

Supporting information

**Design, Synthesis, and Biological Evaluation of Morpholinopyrimidine Derivatives as
Anti-inflammatory agents**

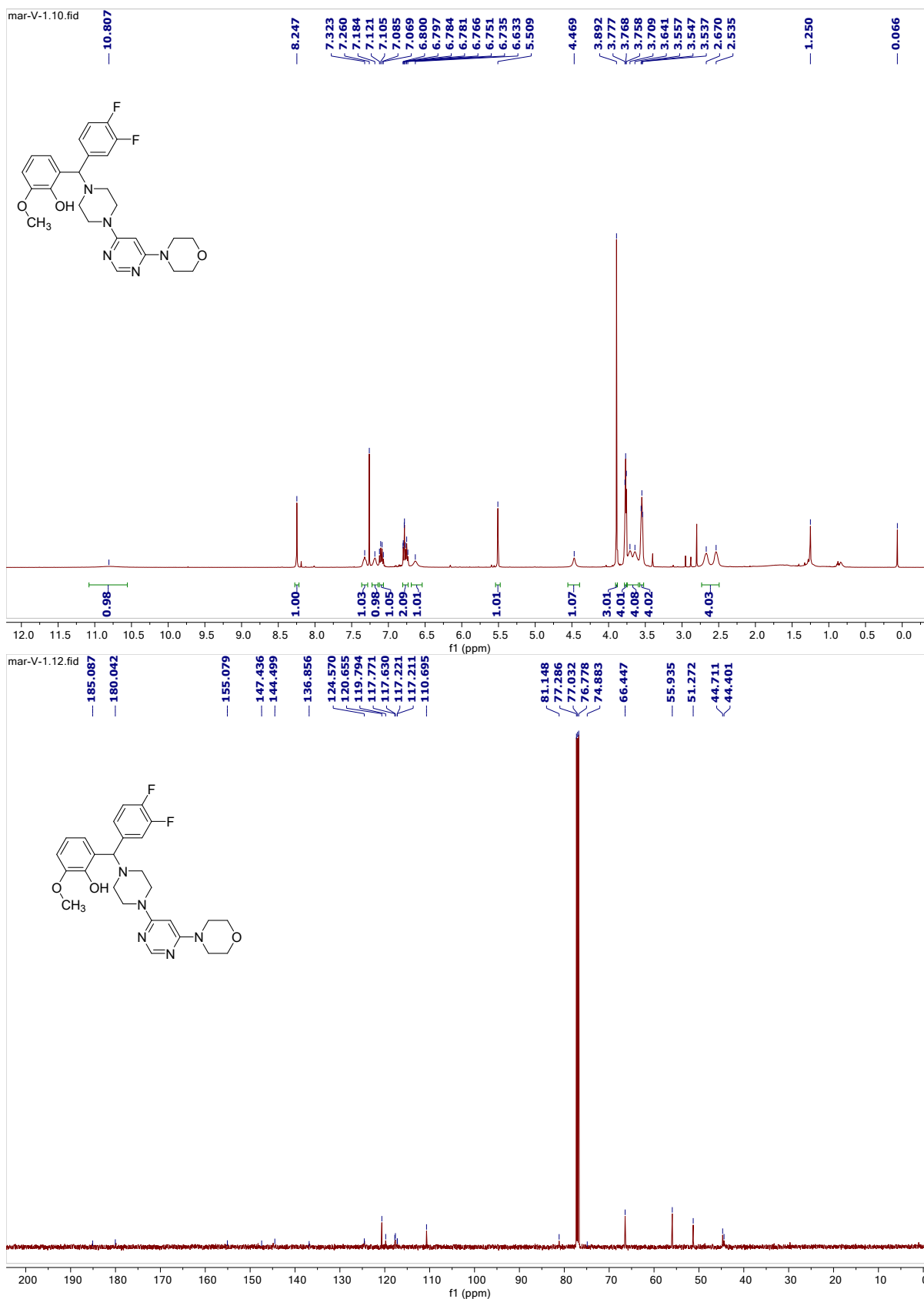


Figure 1: Top: 500 MHz ¹H-NMR of 2-((3,4-difluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**VI**). Bottom: 126 MHz ¹³C-NMR of 2-((3,4-difluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**VI**).

Mass Spectrum List Report

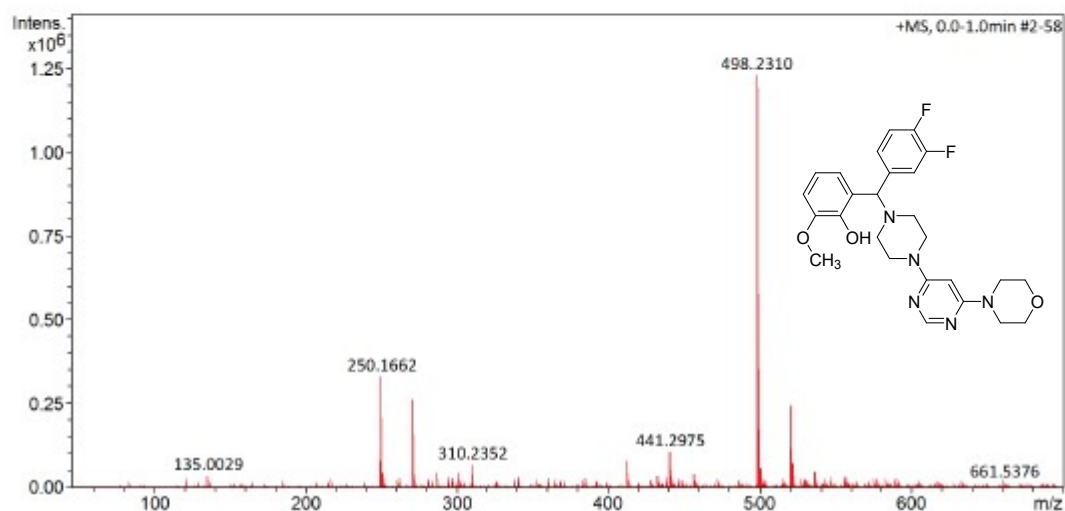
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 Sample Name V1
 Comment

Acquisition Date 17-Jun-22 1:39:52 PM
 Operator Erlend
 Instrument maXis II ETD 1823391.22318

Acquisition Parameter

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Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I%	FWHM
1	135.0029	28219	1928.1	35818	2.9	0.0048
2	249.0722	34409	2579.9	81328	6.6	0.0072
3	250.1662	32522	10470.7	331804	27.0	0.0077
4	251.1692	30177	1433.0	45906	3.7	0.0083
5	262.1662	34816	741.4	26785	2.2	0.0075
6	271.0541	33949	6609.1	263892	21.5	0.0080
7	272.0575	33580	998.4	40073	3.3	0.0081
8	281.2451	35037	569.4	24681	2.0	0.0080
9	287.0280	35106	974.2	44229	3.6	0.0082
10	294.1924	35205	646.6	31019	2.5	0.0084
11	297.2400	36390	546.0	26779	2.2	0.0082
12	301.1411	36368	864.8	43066	3.5	0.0083
13	310.2352	35381	1254.1	67926	5.5	0.0088
14	338.2666	36363	362.7	23834	1.9	0.0093
15	341.2662	36969	457.5	30329	2.5	0.0092
16	360.3237	36506	387.7	28551	2.3	0.0099
17	385.2925	37824	326.2	26896	2.2	0.0102
18	413.2662	38031	869.7	81959	6.7	0.0109
19	433.3804	38580	347.9	34467	2.8	0.0112
20	441.2975	38763	1053.4	105884	8.6	0.0114
21	442.3010	38659	295.0	29744	2.4	0.0114
22	457.2733	31870	402.6	42004	3.4	0.0143
23	498.2310	39276	10836.8	1229668	100.0	0.0127
24	499.2342	38183	3210.9	365076	29.7	0.0131
25	500.2372	36840	512.7	58403	4.7	0.0136
26	520.2131	40227	2099.6	247010	20.1	0.0129
27	521.2163	38889	618.3	72836	5.9	0.0134
28	529.4954	39647	216.8	25925	2.1	0.0134
29	536.1871	40476	387.4	47189	3.8	0.0132
30	555.5112	39801	242.6	30356	2.5	0.0140

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Figure 2: HRMS report of 2-((3,4-difluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (V1).

Elemental Analysis Report

Analysis Info

Sample Name V1

Method ESI_pos_50_1500_os.m

Acquisition Date 17-Jun-22 1:39:52 PM

Analysis Name D:\Data\maxis2022\18933.d

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
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Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
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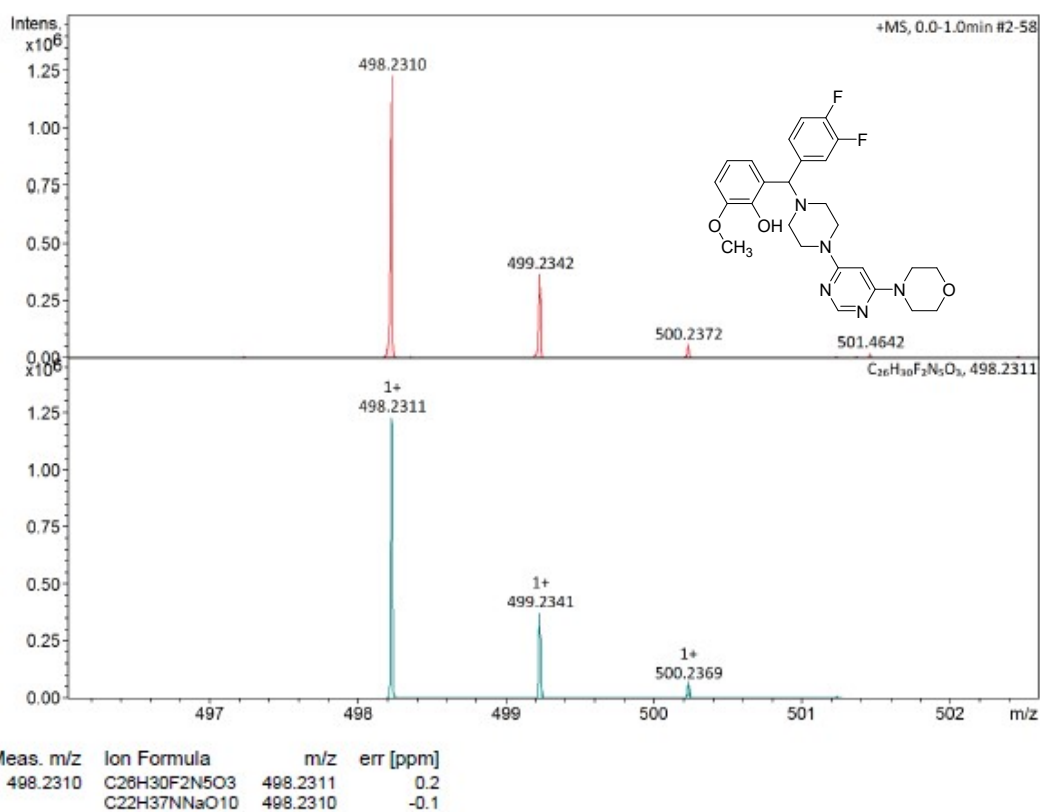


Figure 3: Elemental analysis report of 2-((3,4-difluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V1**).

