6, 1.7 Hz, 1H), 7.09 (dd, J = 8.3, 0.8 Hz, 1H), 7.00 (ddd, J = 7.5, 7.6, 0.8 Hz, 1H), 6.81 (s, 1H), 6.78 (s, 1H), 4.13 (br s, 2H), 3.83 (s, 3H), 3.73 (s, 3H), 3.72 (s, 3H), 3.08 – 3.02 (m, 2H), 2.96 – 2.91 (m, 2H), 2.54 (q, J = 7.4 Hz, 2H), 1.10 (t, J = 7.5 Hz, 3H); ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 150.9, 150.7, 131.4, 131.1, 130.8, 122.6, 120.4, 119.7, 113.2, 112.5, 111.1, 55.9, 55.8, 55.6, 46.2, 44.9, 26.3, 22.8, 14.5.

2-((4-Ethyl-2,5-dimethoxyphenethylamino)methyl)phenol hydrochloride (8b)

Obtained from 2C-E[2] and salicylaldehyde by general procedure A in 78% yield as a colorless solid, mp. 189 – 191 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 10.23 (s, 1H), 8.92 (br s, 2H), 7.37 (dd, J = 7.6, 1.6 Hz, 1H), 7.24 (ddd, J = 8.1, 7.5, 1.7, 1H), 6.96 (dd, J = 8.1, 1.0 Hz, 1H), 6.85 (td, J = 7.5, 1.1 Hz, 1H), 6.81 (s, 1H), 6.77 (s, 1H), 4.10 (s, 2H), 3.73 (s, 3H), 3.72 (s, 3H), 3.08 – 3.02 (m, 2H), 2.94 – 2.90 (m, 2H), 2.53 (q, J = 7.6 Hz, 2H), 1.11 (t, J = 7.5 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 156.0, 150.9, 150.7, 131.6, 131.2, 130.4, 122.6, 119.0, 118.1, 115.4, 113.2, 112.5, 55.9, 55.8, 46.3, 45.1, 26.4, 22.8, 14.5.

2-(4-Ethyl-2,5-dimethoxyphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (8c)

Obtained from 2C-E[2] and 2-fluorobenzaldehyde by general procedure A in 75% yield as a colorless solid, mp. 160 – 162 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.56 (br s, 2H), 7.74 (ddd, J = 7.7, 7.6, 1.6 Hz, 1H), 7.51 – 7.46 (m, 1H), 7.32 – 7.26 (m, 2H), 6.81 (s, 1H), 6.80 (s, 1H), 4.21 (s, 2H), 3.73 (s, 3H), 3.73 (s, 3H), 3.13 – 3.06 (m, 2H), 2.98 – 2.94 (m, 2H), 2.53 (q, J = 7.5 Hz, 2H), 1.11 (t, J = 7.5 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 160.6 (d, $^{1}J_{CF}$ = 247 Hz), 150.9, 150.7, 132.4 (d, $^{3}J_{CF}$ = 2.9 Hz), 131.4 (d, $^{3}J_{\mathrm{CF}}$ = 8.3 Hz), 131.5, 124.7 (d, $^{4}J_{CF}$ = 3.5 Hz), 122.6,

119.1 (d, $^2J_{CF}$ = 14.6 Hz), 115.5 (d, $^2J_{CF}$ = 21.3 Hz), 113.2, 112.5, 55.9, 55.8, 46.4, 42.7 (d, $^3J_{CF}$ = 3.9 Hz), 26.3, 22.8, 14.4.

_N_-(Benzo[_d_][1,3]dioxol-4-ylmethyl)-2-(4-ethyl-2,5-dimethoxyphenyl)ethanamine hydrochloride (8d)

Obtained from 2C-E[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 69% yield as a colorless solid, mp. 143 – 145 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.66 (br s, 2H), 7.03 (dd, J = 7.9, 1.1 Hz, 1H), 6.99 (dd, J = 7.8, 1.1 Hz, 1H), 6.92 (dd, J = 7.9, 7.8 Hz, 1H), 6.82 (s, 1H), 6.78 (s, 1H), 6.08 (s, 2H), 4.13 (s, 2H), 3.73 (s, 3H), 3.73 (s, 3H), 3.14 – 3.07 (m, 2H), 2.93 – 2.88 (m, 2H), 2.54 (q, J = 7.5 Hz, 2H), 1.10 (t, J = 7.5 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 150.9, 150.7, 147.2, 146.3, 131.2, 123.2, 122.4, 121.9, 113.2, 113.1, 112.5, 109.2, 101.2, 55.9, 55.8, 46.4, 43.7, 26.5, 22.8, 14.4.

2-(2,5-Dimethoxy-4-propylphenyl)-_N_-(2-methoxybenzyl)ethanamine hydrochloride (9a)

Obtained from 2C-P[2] and 2-methoxybenzaldehyde by general procedure A in 68% yield as a colorless solid, mp 124 – 127 °C (dec). ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.03 (br s, 2H), 7.47 (dd, J = 7.5, 1.7 Hz, 1H), 7.42 (ddd, J = 8.3, 7.5, 1.7 Hz, 1H), 7.09 (dd, J = 8.3, 0.9 Hz, 1H), 7.00 (td, J = 7.5, 0.9 Hz, 1H), 6.79 (s, 1H), 6.78 (s, 1H), 4.13 (s, 2H), 3.83 (s, 3H), 3.73 (s, 3H), 3.72 (s, 3H), 3.08 – 3.02 (m, 2H), 2.96 – 2.90 (m, 2H), 2.50 – 2.47 (m, 2H), 1.56 – 1.48 (m, 2H), 0.89 (t, J = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 150.8, 150.7, 131.4, 130.8, 129.6, 122.7, 120.4, 119.7, 113.2, 113.2, 111.1, 55.9, 55.8, 55.6, 46.3, 44.9, 31.7, 26.3, 22.8, 13.9.

2-((2,5-Dimethoxy-4-propylphenethylamino)methyl)phenol hydrochloride (9b)

Obtained from 2C-P[2] and salicylaldehyde by general procedure A in 46% yield as a colorless solid, mp. 159 – 161 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 10.23 (br s, 1H), 8.93 (br s, 2H), 7.39 (dd, J = 7.6, 1.7 Hz, 1H), 7.23 (ddd, J = 8.1, 7.5, 1.7 Hz, 1H), 6.98 (dd, J = 8.1, 1.0 Hz, 1H), 6.84

(td, J = 7.5, 1.0 Hz, 1H), 6.78 (s, 1H), 6.77 (s, 1H), 4.10 (s, 2H), 3.72 (s, 3H), 3.72 (s, 3H), 3.07 – 3.02 (m, 2H), 2.94 – 2.90 (m, 2H), 2.50 – 2.47 (m, 2H), 1.56 – 1.48 (m, 2H), 0.89 (t, J = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 156.0, 150.8, 150.7, 131.6, 130.4, 129.6, 122.7, 119.0, 118.1, 115.4, 113.2, 113.2, 55.9, 55.8, 46.2, 45.1, 31.7, 26.4, 22.8, 13.9.

2-(2,5-Dimethoxy-4-propylphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (9c)

Obtained from 2C-P[2] and 2-fluorobenzaldehyde by general procedure A in 71% yield as a colorless solid, mp. 124-125 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.36 (br s, 2H), 7.69 (td, J = 7.7, 1.6 Hz, 1H), 7.52 – 7.47 (m, 1H), 7.33 – 7.27 (m, 2H), 6.79 (s, 1H), 6.79 (s, 1H), 4.22 (s, 2H), 3.73 (s, 3H), 3.72 (s, 3H), 3.14 – 3.08 (m, 2H), 2.96 – 2.92 (m, 2H), 2.50 – 2.47 (m, 2H), 1.57 – 1.49 (m, 2H), 0.89 (t, J = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 160.6 (d, $^1J_{CF}$ = 247 Hz), 150.8, 150.8, 132.4 (d, $^3J_{CF}$ = 3.0 Hz), 131.5 (d, $^3J_{\mathrm{CF}}$ = 8.3 Hz), 129.6, 124.7 (d, $^4J_{CF}$ = 3.5 Hz), 122.7, 119.1 (d, $^2J_{CF}$ = 14.7 Hz), 115.6 (d, $^2J_{CF}$ = 21.3 Hz), 113.2, 113.2, 55.9, 55.8, 46.5, 43.0 (d, $^3J_{CF}$ = 3.9 Hz), 31.7, 26.4, 22.8, 13.9.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(2,5-dimethoxy-4-propylphenyl)ethanamine hydrochloride (9d)**

Obtained from 2C-P[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 67% yield as a colorless solid, mp. 110 °C (dec). ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.29 (br s, 2H), 7.07 (dd, J = 7.9, 1.1 Hz, 1H), 6.98 (dd, J = 7.8, 1.1 Hz, 1H), 6.91 (dd, J = 7.9, 7.8 Hz, 1H), 6.79 (s, 1H), 6.78 (s, 1H), 6.07 (s, 2H), 4.11 (s, 2H), 3.72 (s, 3H), 3.72 (s, 3H), 3.12 – 3.06 (m, 2H), 2.94 – 2.90 (m, 2H), 2.50 – 2.47 (m, 2H), 1.56 – 1.49 (m, 2H), 0.89 (t, J = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 150.8, 150.8, 147.1, 146.3, 129.6, 123.2, 122.6, 121.8, 113.2, 113.2, 113.1, 109.2, 101.2, 55.9, 55.8, 46.3, 43.6, 31.7, 26.4, 22.8, 13.9.

2-(2,5-Dimethoxy-4-(methylthio)phenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (10a)

Obtained from 2C-T[2] and 2-methoxybenzaldehyde by general procedure A in 76% yield as a colorless solid, mp. 147 – 153 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.06 (br s, 2H), 7.47 (dd, *J* = 7.5, 1.7 Hz 1H), 7.41 (ddd, *J* = 8.3, 7.5, 1.7 Hz, 1H), 7.09 (dd, *J* = 8.3, 1.0 Hz 1H), 7.00 (td, *J* = 7.5, 1.0 Hz, 1H), 6.83 (s, 1H), 6.76 (s, 1H), 4.13 (s, 2H), 3.84 (s, 3H), 3.78 (s, 3H), 3.76 (s, 3H), 3.08 – 3.02 (m, 2H), 2.97 – 2.91 (m, 2H), 2.41 (s, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 151.6, 149.5, 131.4, 130.8, 125.8, 121.6, 120.4, 119.7, 113.2, 111.1, 109.3, 56.2, 56.1, 55.6, 46.1, 44.9, 26.1, 13.7.

2-((2,5-Dimethoxy-4-(methylthio)phenethylamino)methyl)phenol hydrochloride (10b)

Obtained from 2C-T[2] and salicylaldehyde by general procedure A in 68% yield as a colorless solid, mp. 221 – 223 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 10.25 (s, 1H), 9.00 (br s, 2H), 7.39 (dd, *J* = 7.6, 1.6 Hz, 1H), 7.23 (ddd, *J* = 8.1, 7.5, 1.6 Hz, 1H), 6.97 (dd, *J* = 8.1, 1.0 Hz, 1H), 6.84 (td, *J* = 7.4, 1.0 Hz, 1H), 6.82 (s, 1H), 6.75 (s, 1H), 4.09 (s, 2H), 3.78 (s, 3H), 3.76 (s, 3H), 3.08 – 3.01 (m, 2H), 2.96 – 2.91 (m, 2H), 2.40 (s, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 156.0, 151.6, 149.5, 131.6, 130.4, 125.8, 121.7, 119.0, 118.1, 115.4, 113.2, 109.3, 56.2, 56.1, 46.1, 45.0, 26.2, 13.7.

2-(2,5-Dimethoxy-4-(methylthio)phenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (10c)

Obtained from 2C-T[2] and 2-fluorobenzaldehyde by general procedure A in 71% yield as a colorless solid, mp. 196 – 198 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.47 (br s, 2H), 7.76 (td, *J* = 7.6, 1.6 Hz, 1H), 7.51 – 7.47 (m, 1H), 7.33 – 7.27 (m, 2H), 6.85 (s, 1H), 6.76 (s, 1H), 4.21 (s, 2H), 3.78 (s, 3H), 3.76 (s, 3H), 3.14 – 3.07 (m, 2H), 2.98 – 2.93 (m, 2H), 2.41 (s, 3H). ^{13}C NMR

(150 MHz, DMSO-d_6) δ 160.6 (d, $^1J_{CF}$ = 247 Hz), 151.6, 149.5, 132.4 (d, $^3J_{CF}$ = 2.8 Hz), 131.5 (d, $^3J_{CF}$ = 8.3 Hz), 125.8, 124.7 (d, $^4J_{CF}$ = 3.4 Hz), 121.5, 119.1 (d, $^2J_{CF}$ = 14.7 Hz), 115.6 (d, $^2J_{CF}$ = 21.3 Hz), 113.2, 109.3, 56.2, 56.1, 46.3, 42.9 (d, $^3J_{CF}$ = 3.9 Hz), 26.2, 13.7.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(2,5-dimethoxy-4-(methylthio)phenyl)ethanamine hydrochloride (10d)**

Obtained from 2C-T[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 85% yield as a colorless solid, mp. 149 – 150 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.30 (br s, 2H), 7.08 (dd, *J* = 7.9, 1.1 Hz, 1H), 6.98 (dd, *J* = 7.8, 1.1 Hz, 1H), 6.91 (dd, *J* = 7.9, 7.8 Hz, 1H), 6.83 (s, 1H), 6.76 (s, 1H), 6.07 (s, 2H), 4.11 (s, 2H), 3.78 (s, 3H), 3.76 (s, 3H), 3.12 – 3.06 (m, 2H), 2.95 – 2.91 (m, 2H), 2.41 (s, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 151.6, 149.5, 147.1, 146.3, 125.8, 123.2, 121.8, 121.5, 113.2, 113.1, 109.3, 109.2, 101.2, 56.2, 56.1, 46.2, 43.6, 26.2, 13.7.

2-(4-(Ethylthio)-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (11a)

Obtained from 2C-T-2[2] and 2-methoxybenzaldehyde by general procedure A in 55% yield as a colorless solid, mp. 134 – 135 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 8.94 (br s, 2H), 7.45 (dd, *J* = 7.5, 1.7 Hz, 1H), 7.42 (ddd, *J* = 8.3, 7.5, 1.7 Hz, 1H), 7.09 (dd, *J* = 8.3, 1.0 Hz, 1H), 7.01 (td, *J* = 7.5, 1.0 Hz, 1H), 6.84 (s, 1H), 6.83 (s, 1H), 4.14 (s, 2H), 3.84 (s, 3H), 3.76 (s, 3H), 3.76 (s, 3H), 3.10 – 3.04 (m, 2H), 2.95 – 2.91 (m, 2H), 2.93 (q, *J* = 7.4 Hz, 2H), 1.23 (t, *J* = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 151.3, 150.4, 131.4, 130.8, 123.7, 122.6, 120.4, 119.7, 113.6, 111.3, 111.1, 56.2, 56.1, 55.6, 46.2, 45.0, 26.2, 24.8, 13.9.

2-((4-(Ethylthio)-2,5-dimethoxyphenethylamino)methyl)phenol hydrochloride (11b)

Obtained from 2C-T-2[2] and salicylaldehyde by general procedure A in 69% yield as a colorless solid, mp. 190 – 192 °C. ^{1}H NMR (300 MHz, DMSO-d_6) δ 10.27 (s, 1H), 9.05 (br s, 2H), 7.39

(dd, J = 7.6, 1.6 Hz, 1H), 7.23 (ddd, J = 8.1, 7.4, 1.6 Hz 1H), 6.98 (dd, J = 8.1, 1.0 Hz 1H), 6.84 (ddd, J = 7.5, 7.4, 1.0 Hz, 1H), 6.84 (s, 1H), 6.82 (s, 1H), 4.09 (s, 2H), 3.76 (s, 3H), 3.75 (s, 3H), 3.08 – 3.02 (m, 2H), 2.96 – 2.90 (m, 2H), 2.92 (q, J = 7.4 Hz, 2H), 1.22 (t, J = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 156.1, 151.3, 150.4, 131.6, 130.4, 123.6, 122.7, 119.0, 118.1, 115.4, 113.6, 111.4, 56.2, 56.1, 46.0, 45.0, 26.2, 24.8, 13.9.

2-(4-(Ethylthio)-2,5-dimethoxyphenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (11c)

Obtained from 2C-T-2[2] and 2-fluorobenzaldehyde by general procedure A in 57% yield as a colorless solid, mp. 127 – 129 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.45 (br s, 2H), 7.71 (td, J = 7.6, 1.6 Hz, 1H), 7.51 – 7.47 (m, 1H), 7.33 – 7.27 (m, 2H), 6.86 (s, 1H), 6.83 (s, 1H), 4.21 (s, 2H), 3.76 (s, 3H), 3.76 (s, 3H), 3.15 – 3.09 (m, 2H), 2.98 – 2.94 (m, 2H), 2.92 (q, J = 7.4 Hz, 2H), 1.23 (t, J = 7.4 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 160.6 (d, $^1J_{CF}$ = 247 Hz), 151.3, 150.4, 132.4 (d, $^3J_{CF}$ = 2.9 Hz), 131.5 (d, $^3J_{CF}$ = 8.4 Hz), 124.7 (d, $^4J_{CF}$ = 3.4 Hz), 123.6, 122.6, 119.1 (d, $^2J_{CF}$ = 14.6 Hz), 115.6 (d, $^2J_{\mathrm{CF}}$ = 21.3 Hz), 113.6, 111.3, 56.2, 56.1, 46.3, 43.0 (d, $^3J_{CF}$ = 3.8 Hz), 26.2, 24.8, 13.9.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(4-(ethylthio)-2,5-dimethoxyphenyl)-ethanamine hydrochloride (11d)**

Obtained from 2C-T-2[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 69% yield as a colorless solid, mp. 149 – 151 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.34 (br s, 2H), 7.08 (dd, J = 7.9, 1.1 Hz, 1H), 6.98 (dd, J = 7.9, 1.1 Hz, 1H), 6.91 (t, J = 7.9 Hz, 1H), 6.85 (s, 1H), 6.83 (s, 1H), 6.07 (s, 2H), 4.11 (s, 2H), 3.76 (s, 3H), 3.75 (s, 3H), 3.13 – 3.07 (m, 2H), 2.96 – 2.92 (m, 2H), 2.92 (q, J = 7.3 Hz, 2H), 1.23 (t, J = 7.3 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-

d_6) δ 151.4, 150.4, 147.1, 146.3, 123.7, 123.2, 122.5, 121.8, 113.6, 113.1, 111.3, 109.2, 101.2, 56.2, 56.1, 46.1, 43.6, 26.3, 24.8, 13.9.

2-(2,5-Dimethoxy-4-(propylthio)phenyl)-*N*-(2-methoxybenzyl)ethanamine hydrochloride (12a)

Obtained from 2C-T-7[2] and 2-methoxybenzaldehyde by general procedure A in 49% yield as a colorless solid, mp. 121 – 123 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.03 (br s, 2H), 7.47 (dd, *J* = 7.5, 1.7 Hz, 1H), 7.42 (ddd, *J* = 8.3, 7.5, 1.7 Hz, 1H), 7.09 (dd, *J* = 8.3, 1.0 Hz, 1H), 7.00 (td, *J* = 7,5, 1.0 Hz, 1H), 6.84 (s, 1H), 6.82 (s, 1H), 4.13 (s, 2H), 3.84 (s, 3H), 3.76 (s, 6H), 3.09 – 3.03 (m, 2H), 2.96 – 2.92 (m, 2H), 2.89 (t, *J* = 7.2 Hz, 2H), 1.58 (sextuplet, *J* = 7.2 Hz, 2H), 0.98 (t, *J* = 7.2 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 157.5, 151.3, 150.5, 131.4, 130.8, 123.8, 122.6, 120.4, 119.7, 113.6, 111.4, 111.1, 56.2, 56.1, 55.6, 46.1, 44.9, 32.7, 26.2, 21.8, 13.3.

2-((2,5-Dimethoxy-4-(propylthio)phenethylamino)methyl)phenol hydrochloride (12b)

Obtained from 2C-T-7[2] and salicylaldehyde by general procedure A in 57% yield as a colorless solid, mp. 116 – 117 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 10.24 (s, 1H), 8.95 (br s, 2H), 7.38 (dd, *J* = 7.5, 1.7 Hz, 1H), 7.24 (ddd, *J* = 8.1, 7.4, 1.7 Hz, 1H), 6.96 (dd, *J* = 8.1, 1.0 Hz, 1H), 6.85 (td, *J* = 7.4, 1.0 Hz, 1H), 6.83 (s, 1H), 6.82 (s, 1H), 4.10 (s, 2H), 3.76 (s, 3H), 3.76 (s, 3H), 3.08 – 3.02 (m, 2H), 2.95 – 2.90 (m, 2H), 2.88 (t, *J* = 7.3 Hz, 2H), 1.58 (sextuplet, *J* = 7.3 Hz, 2H), 0.98 (t, *J* = 7.3 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 156.0, 151.3, 150.5, 131.6, 130.4, 123.8, 122.6, 119.0, 118.1, 115.4, 113.6, 111.4, 56.2, 56.1, 46.1, 45.1, 32.7, 26.3, 21.8, 13.3.

2-(2,5-Dimethoxy-4-(propylthio)phenyl)-*N*-(2-fluorobenzyl)ethanamine hydrochloride (12c)

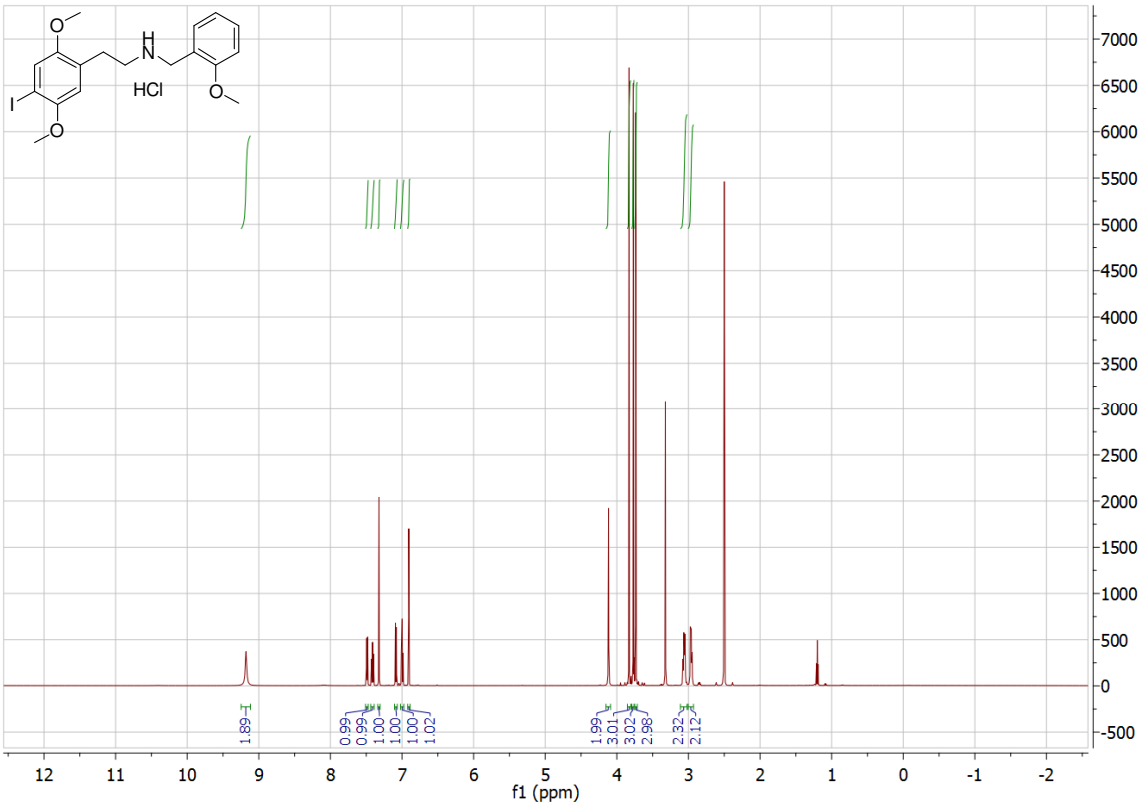
Obtained from 2C-T-7[2] and 2-fluorobenzaldehyde by general procedure A in 67% yield as a colorless solid, mp. 100 – 101 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.42 (br s, 2H), 7.70 (td, *J* =

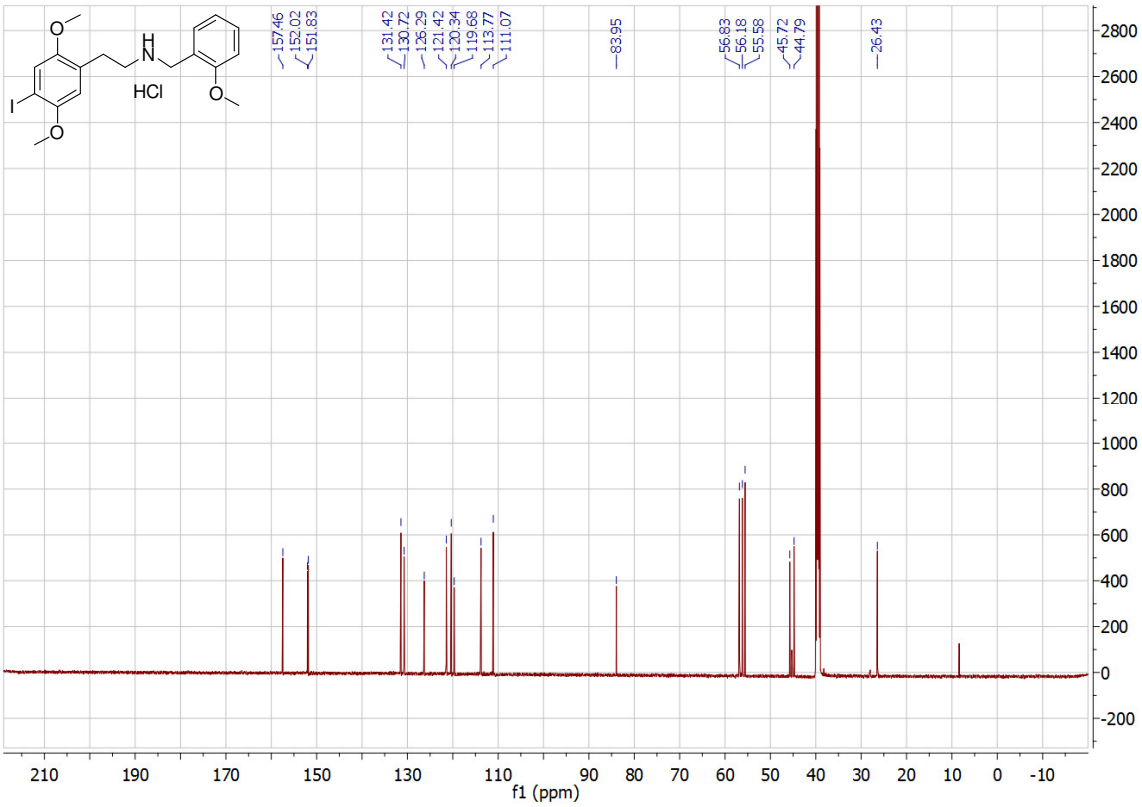
7.6, 1.6 Hz, 1H), 7.52 – 7.47 (m, 1H), 7.33 – 7.28 (m, 2H), 6.86 (s, 1H), 6.83 (s, 1H), 4.22 (br s, 2H), 3.76 (s, 3H), 3.76 (s, 3H), 3.15 – 3.09 (m, 2H), 2.98 – 2.93 (m, 2H), 2.89 (t, J = 7.2 Hz, 2H), 1.58 (sextuplet, J = 7.2 Hz, 2H), 0.97 (t, J = 7.3 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 160.6 (d, $^1J_{CF}$ = 247 Hz), 151.3, 150.5, 132.4 (d, $^3J_{CF}$ = 2.9 Hz), 131.5 (d, $^3J_{CF}$ = 8.3 Hz), 124.7 (d, $^4J_{CF}$ = 3.4 Hz), 123.9, 122.5, 119.1 (d, $^2J_{CF}$ = 14.7 Hz), 115.6 (d, $^2J_{CF}$ = 21.3 Hz), 113.6, 111.4, 56.2, 56.1, 46.3, 43.0 (d, $^3J_{CF}$ = 3.8 Hz), 32.7, 26.2, 21.8, 13.3.

***N*-(Benzo[*d*][1,3]dioxol-4-ylmethyl)-2-(2,5-dimethoxy-4-(propylthio)phenyl)-ethanamine hydrochloride (12d)**

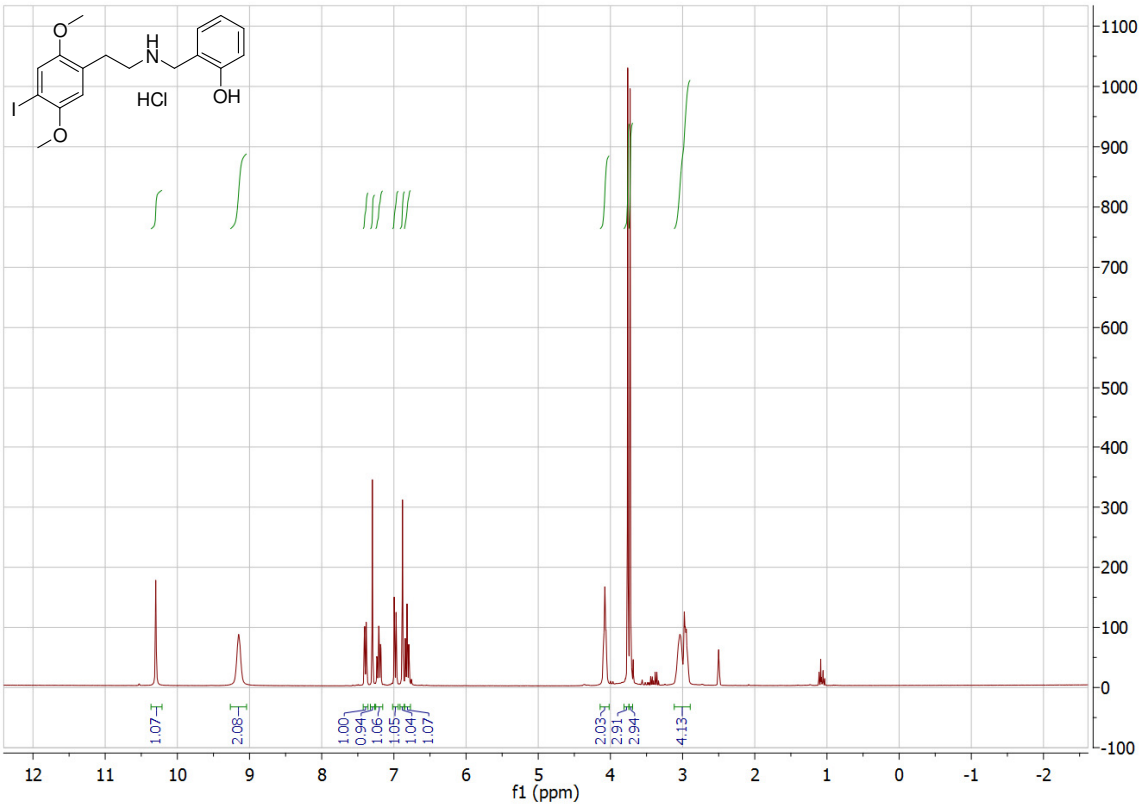
Obtained from 2C-T-7[2] and 2,3-methylenedioxybenzaldehyde by general procedure A in 76% yield as a colorless solid, mp. 116 – 117 °C. ^{1}H NMR (600 MHz, DMSO-d_6) δ 9.36 (br s, 2H), 7.09 (dd, J = 8.0, 1.1 Hz, 1H), 6.98 (dd, J = 7.8, 1.1 Hz, 1H), 6.90 (dd, J = 8.0, 7.8 Hz, 1H), 6.85 (s, 1H), 6.82 (s, 1H), 6.07 (s, 2H), 4.10 (br s, 2H), 3.76 (s, 3H), 3.76 (s, 3H), 3.09 (dd, J = 9.3, 6.7 Hz, 2H), 2.94 (dd, J = 9.4, 6.6 Hz, 2H), 2.88 (t, J = 7.2 Hz, 2H), 1.58 (sextuplet, J = 7.3 Hz, 2H), 0.98 (t, J = 7.3 Hz, 3H). ^{13}C NMR (150 MHz, DMSO-d_6) δ 151.3, 150.5, 147.1, 146.3, 123.8, 123.3, 122.5, 121.8, 113.6, 113.1, 111.4, 109.1, 101.2, 56.2, 56.1, 46.1, 43.6, 32.7, 26.3, 21.8, 13.3.