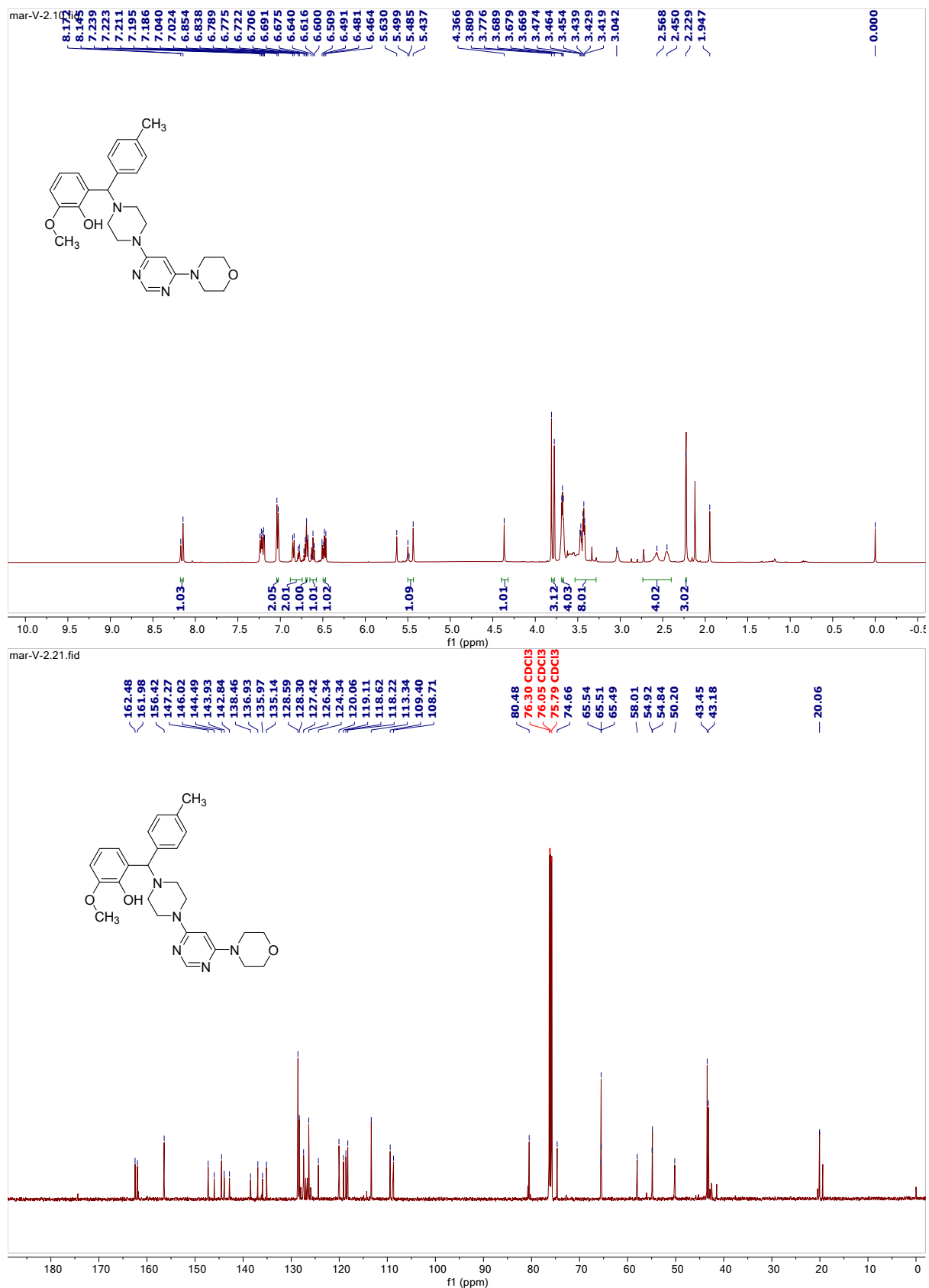


Figure 4: Top: 500 MHz ¹H-NMR of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(p-tolyl)methyl)phenol (V2). Bottom: 126 MHz ¹³C-NMR of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(p-tolyl)methyl)phenol (V2).

Mass Spectrum List Report

Analysis Info

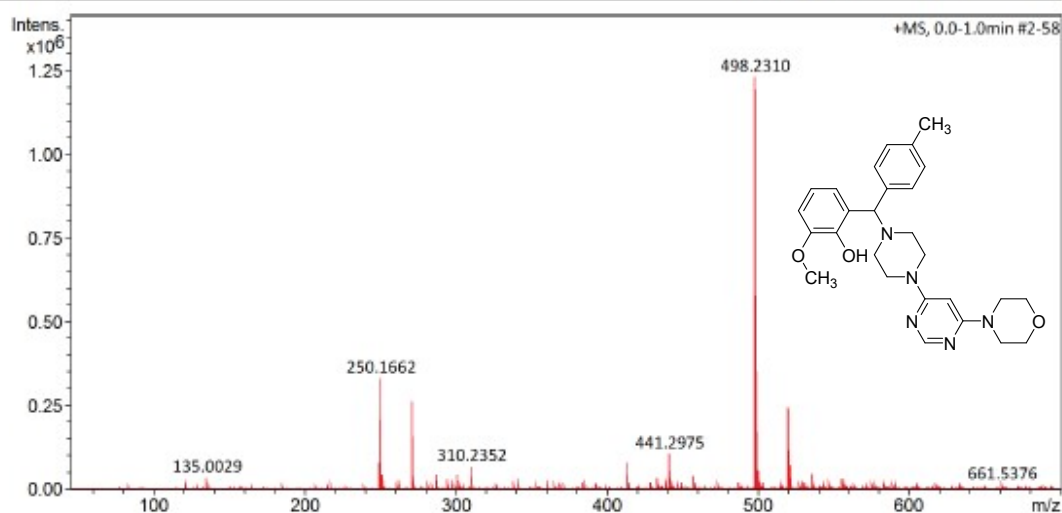
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Acquisition Date 17-Jun-22 1:39:52 PM

Operator Erlend
 Instrument maxis II ETD 1823391.22318

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
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Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I %	FWHM
1	135.0029	28219	1928.1	35818	2.9	0.0048
2	249.0722	34409	2579.9	81328	6.6	0.0072
3	250.1662	32522	10470.7	331804	27.0	0.0077
4	251.1692	30177	1433.0	45906	3.7	0.0083
5	262.1662	34818	741.4	26785	2.2	0.0075
6	271.0541	33949	6609.1	263892	21.5	0.0080
7	272.0575	33580	998.4	40073	3.3	0.0081
8	281.2451	35037	569.4	24681	2.0	0.0080
9	287.0280	35106	974.2	44229	3.6	0.0082
10	294.1924	35205	646.6	31019	2.5	0.0084
11	297.2400	36390	546.0	26779	2.2	0.0082
12	301.1411	36368	864.8	43066	3.5	0.0083
13	310.2352	35381	1254.1	67926	5.5	0.0088
14	338.2666	36363	362.7	23834	1.9	0.0093
15	341.2662	36969	457.5	30329	2.5	0.0092
16	360.3237	36506	387.7	28551	2.3	0.0099
17	385.2925	37824	326.2	26896	2.2	0.0102
18	413.2662	38031	869.7	81959	6.7	0.0109
19	433.3804	38580	347.9	34467	2.8	0.0112
20	441.2975	38763	1053.4	105884	8.6	0.0114
21	442.3010	38659	295.0	29744	2.4	0.0114
22	457.2733	31870	402.6	42004	3.4	0.0143
23	498.2310	39276	10836.8	1229668	100.0	0.0127
24	499.2342	38183	3210.9	365076	29.7	0.0131
25	500.2372	36840	512.7	58403	4.7	0.0136
26	520.2131	40227	2099.6	247010	20.1	0.0129
27	521.2163	38889	618.3	72836	5.9	0.0134
28	529.4954	39647	216.8	25925	2.1	0.0134
29	536.1871	40476	387.4	47189	3.8	0.0132
30	555.5112	39801	242.6	30356	2.5	0.0140

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Figure 5: HRMS report of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(p-tolyl)methyl)phenol (V2).

Elemental Analysis Report

Analysis Info

Sample Name V1
 Method ESI_pos_50_1500_os.m

Acquisition Date 17-Jun-22 1:39:52 PM
 Analysis Name D:\Data\maxis2022\18933.d

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
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Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
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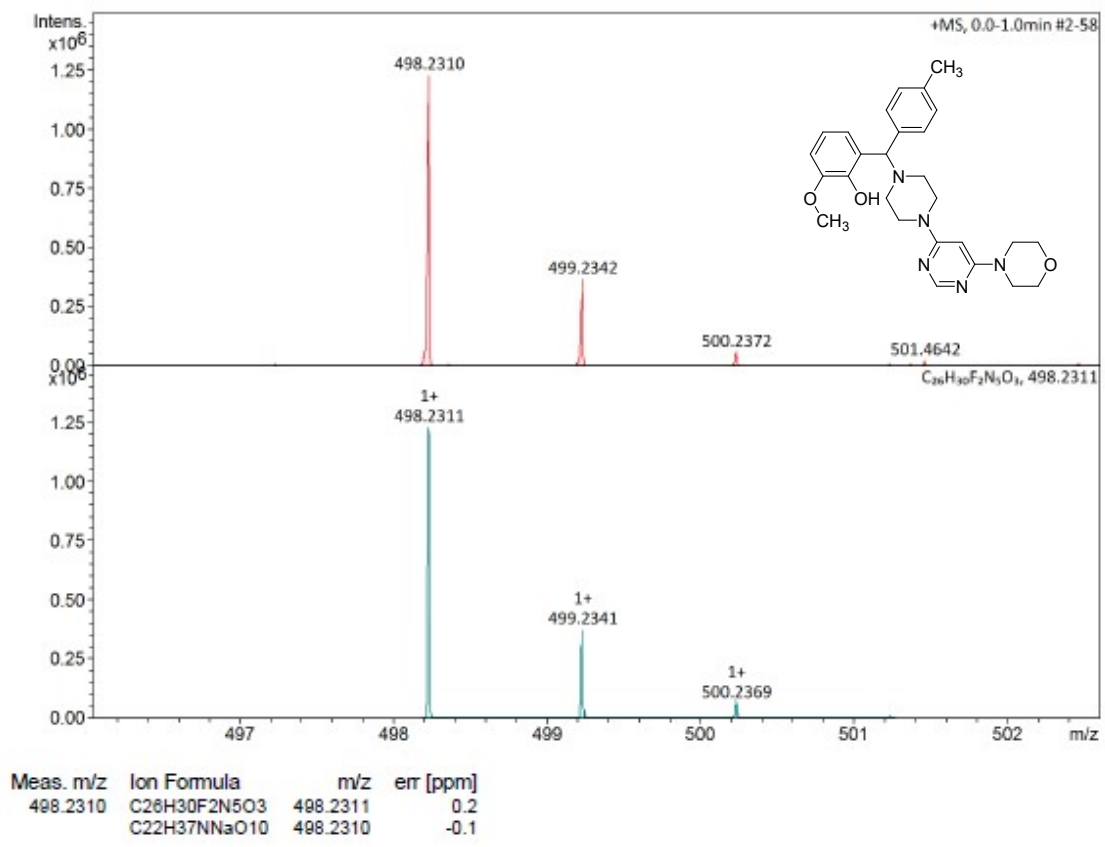


Figure 6: Elemental analysis report of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(p-tolyl)methyl)phenol (V2).