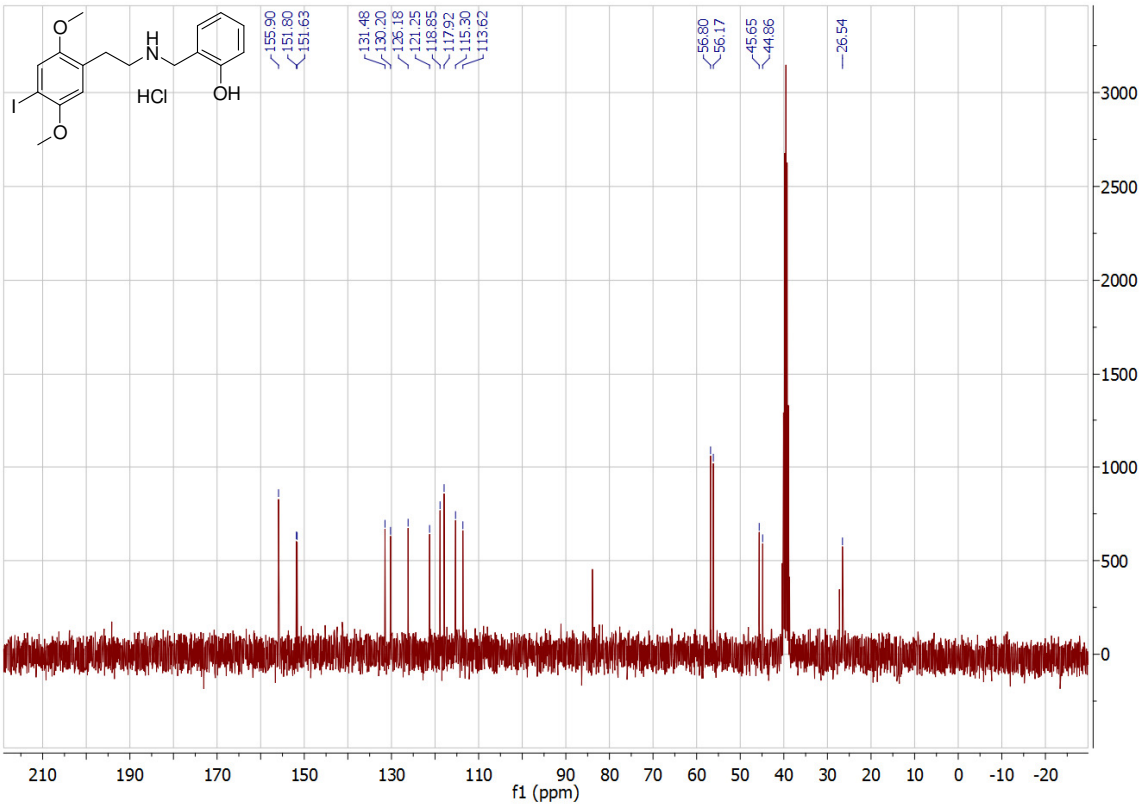
Compound **1a** (25I-NBOMe)



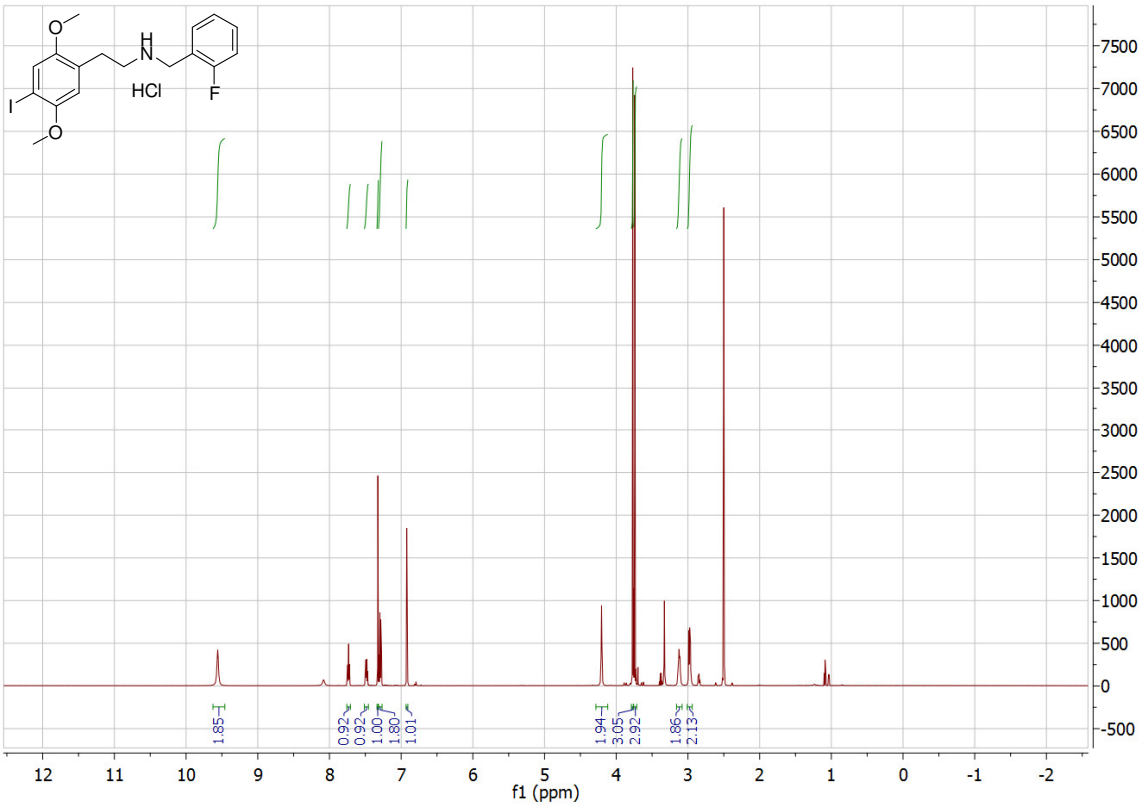


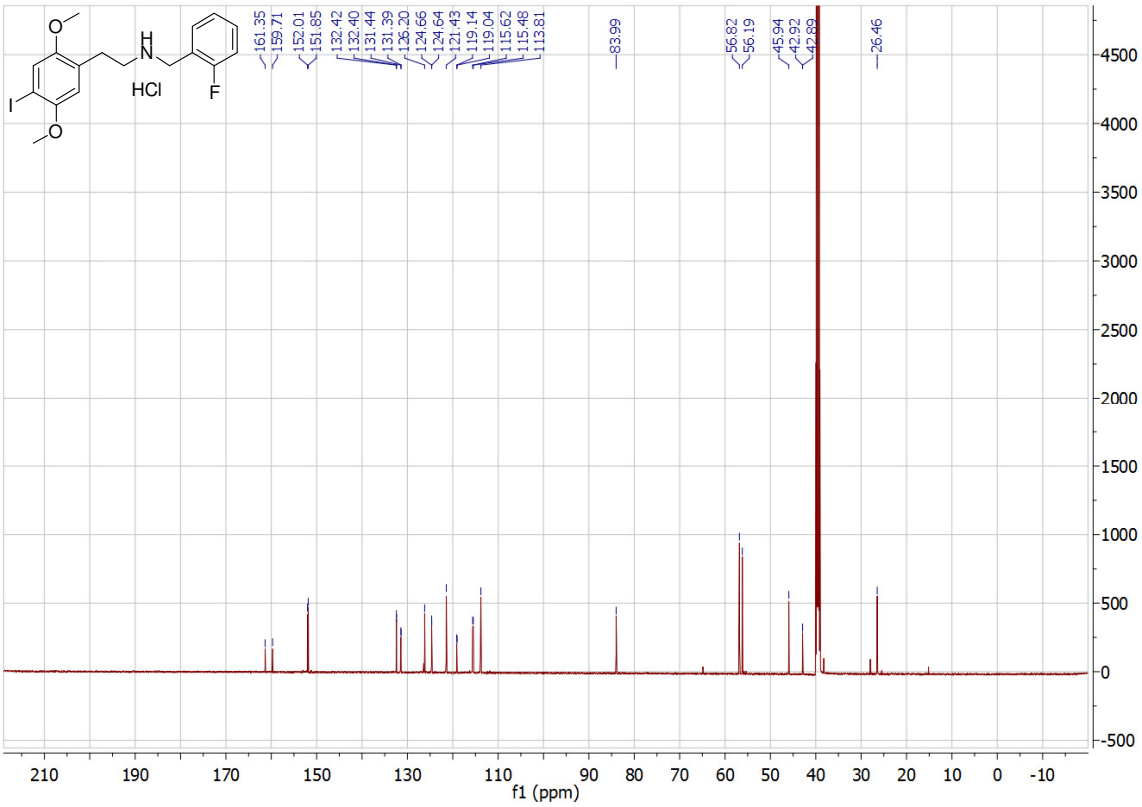
Compound **1b** (25I-NBOH)



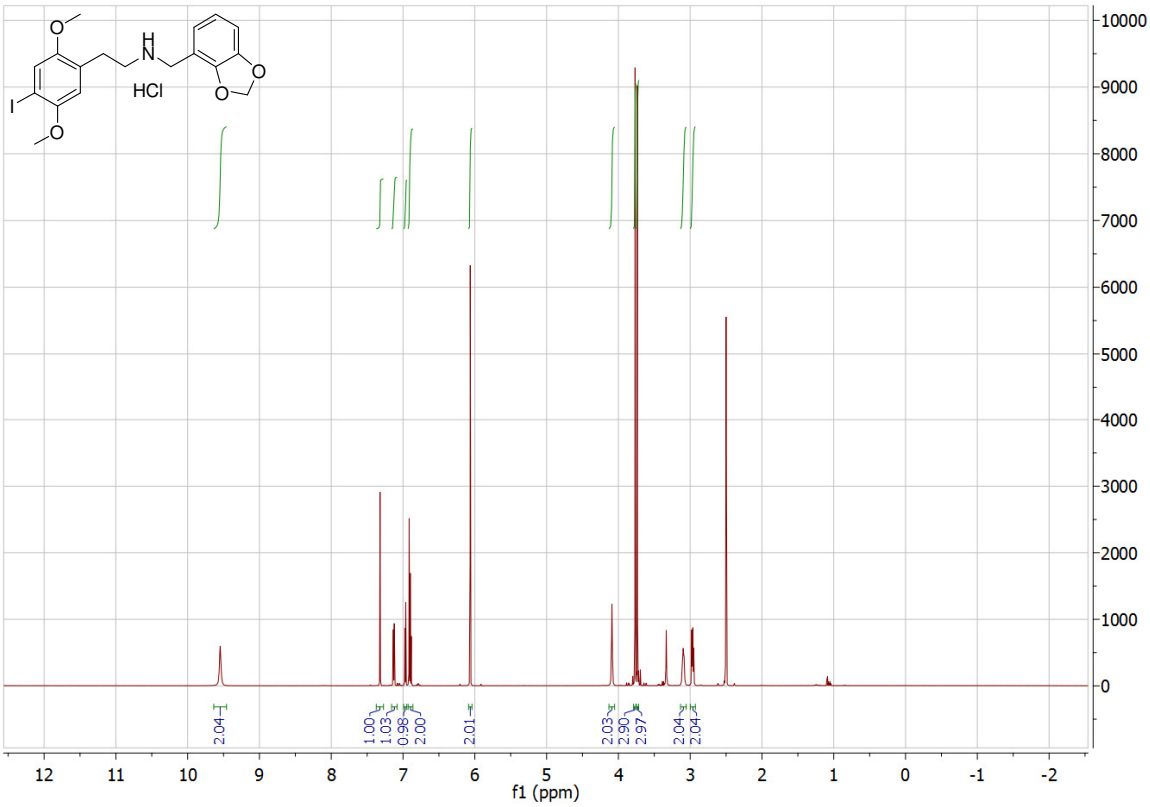


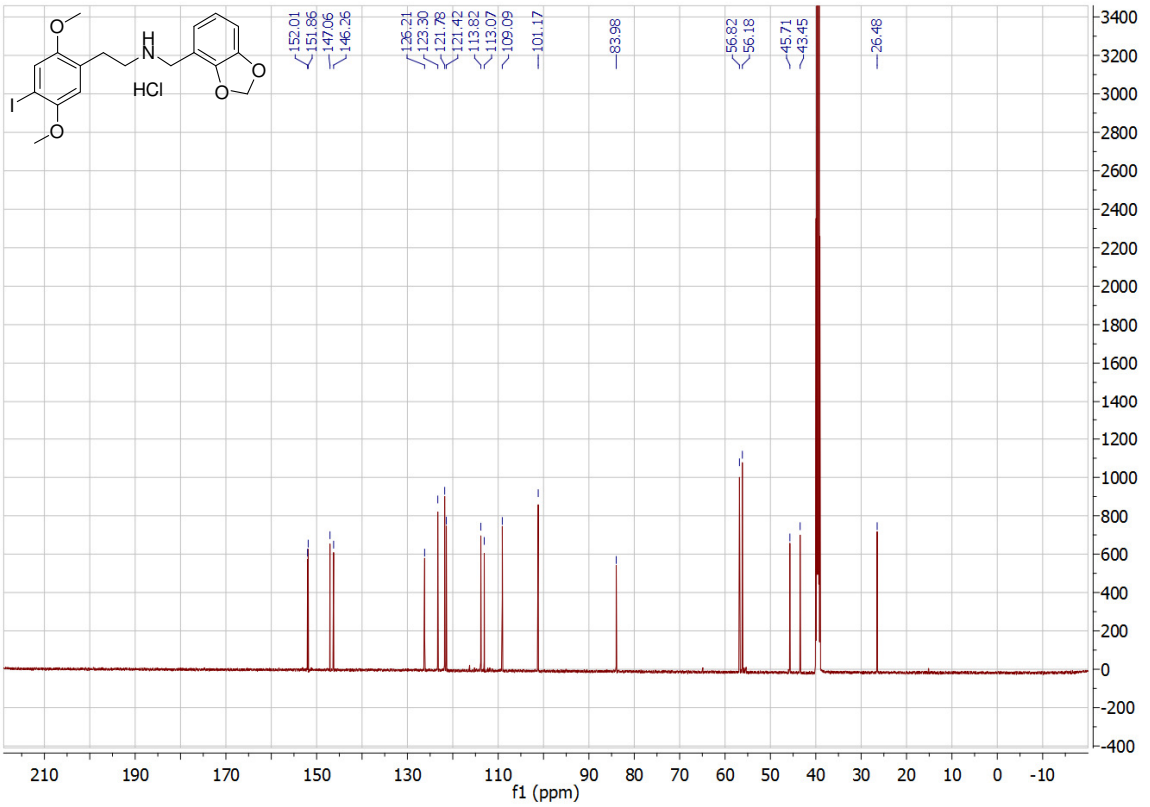
Compound **1c** (25I-NBF)



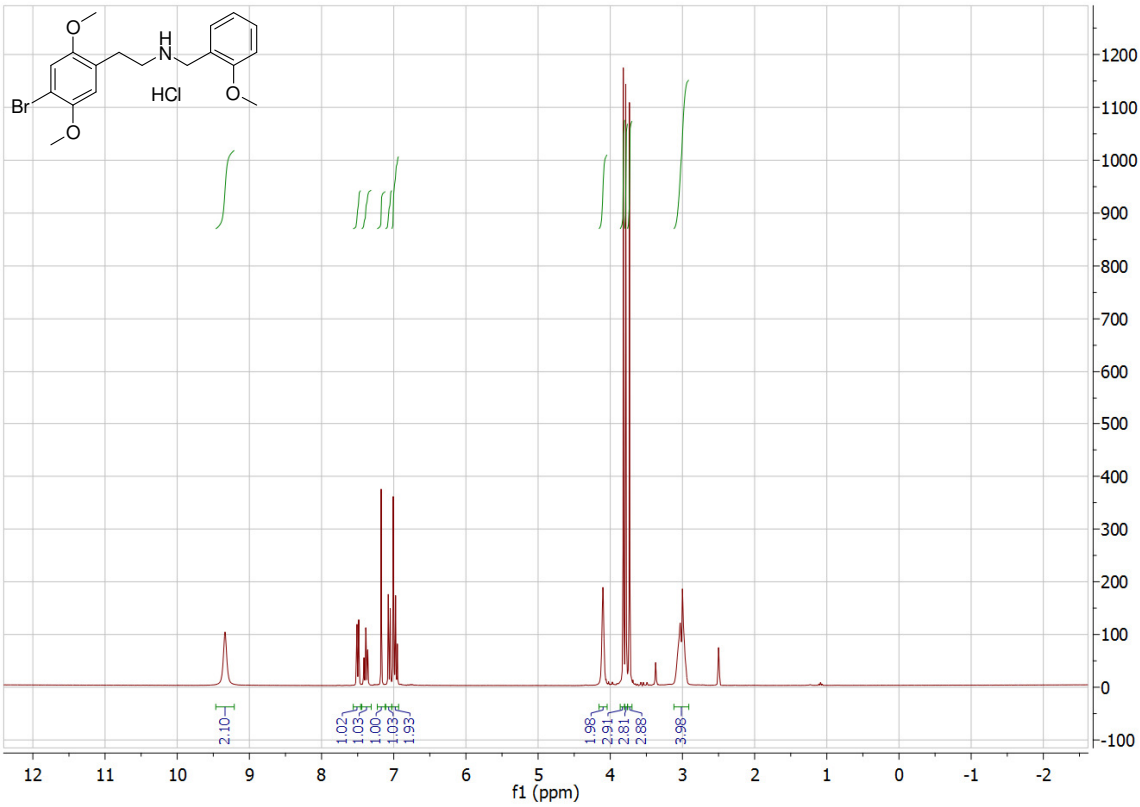


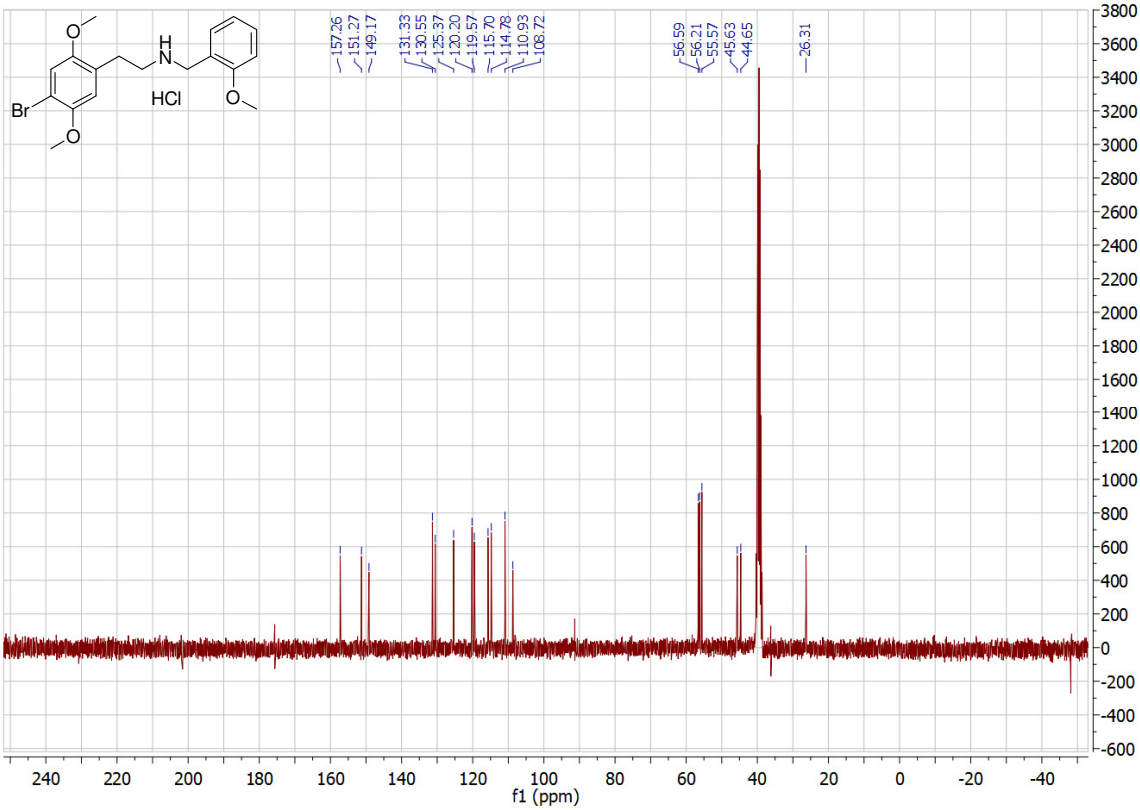
Compound **1d** (25I-NBMD)



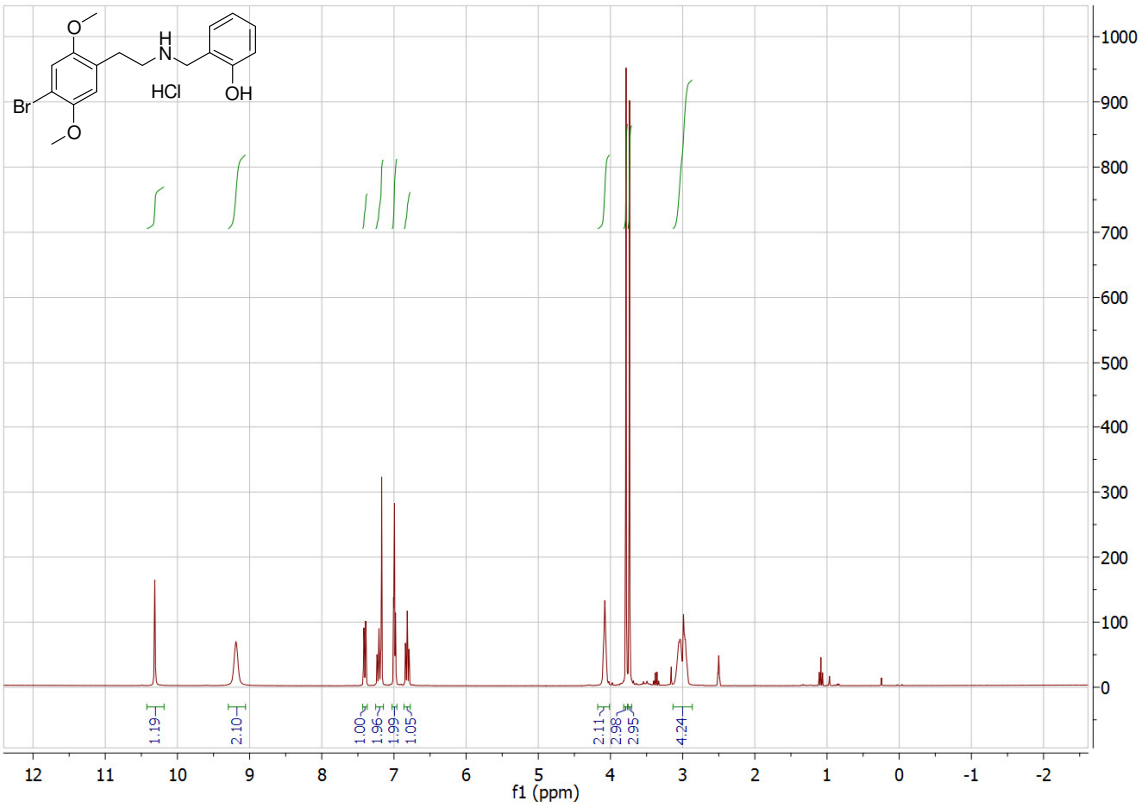


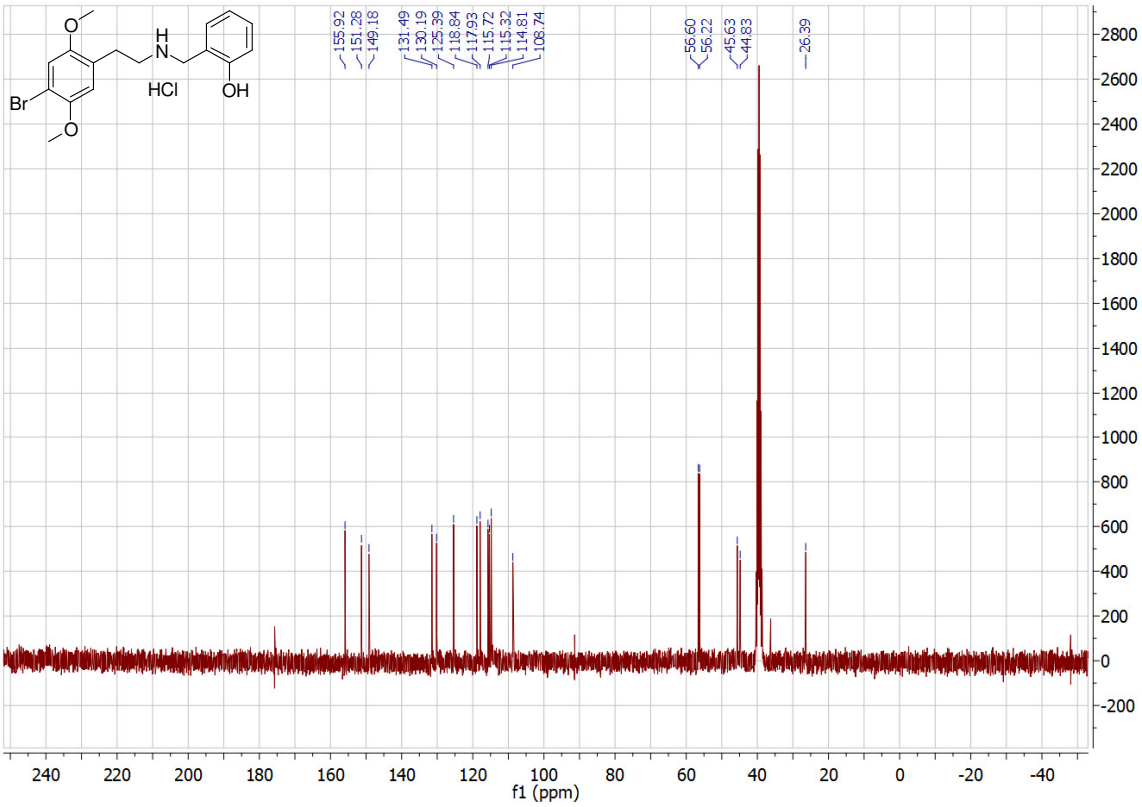
Compound **2a** (25B-NBOMe)



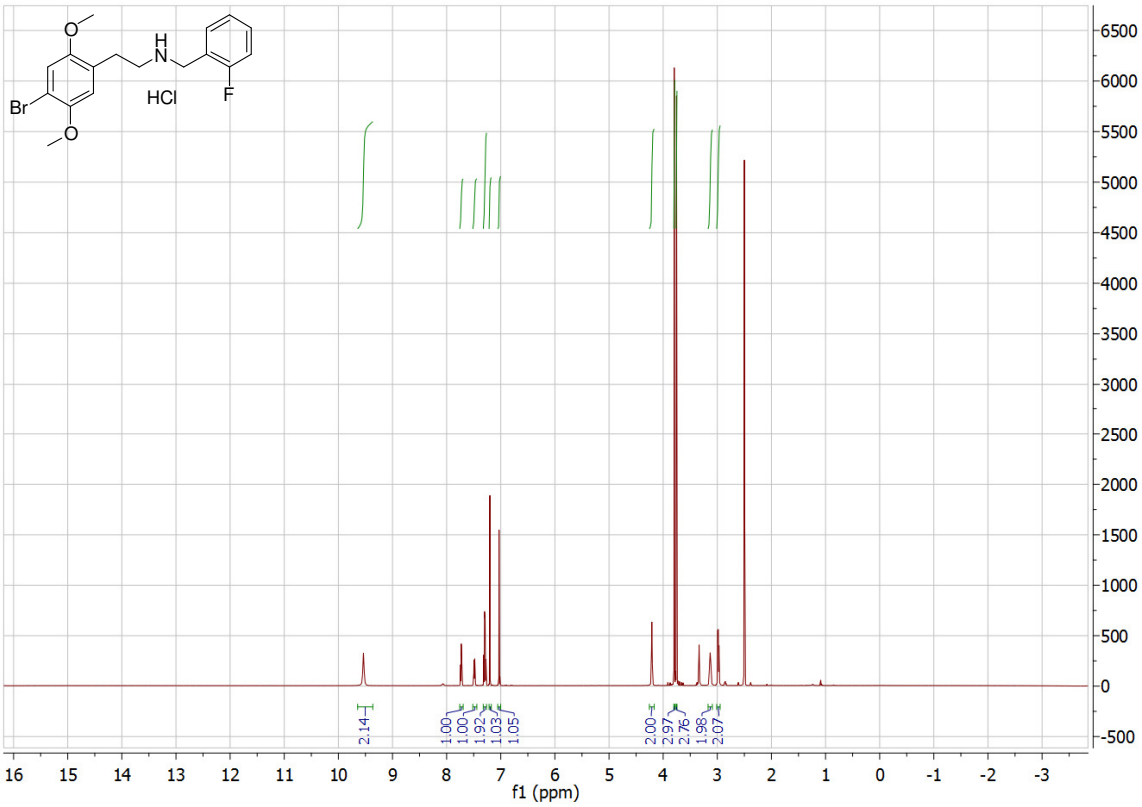


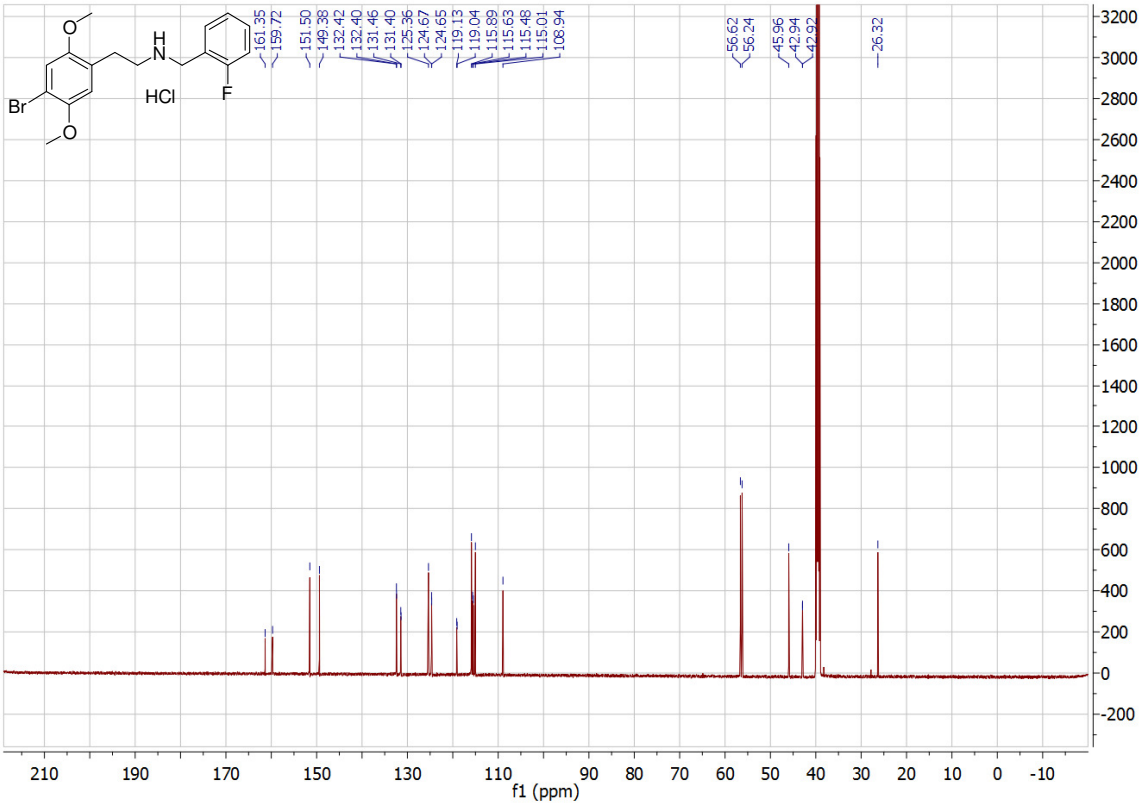
Compound **2b** (25B-NBOH)



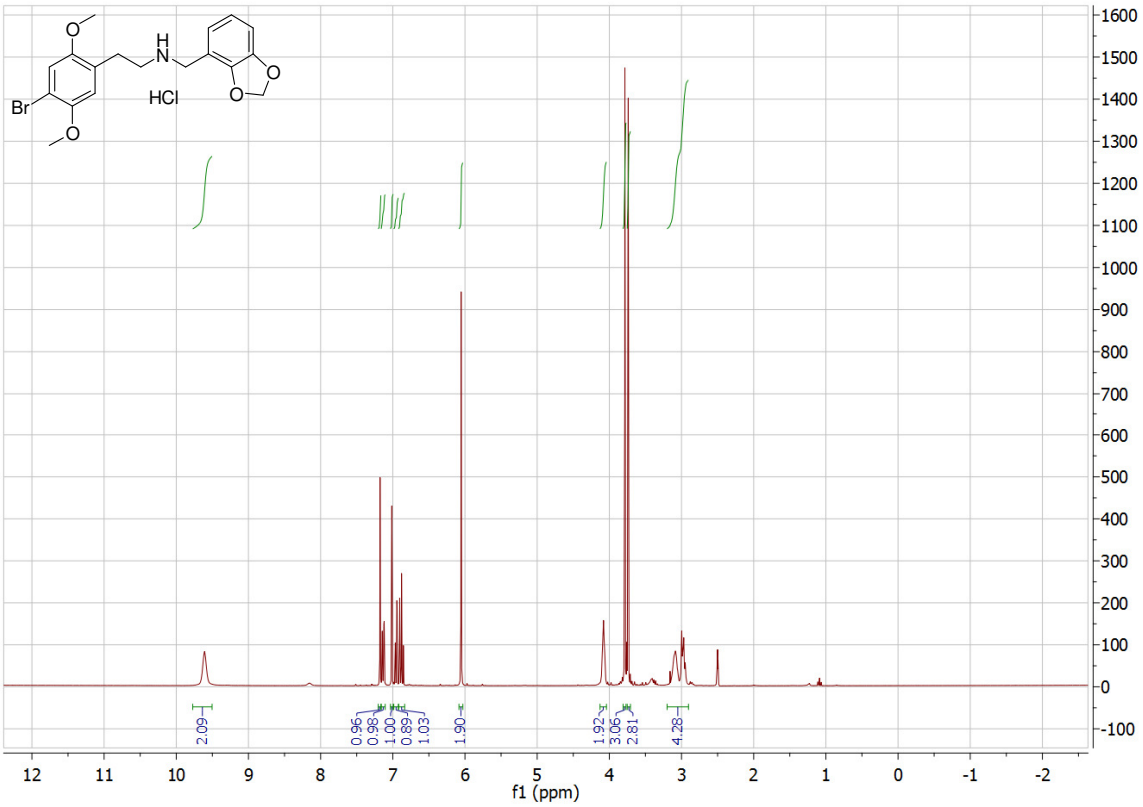


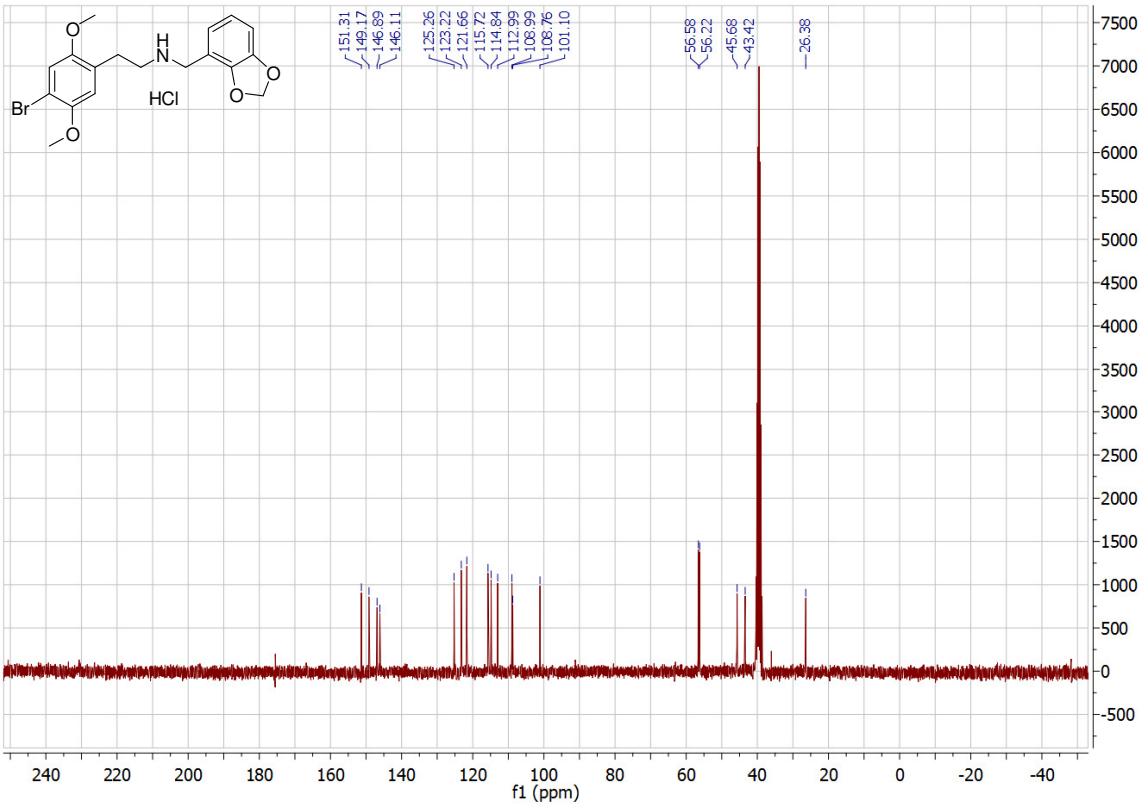
Compound **2c** (25B-NBF)



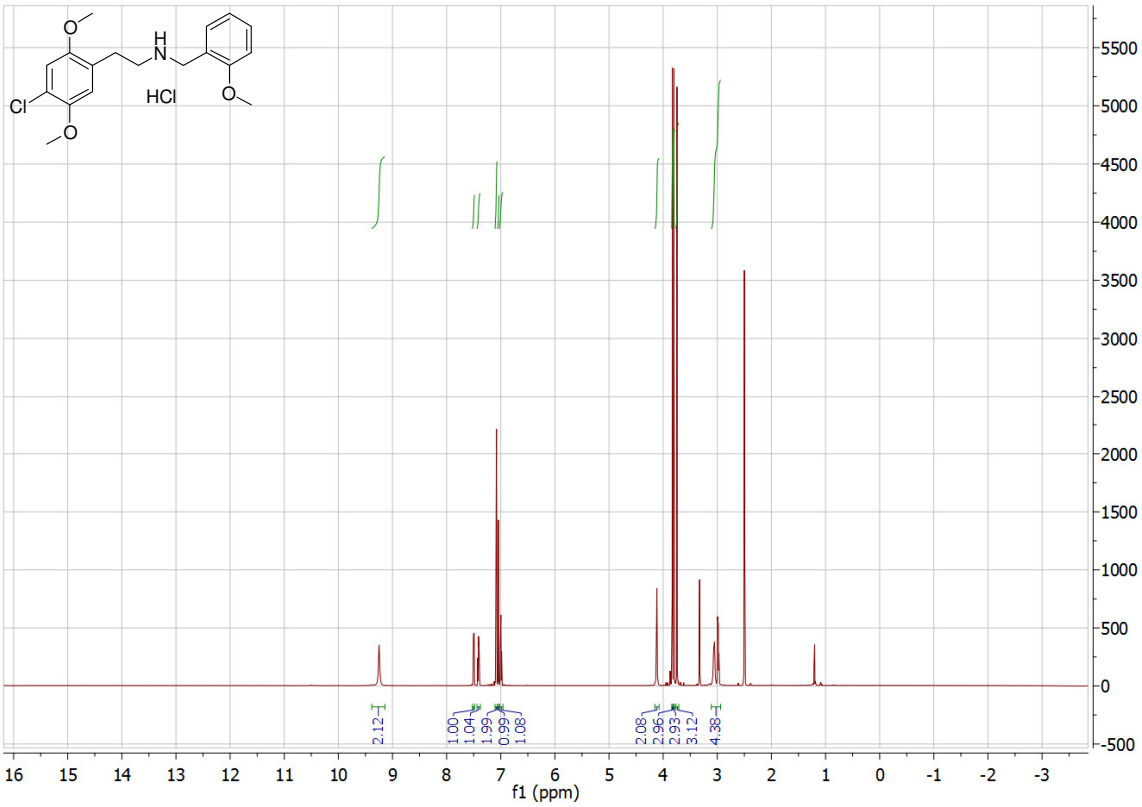


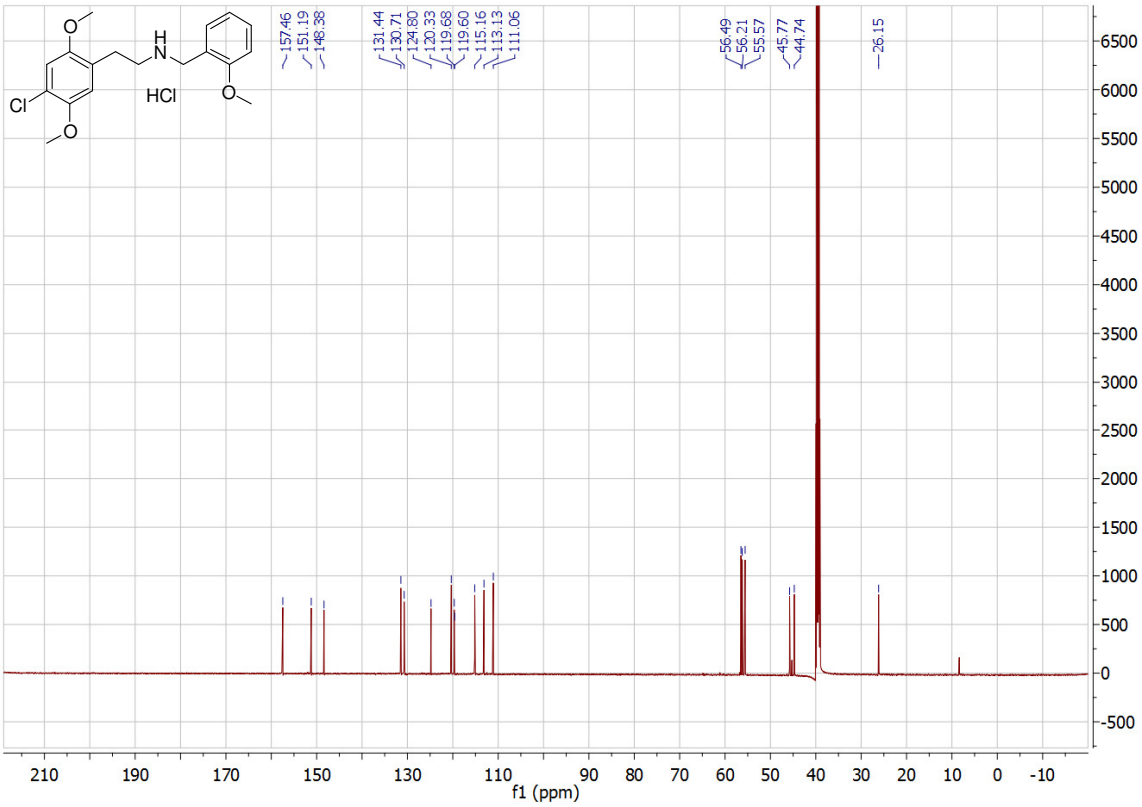
Compound **2d** (25B-NBMD)