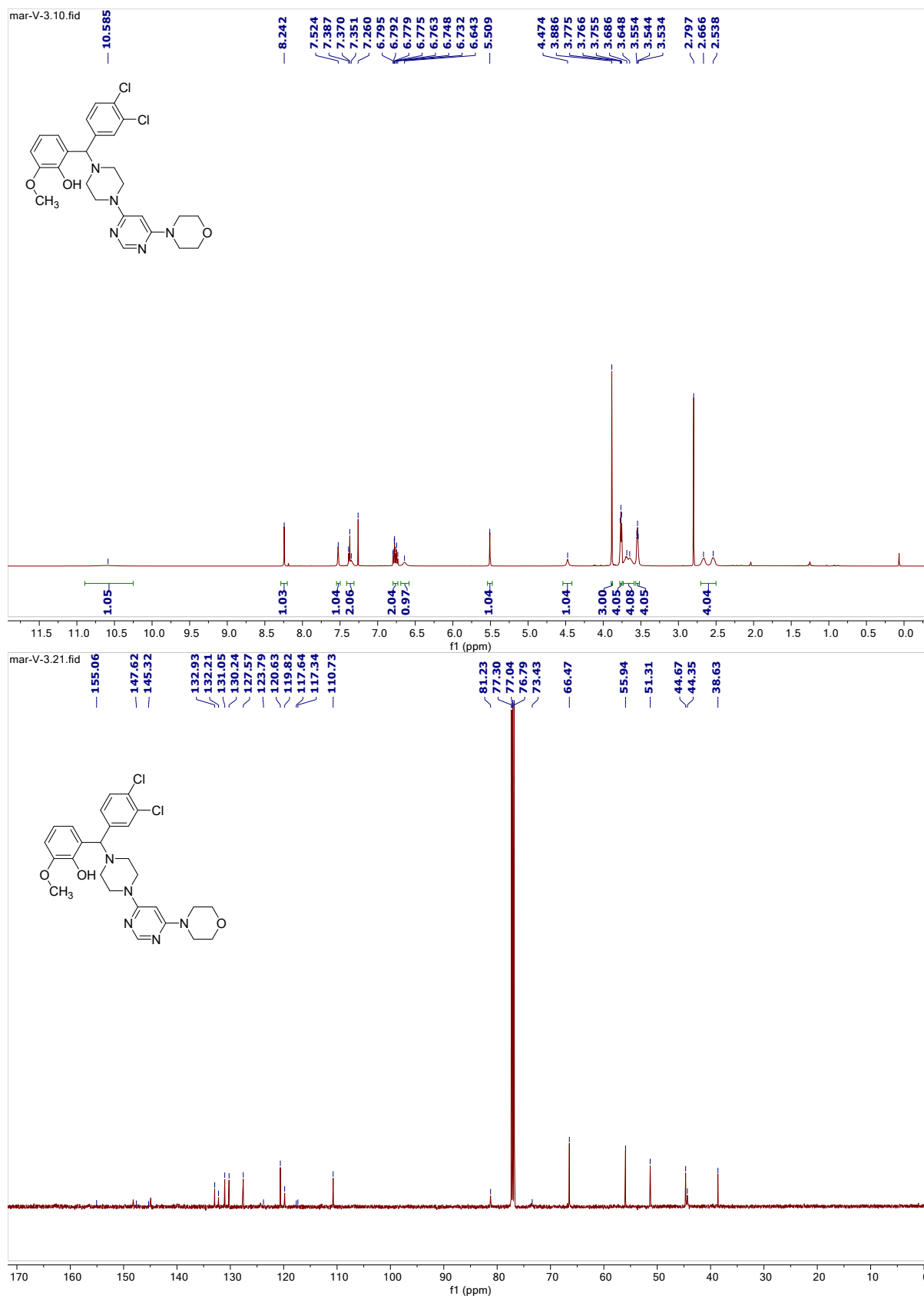


Figure 7: Top: 500 MHz ¹H-NMR of 2-((3,4-dichlorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V3**). Bottom: 126 MHz ¹³C-NMR of 2-((3,4-dichlorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V3**).

Mass Spectrum List Report

Analysis Info

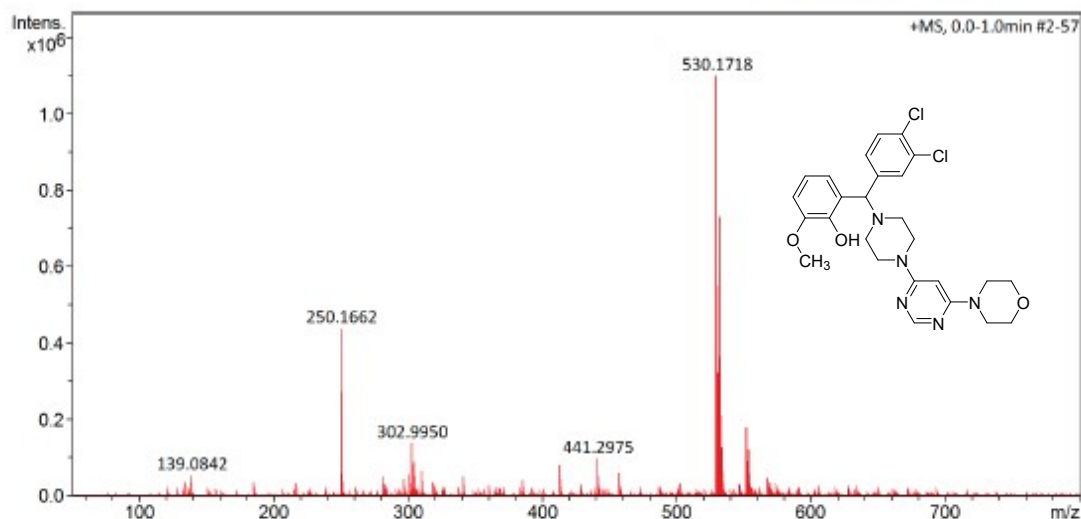
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 Sample Name V3
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Acquisition Date 17-Jun-22 2:36:06 PM

Operator Erlend
 Instrument maxis II ETD 1823391.22318

Acquisition Parameter

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Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I %	FWHM
1	135.0029	26523	2043.6	36172	3.3	0.0051
2	139.0842	27189	2993.3	53163	4.8	0.0051
3	185.1149	31218	1804.7	37791	3.4	0.0059
4	250.1662	33811	13498.1	438722	39.9	0.0074
5	251.1692	30228	1779.3	58705	5.3	0.0083
6	281.0131	35031	1122.8	50921	4.6	0.0080
7	297.2400	35049	823.7	44091	4.0	0.0085
8	301.1411	34817	1068.3	58165	5.3	0.0086
9	302.9950	35236	2492.7	138456	12.6	0.0086
10	304.9921	35248	1546.3	88522	8.1	0.0087
11	310.2353	36198	1101.2	66119	6.0	0.0086
12	318.9690	35765	584.3	36999	3.4	0.0089
13	341.2663	37134	697.7	52217	4.7	0.0092
14	385.2924	37047	450.4	41989	3.8	0.0104
15	413.2662	37553	759.1	81997	7.5	0.0110
16	441.2975	38121	805.4	97126	8.8	0.0116
17	457.2738	30932	481.5	59838	5.4	0.0148
18	503.2051	39580	253.7	34407	3.1	0.0127
19	530.1718	39136	7641.5	1099316	100.0	0.0135
20	531.1750	37758	2247.4	324290	29.5	0.0141
21	532.1691	38191	5041.5	729743	66.4	0.0139
22	533.1721	38191	1475.3	213708	19.4	0.0140
23	534.1671	34178	879.3	127478	11.6	0.0156
24	535.1696	36391	249.9	36286	3.3	0.0147
25	552.1538	40153	1217.3	181576	16.5	0.0138
26	553.1570	39282	367.6	54899	5.0	0.0141
27	554.1512	38850	807.1	120883	11.0	0.0143
28	555.1542	37787	229.3	34468	3.1	0.0147
29	568.1278	40951	323.8	49649	4.5	0.0139
30	570.1252	38675	234.7	36034	3.3	0.0147

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Figure 8: HRMS report of 2-((3,4-dichlorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V3**).

Elemental Analysis Report

Analysis Info

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Method ESI_pos_50_1500_os.m

Acquisition Date 17-Jun-22 2:36:06 PM
Analysis Name D:\Data\maxis2022\18936.d

Acquisition Parameter

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Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
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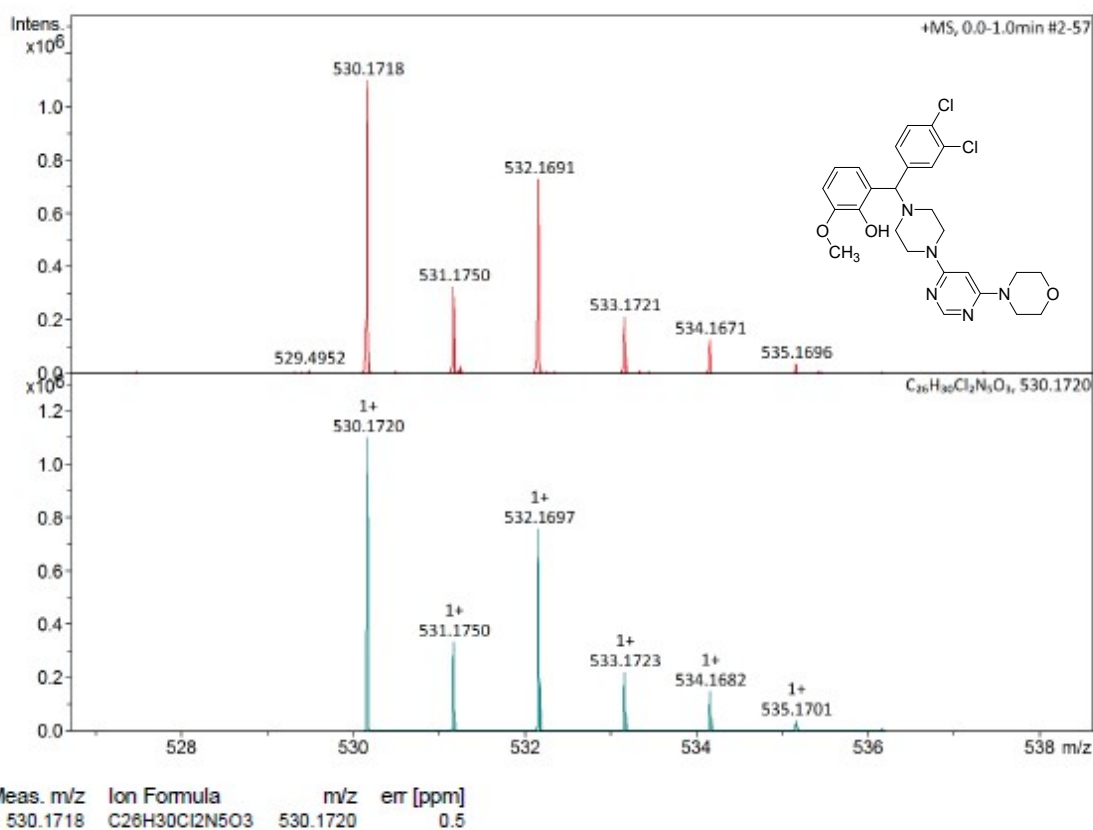


Figure 9: Elemental analysis report of 2-((3,4-dichlorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (V3).