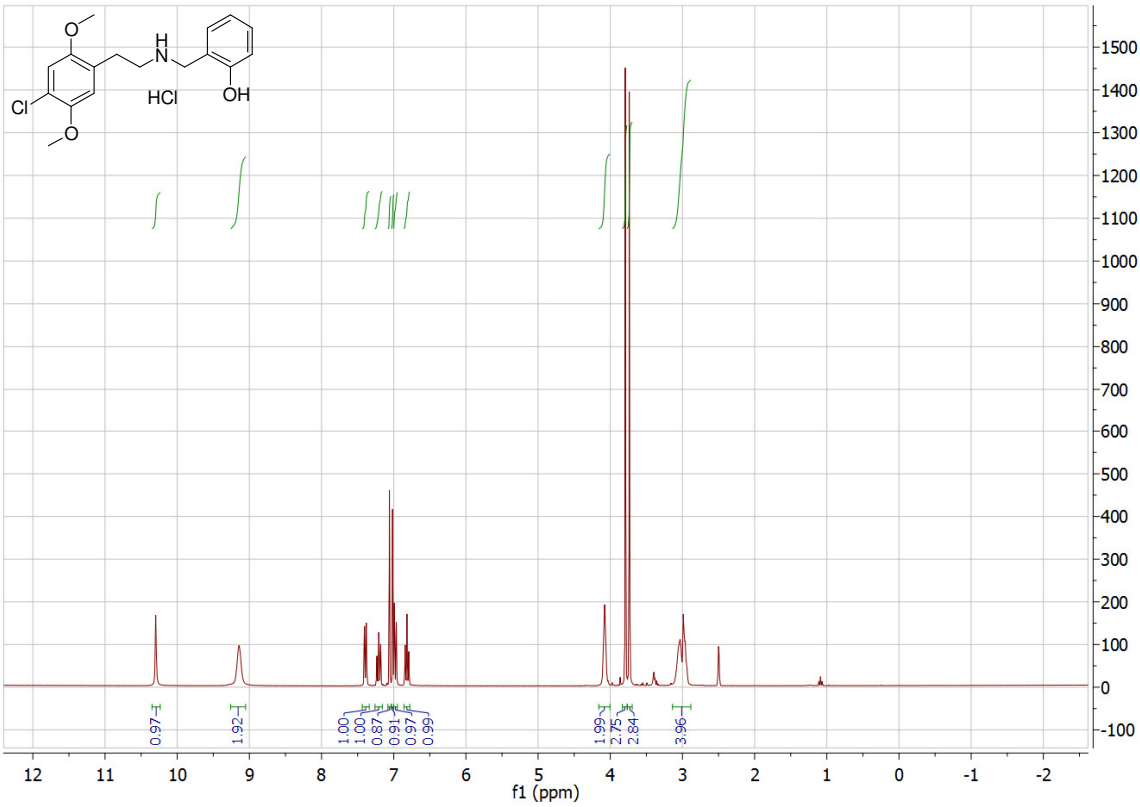


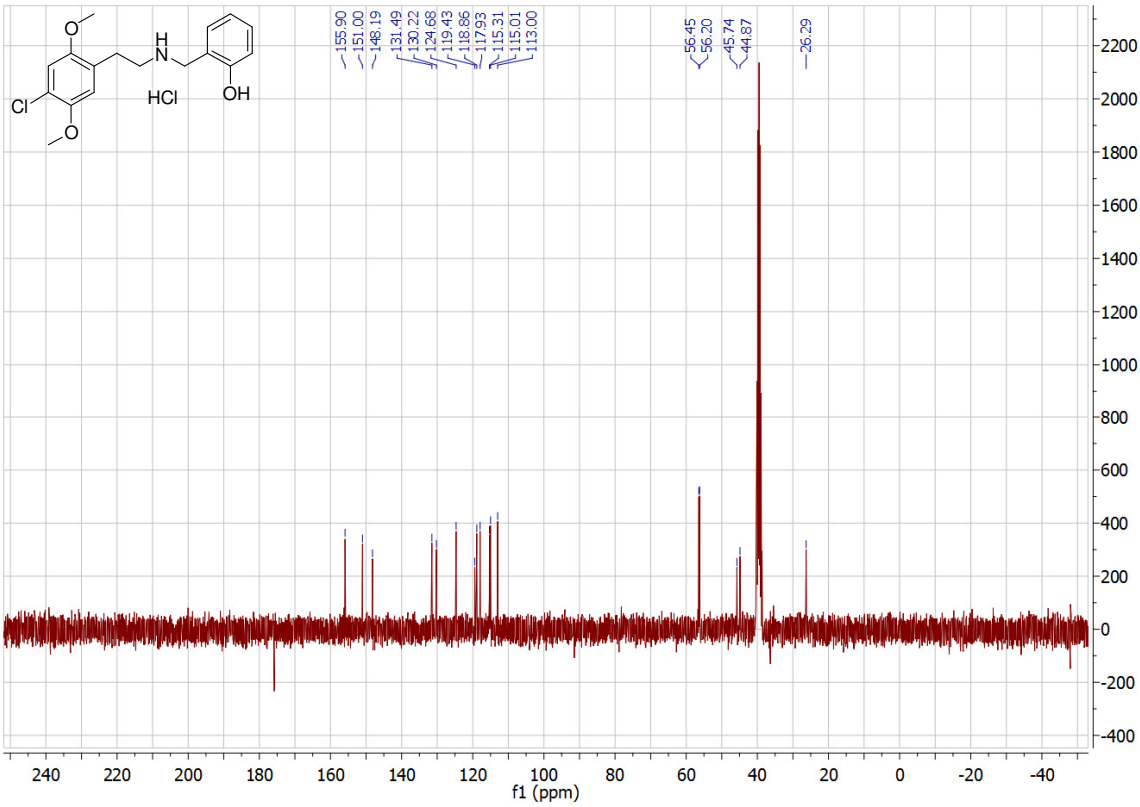
Compound **3a** (25C-NBOMe)



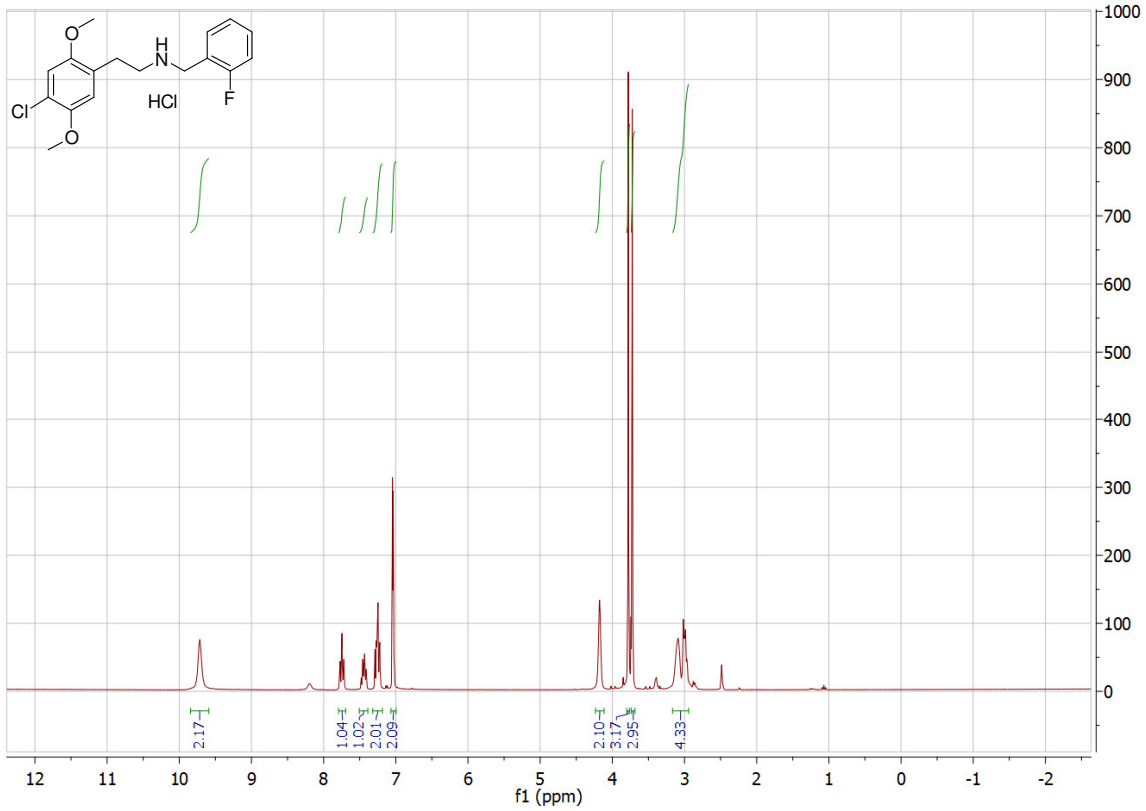


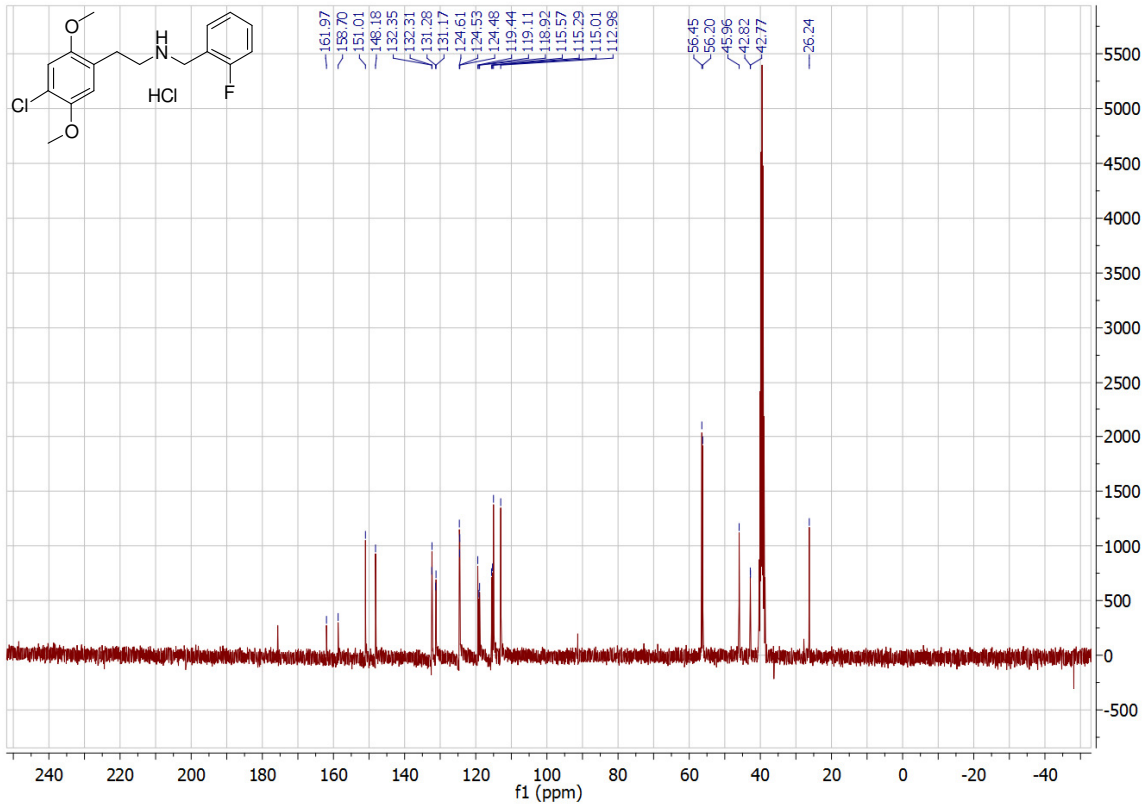
Compound **3b** (25C-NBOH)



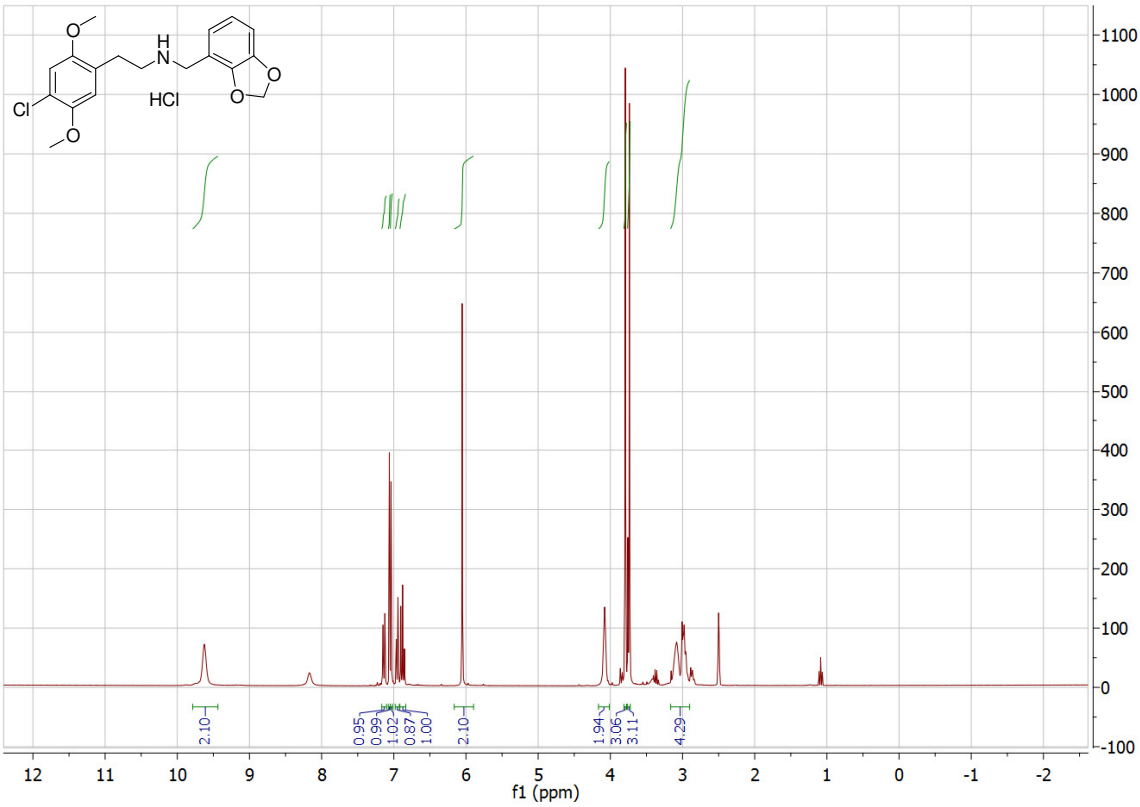


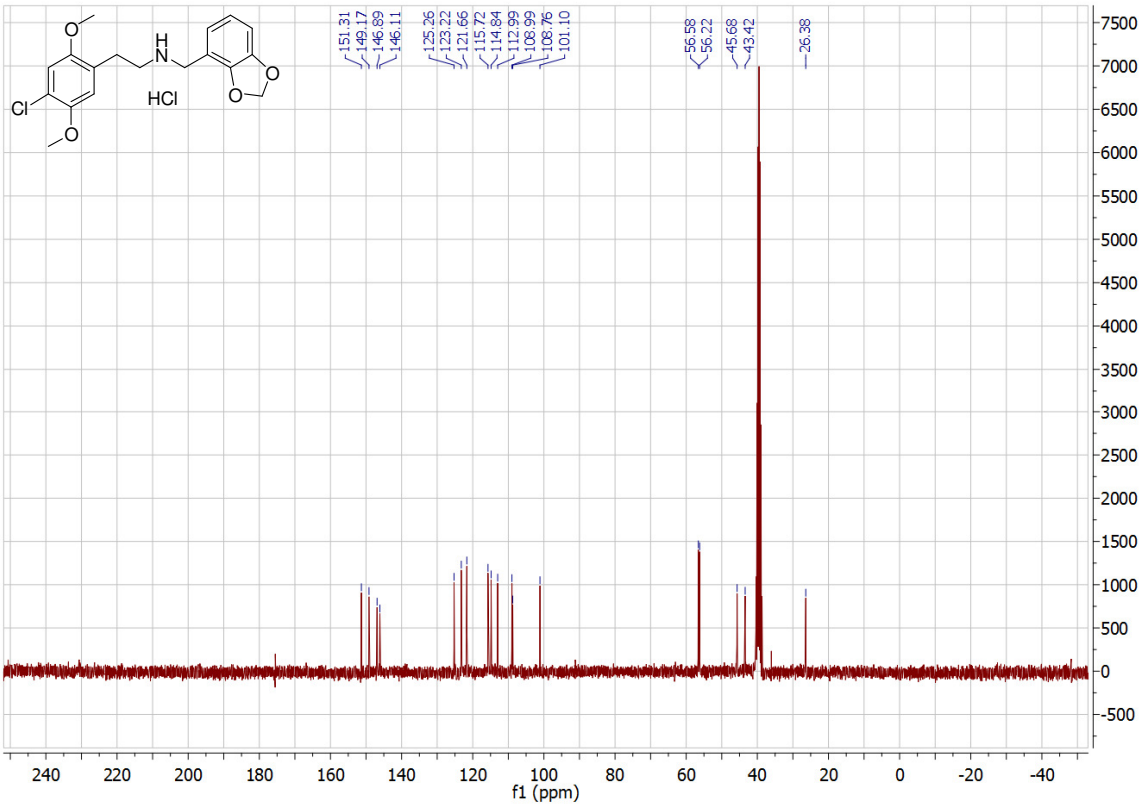
Compound XX (25C-NBF)



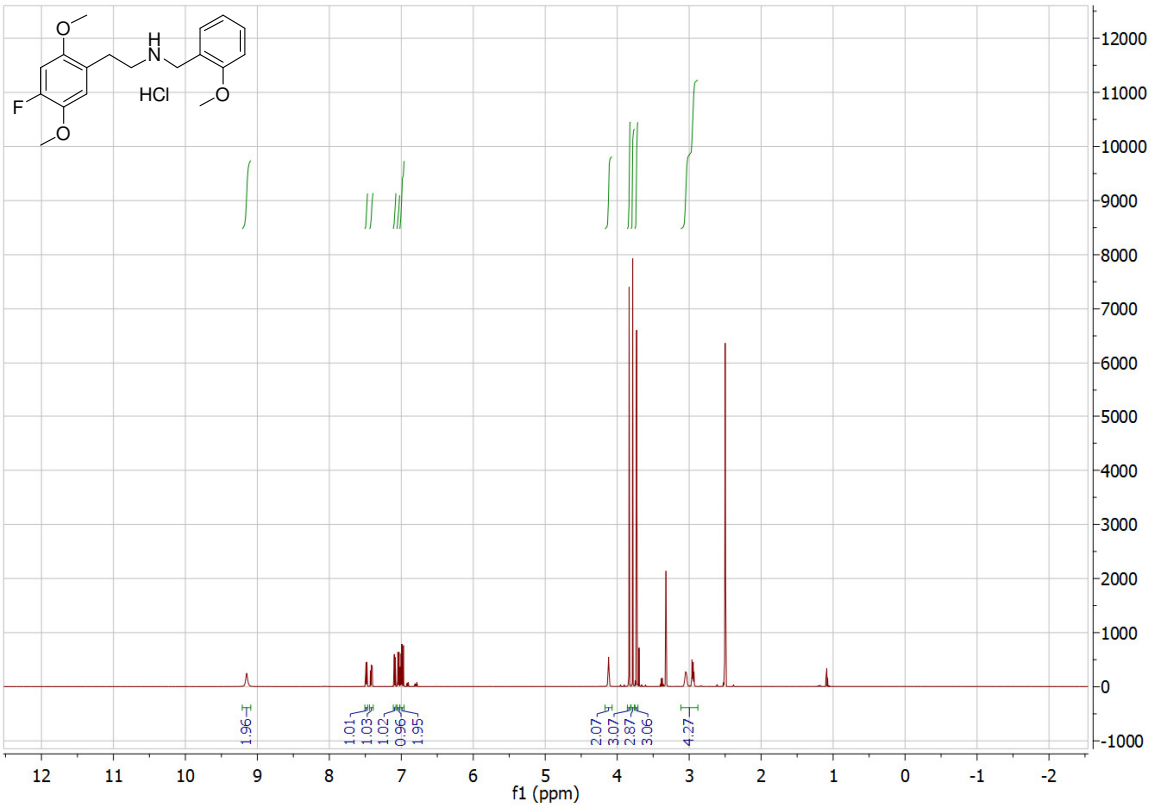


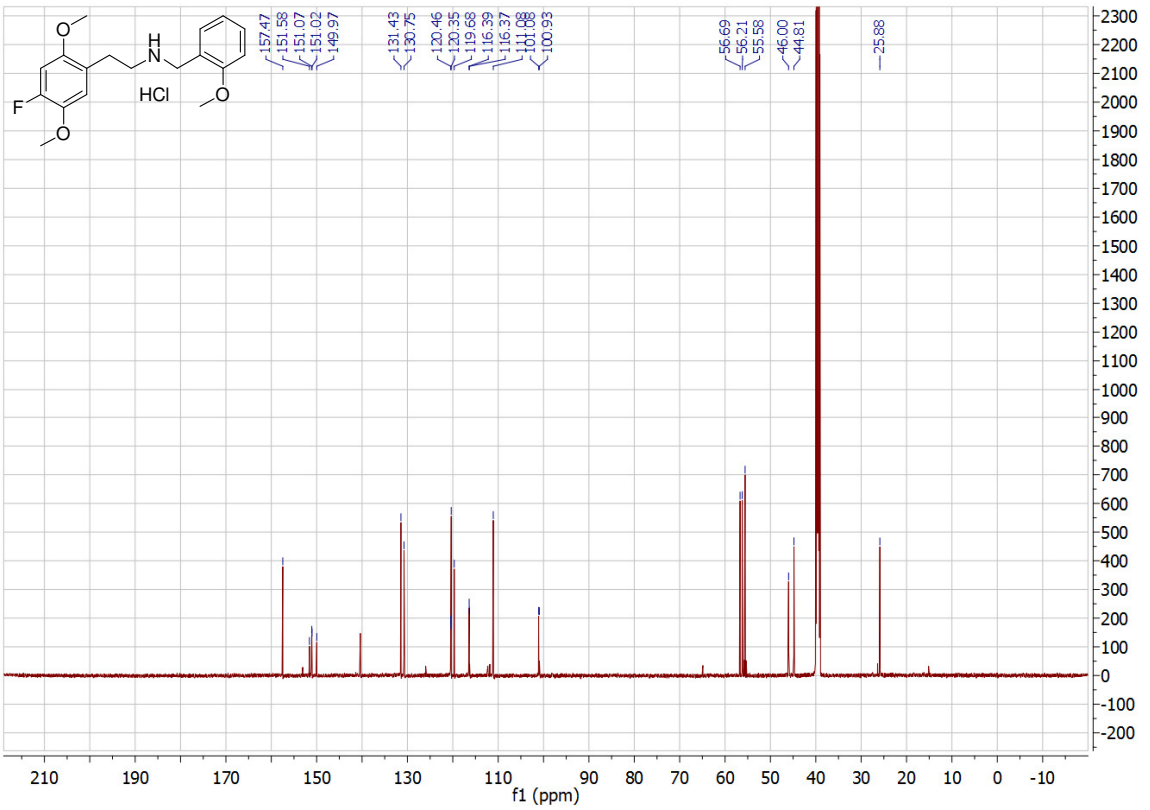
Compound **3d** (25C-NBMD)



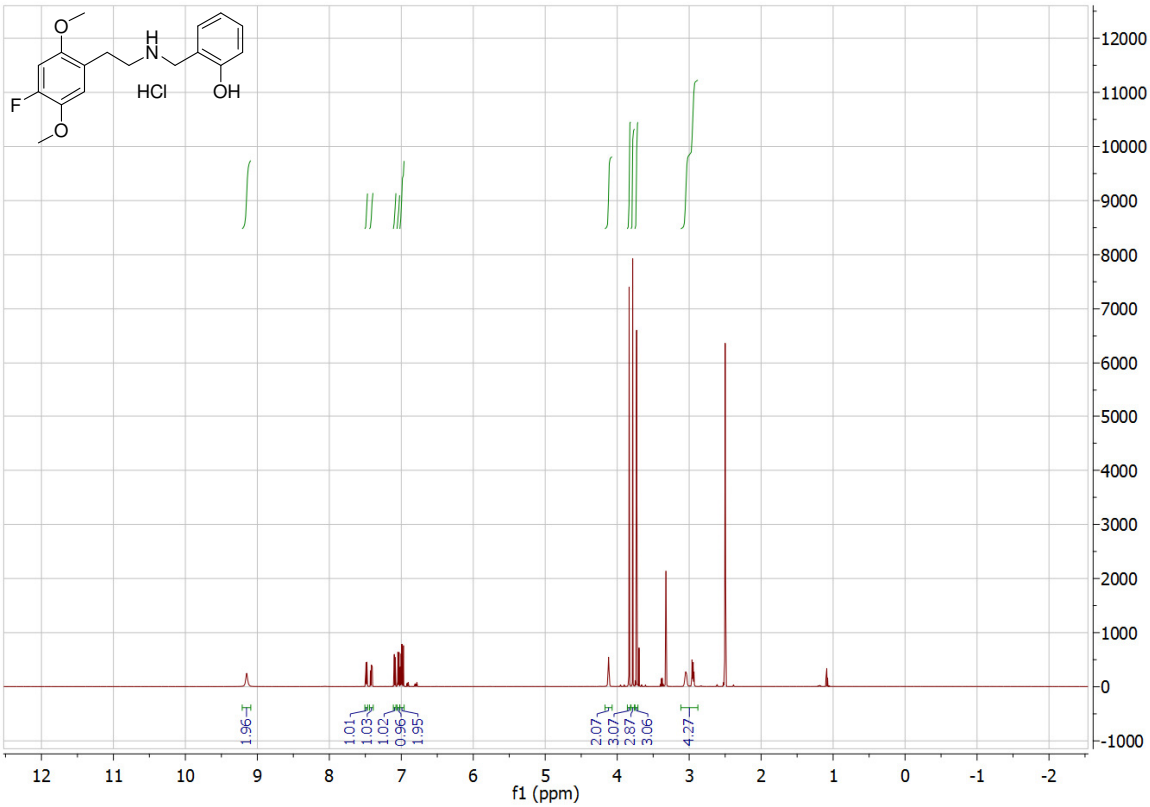


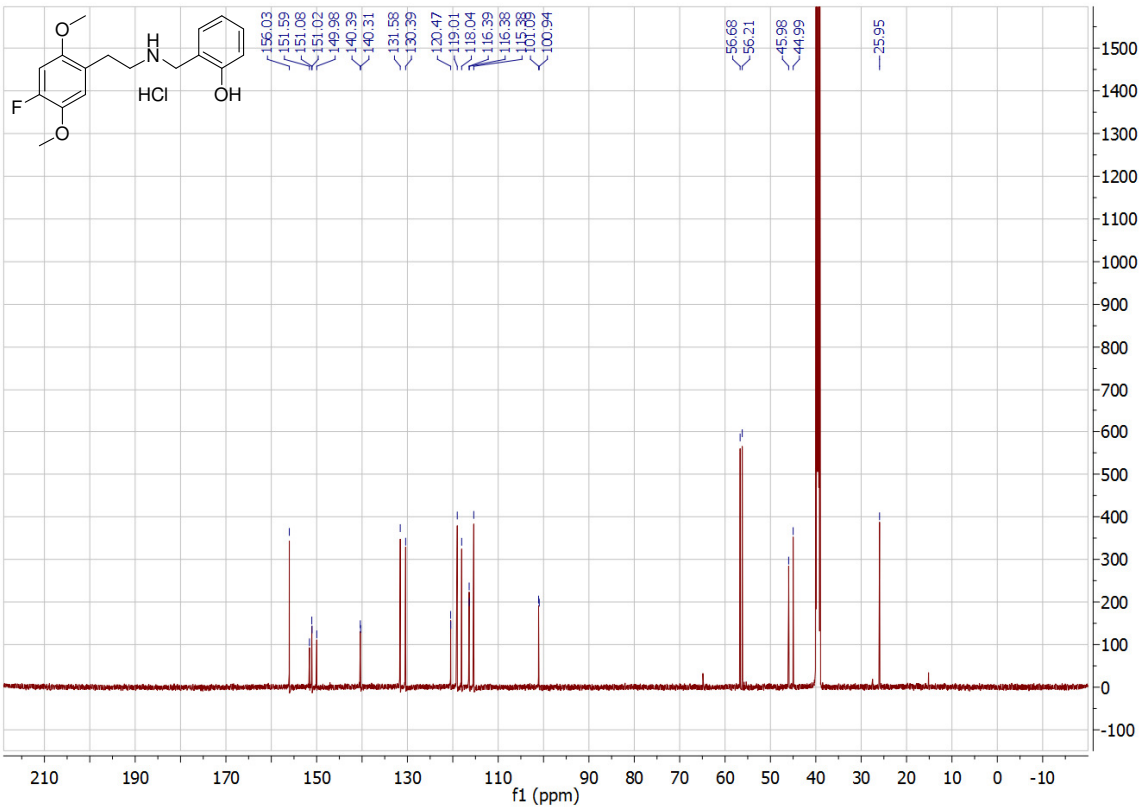
Compound **4a** (25F-NBOMe)



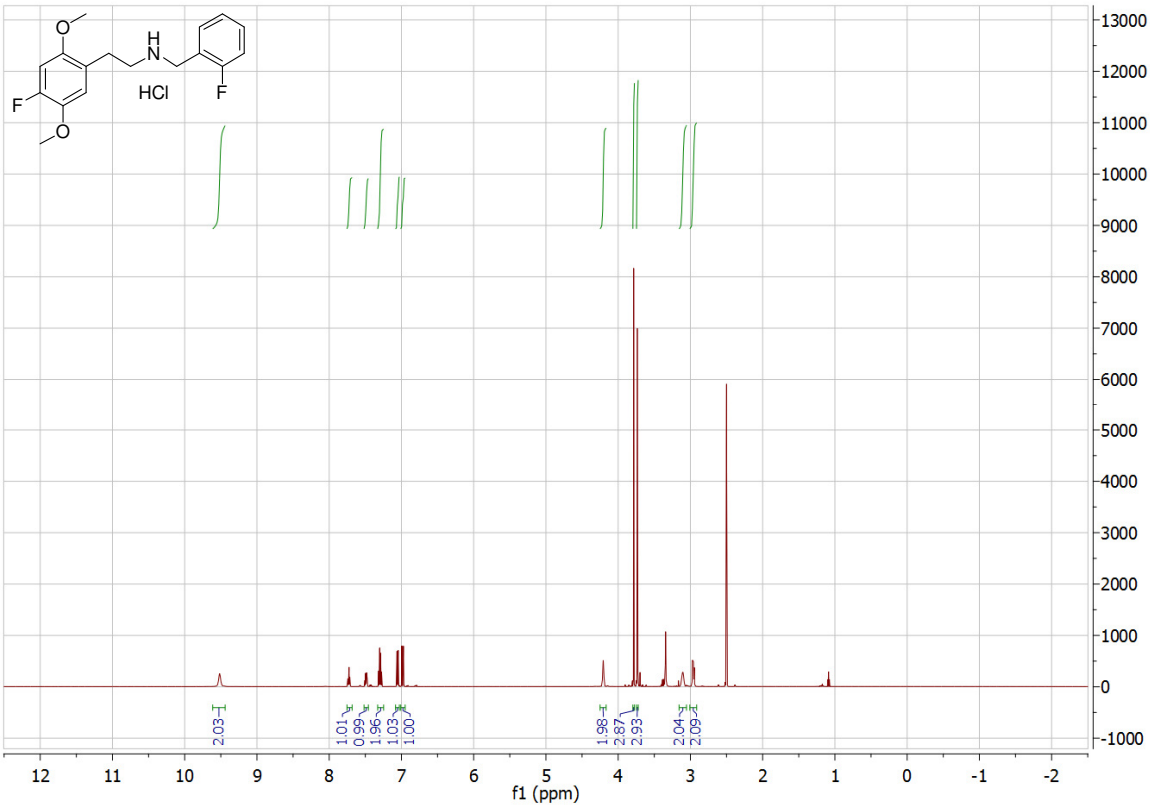


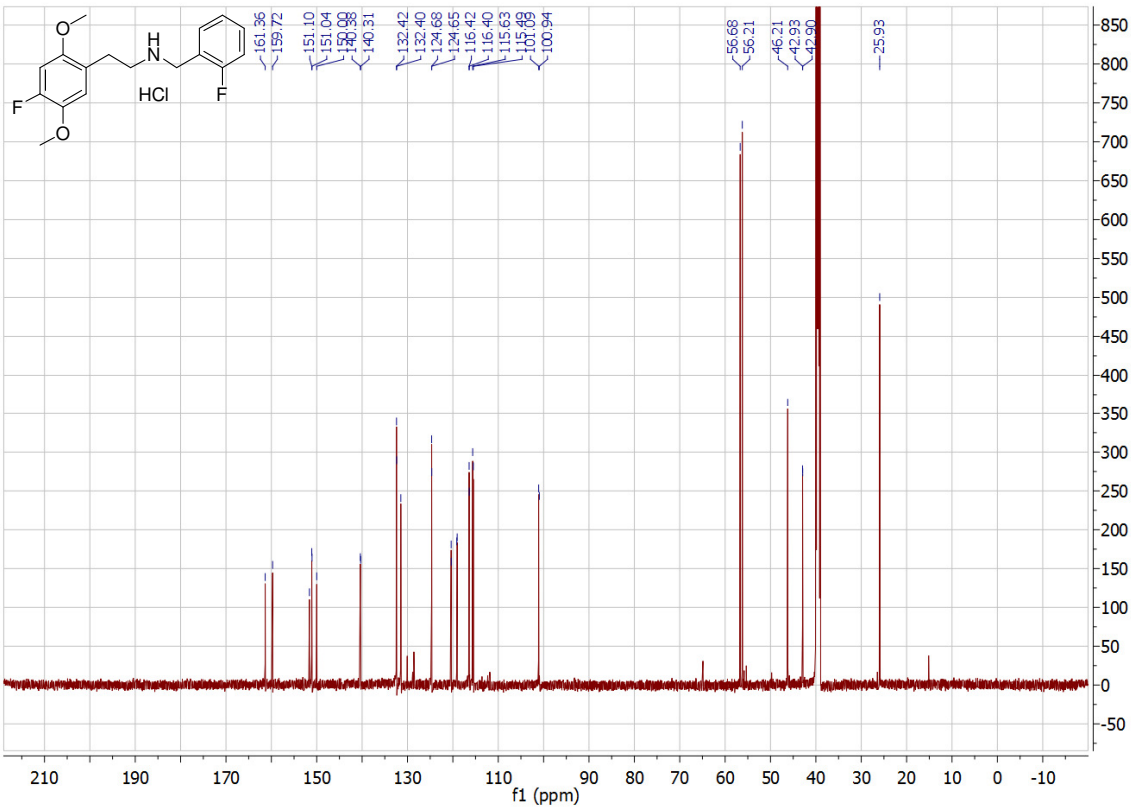
Compound **4b** (25F-NBOH)



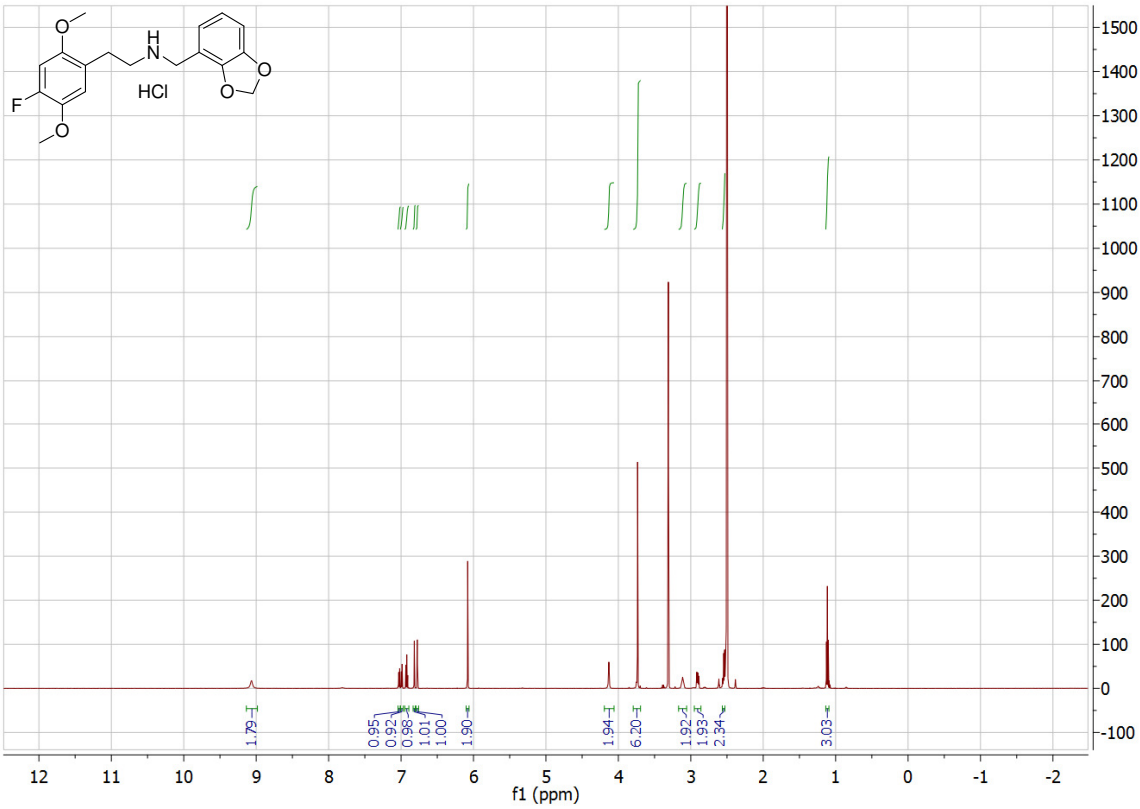


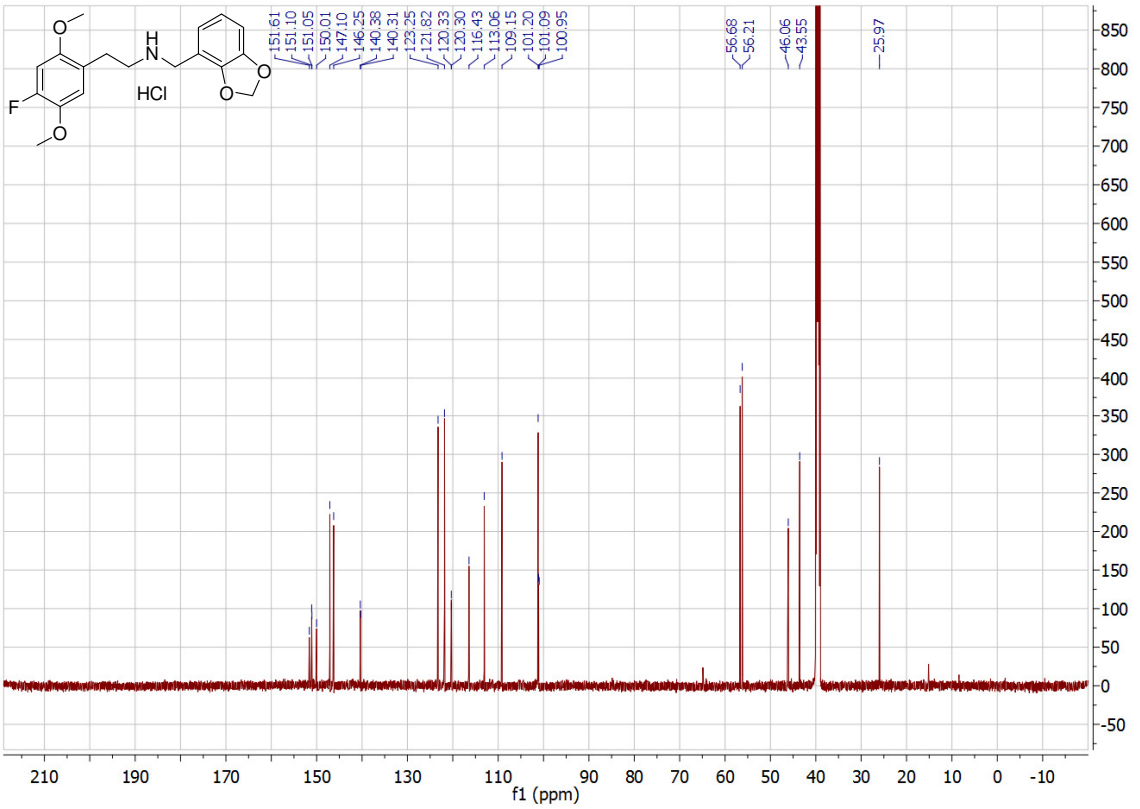
Compound **4c** (25F-NBF)



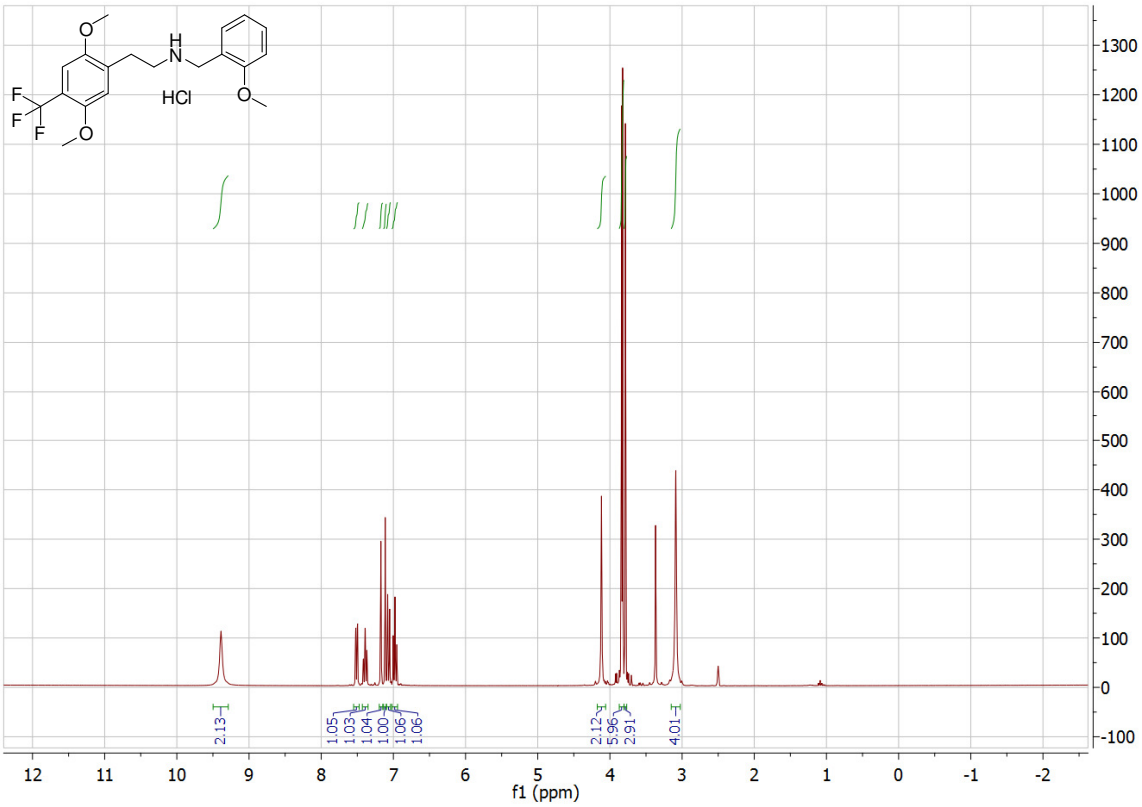


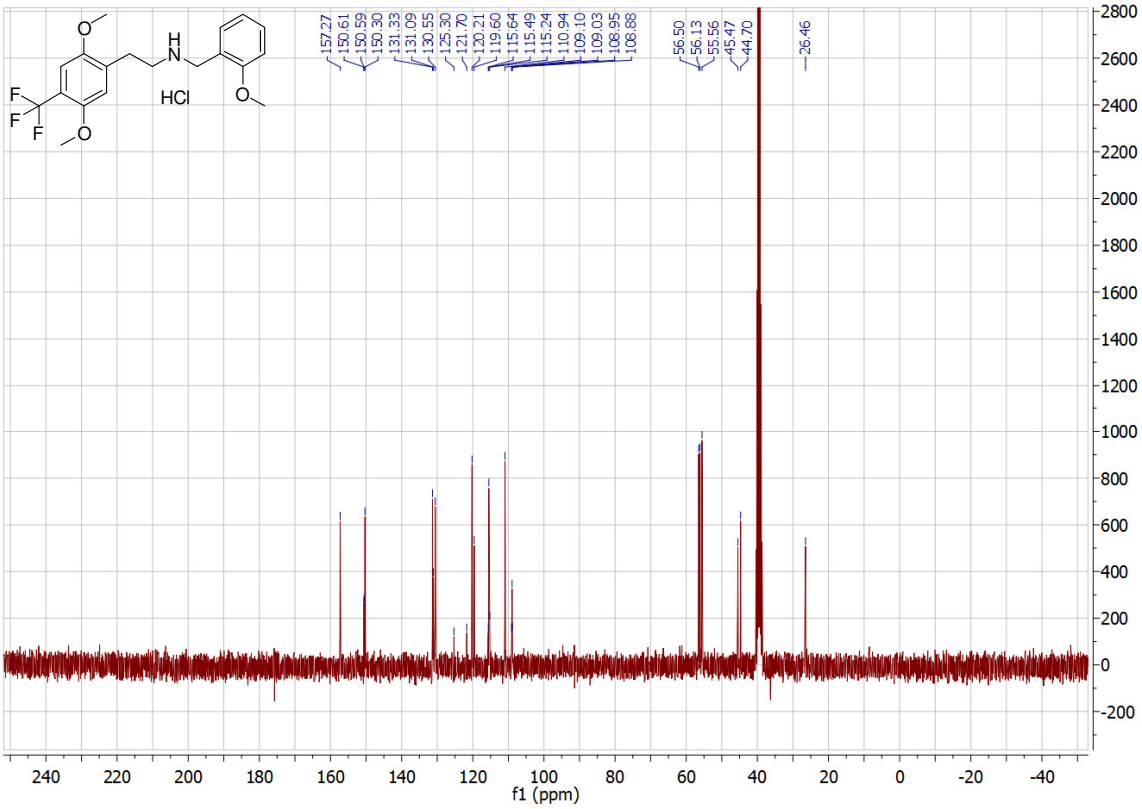
Compound **4d** (25F-NBMD)



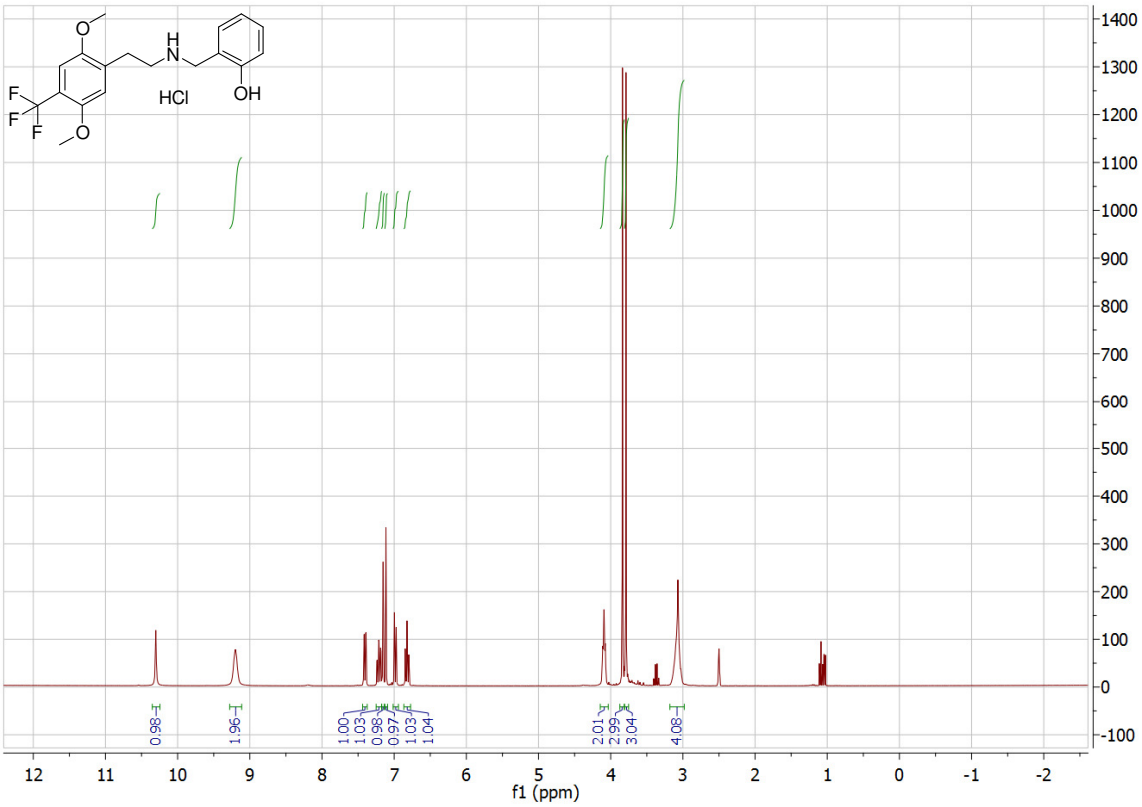


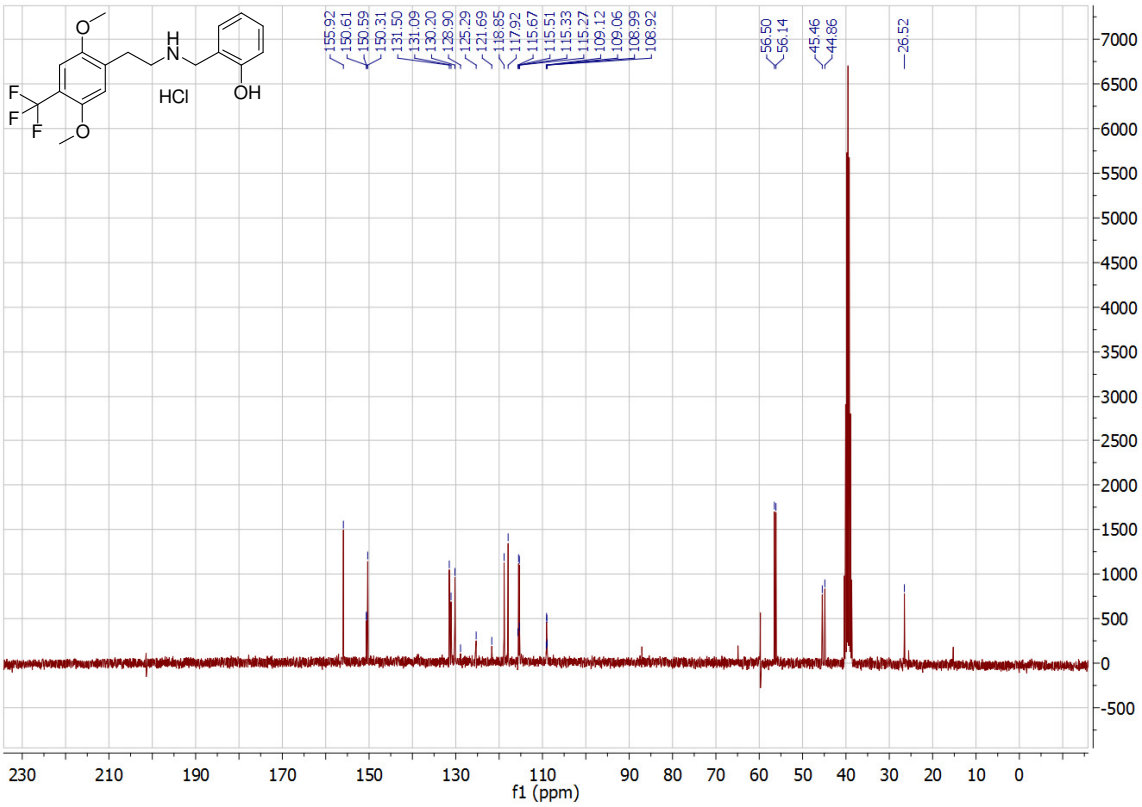
Compound **5a** (25TFM-NBOMe)



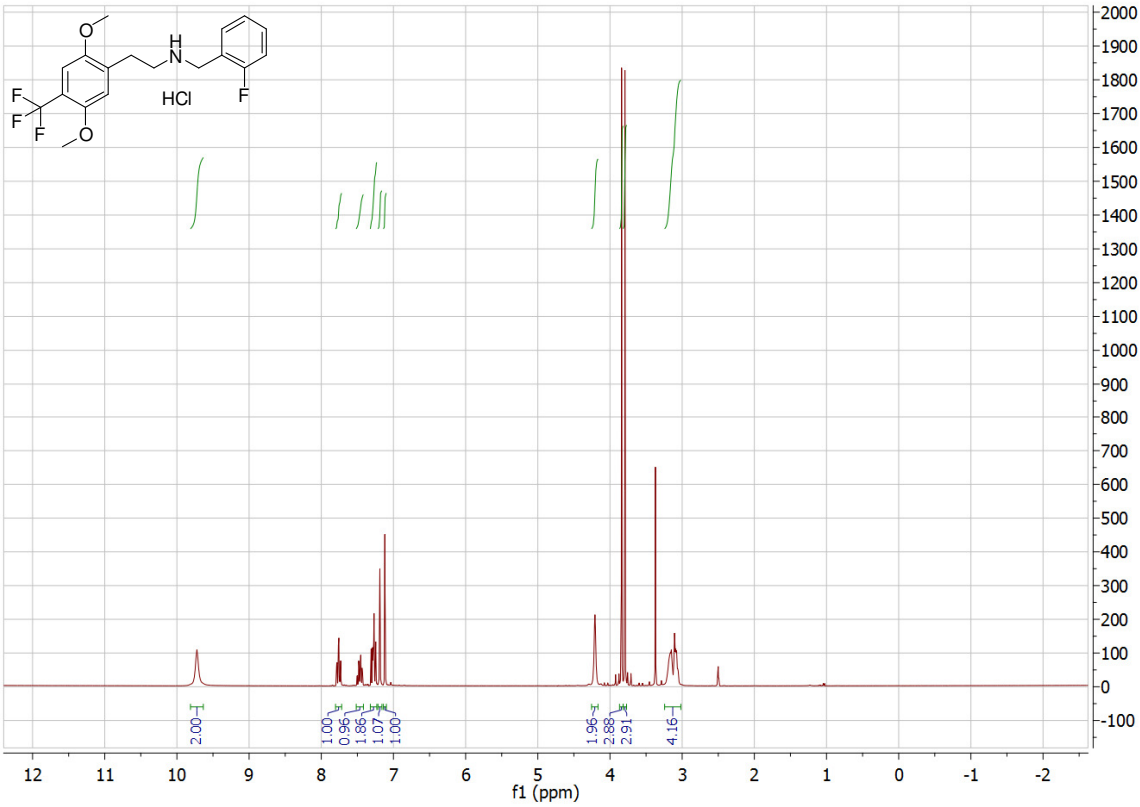


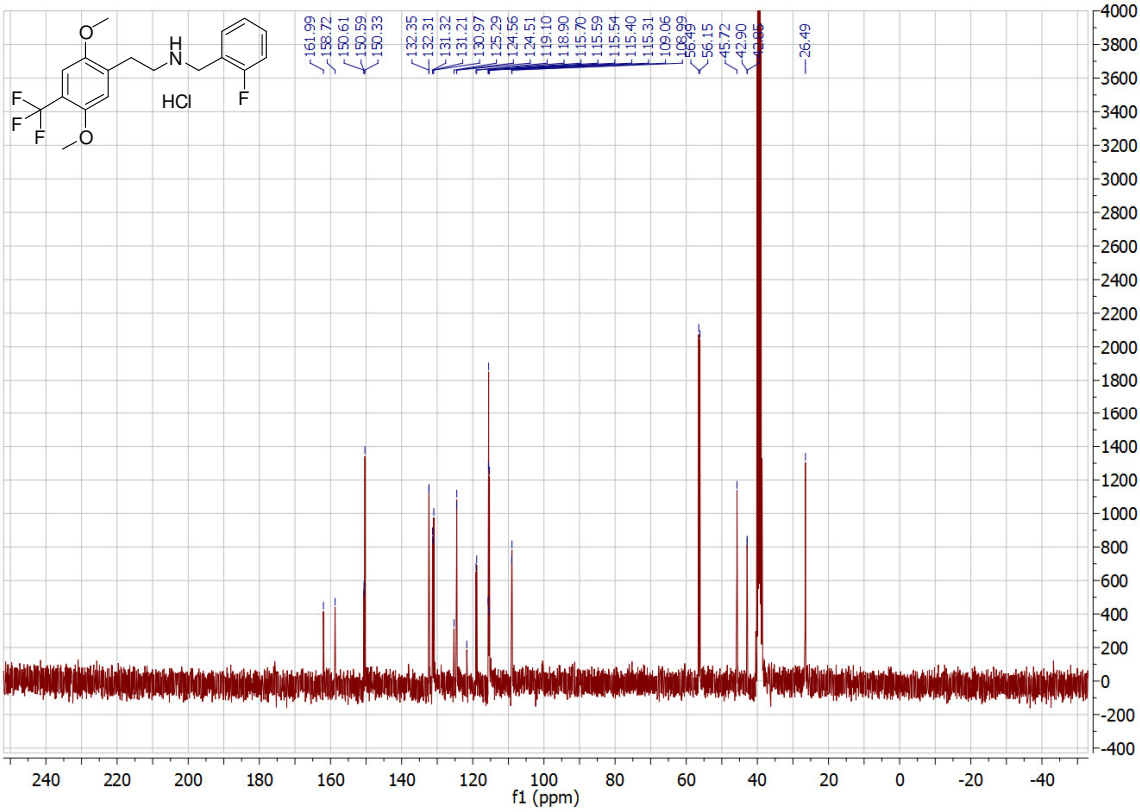
Compound **5b** (25TFM-NBOH)



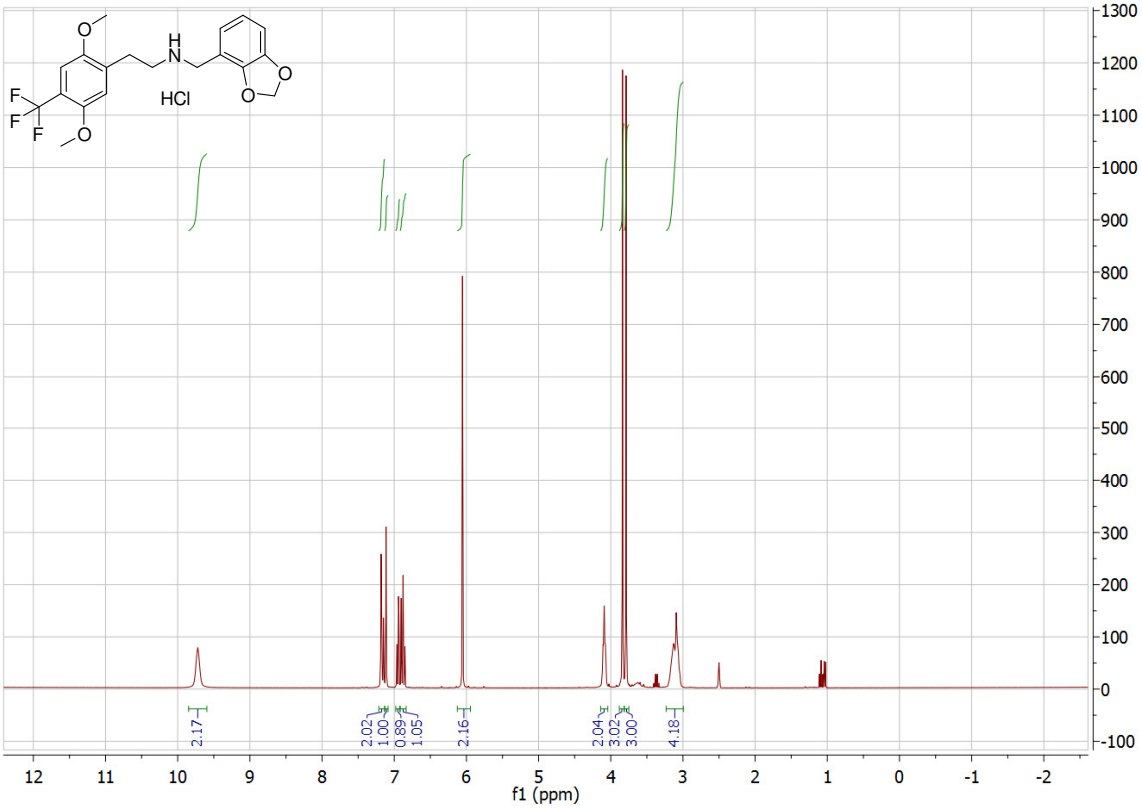


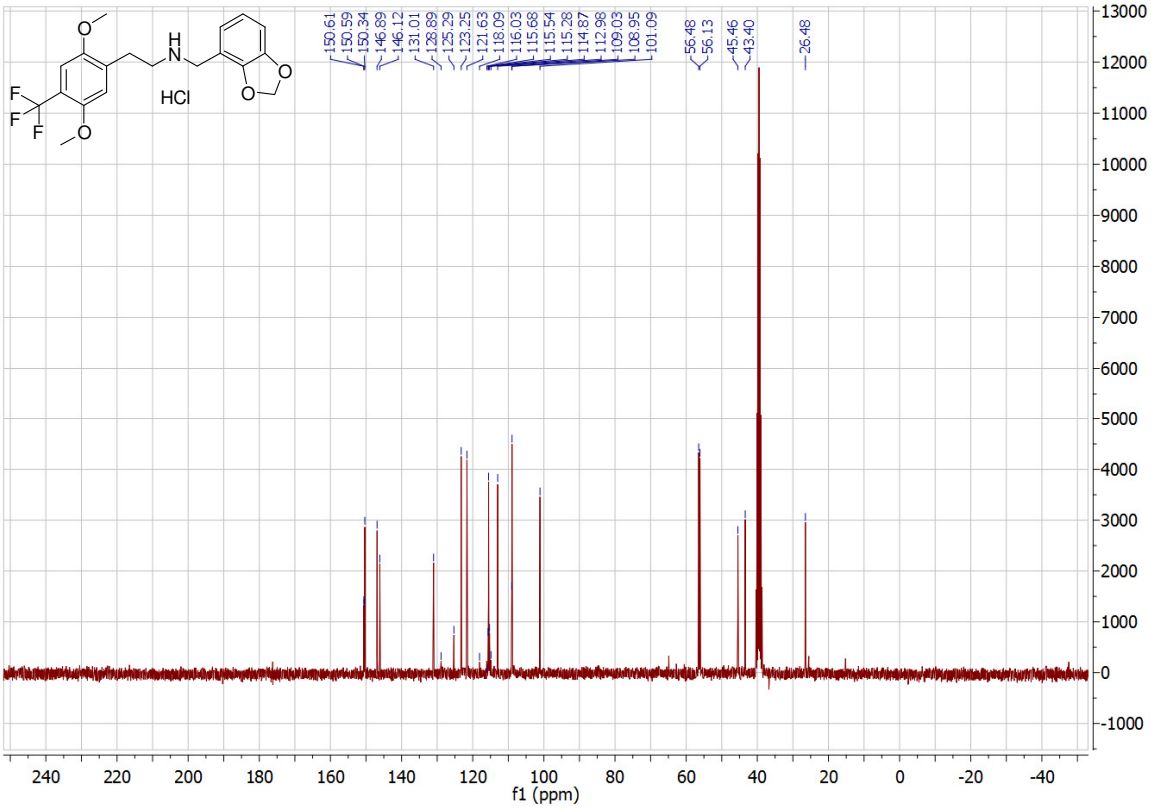
Compound **5c** (25TFM-NBF)



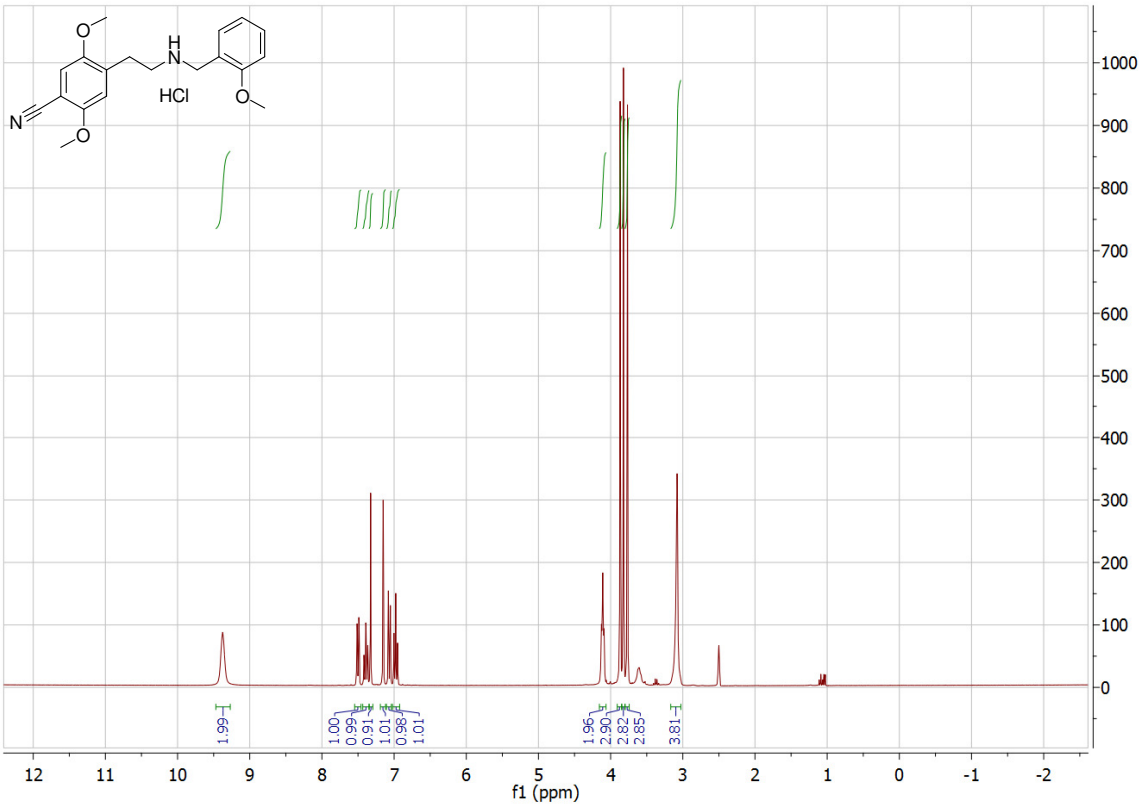


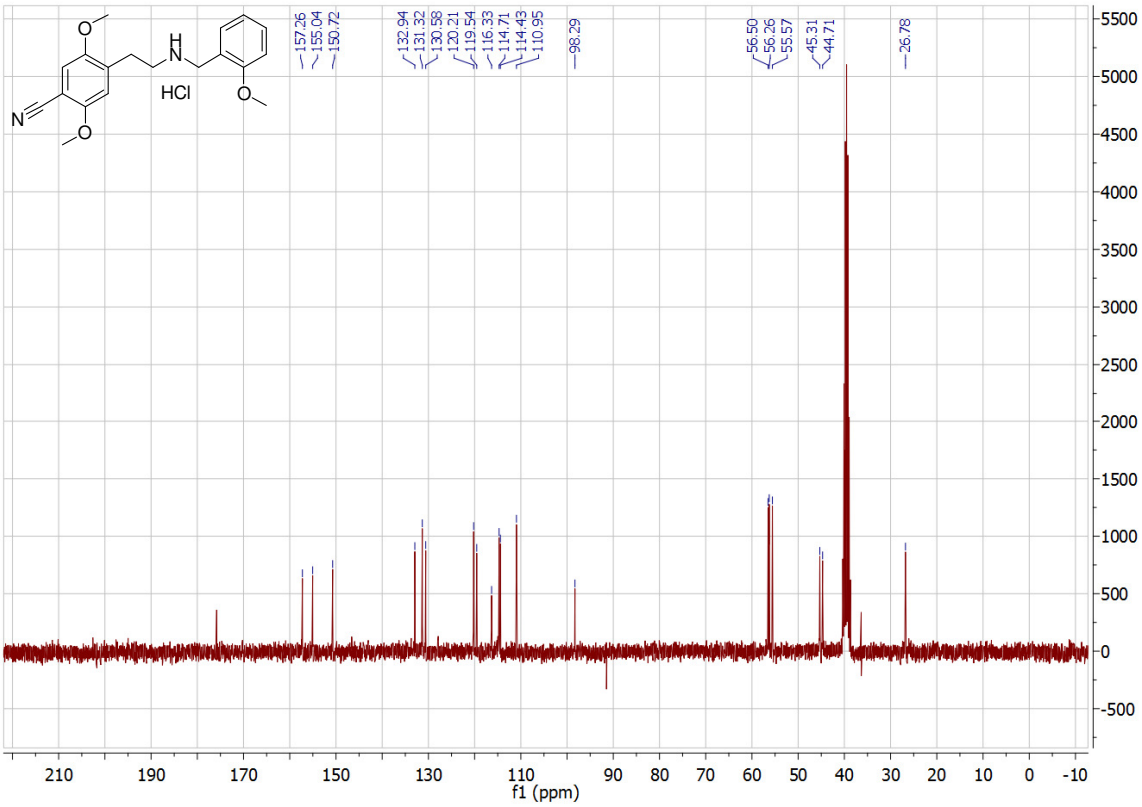
Compound **5d** (25TFM-NBMD)



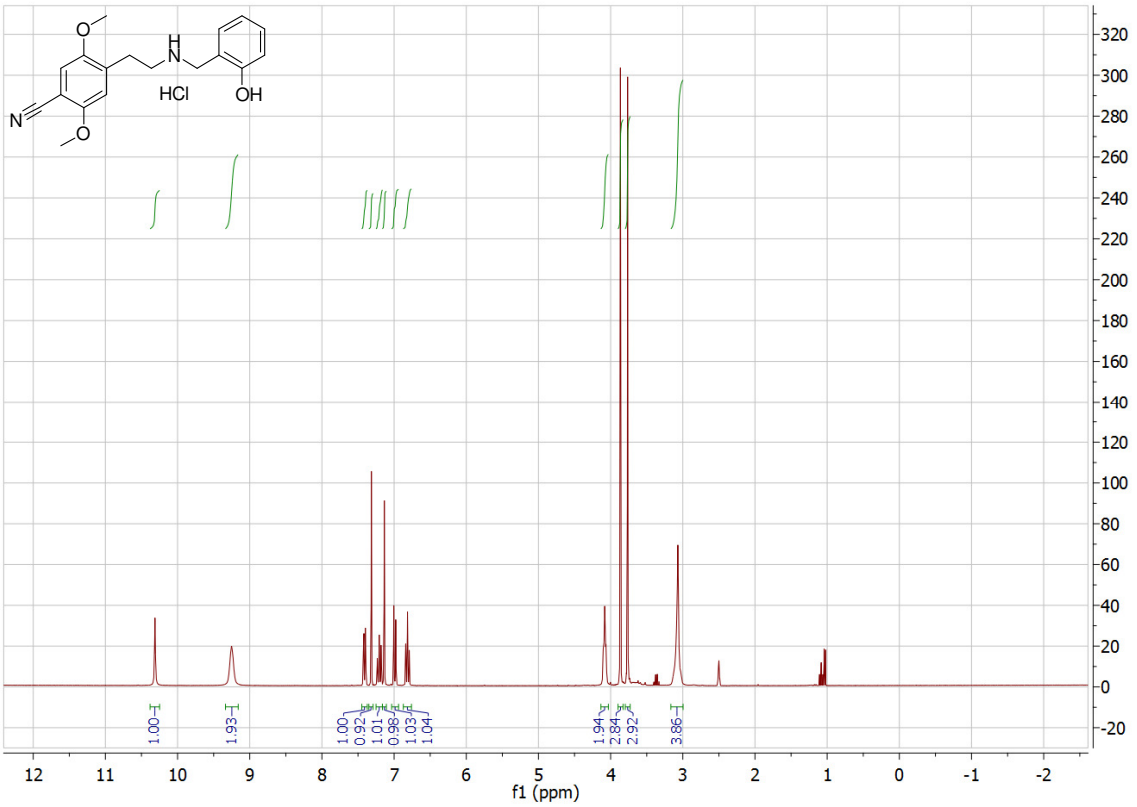


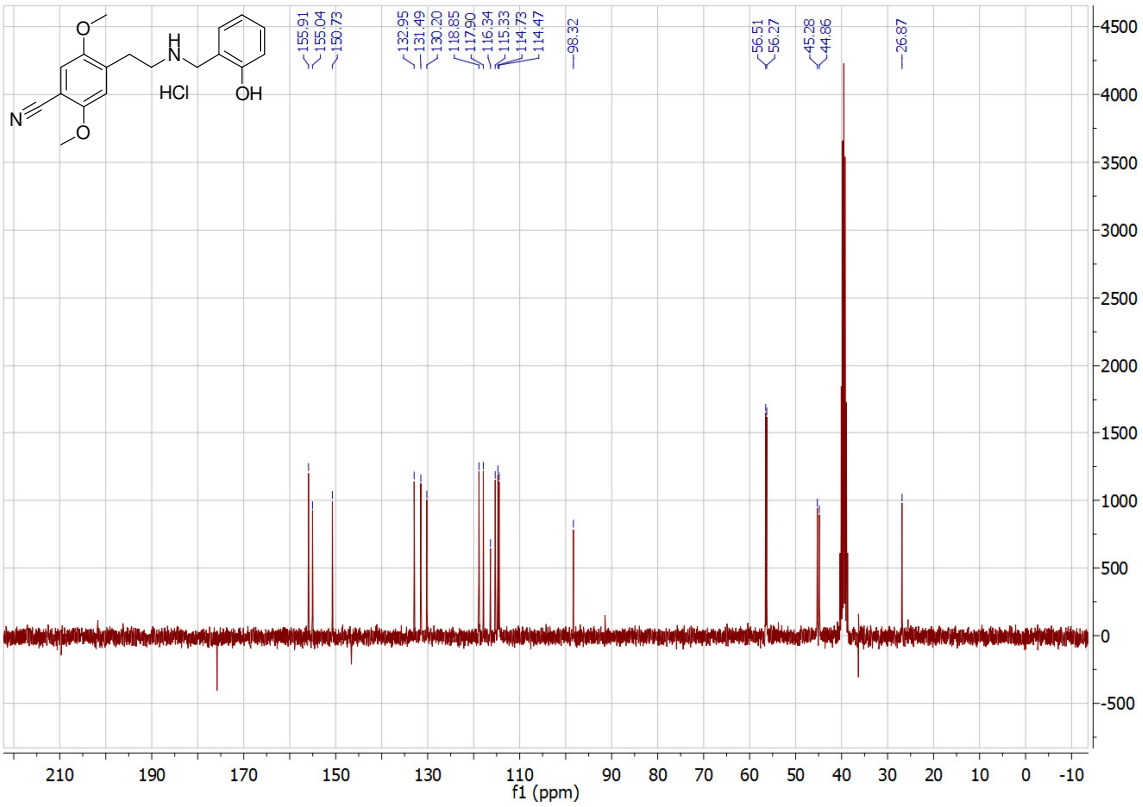
Compound **6a** (25CN-NBOMe)