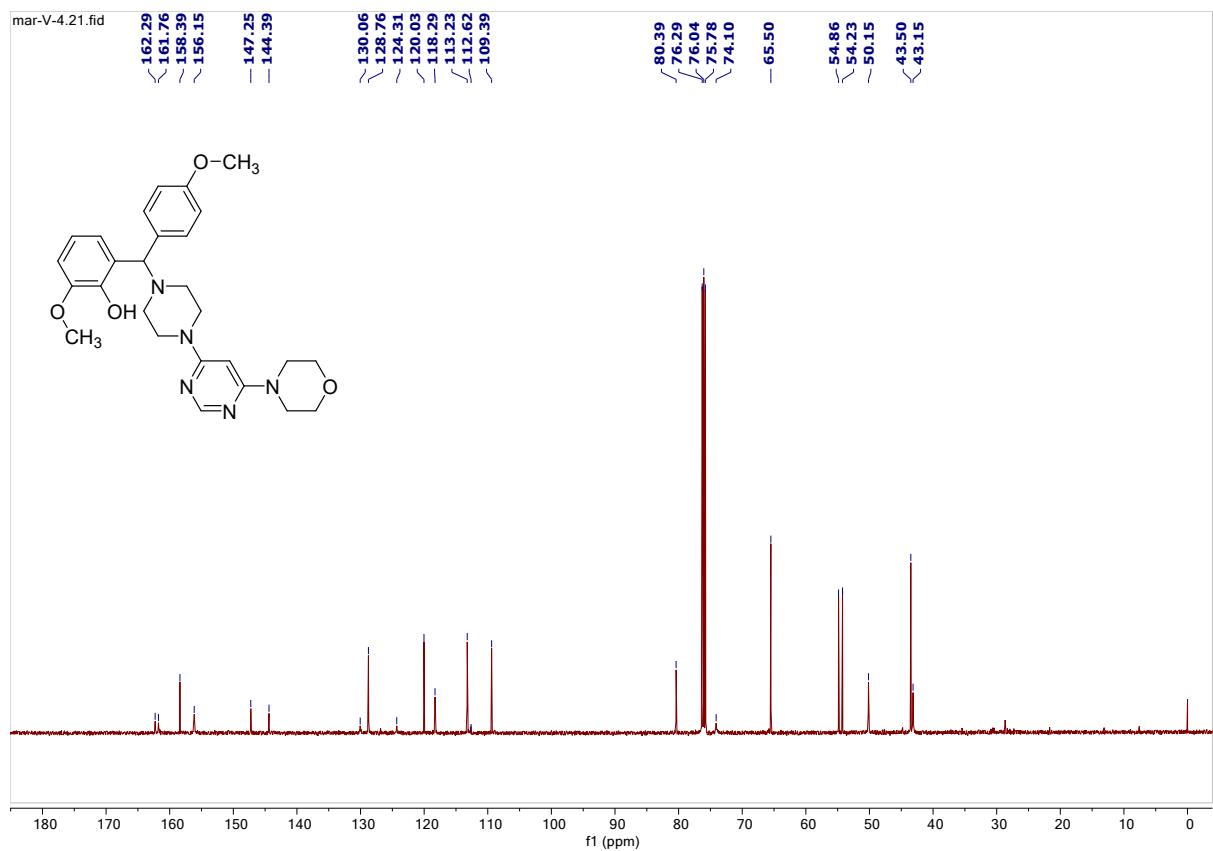
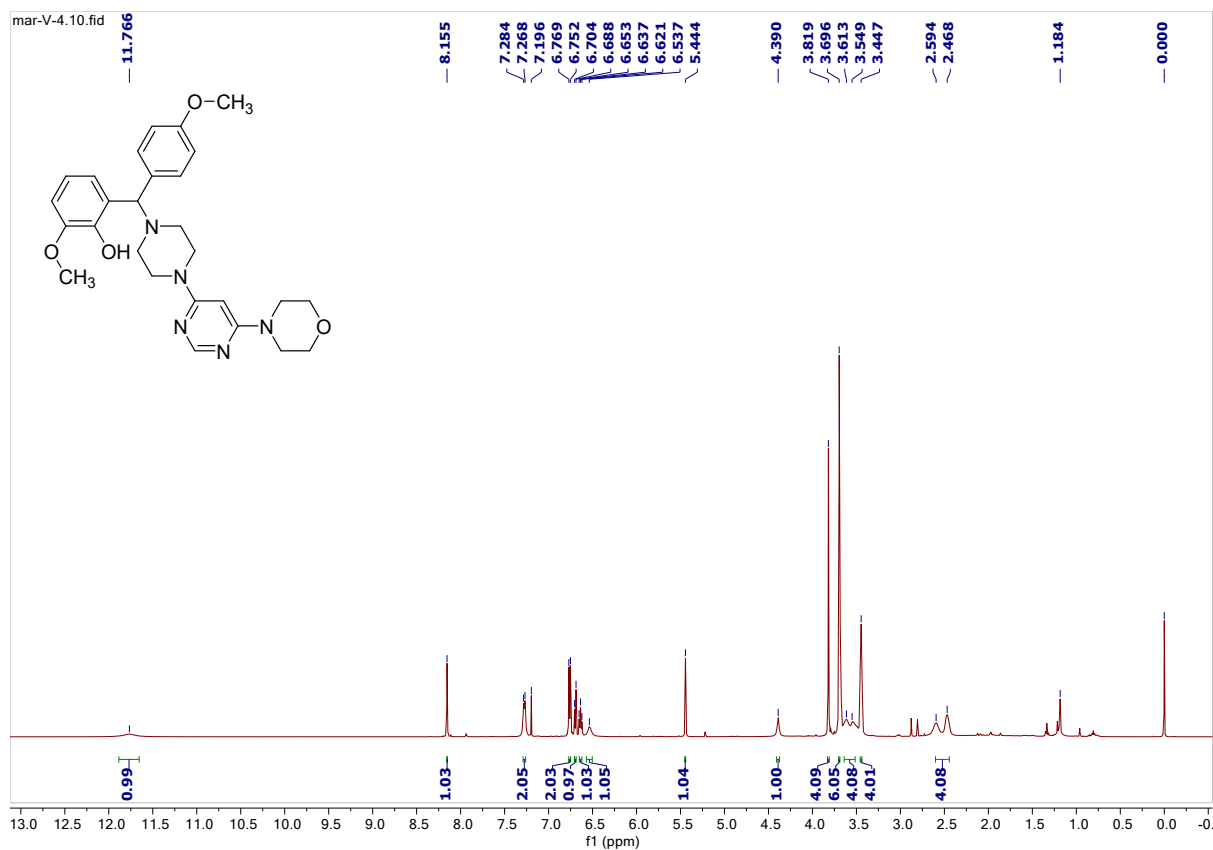


Figure 10: Top: 500 MHz $^1\text{H-NMR}$ of 2-methoxy-6-((4-methoxyphenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)phenol (**V4**). Bottom: 126 MHz $^{13}\text{C-NMR}$ of 2-methoxy-6-((4-methoxyphenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)phenol (**V4**).

Mass Spectrum List Report

Analysis Info

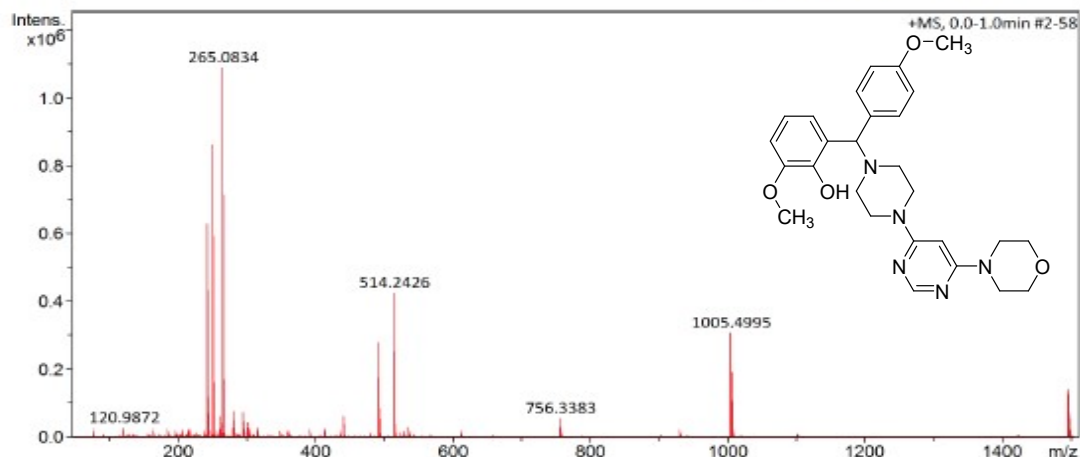
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Operator Erlend
 Instrument maXis II ETD 1823391.22318

Acquisition Parameter

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Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I %	FWHM
1	120.9872	27222	1902.1	28395	2.6	0.0044
2	217.1047	33029	1182.0	25530	2.3	0.0066
3	243.1015	32689	25266.9	630251	57.9	0.0074
4	244.1050	32597	4104.5	103056	9.5	0.0075
5	250.1662	34123	33289.5	861329	79.1	0.0073
6	251.1692	30623	4347.8	113359	10.4	0.0082
7	261.1309	34830	858.2	23835	2.2	0.0075
8	262.1662	33202	2282.3	63858	5.9	0.0079
9	265.0834	34263	38044.3	1089037	100.0	0.0077
10	266.0869	33802	6103.9	175171	16.1	0.0079
11	281.0574	35186	870.8	27445	2.5	0.0080
12	281.2450	35517	2455.7	77409	7.1	0.0079
13	294.1924	35616	2211.4	73672	6.8	0.0083
14	301.1410	35742	1306.6	44590	4.1	0.0084
15	316.1744	35529	756.5	27979	2.6	0.0089
16	413.2662	38366	395.0	23790	2.2	0.0108
17	441.2975	38714	957.9	63533	5.8	0.0114
18	492.2606	39230	3451.1	280126	25.7	0.0125
19	493.2638	37822	1040.3	84700	7.8	0.0130
20	514.2426	39461	4926.9	426123	39.1	0.0130
21	515.2458	38719	1489.6	129316	11.9	0.0133
22	536.2246	40075	341.7	31003	2.8	0.0134
23	756.3383	41442	676.7	56393	5.2	0.0183
24	757.3414	41911	330.7	27497	2.5	0.0181
25	1005.4995	43585	7813.7	309401	28.4	0.0231
26	1006.5027	43150	4854.5	192067	17.6	0.0233
27	1007.5057	41325	1570.8	62098	5.7	0.0244
28	1496.7612	44636	4351.8	140487	12.9	0.0335
29	1497.7642	44271	4133.6	133443	12.3	0.0338
30	1498.7674	44144	2022.3	65284	6.0	0.0340

18937.d

Figure 11: HRMS report of 2-methoxy-6-((4-methoxyphenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)phenol (V4).