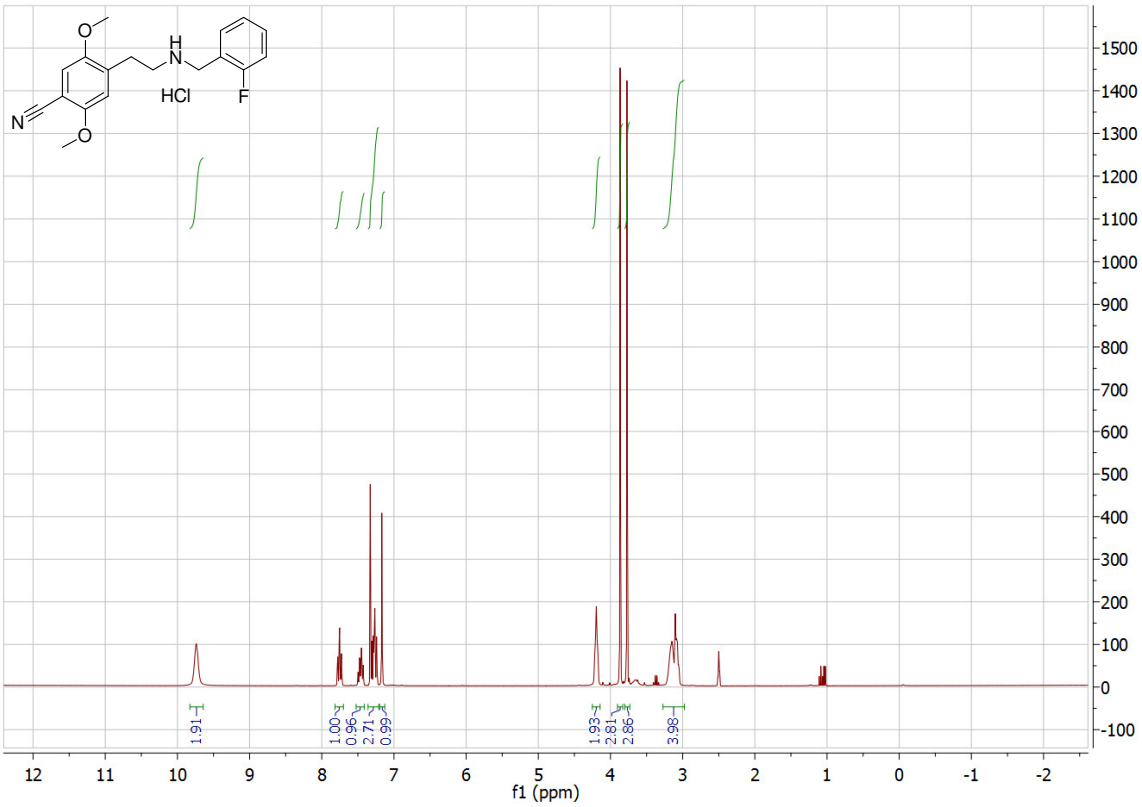


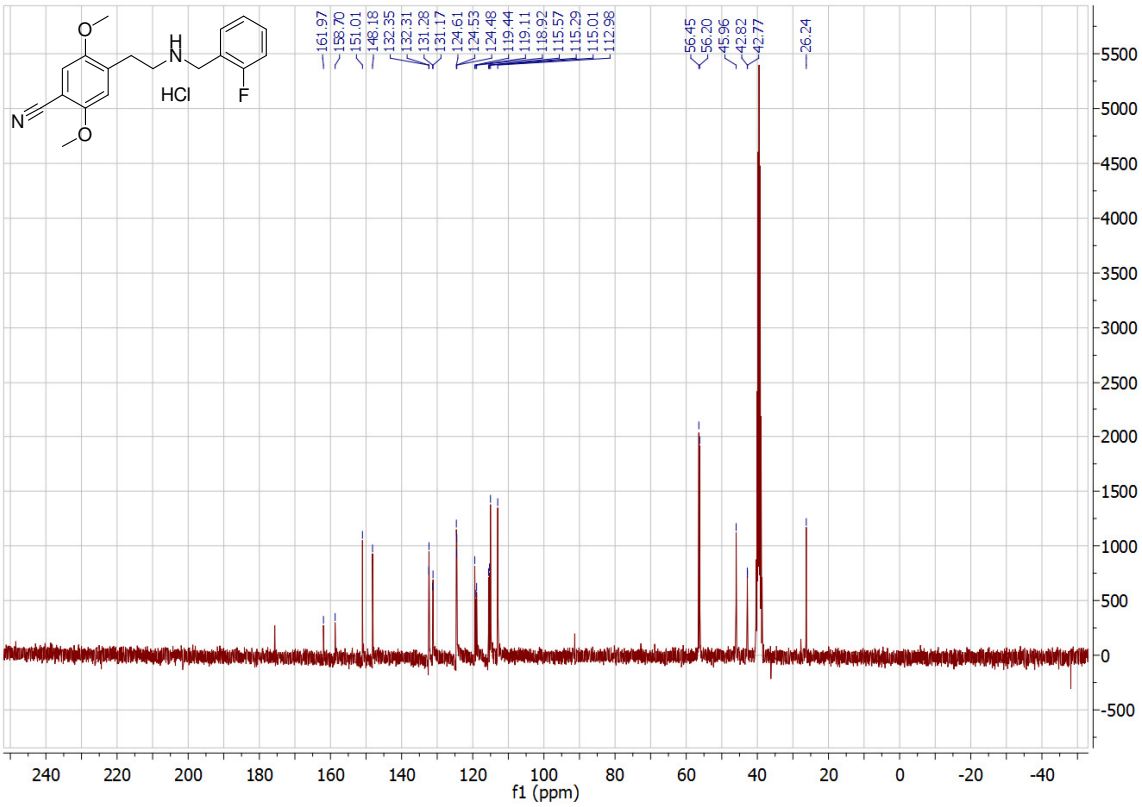
Compound **6b** (25CN-NBOH)



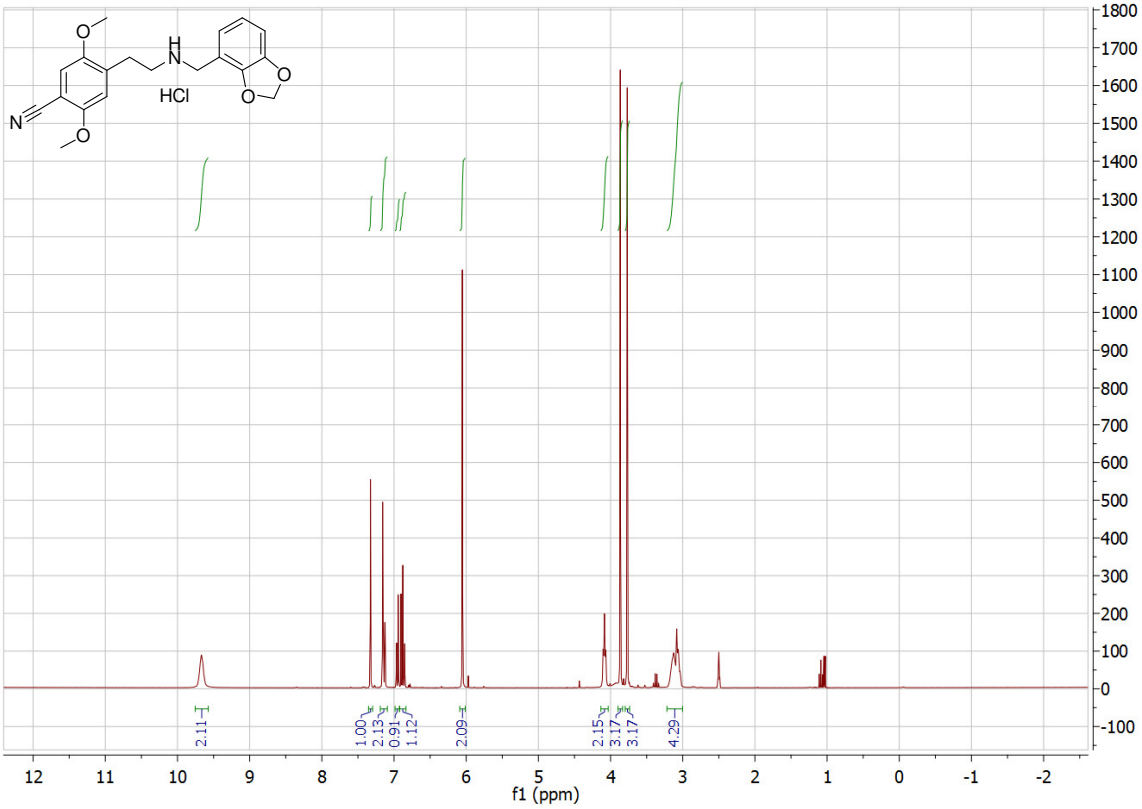


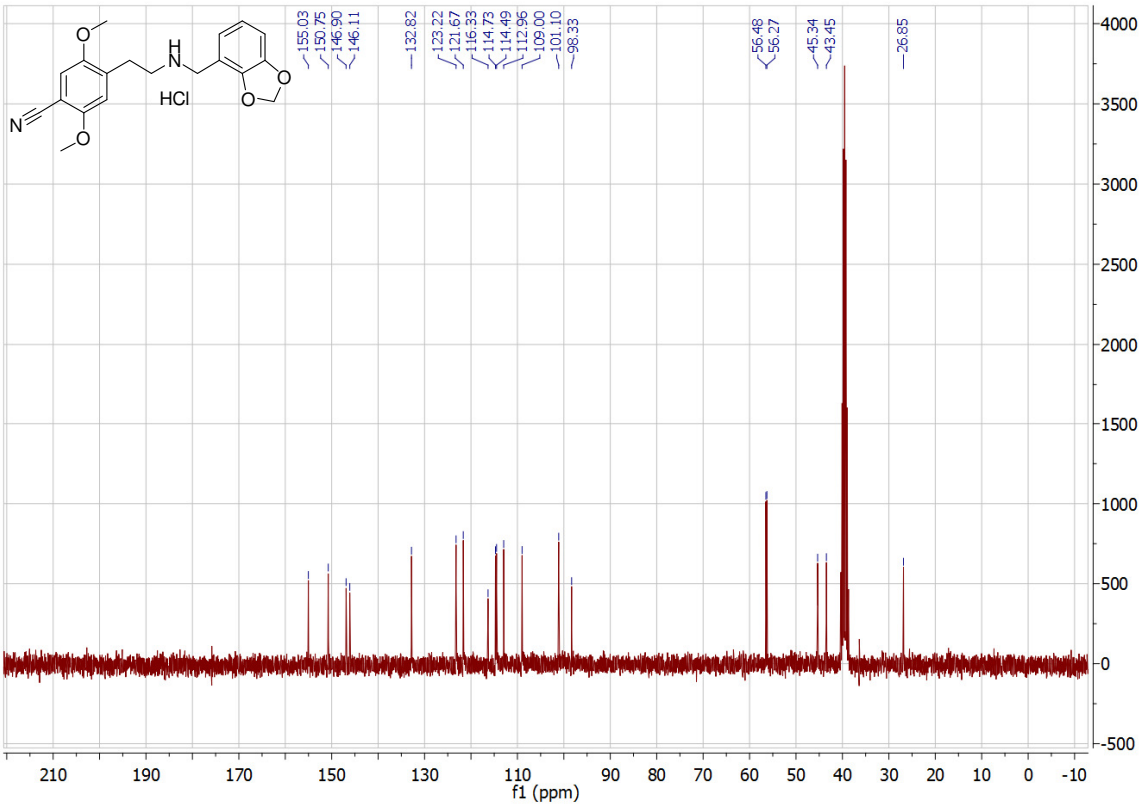
Compound **6c** (25CN-NBF)



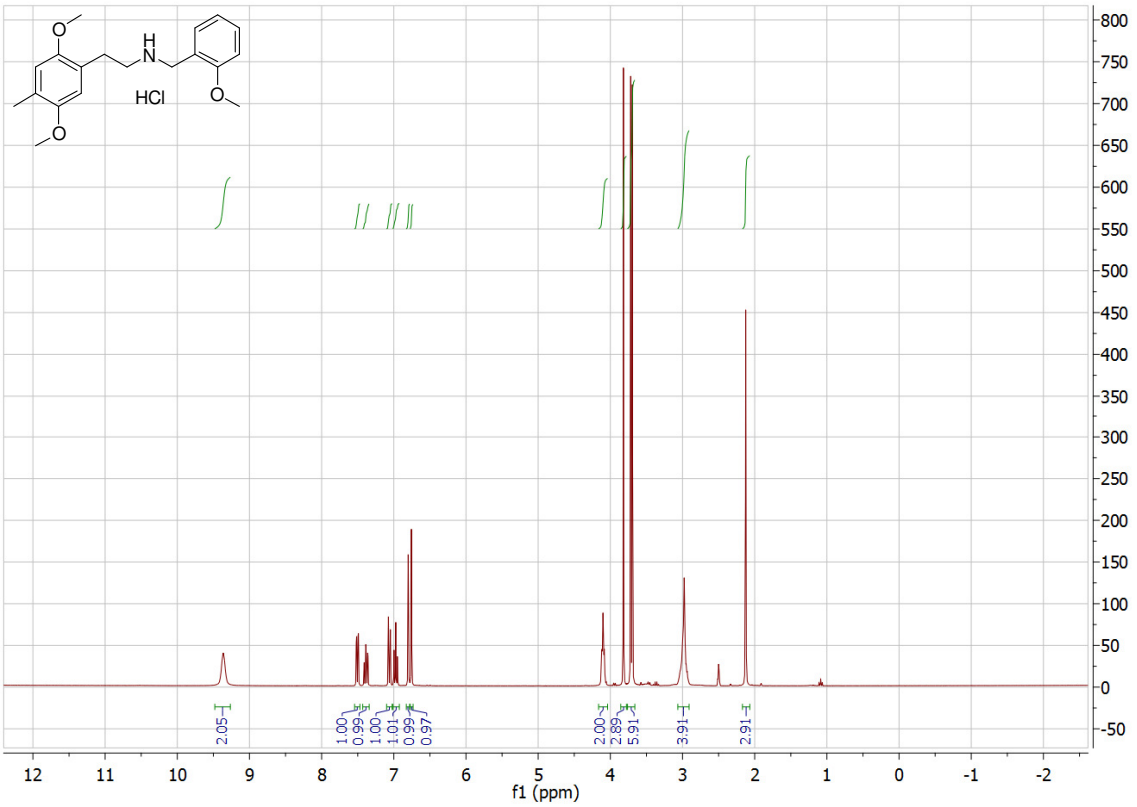


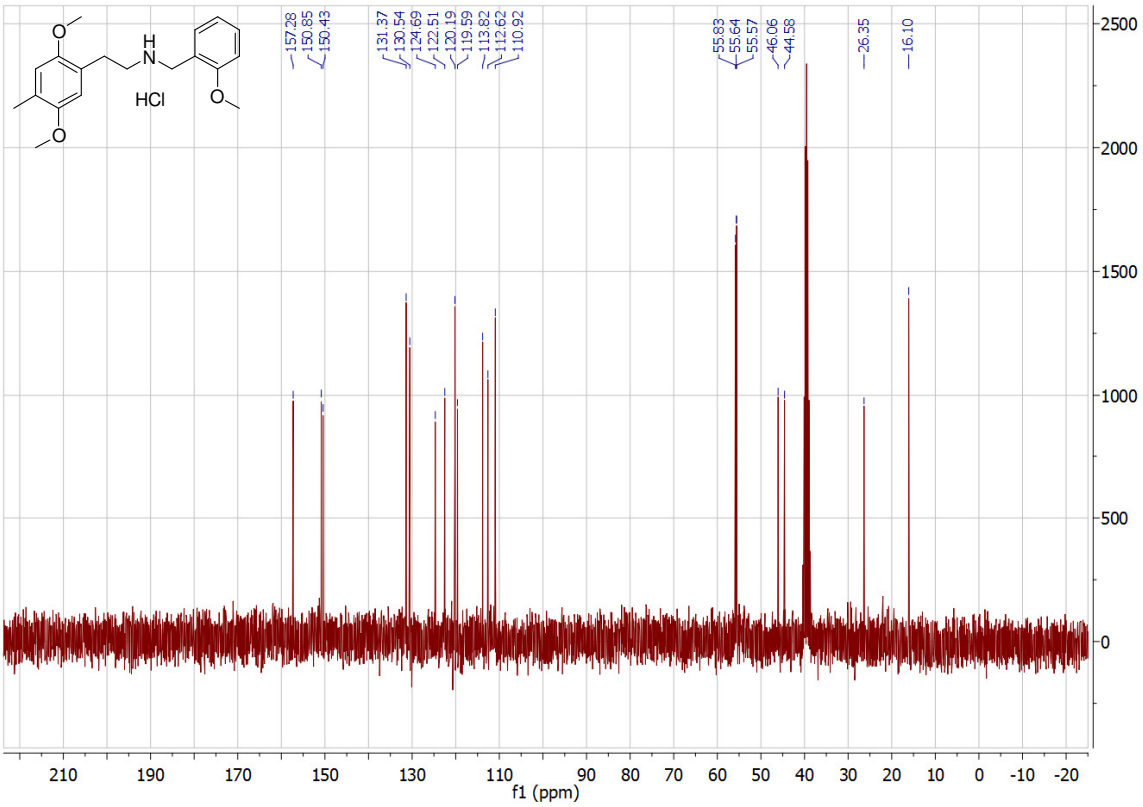
Compound **6d** (25CN-NBMD)



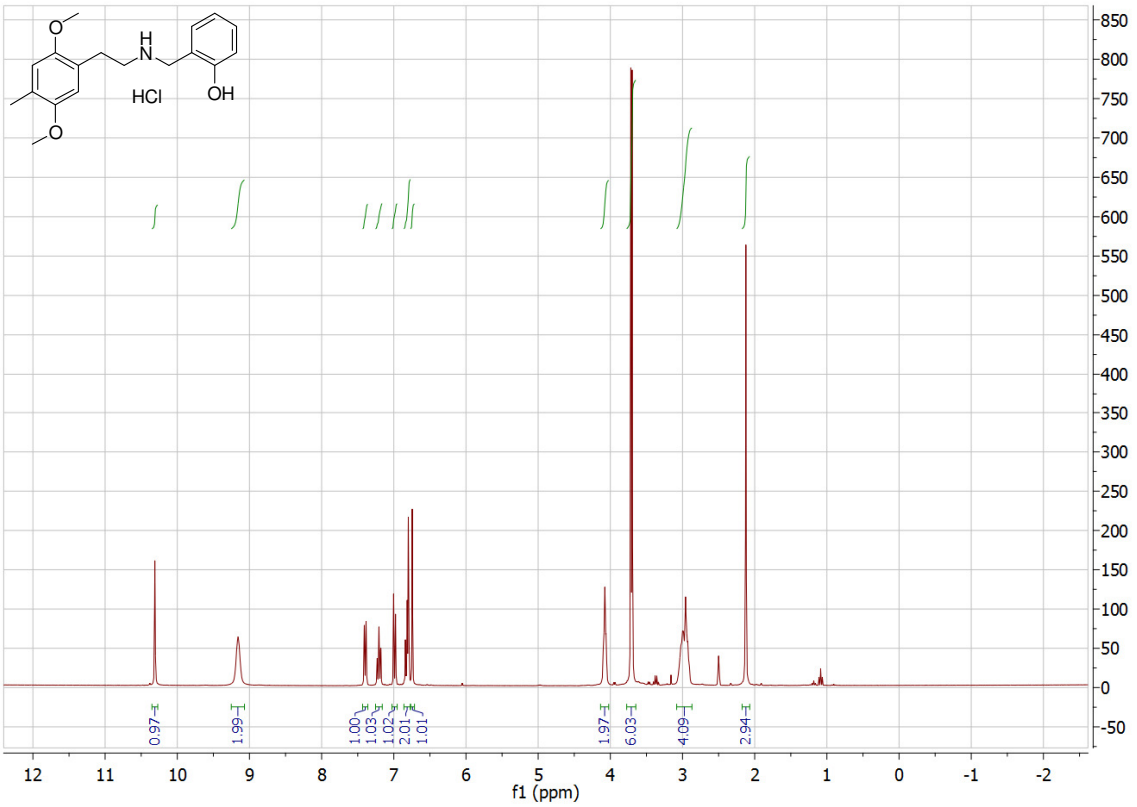


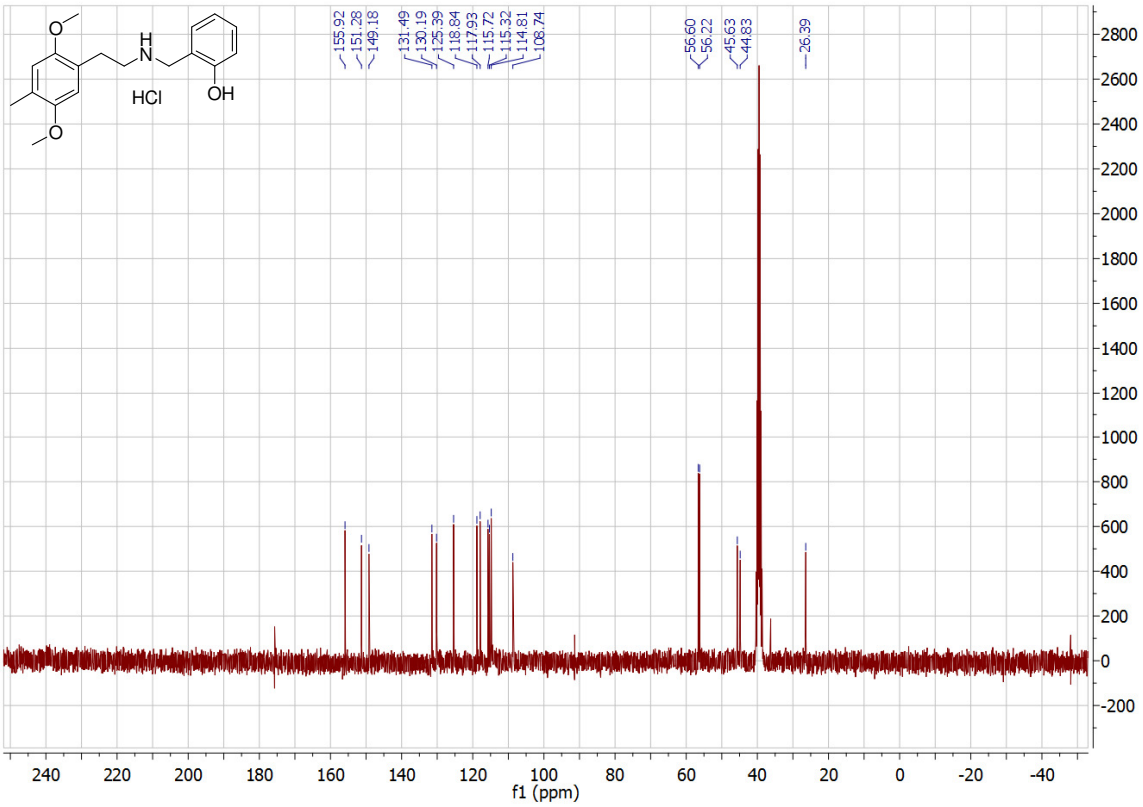
Compound **7a** (25D-NBOMe)



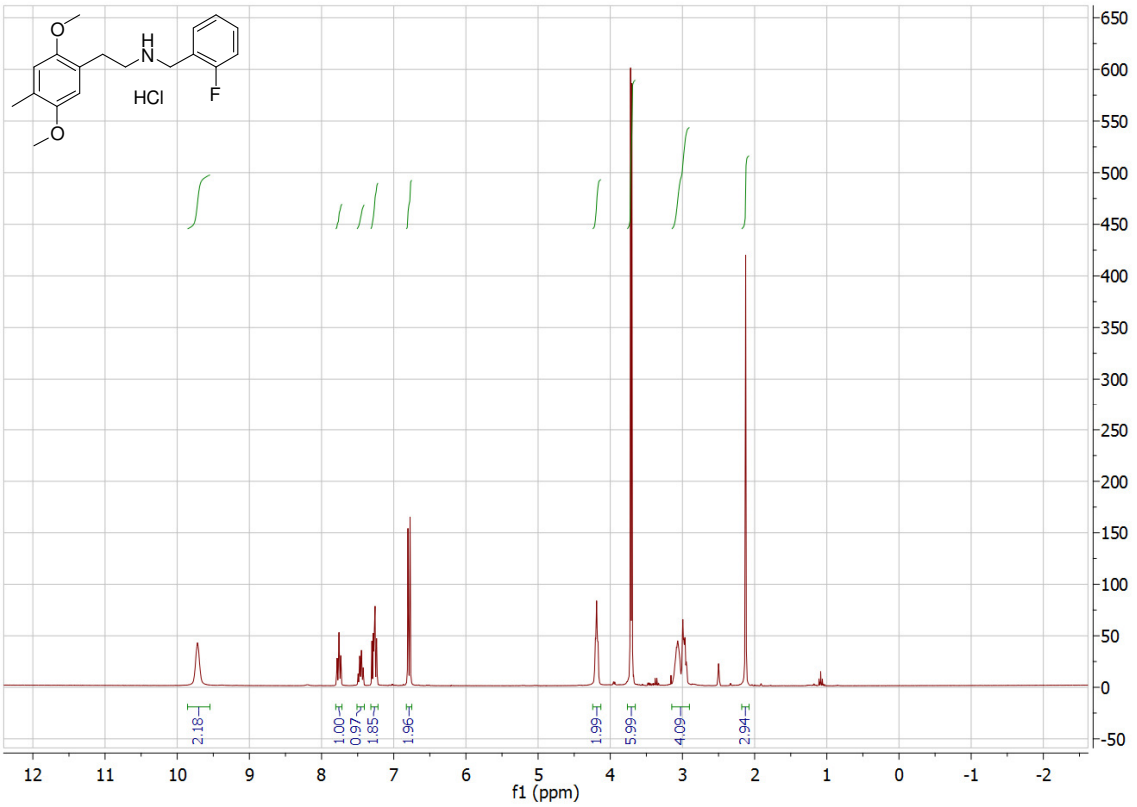


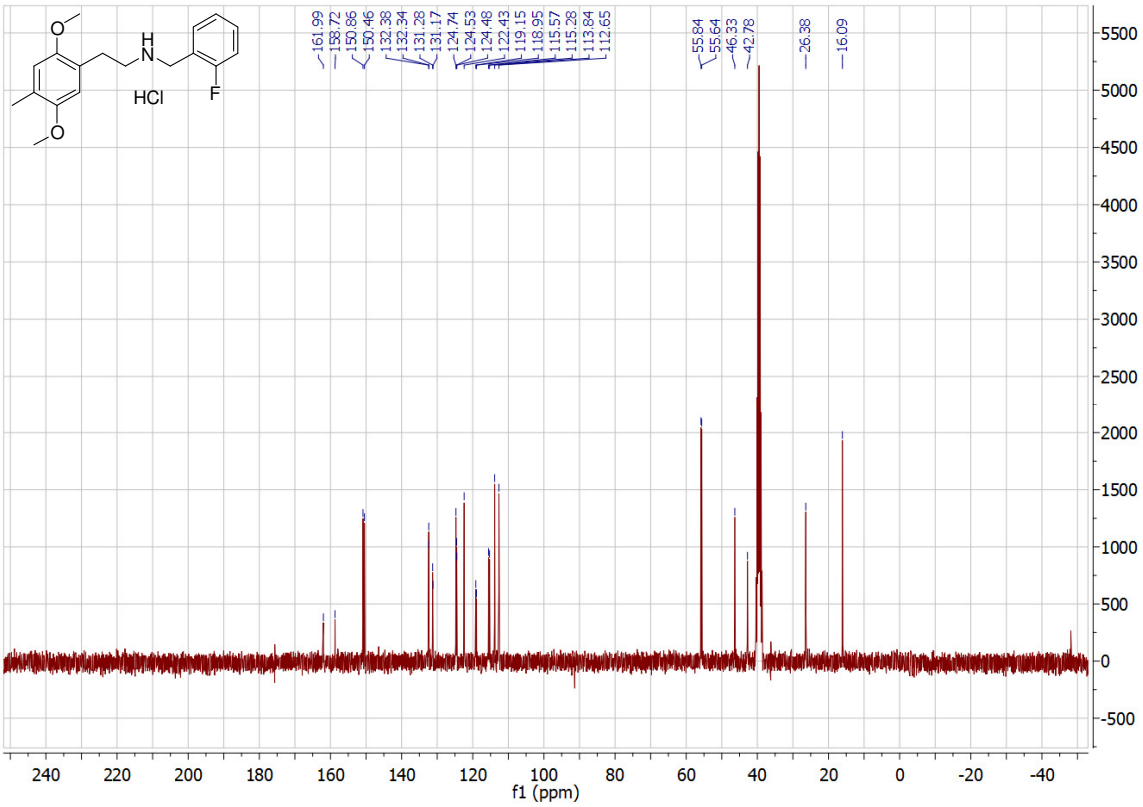
Compound **7b** (25D-NBOH)



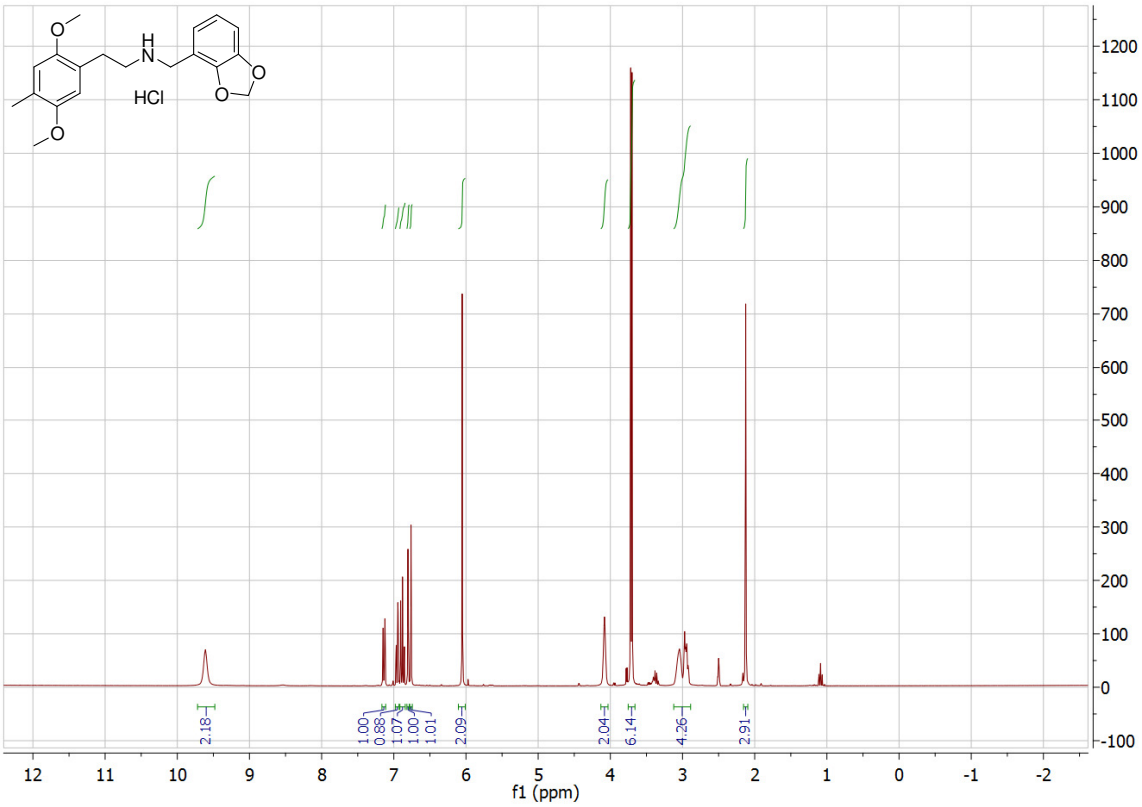


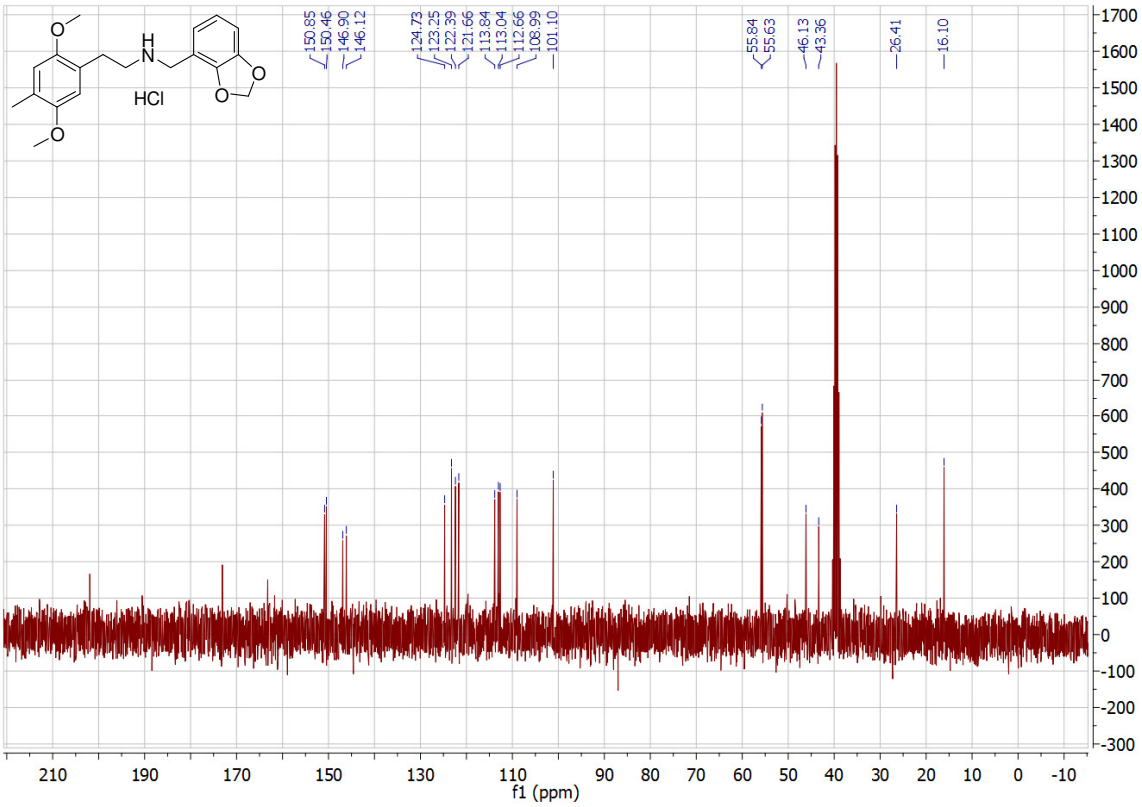
Compound XX (25D-NBF)



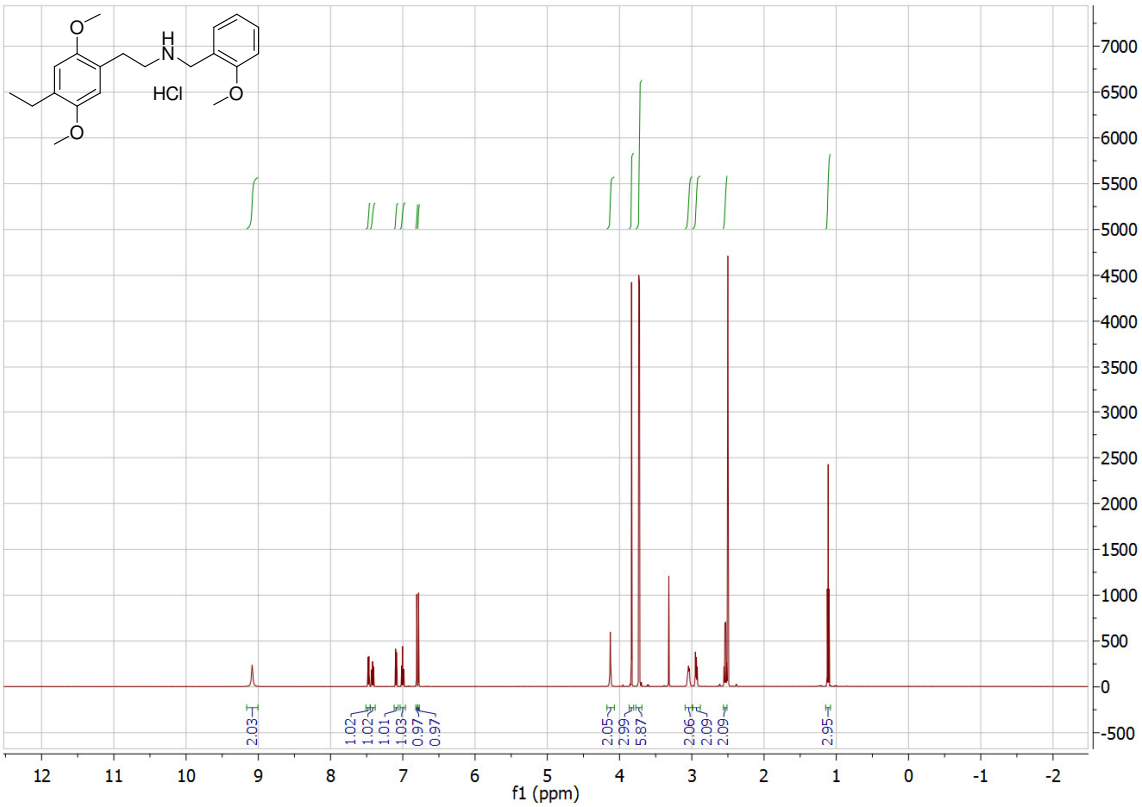


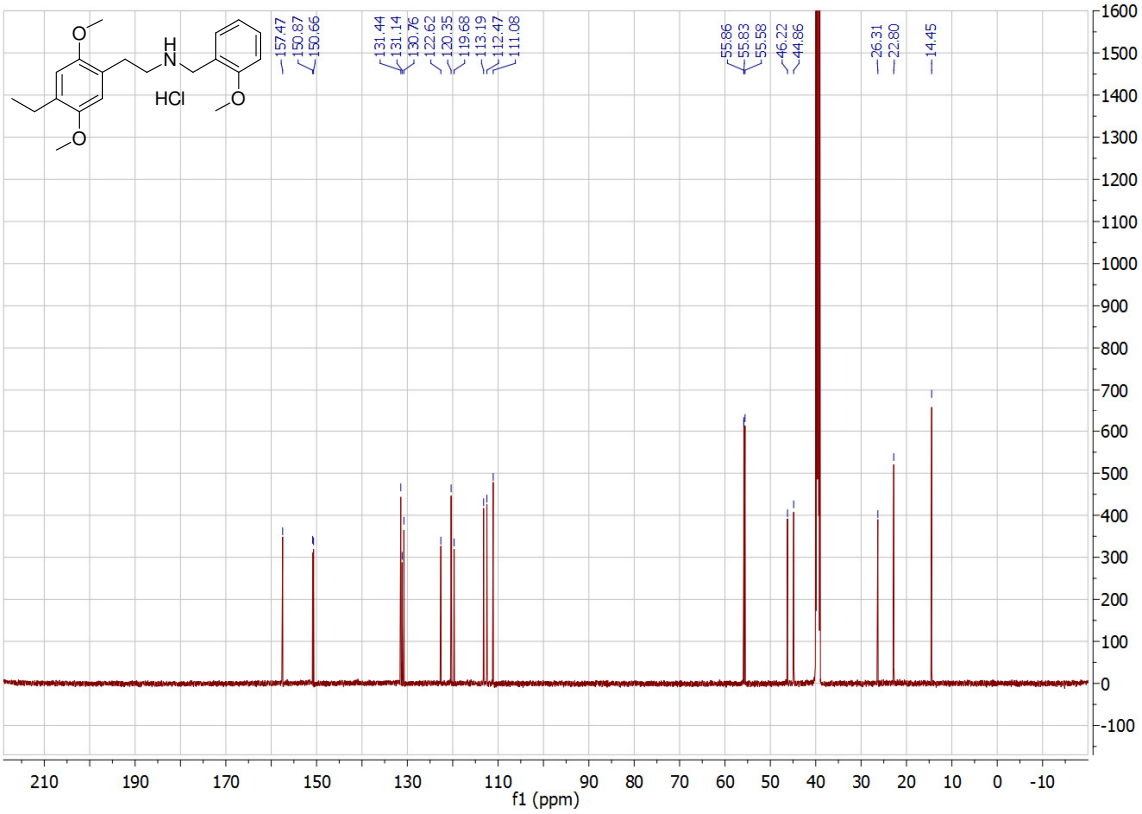
Compound **7d** (25D-NBMD)



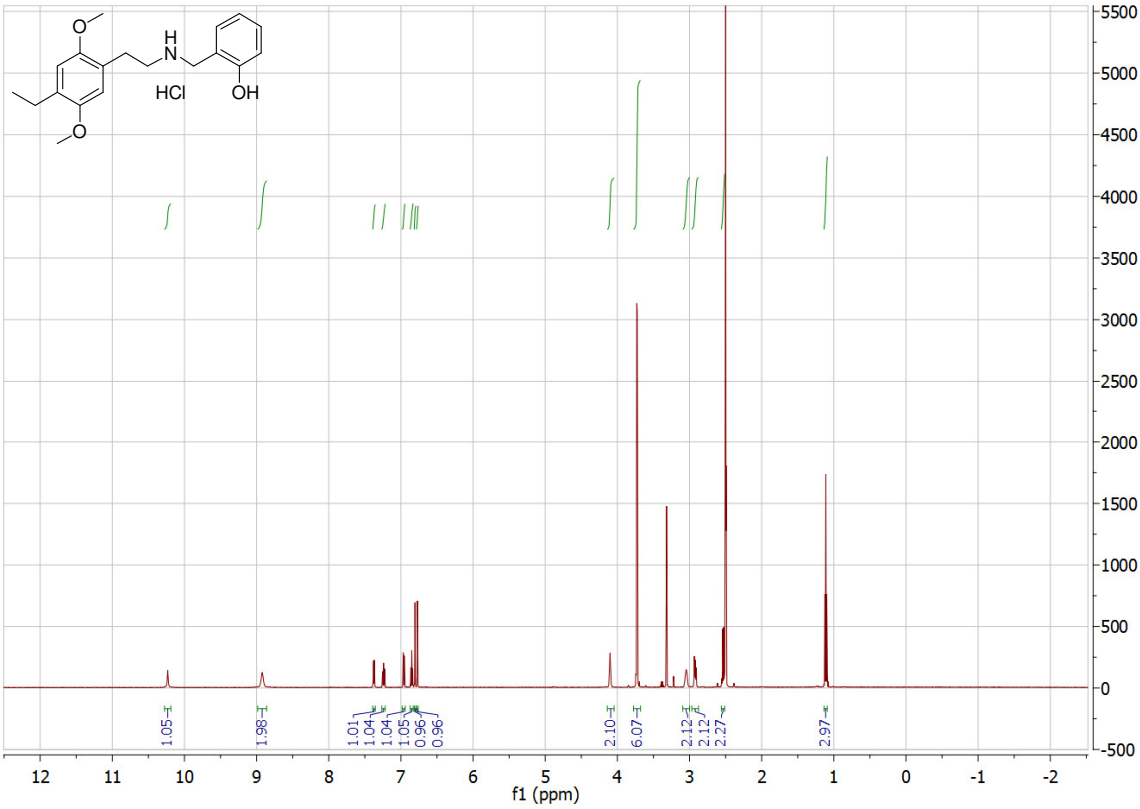


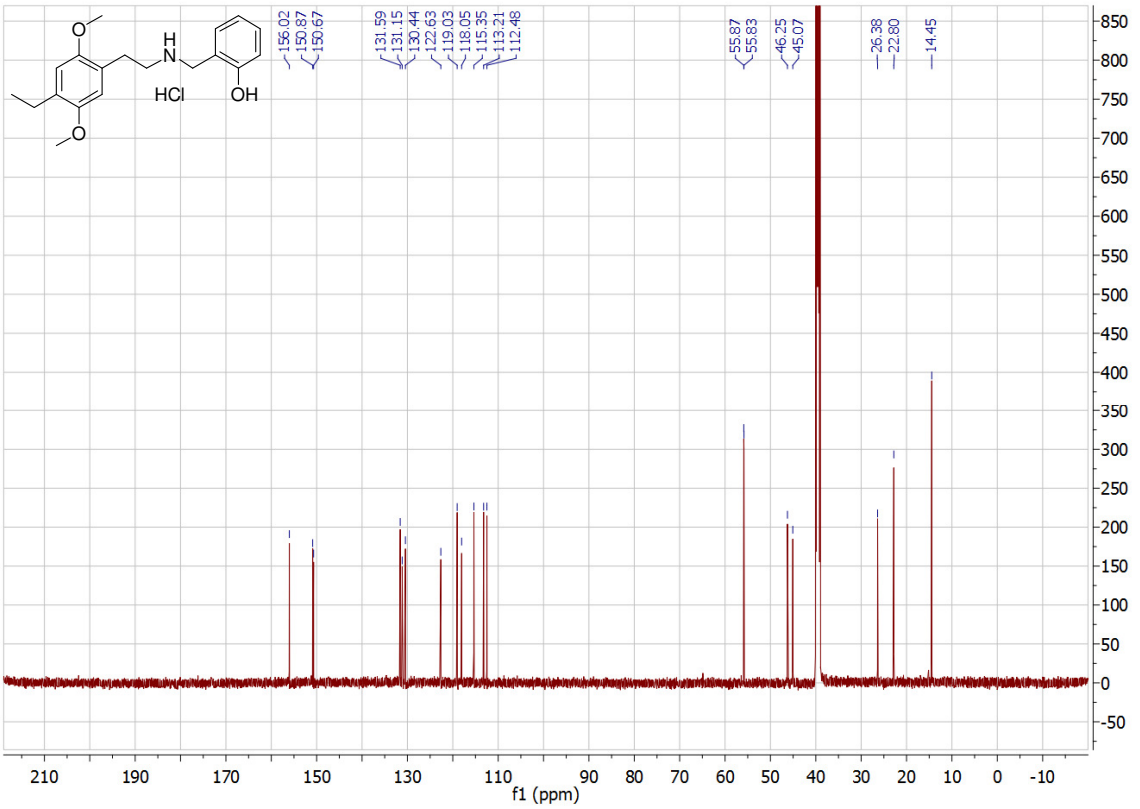
Compound **8a** (25E-NBOMe)



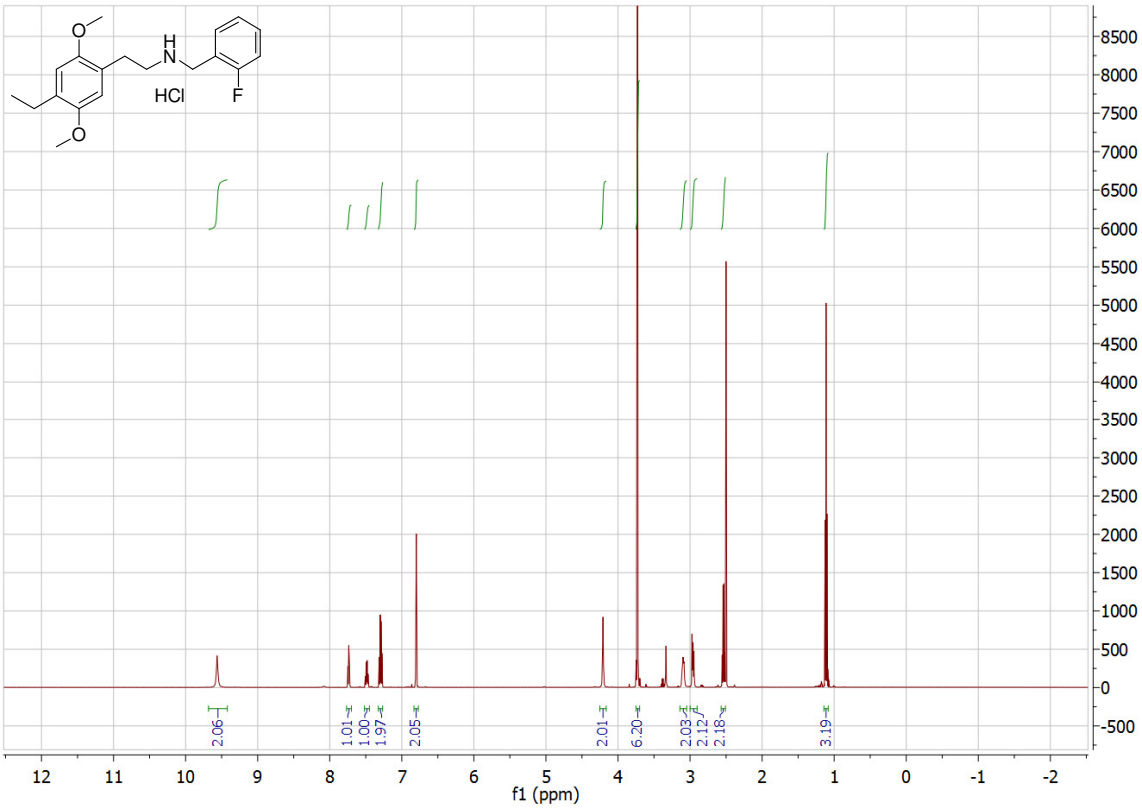


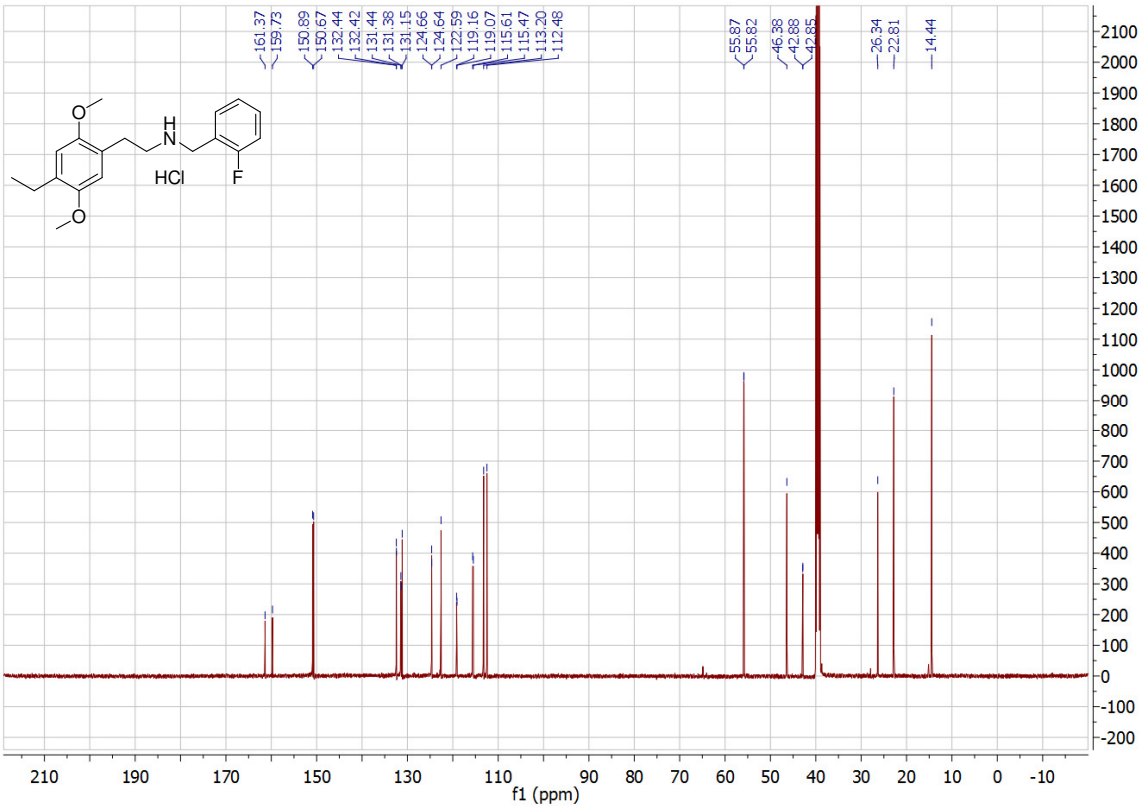
Compound **8b** (25E-NBOH)



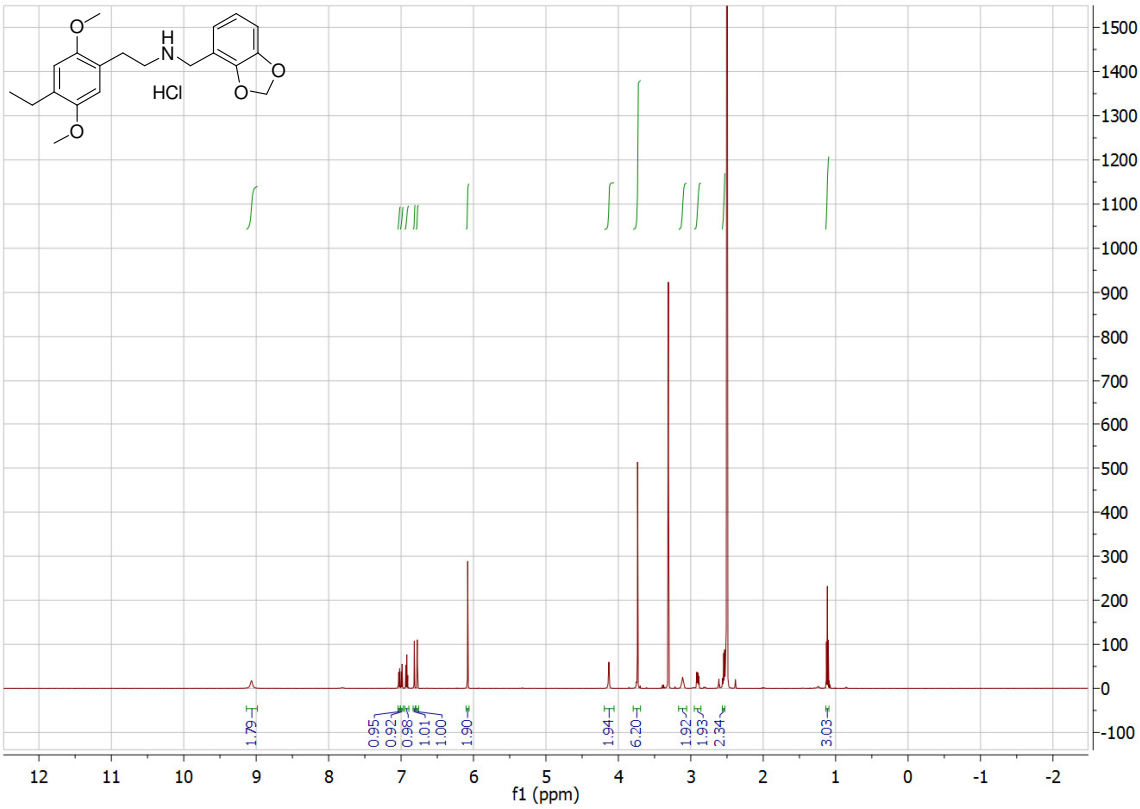


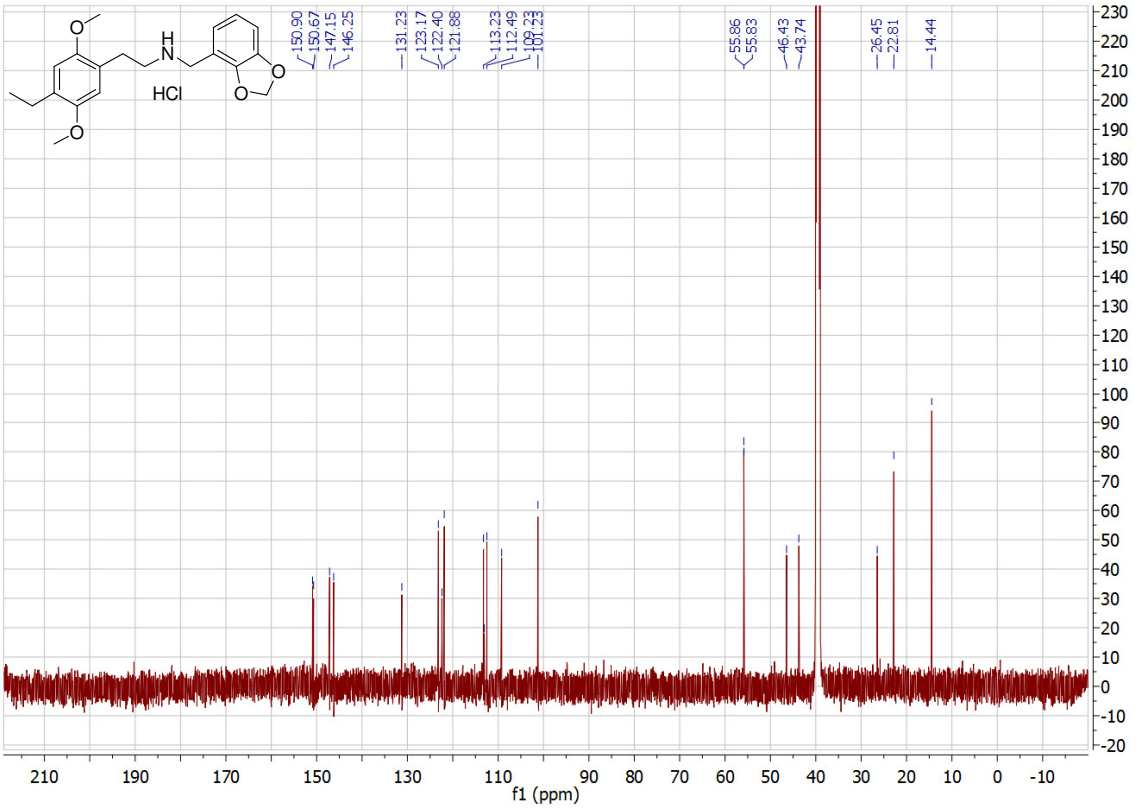
Compound **8c** (25E-NBF)



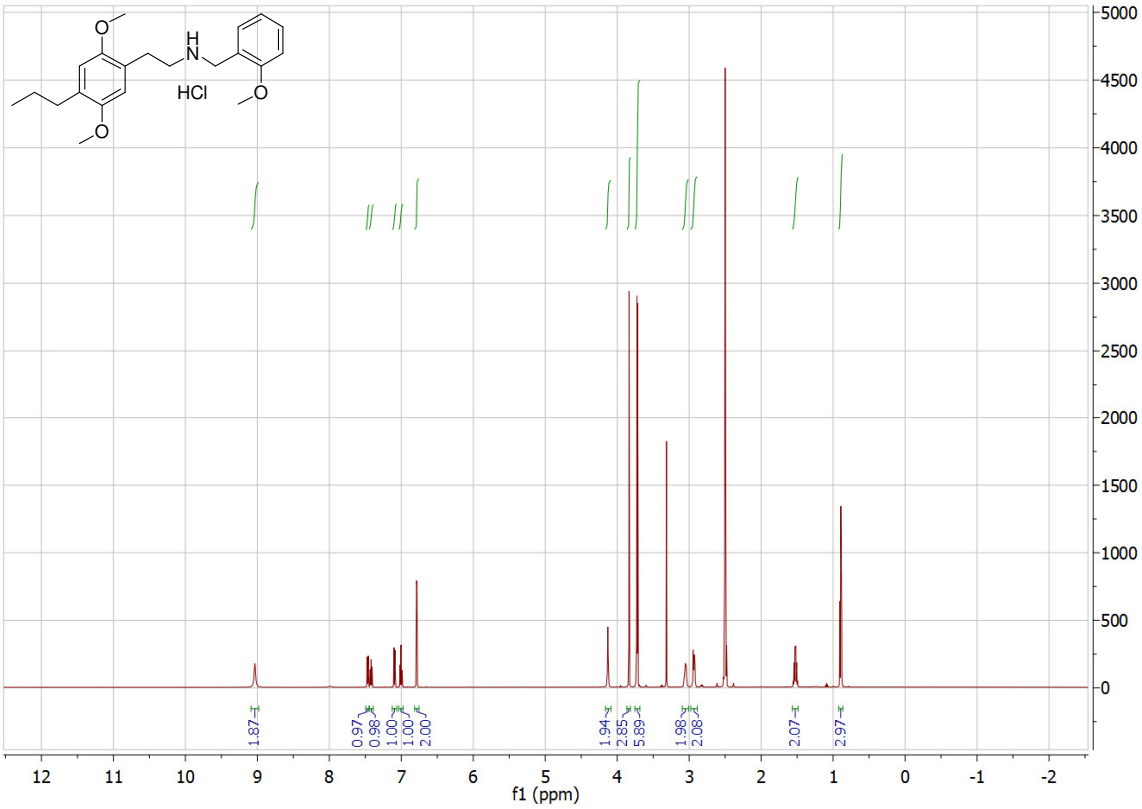


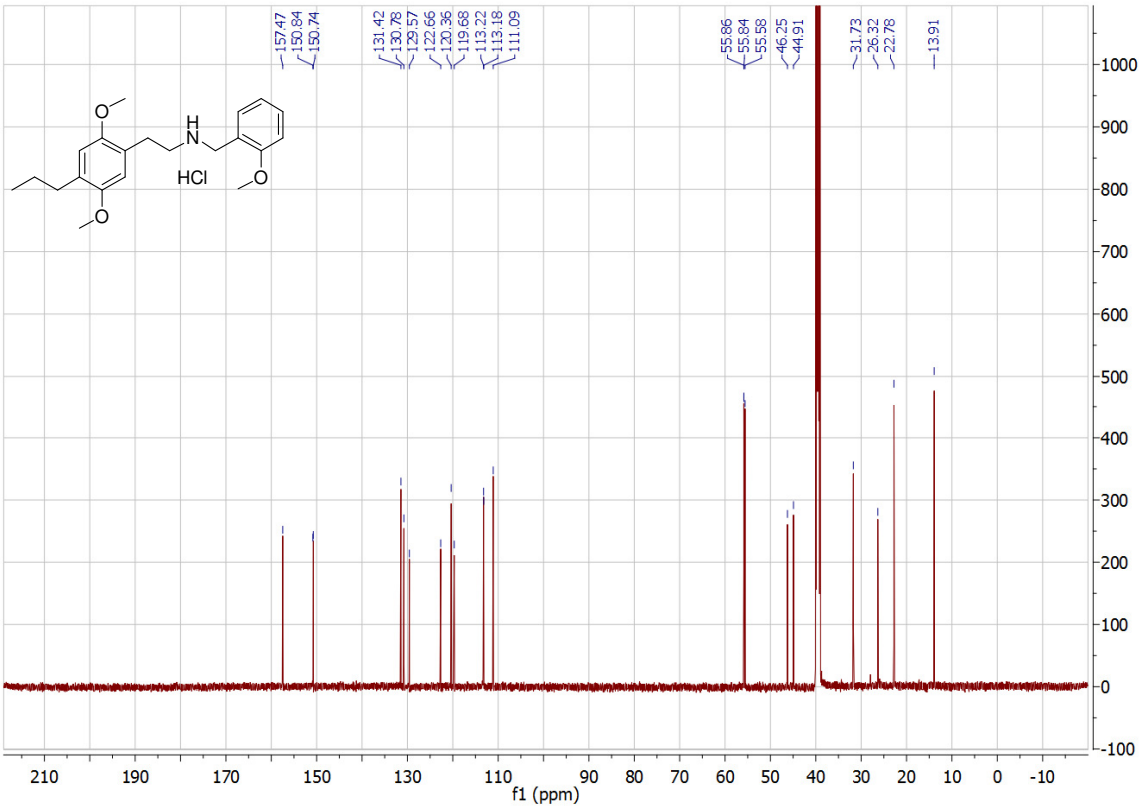
Compound **8d** (25E-NBMD)



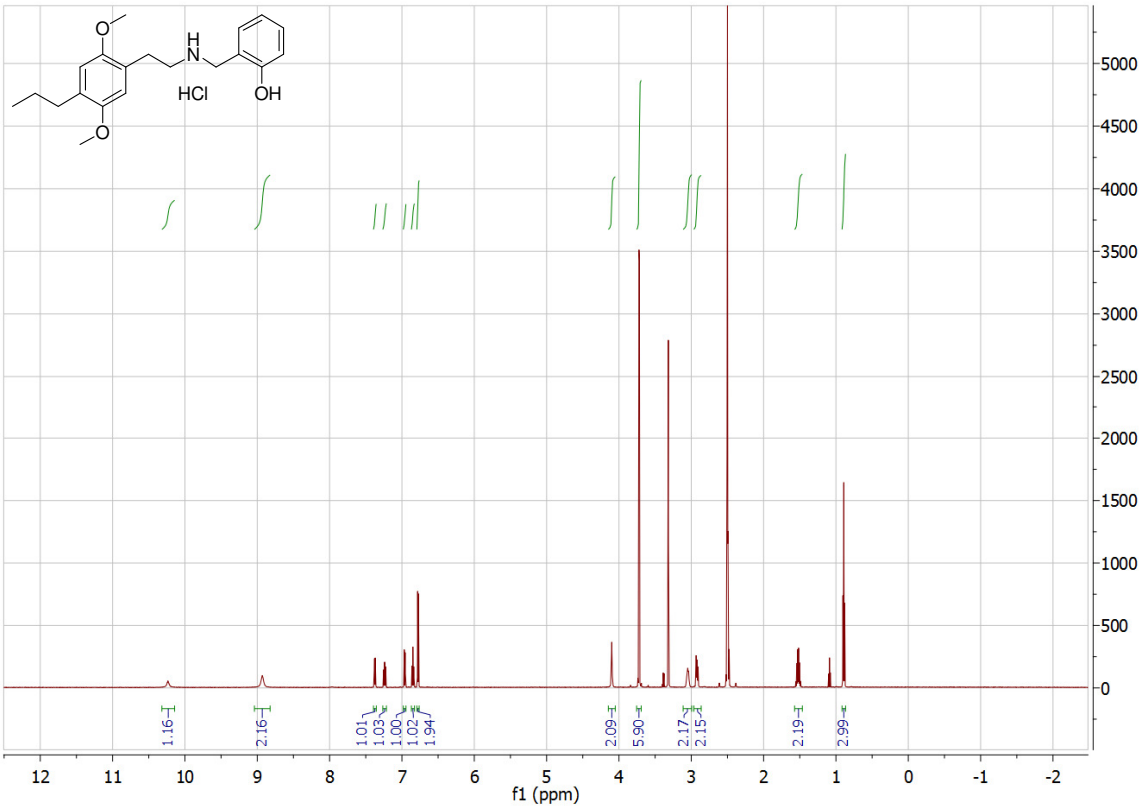


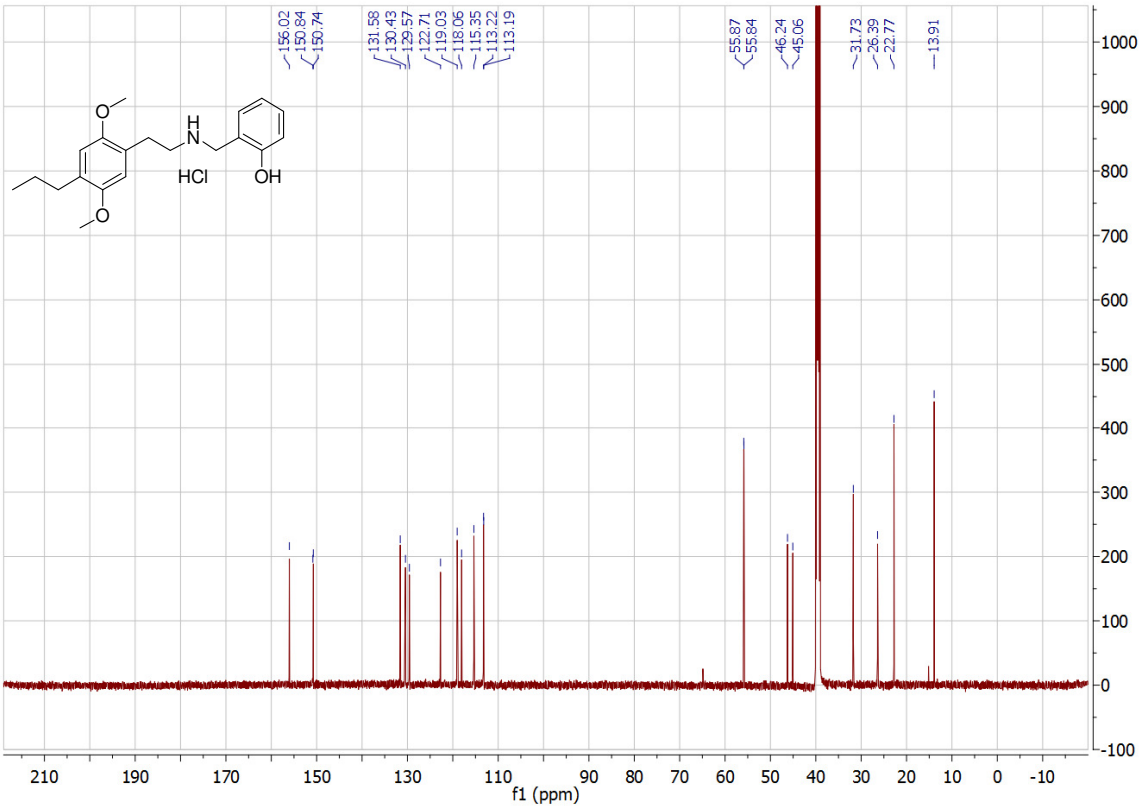
Compound **9a** (25P-NBOMe)



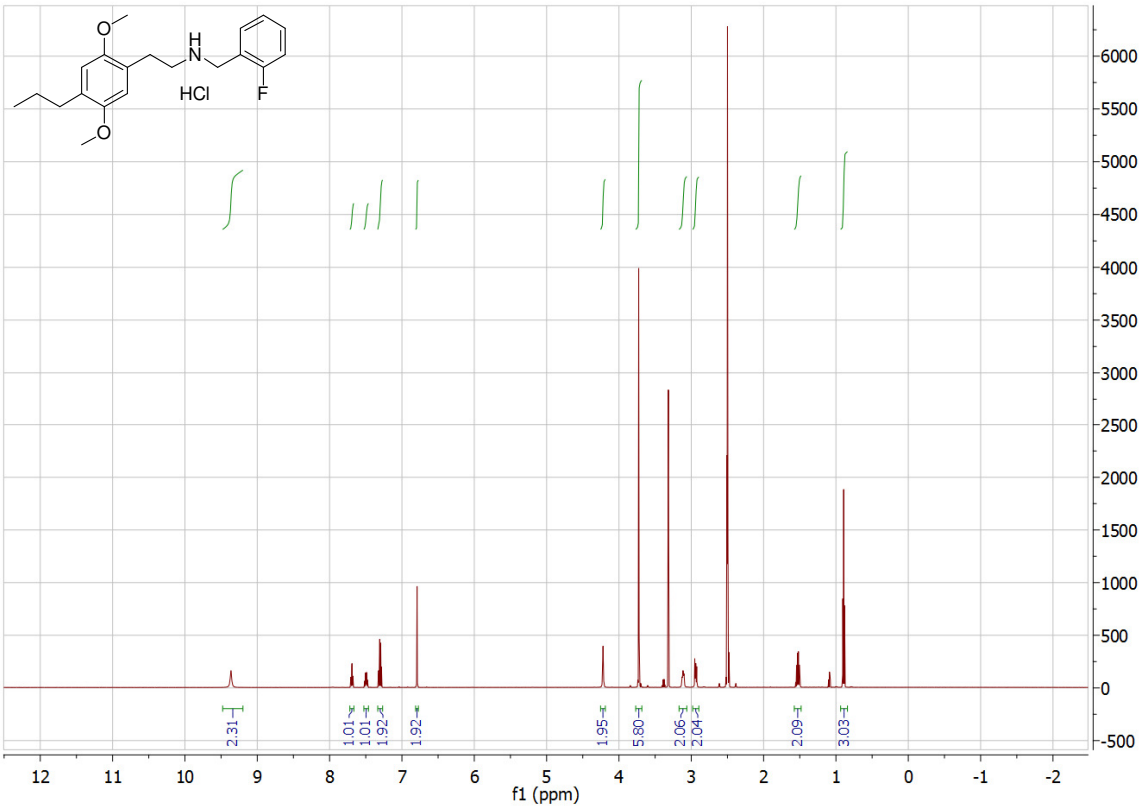


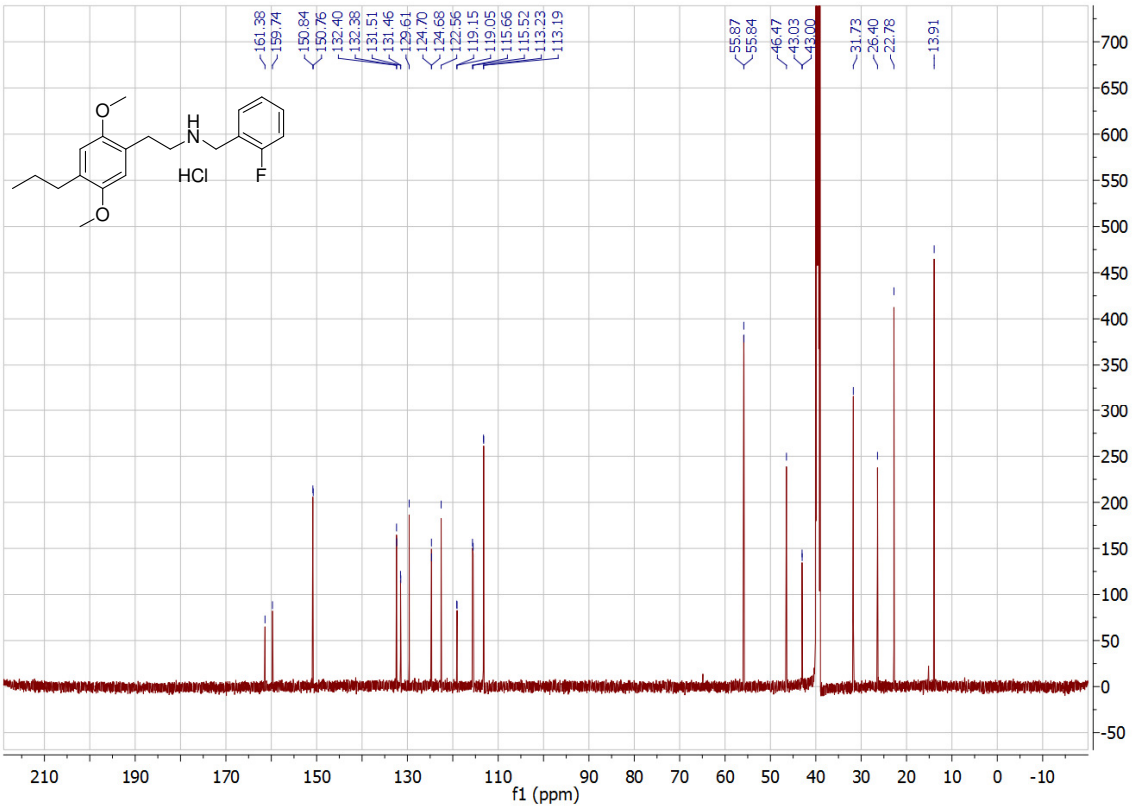
Compound **9b** (25P-NBOH)