Elemental Analysis Report

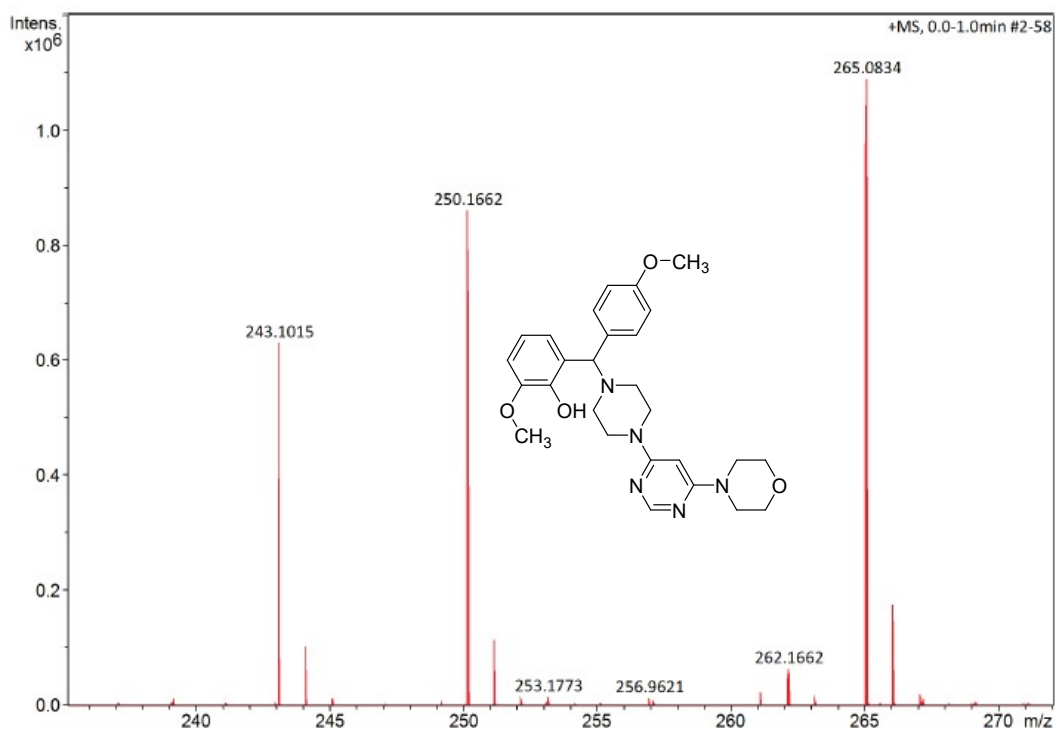
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Acquisition Parameter

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Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



Meas. m/z	Ion Formula	m/z	err [ppm]
243.1015	C ₁₅ H ₁₅ O ₃	243.1016	0.2
250.1662	C ₁₂ H ₂₀ N ₅ O	250.1662	0.2
265.0834	C ₁₃ H ₉ N ₆ O	265.0832	-0.7
	C ₁₅ H ₁₄ NaO ₃	265.0835	0.4

Figure 12: Elemental analysis report of 2-methoxy-6-((4-methoxyphenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)phenol (V4).

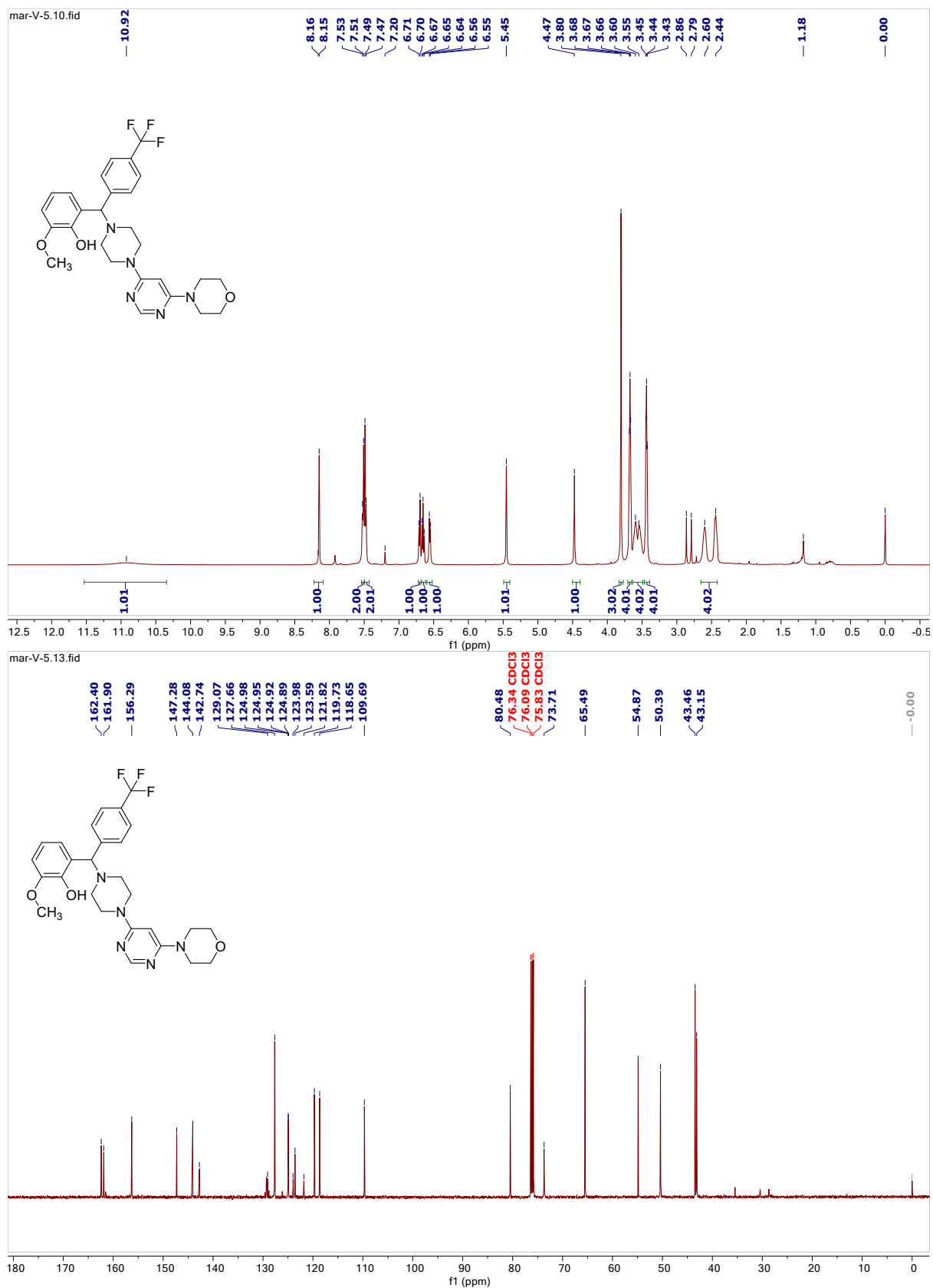


Figure 13: Top: 500 MHz ¹H-NMR of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethyl)phenyl)methyl)phenol (**V5**). Bottom: 126 MHz ¹³C-NMR of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethyl)phenyl)methyl)phenol (**V5**).

Mass Spectrum List Report

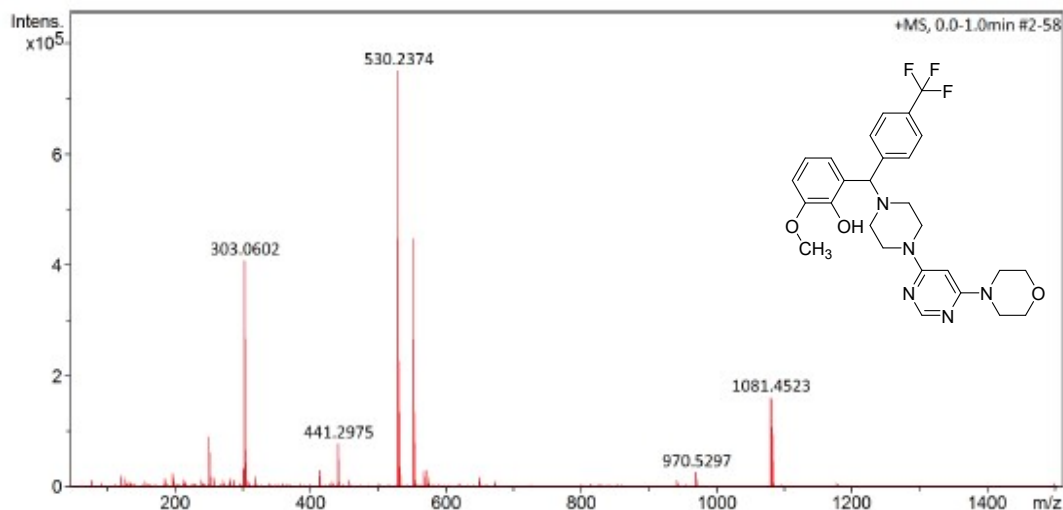
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 Instrument maXis II ETD 1823391.22318

Acquisition Parameter

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Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I%	FWHM
1	76.9974	22693	894.1	11982	1.6	0.0034
2	120.9872	27441	1523.5	20545	2.7	0.0044
3	185.1148	31582	1090.3	15693	2.1	0.0059
4	197.0341	32623	1620.0	23871	3.2	0.0060
5	250.1662	34189	5421.6	91163	12.1	0.0073
6	251.1691	29724	704.5	11907	1.6	0.0085
7	256.9620	33543	1017.5	17508	2.3	0.0077
8	281.0783	34146	718.7	14290	1.9	0.0082
9	286.9725	34395	636.9	13051	1.7	0.0083
10	301.1409	36156	1509.8	33438	4.5	0.0083
11	303.0602	35122	18170.8	408561	54.4	0.0086
12	304.0636	34988	2934.5	66441	8.8	0.0087
13	319.0342	35474	795.3	19552	2.6	0.0090
14	413.2662	39150	738.1	31590	4.2	0.0106
15	441.2975	38488	1541.2	78054	10.4	0.0115
16	442.3009	38728	443.4	22560	3.0	0.0114
17	530.2374	39536	11108.0	751284	100.0	0.0134
18	531.2406	38070	3362.8	227928	30.3	0.0140
19	532.2436	37091	555.0	37678	5.0	0.0143
20	552.2194	39086	6332.3	447619	59.6	0.0138
21	553.2226	38385	1921.0	135778	18.1	0.0144
22	554.2256	37913	322.1	22835	3.0	0.0146
23	568.1934	40399	397.7	28752	3.8	0.0141
24	574.2015	40352	412.3	29973	4.0	0.0142
25	650.2178	40978	228.3	17364	2.3	0.0159
26	970.5297	42783	592.0	26053	3.5	0.0227
27	971.5330	42207	354.3	15570	2.1	0.0230
28	1081.4523	43387	4117.4	161883	21.5	0.0249
29	1082.4554	42346	2503.1	98353	13.1	0.0256
30	1083.4584	42350	832.5	32707	4.4	0.0256

18938.d

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by: Erlend

Page 1 of 1

Figure 14: HRMS report of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethyl)phenyl)methyl)phenol (V5).