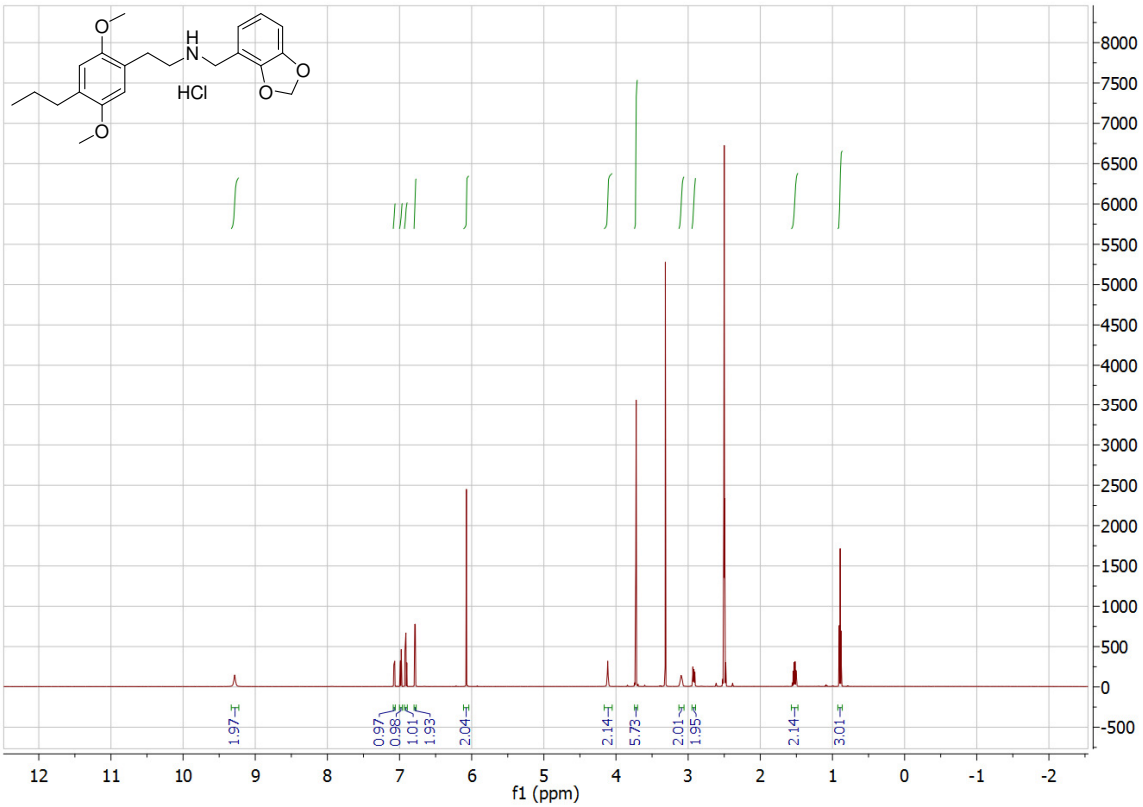


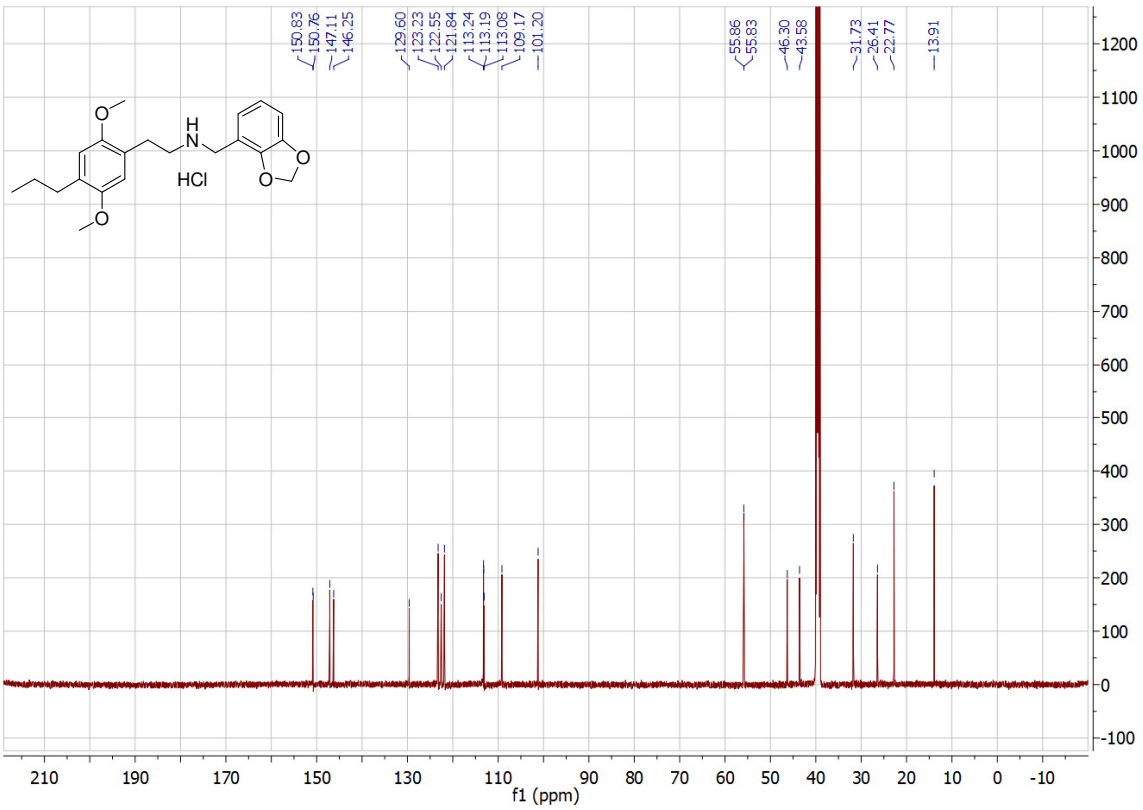
Compound **9c** (25P-NBF)



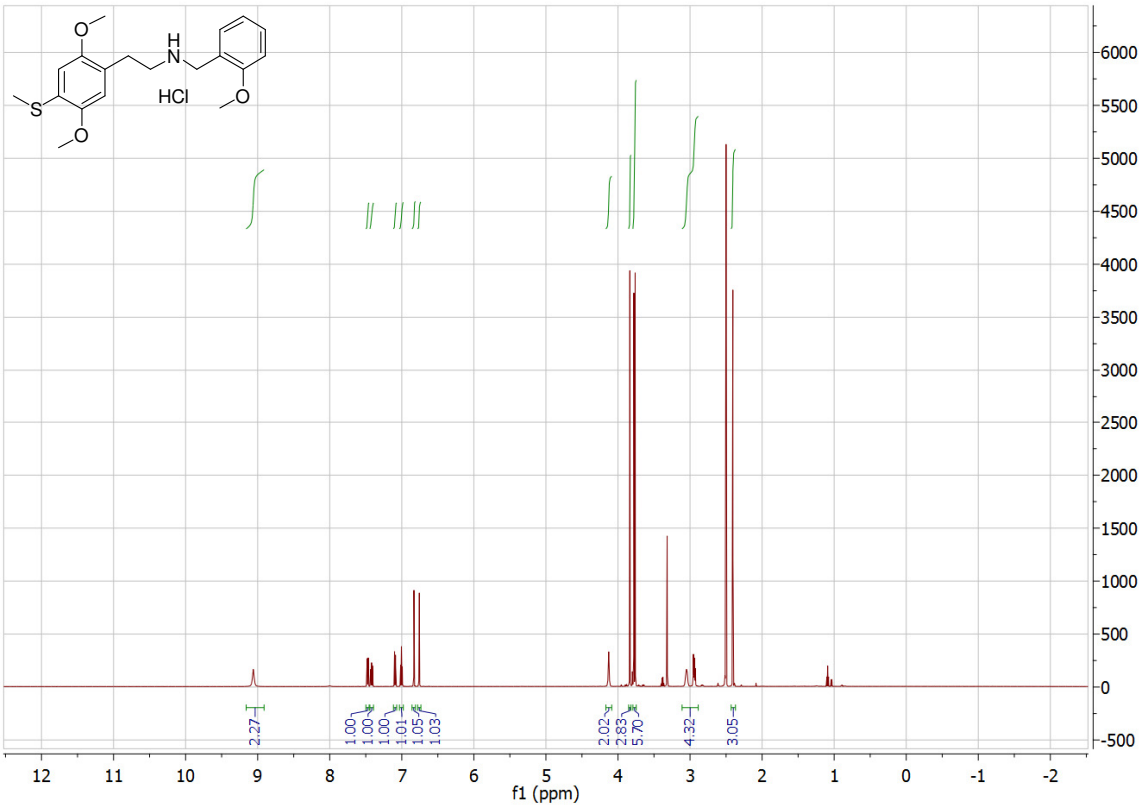


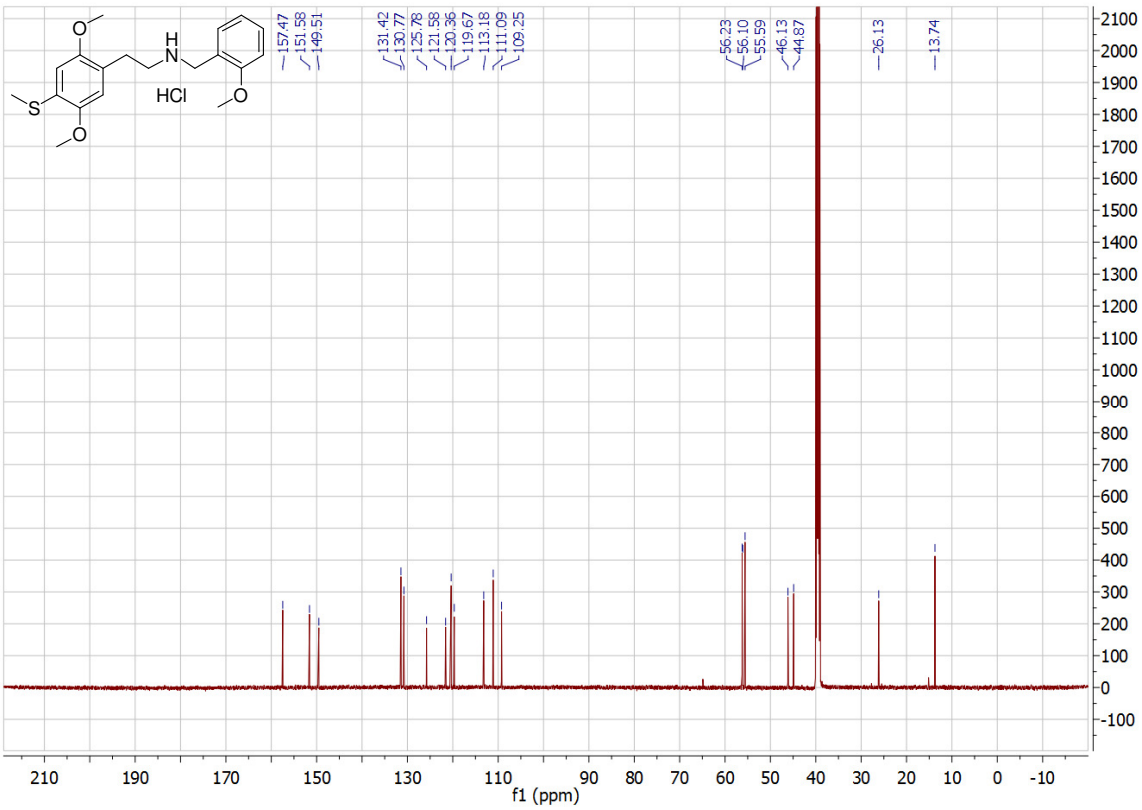
Compound **9d** (25P-NBMD)



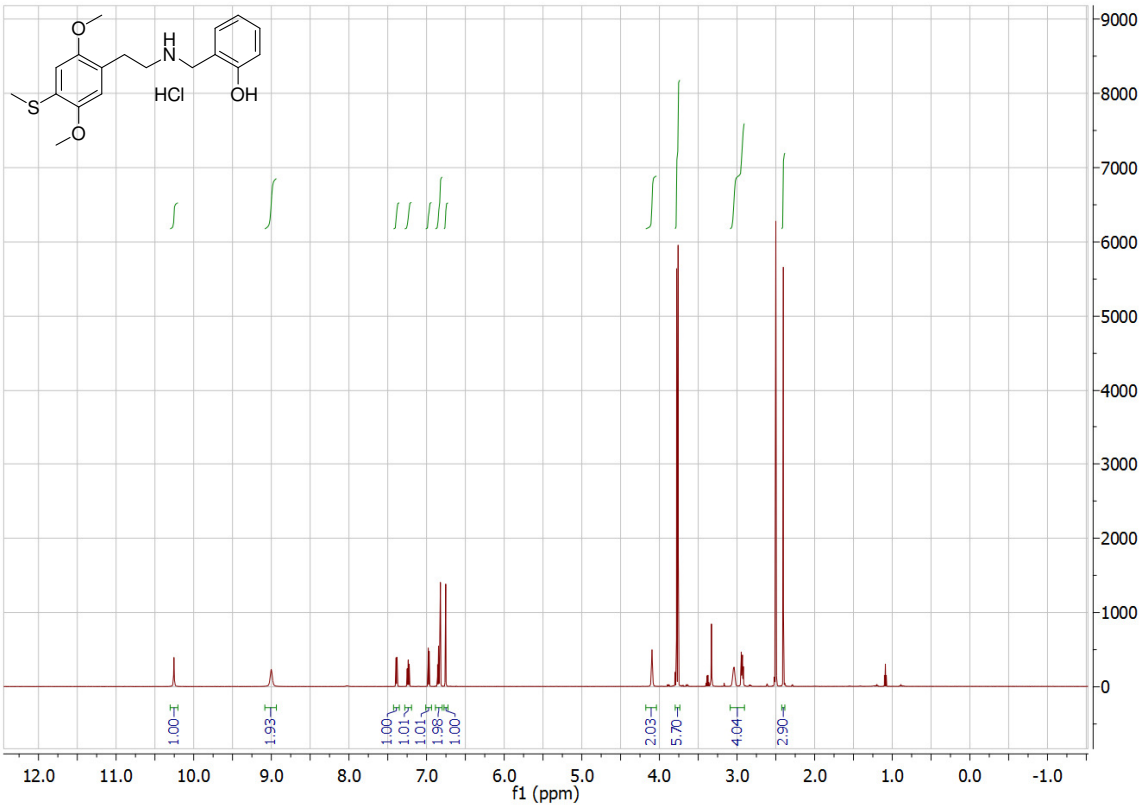


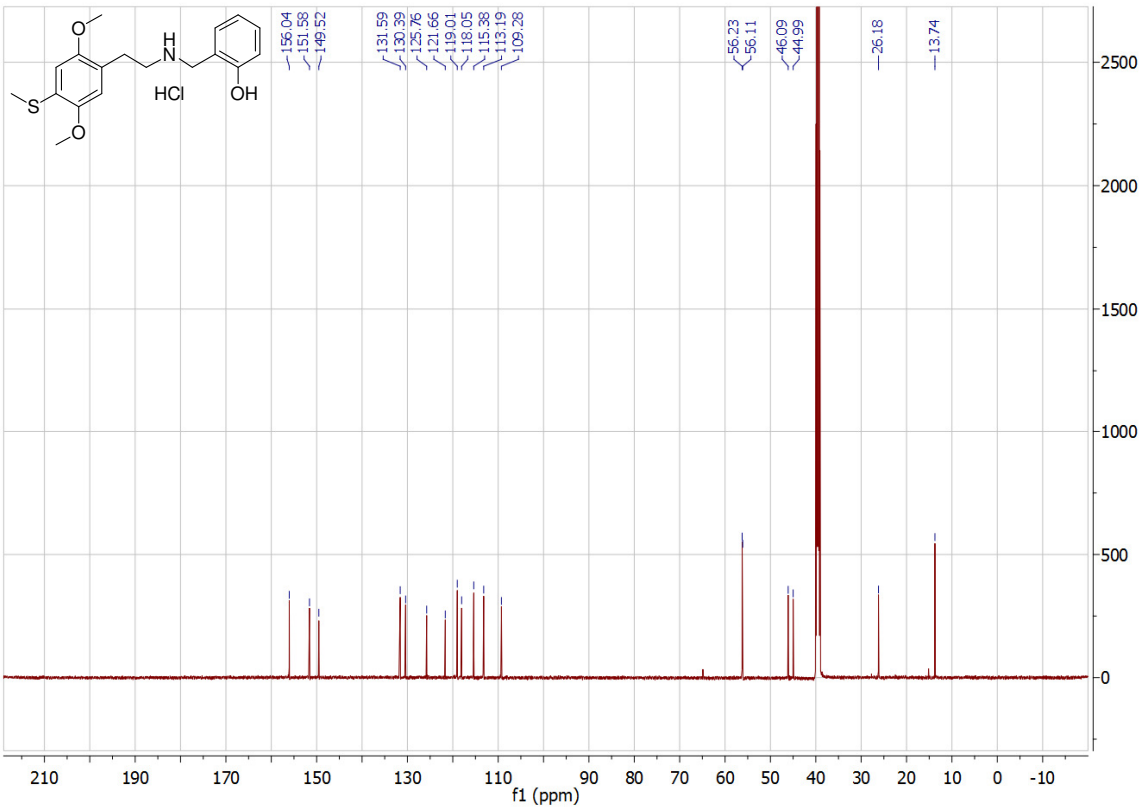
Compound **10a** (25T-NBOMe)



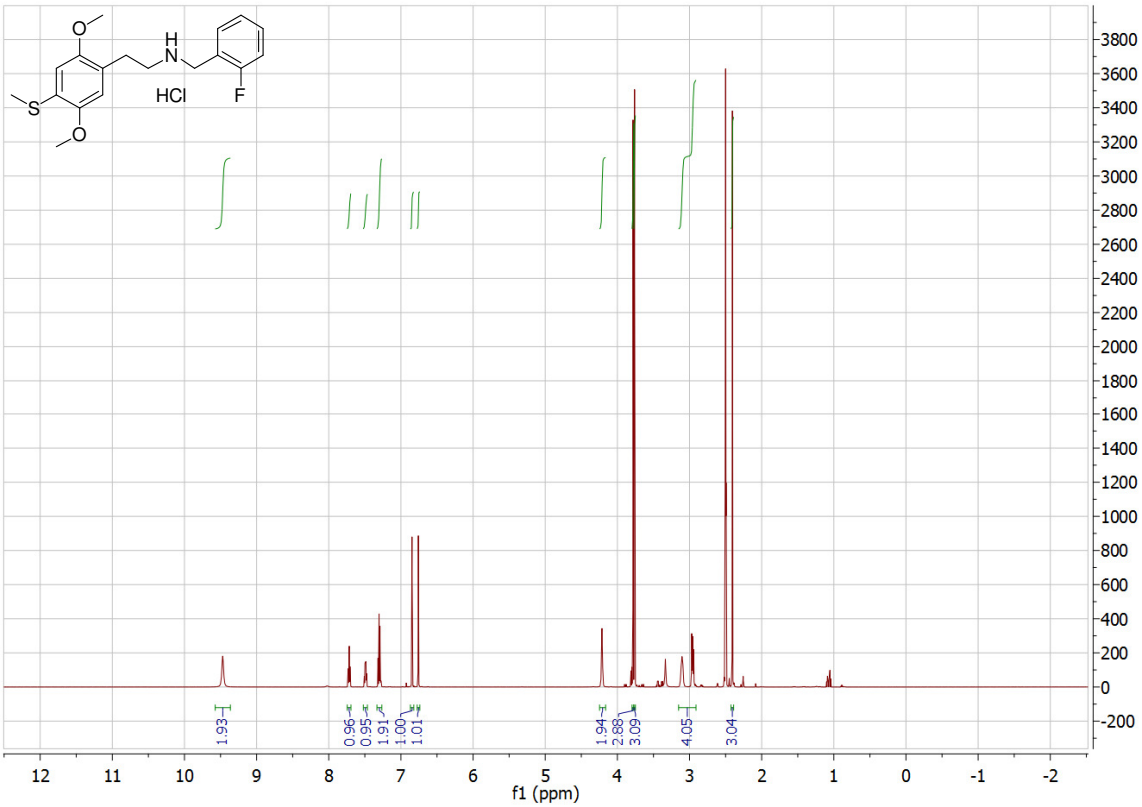


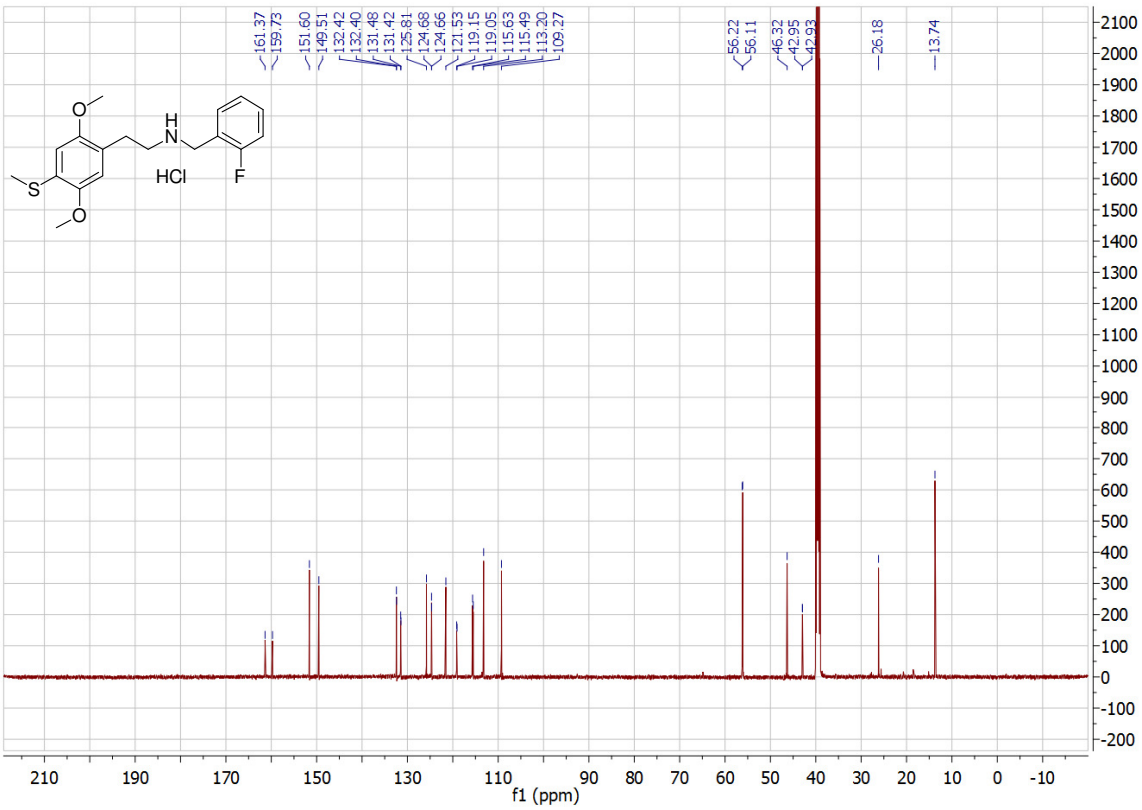
Compound **10b** (25T-NBOH)



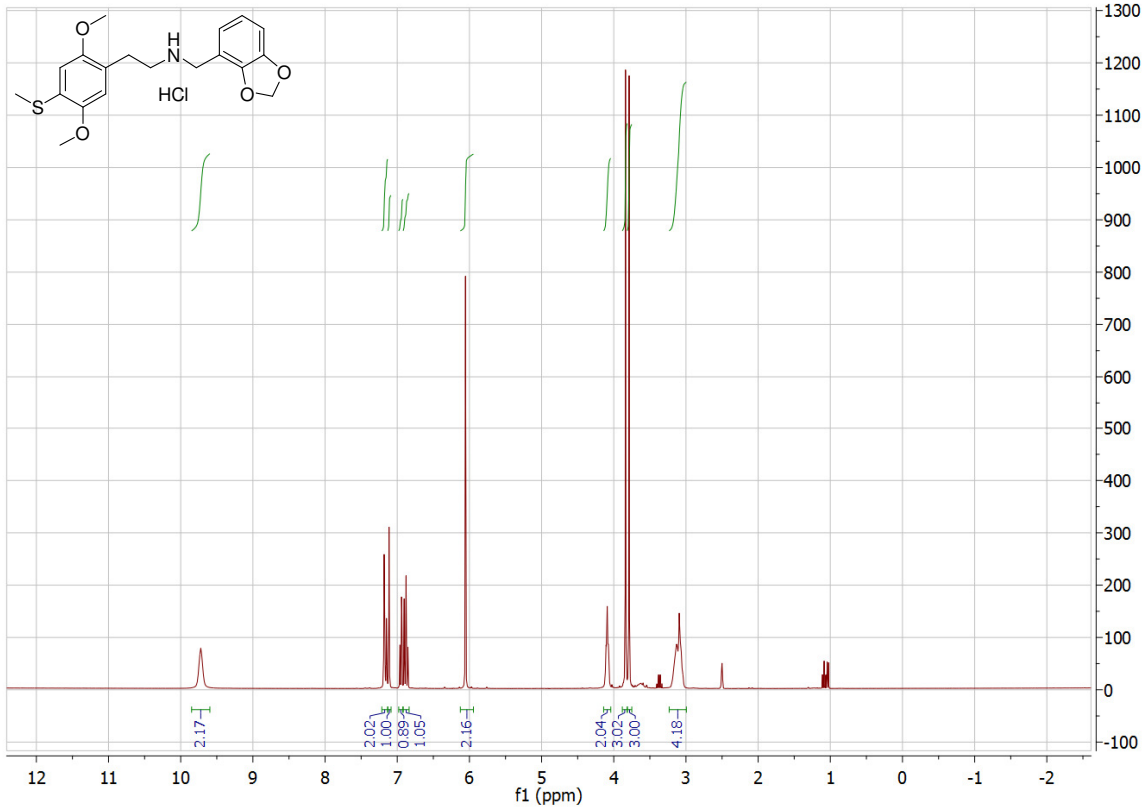


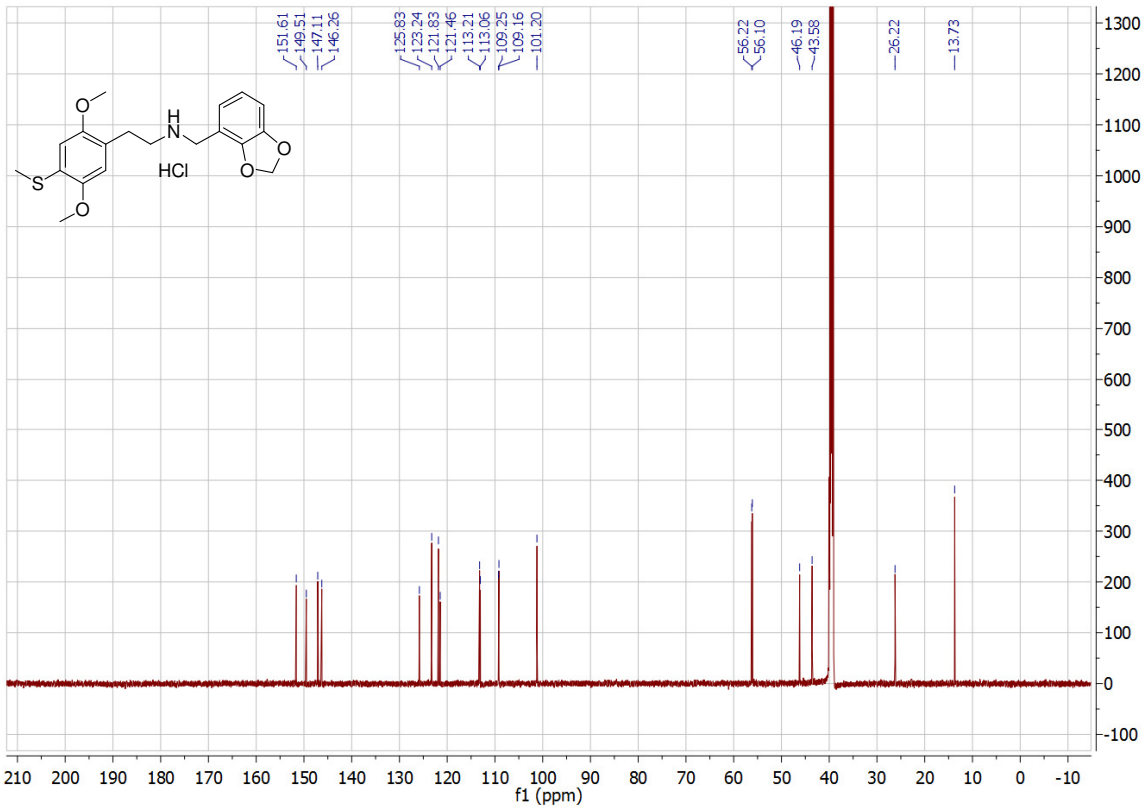
Compound **10c** (25T-NBF)



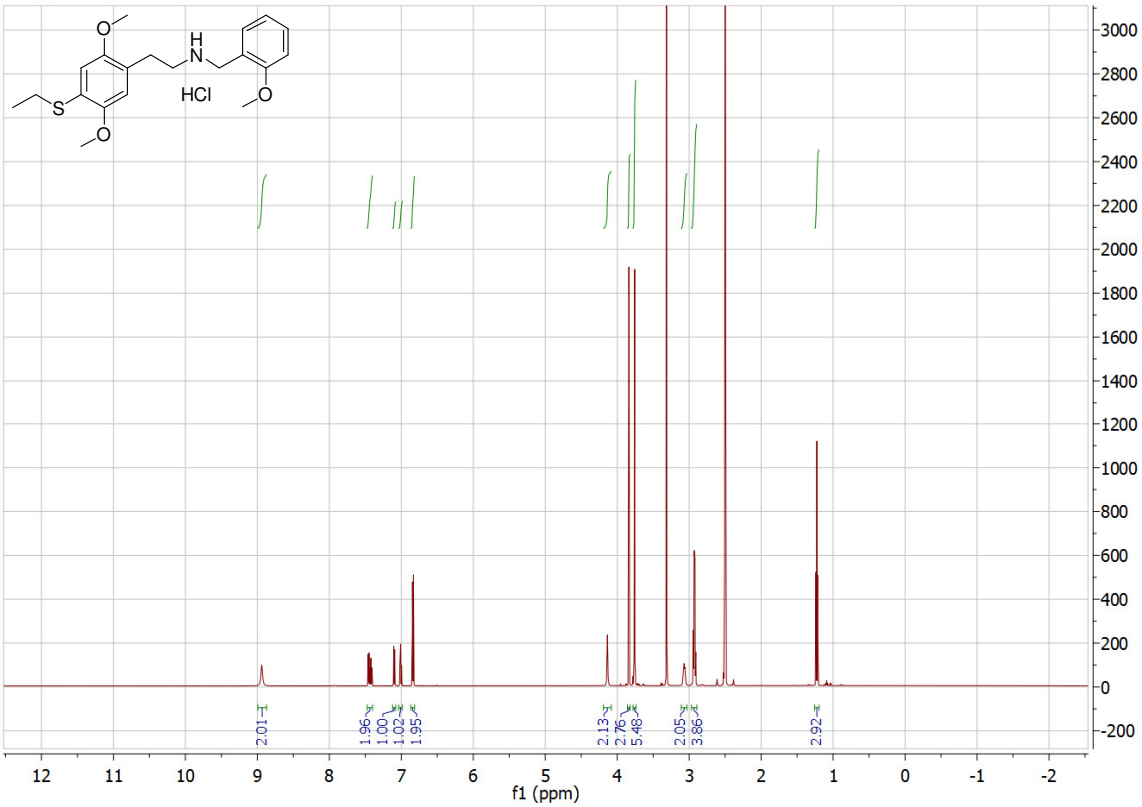


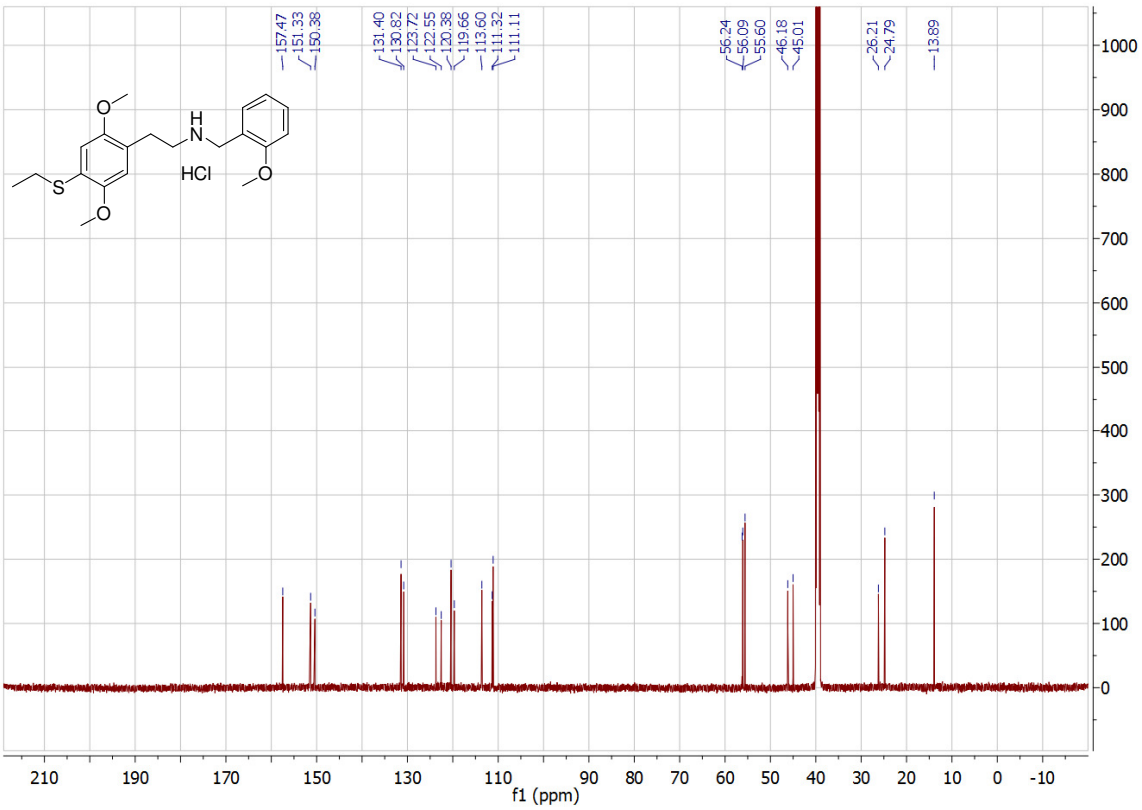
Compound **10d** (25T-NBMD)



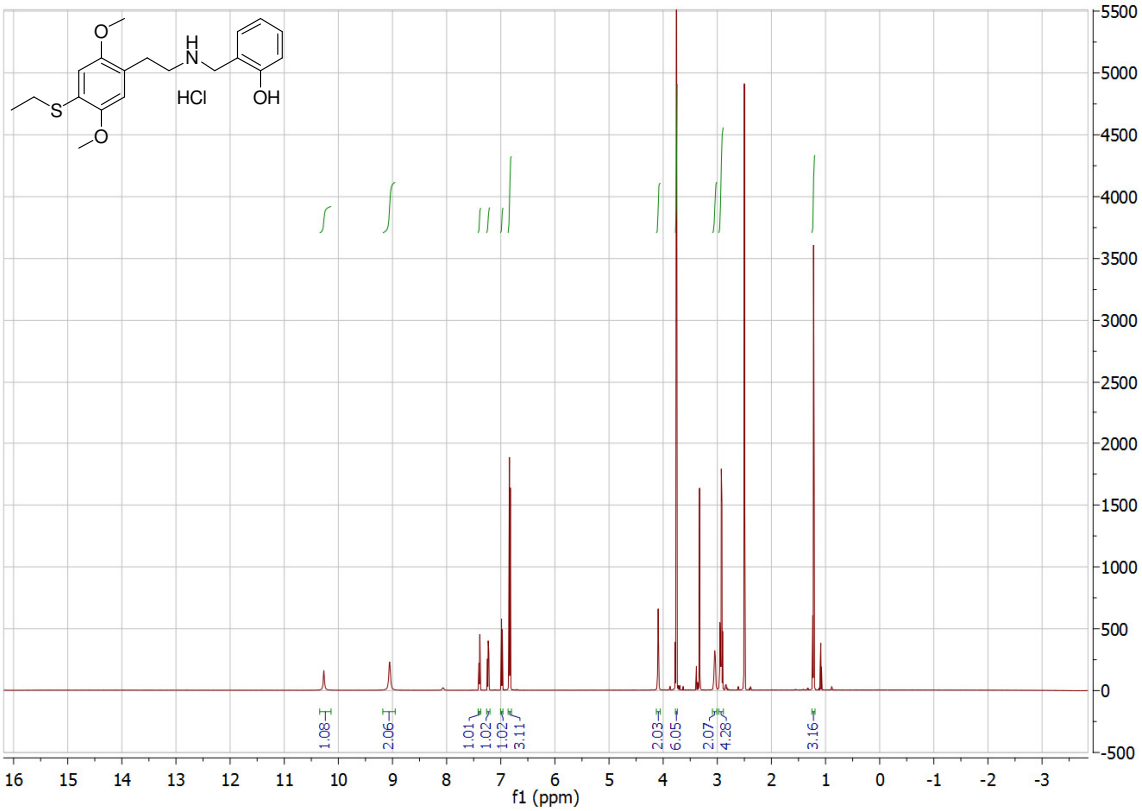


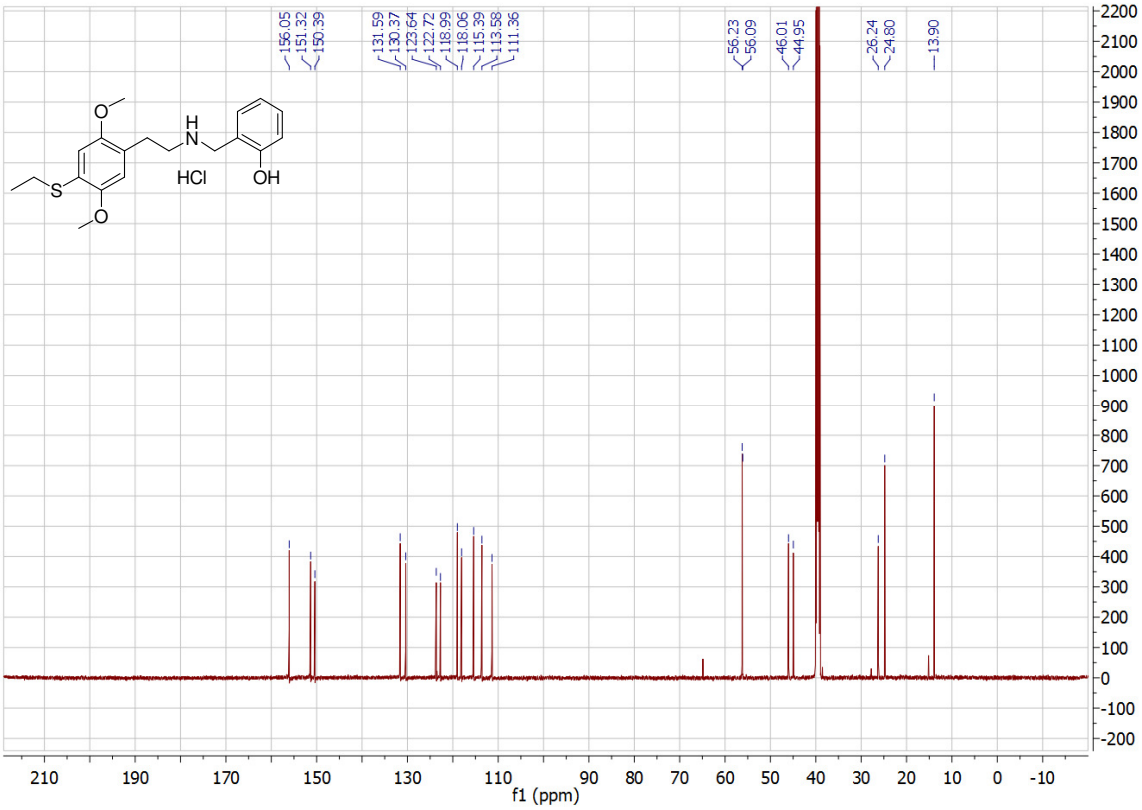
Compound **11a** (25T2-NBOMe)