Elemental Analysis Report

Analysis Info

Sample Name V5

Method ESI_pos_50_1500_os.m

Acquisition Date 17-Jun-22 3:51:58 PM

Analysis Name D:\Data\maxis2022\18938.d

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C

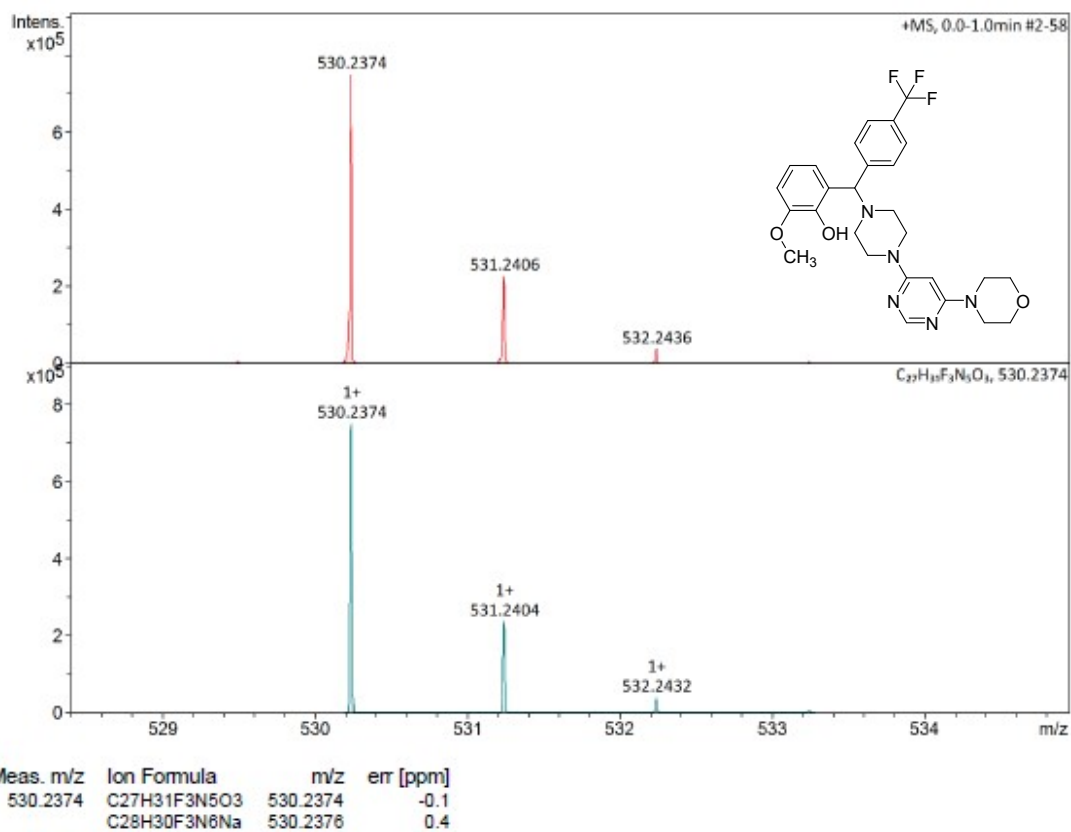


Figure 15: Elemental analysis report of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethyl)phenyl)methyl)phenol (V5).

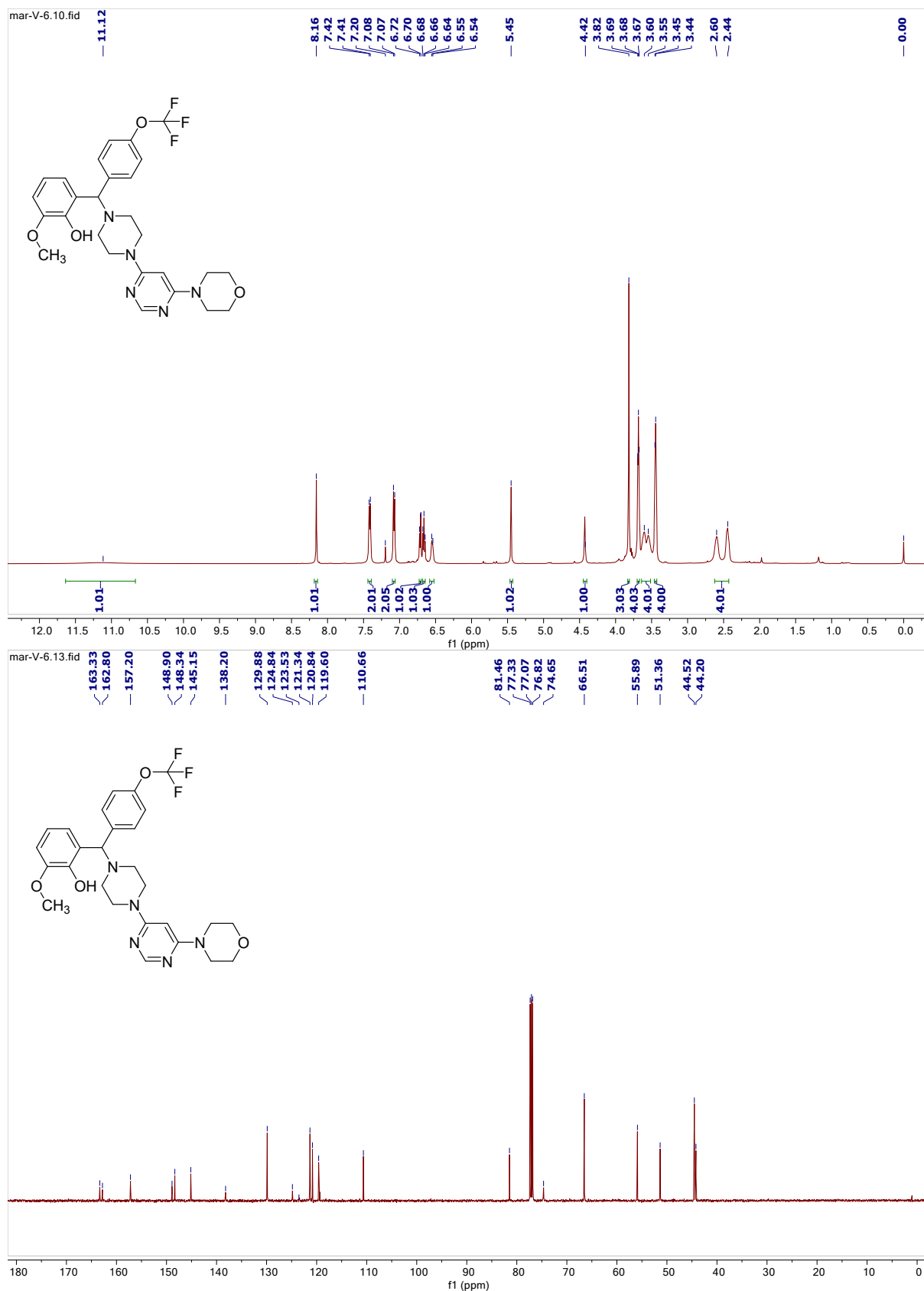


Figure 16: Top: 500 MHz ¹H-NMR of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethoxy)phenyl)methyl)phenol (**V6**). Bottom: 126 MHz ¹³C-NMR of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethoxy)phenyl)methyl)phenol (**V6**).

Mass Spectrum List Report

Analysis Info

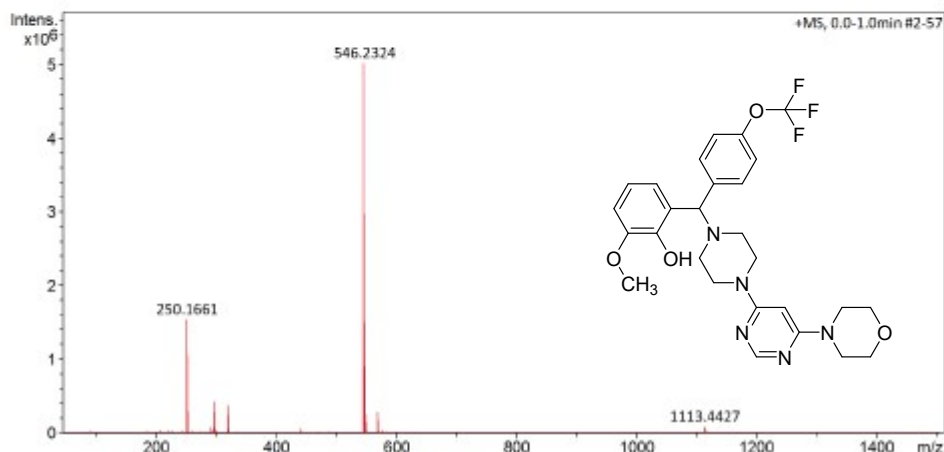
Analysis Name D:\Data\maxis2022\18939.d
 Method ESI_pos_50_1500_os.m
 Sample Name V6
 Comment

Acquisition Date 17-Jun-22 4:05:26 PM

Operator Erlend
 Instrument maXis II ETD 1823391.22318

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	1%	FWHM
1	207.1240	32605	1716.8	30005	0.6	0.0064
2	221.0808	32397	1692.6	34850	0.7	0.0068
3	226.9514	32542	1102.0	23932	0.5	0.0070
4	250.1661	34060	62782.8	1550136	30.9	0.0073
5	251.1692	30674	8042.8	200824	4.0	0.0082
6	261.0732	34605	736.8	19159	0.4	0.0075
7	275.0889	35556	828.9	24293	0.5	0.0077
8	281.2450	35565	726.1	22629	0.5	0.0079
9	291.0839	35431	2431.4	81582	1.6	0.0082
10	297.0732	34648	12421.7	435693	8.7	0.0086
11	298.0766	35855	2054.3	72282	1.4	0.0083
12	319.0551	36281	9500.8	371177	7.4	0.0088
13	320.0585	36421	1545.7	60666	1.2	0.0088
14	335.0291	36914	443.6	18551	0.4	0.0091
15	441.2975	38779	870.0	51029	1.0	0.0114
16	488.2505	39070	294.6	18965	0.4	0.0125
17	546.2324	39338	69295.4	5018806	100.0	0.0139
18	546.3703	41875	1333.2	96557	1.9	0.0130
19	546.4031	37841	285.0	20643	0.4	0.0144
20	546.4649	23324	933.2	67591	1.3	0.0234
21	546.7833	62337	296.9	21512	0.4	0.0088
22	547.2355	38530	20836.3	1509696	30.1	0.0142
23	548.2384	37322	3599.1	260834	5.2	0.0147
24	549.2412	35839	461.1	33438	0.7	0.0153
25	568.2145	39577	3815.1	279360	5.6	0.0144
26	569.2176	39670	1217.4	89193	1.8	0.0143
27	576.2432	40552	503.7	36810	0.7	0.0142
28	1113.4427	44719	2687.3	88803	1.8	0.0249
29	1114.4458	43132	1654.8	54637	1.1	0.0258
30	1115.4488	42155	546.8	18044	0.4	0.0265

18939.d

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by: Erlend

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Figure 17: HRMS report of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethoxy)phenyl)methyl)phenol (V6).

Elemental Analysis Report

Analysis Info

Sample Name V6
 Method ESI_pos_50_1500_os.m

Acquisition Date 17-Jun-22 4:05:26 PM
 Analysis Name D:\Data\maxis2022\18939.d

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C

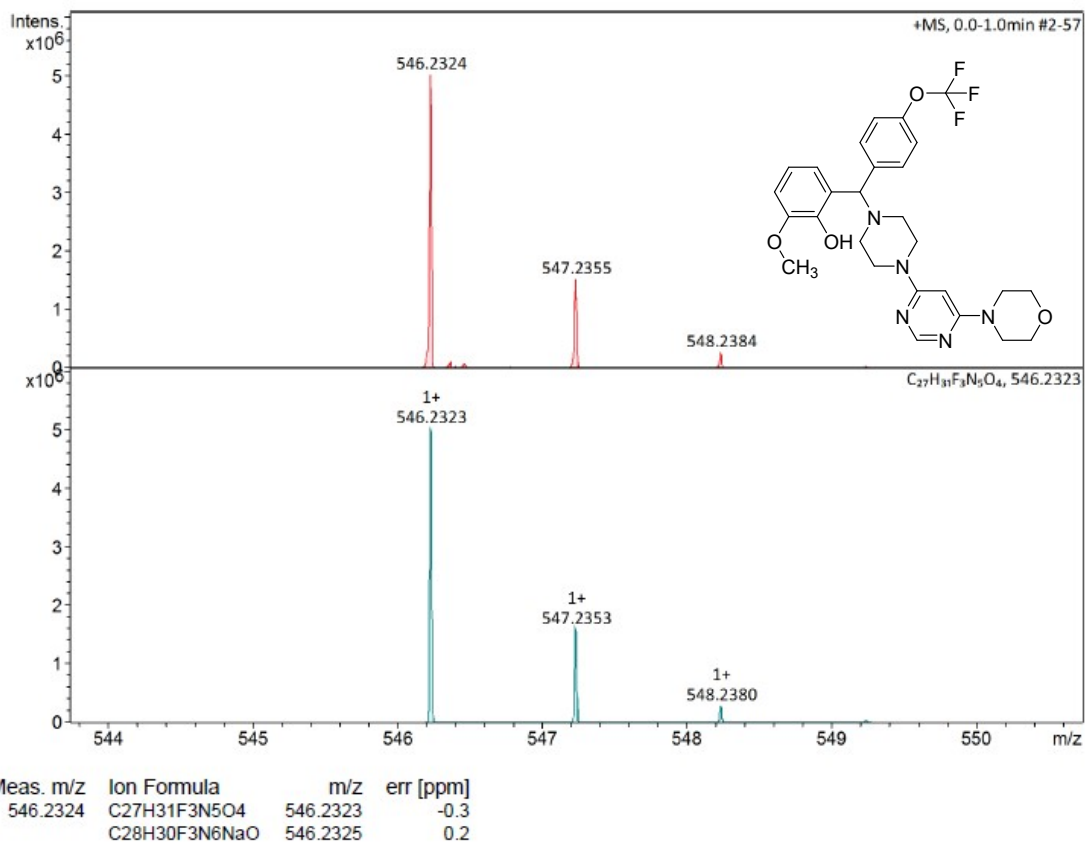


Figure 18: Elemental analysis report of 2-methoxy-6-((4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)(4-(trifluoromethoxy)phenyl)methyl)phenol (V6).

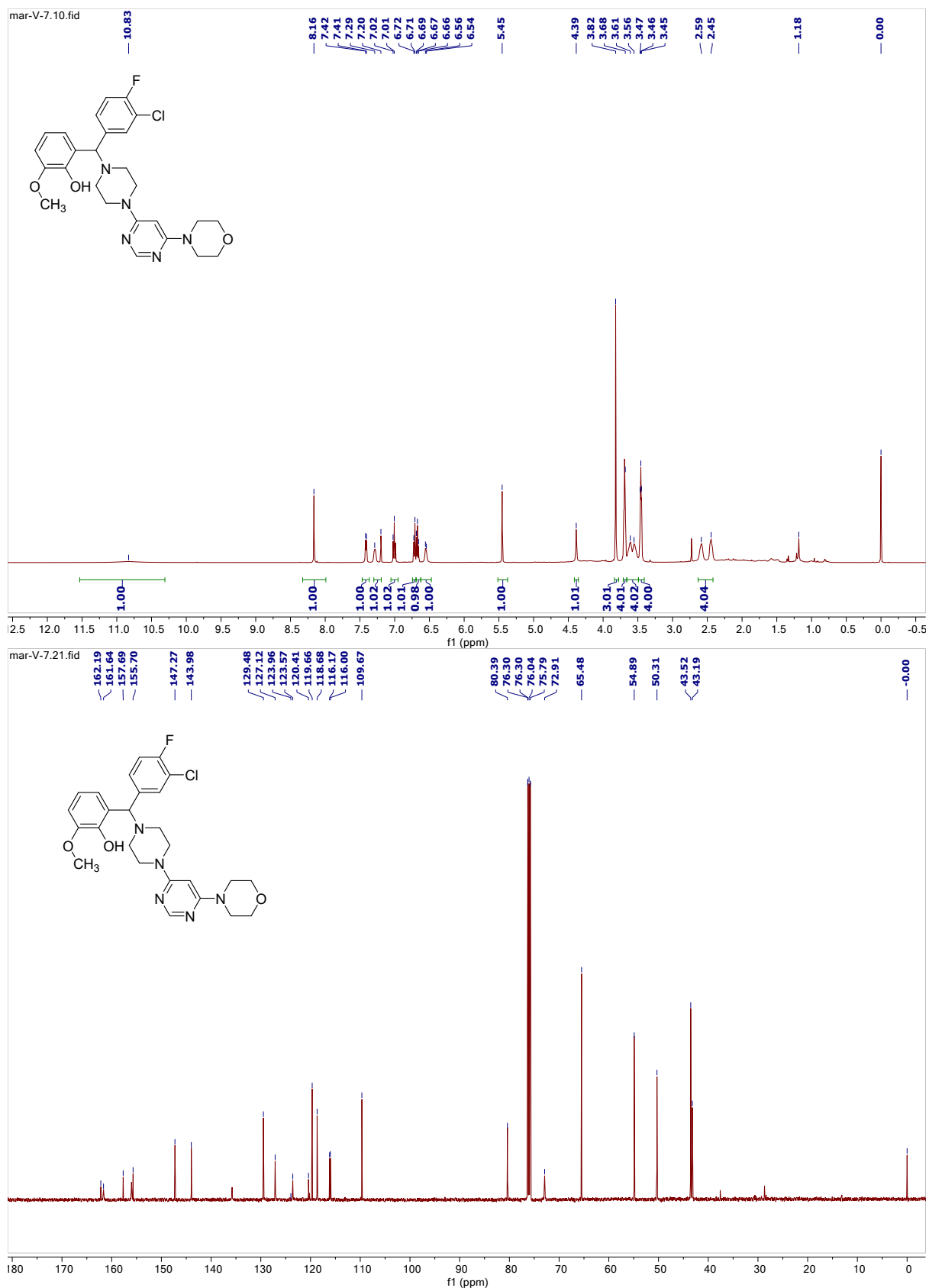


Figure 19: Top: 500 MHz ¹H-NMR of 2-2-((3-chloro-4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V7**). Bottom: 126 MHz ¹³C-NMR of 2-((3-chloro-4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V7**).

Mass Spectrum List Report

Analysis Info

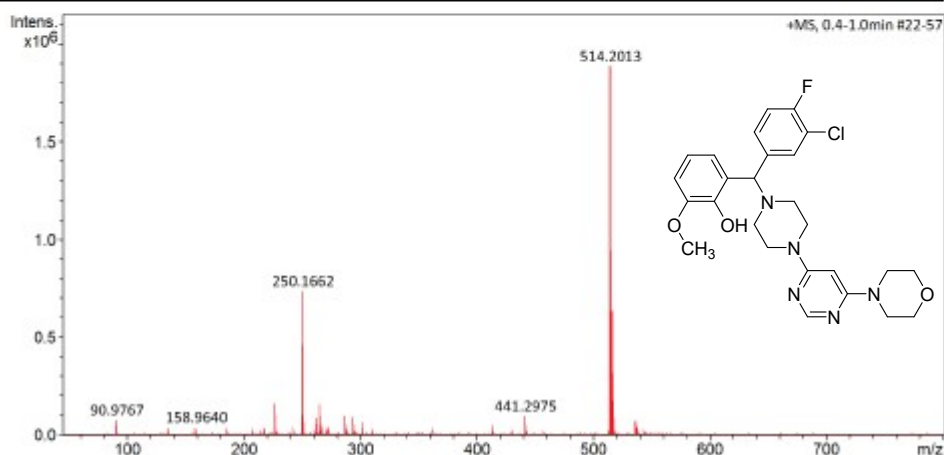
Analysis Name D:\Data\maxis2022\18940.d
 Method ESI_pos_50_1500_os.m
 Sample Name V7
 Comment

Acquisition Date 20-Jun-22 9:58:34 AM

Operator Erlend
 Instrument maXis II ETD 1823391.22318

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	1.0 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I%	FWHM
1	90.9767	23435	3321.8	76645	4.1	0.0039
2	135.0030	26866	1519.4	35371	1.9	0.0050
3	158.9640	26433	1584.1	38396	2.0	0.0056
4	185.1149	30111	979.2	25981	1.4	0.0061
5	217.1047	31945	1187.3	35089	1.9	0.0068
6	226.9515	33662	5267.0	164760	8.7	0.0067
7	227.1254	32238	842.6	26335	1.4	0.0070
8	242.9250	31784	841.1	27238	1.4	0.0076
9	250.1662	32703	21691.6	736259	39.0	0.0076
10	251.1692	30266	2943.7	100752	5.3	0.0083
11	262.1662	34892	2358.2	88311	4.7	0.0075
12	265.0426	34022	4182.8	159776	8.5	0.0078
13	267.0397	35026	1344.3	52108	2.8	0.0076
14	270.9777	33834	789.4	31862	1.7	0.0080
15	273.1673	34012	1101.3	44871	2.4	0.0080
16	287.0246	36305	2114.7	96075	5.1	0.0079
17	289.0217	35182	660.0	30307	1.6	0.0082
18	294.1925	34656	2002.7	94871	5.0	0.0085
19	301.1411	35897	1361.8	66869	3.5	0.0084
20	362.9265	37525	399.1	28087	1.5	0.0097
21	413.2663	38265	585.8	53361	2.8	0.0108
22	441.2975	38798	954.2	95371	5.1	0.0114
23	442.3010	38321	265.6	26654	1.4	0.0115
24	514.2013	39372	15114.8	1886023	100.0	0.0131
25	515.2044	38047	4460.1	556882	29.5	0.0135
26	516.1989	36819	5120.9	638992	33.9	0.0140
27	517.2018	36908	1437.1	179048	9.5	0.0140
28	518.2046	35396	233.7	29156	1.5	0.0146
29	536.1834	40237	569.8	74018	3.9	0.0133
30	538.1810	36890	193.6	25269	1.3	0.0146

18940.d

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Figure 20: HRMS report of 2-((3-chloro-4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (V7).