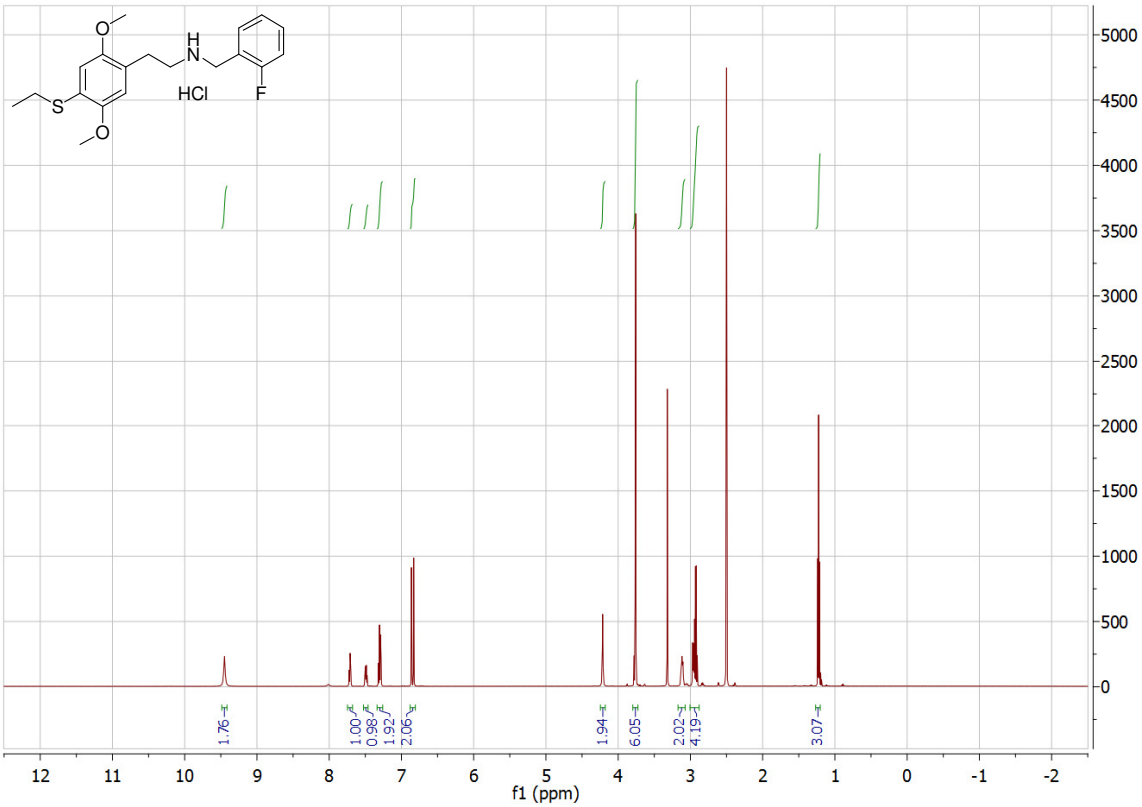


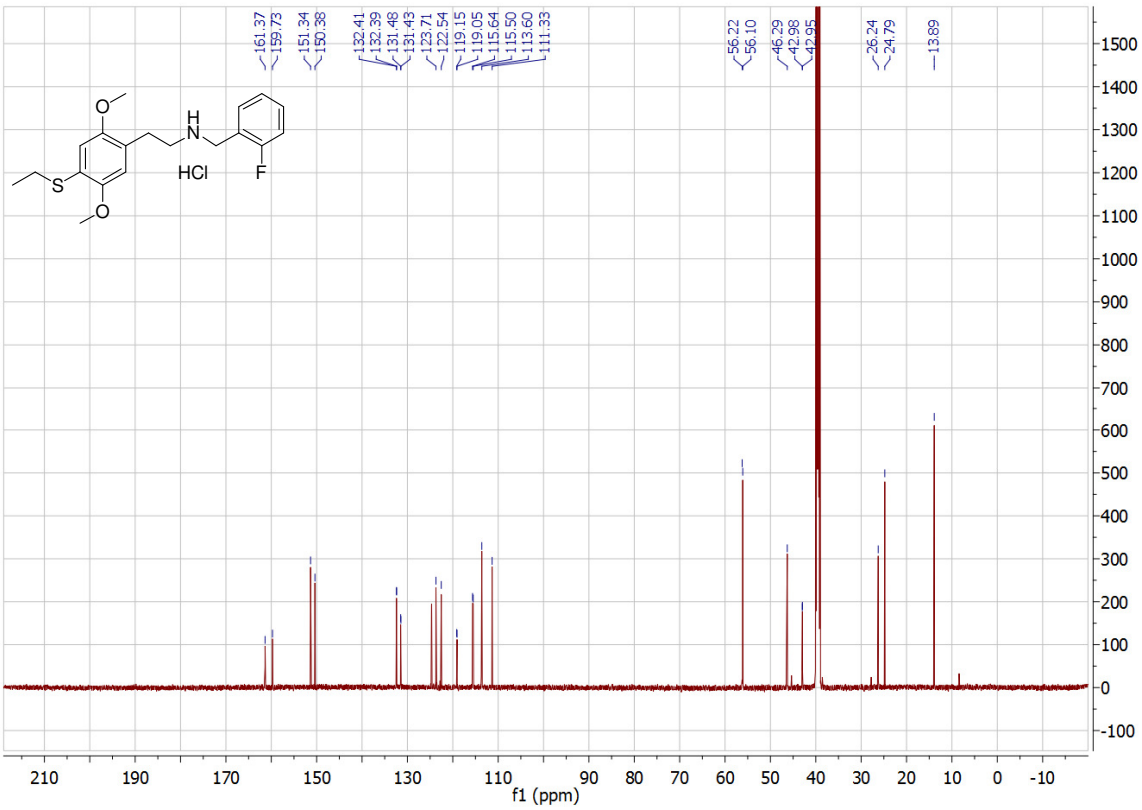
Compound **11b** (25T2-NBOH)



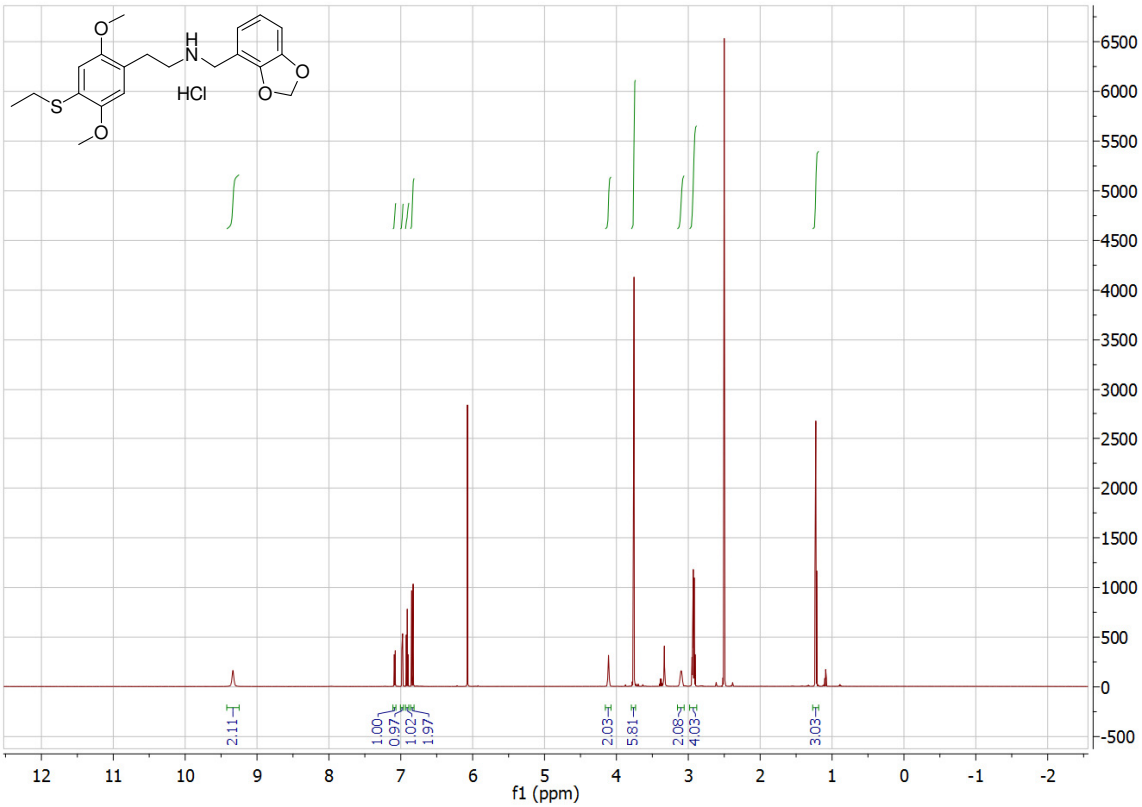


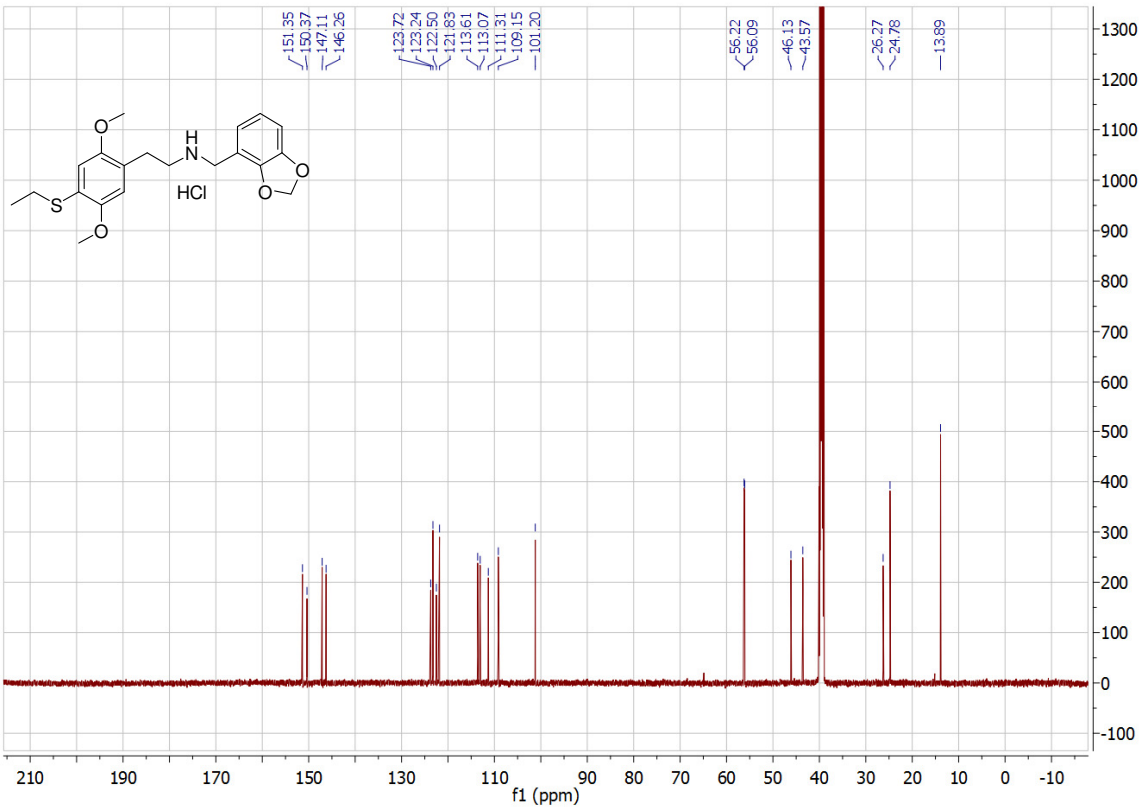
Compound **11c** (25T2-NBF)



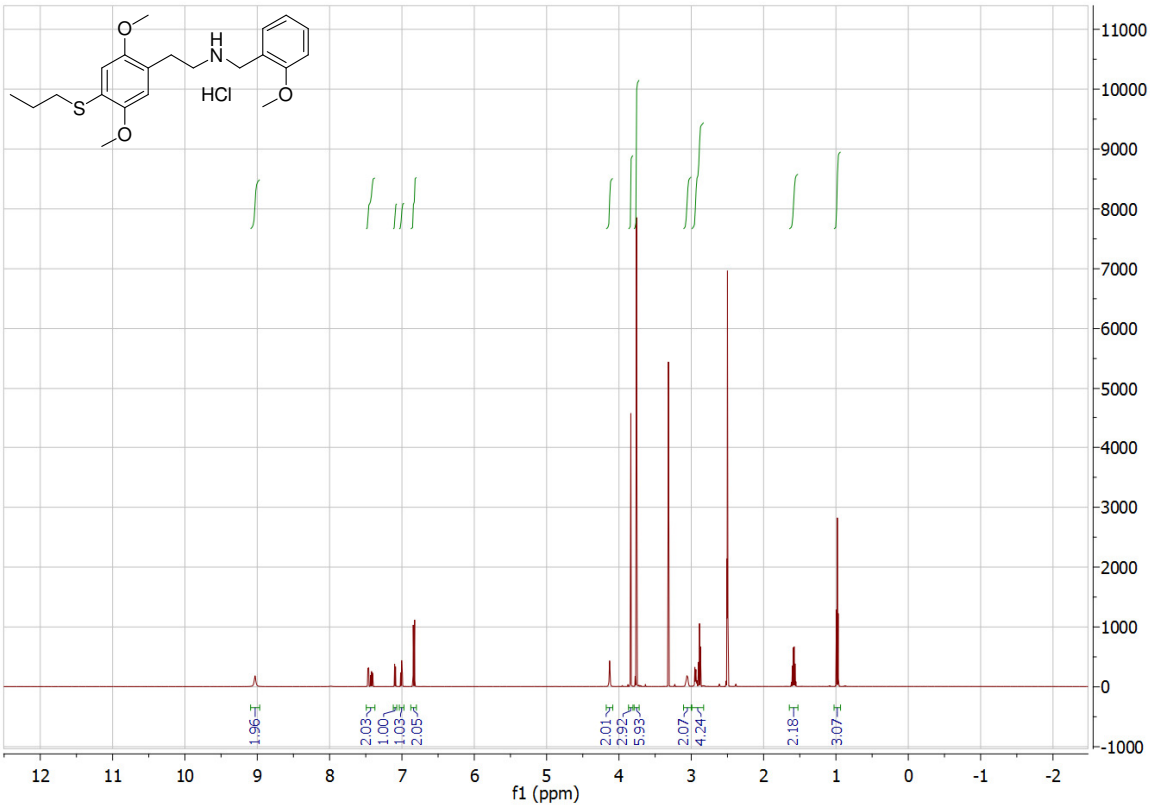


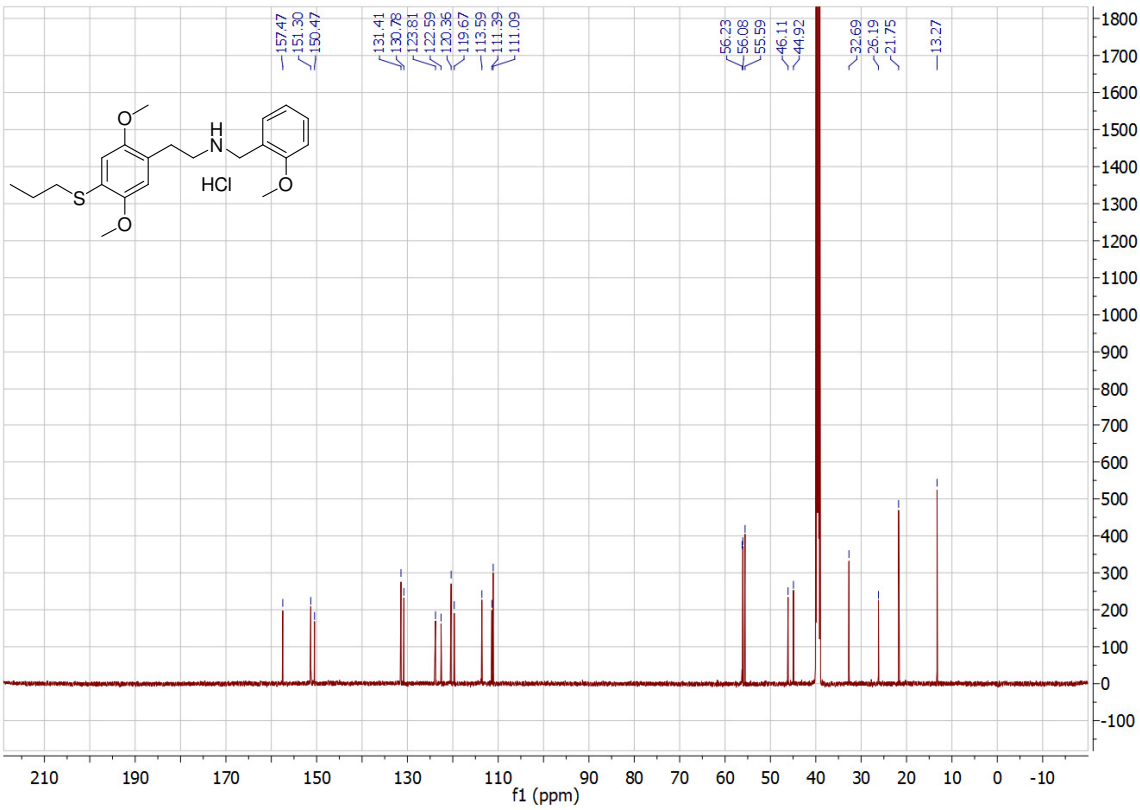
Compound **11d** (25T2-NBMD)



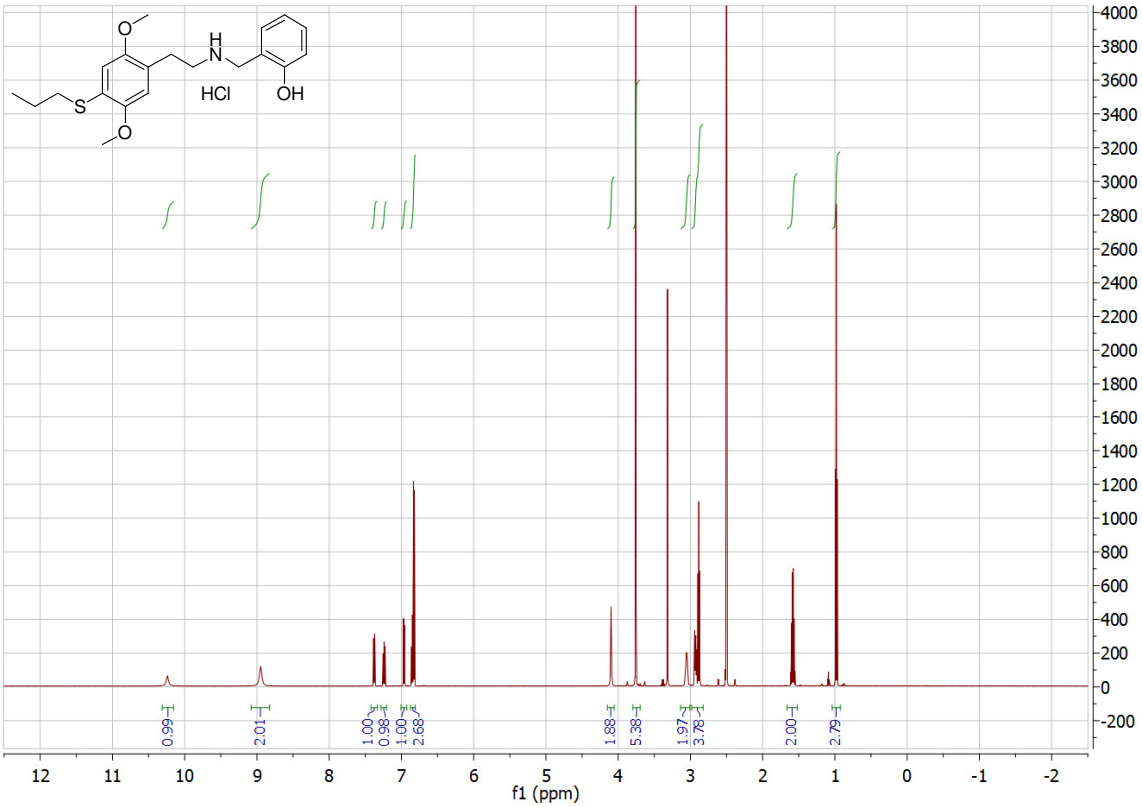


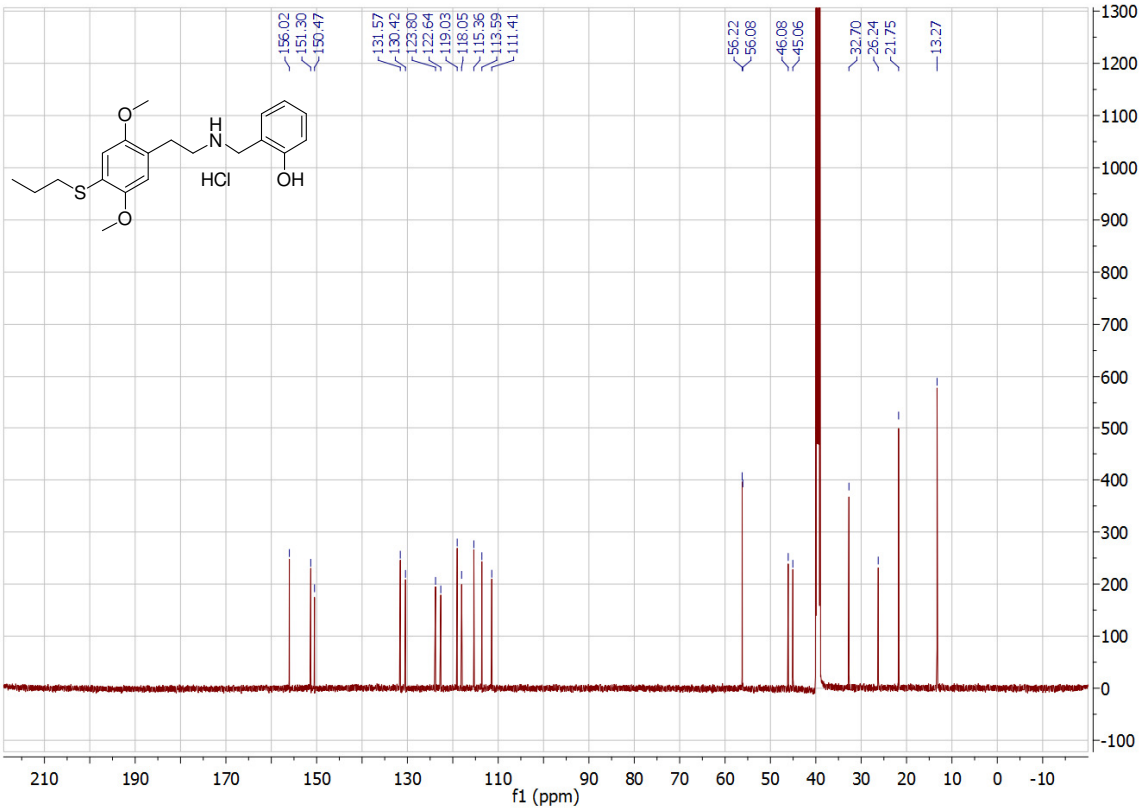
Compound **12a** (25T7-NBOMe)



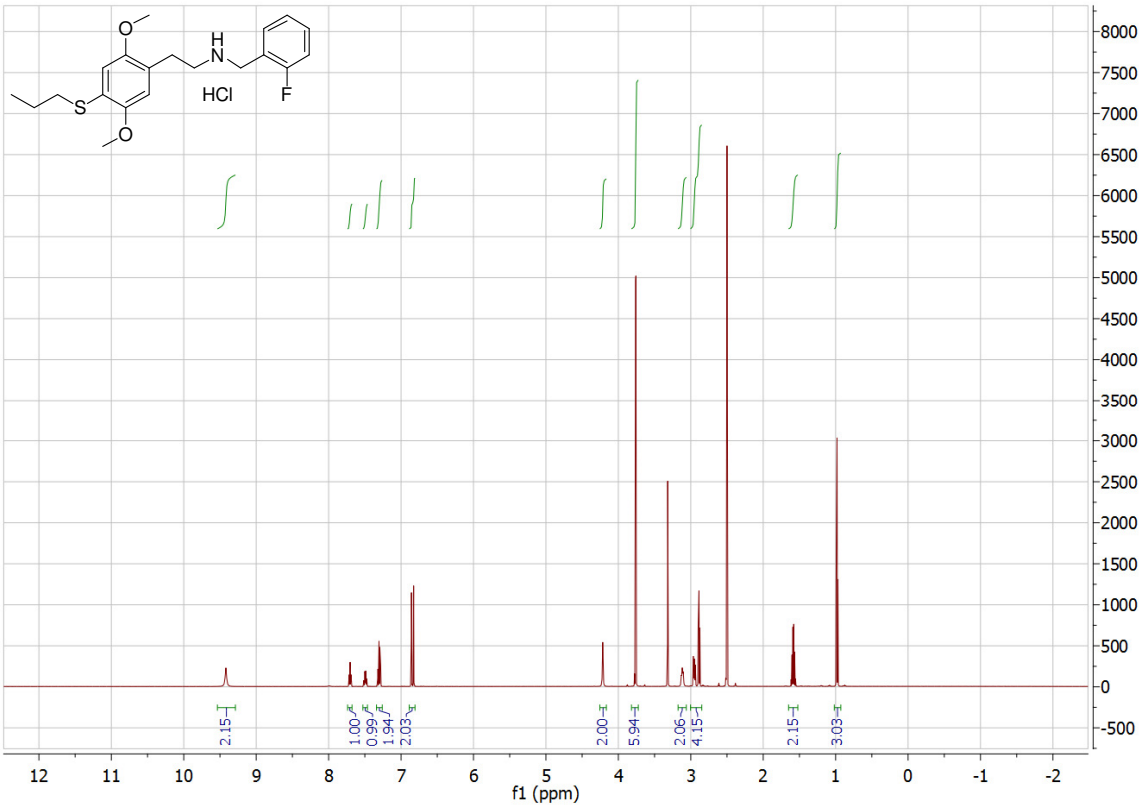


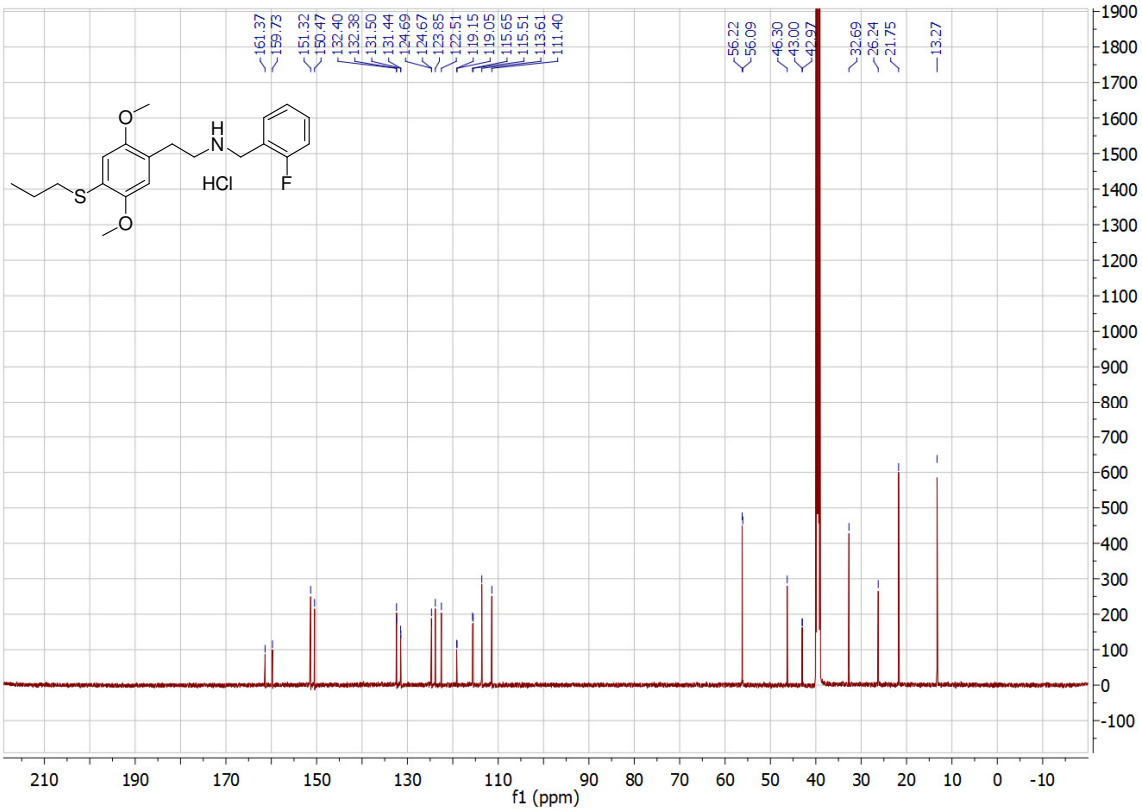
Compound **12b** (25T7-NBOH)



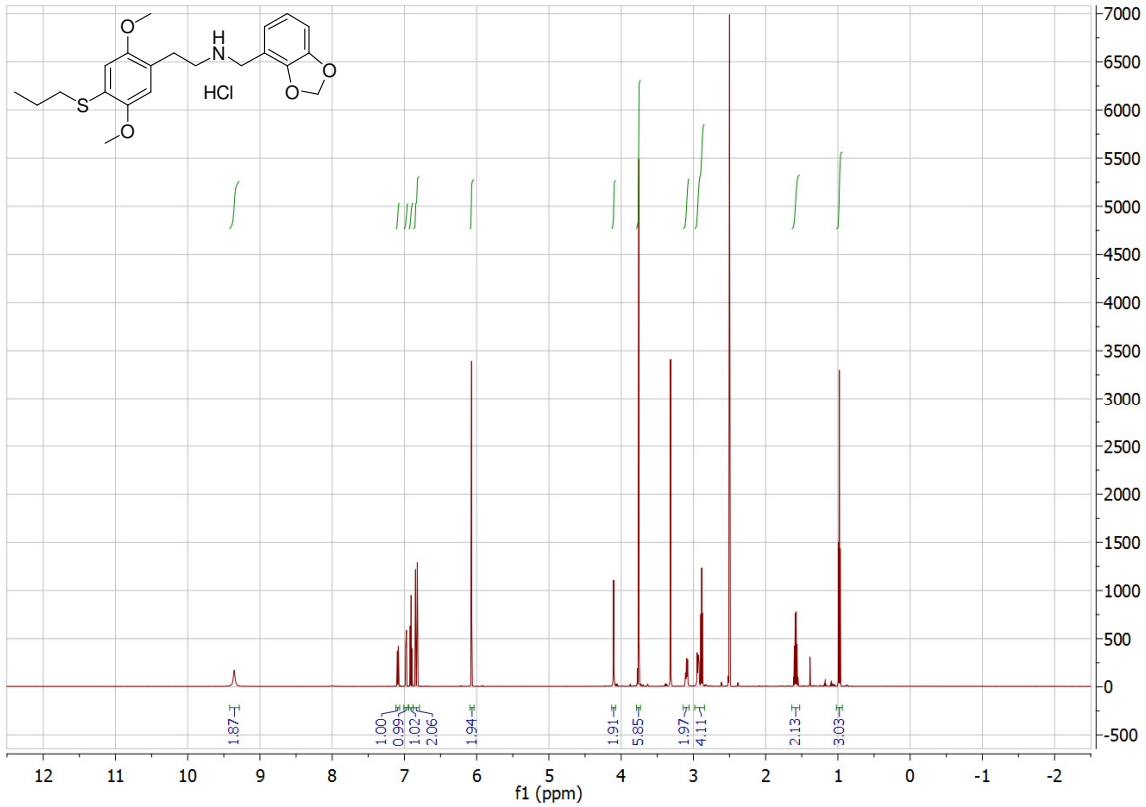


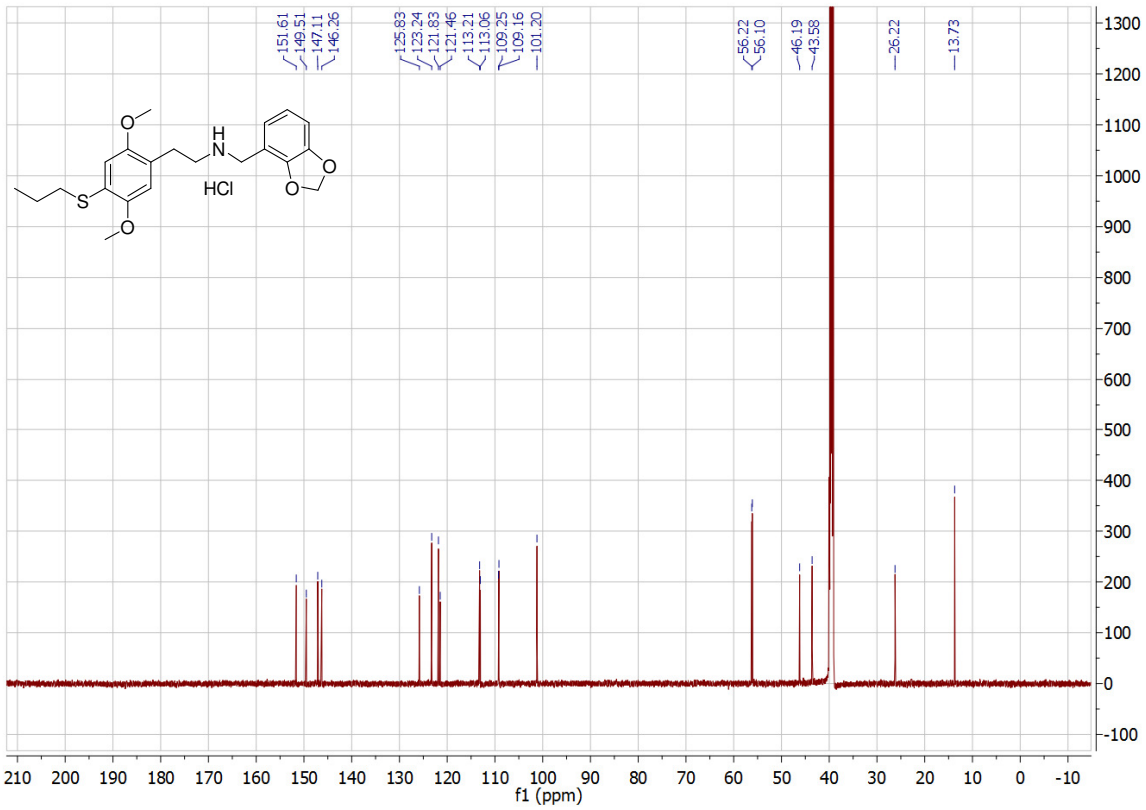
Compound **12c** (25T7-NBF)





Compound **12d** (25T7-NBMD)





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3) Nichols, D. E.; Frescas, S.; Marona-Lewicka, D.; Huang, X.; Roth, B. L.; Gudelsky, G. A.; Nash, J. F. 1-(2,5-dimethoxy-4-(trifluoromethyl)phenyl)-2-aminopropane: A Potent Serotonin 5-$HT_{2A/2c}$ Agonist *J. Med. Chem.* **1994**, *37*, 6116-6123.

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