Elemental Analysis Report

Analysis Info		Acquisition Date	20-Jun-22 9:58:34 AM
Sample Name	V7	Analysis Name	D:\Data\maxis2022\18940.d
Method	ESI_pos_50_1500_os.m		

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	1.0 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C

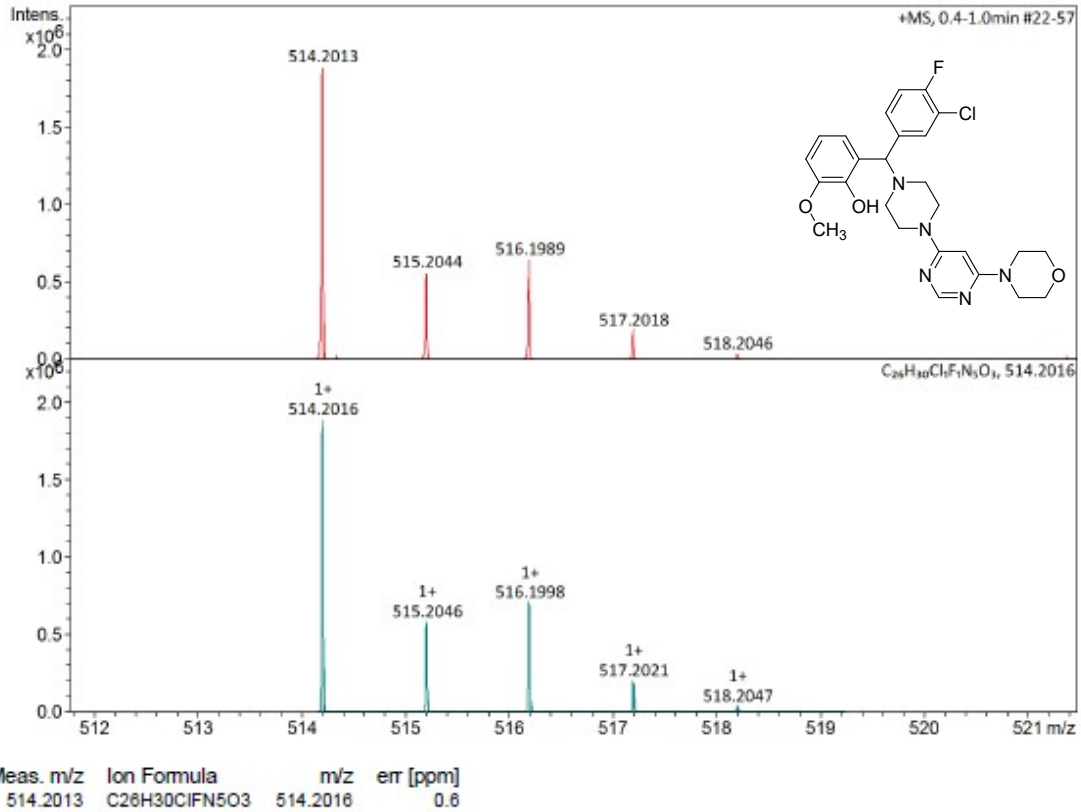


Figure 21: Elemental analysis report of 2-((3-chloro-4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (V7).

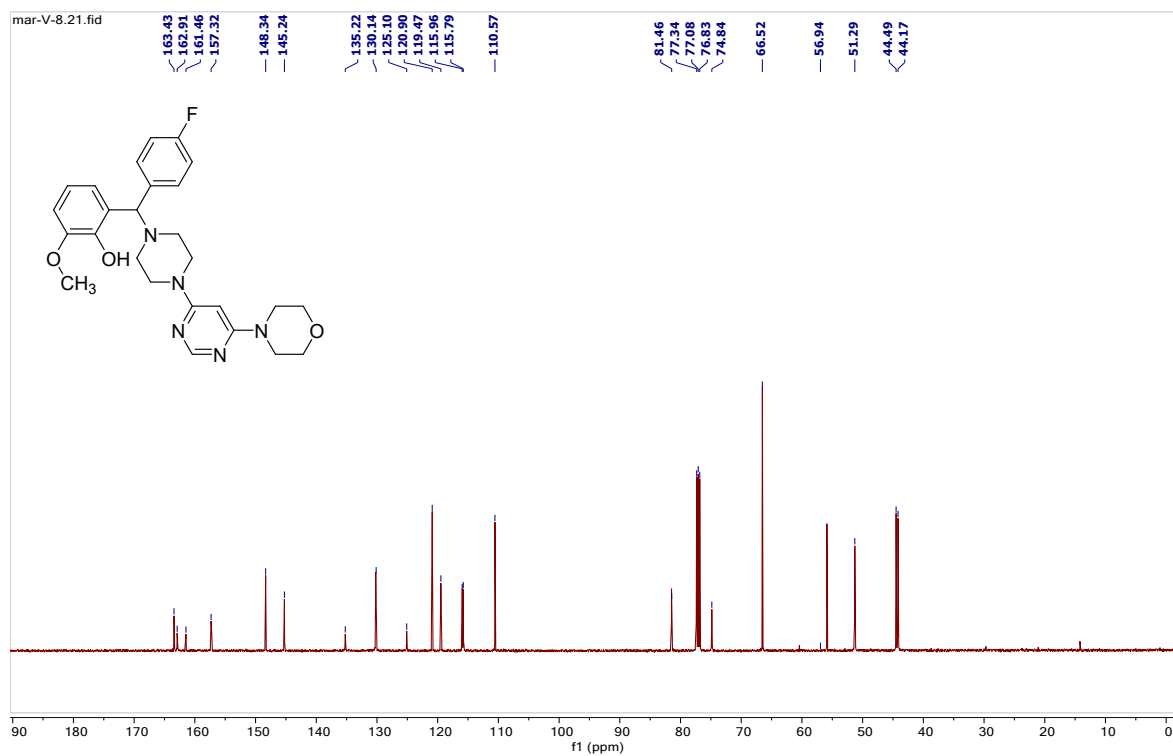
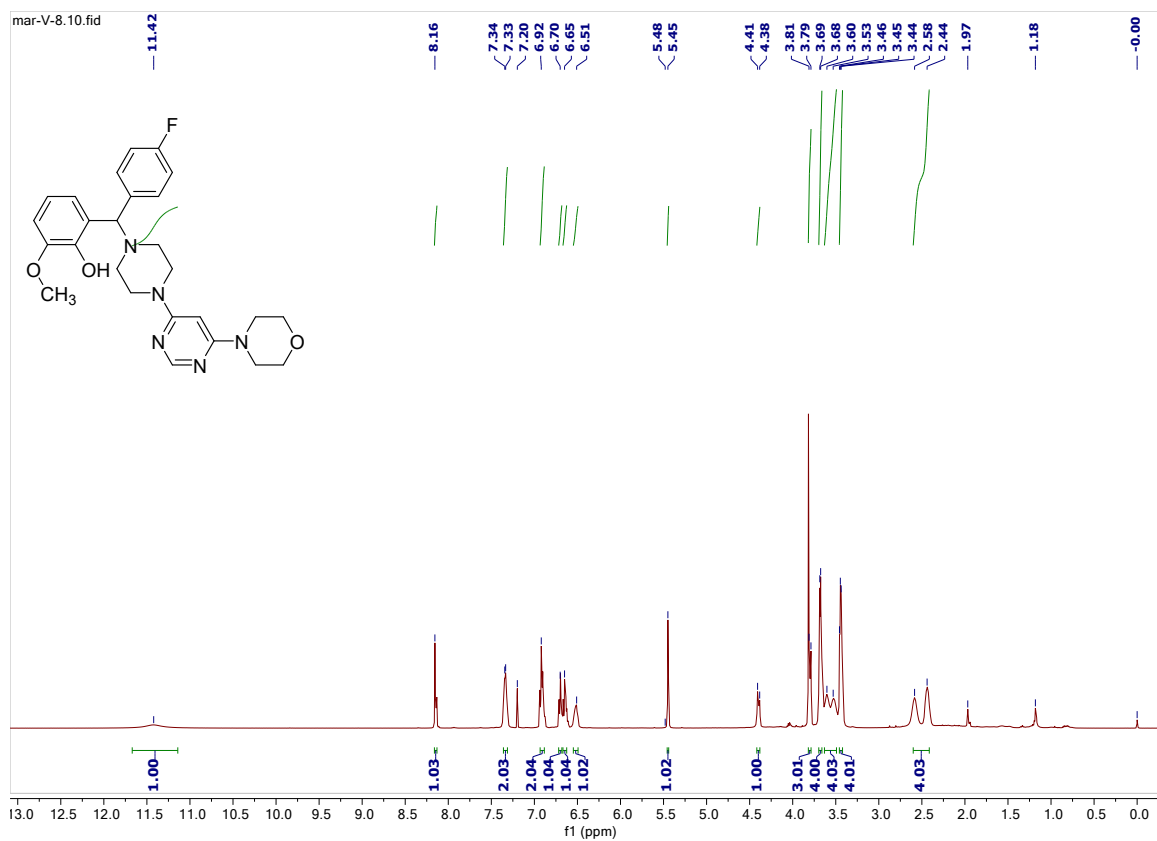


Figure 22: Top: 500 MHz ¹H-NMR of 2-((4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V8**). Bottom: 126 MHz ¹³C-NMR of 2-((4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V8**).

Mass Spectrum List Report

Analysis Info

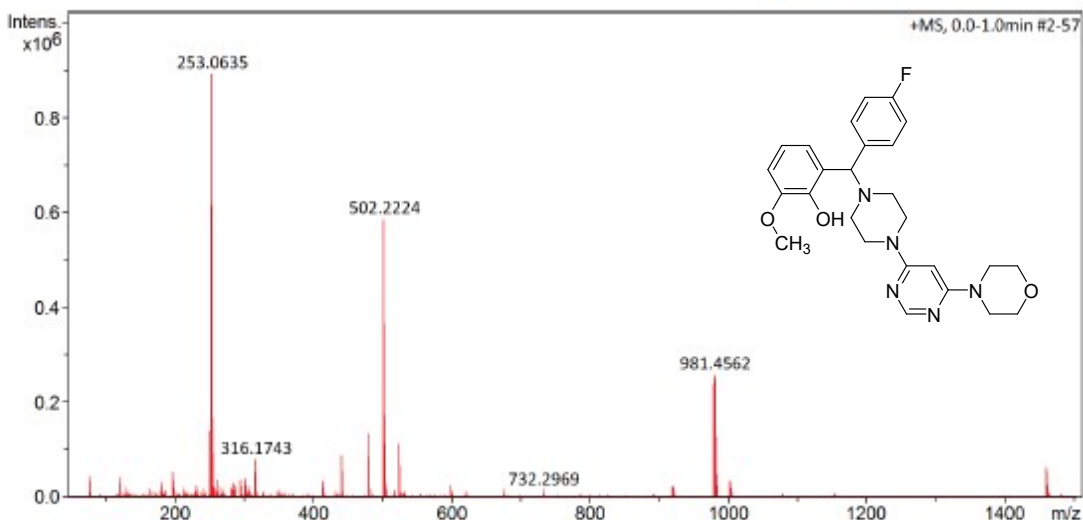
Analysis Name D:\Data\maxis2022\18941.d
 Method ESI_pos_50_1500_os.m
 Sample Name V8
 Comment

Acquisition Date 20-Jun-22 10:15:06 AM

Operator Erlend
 Instrument maXis II ETD 1823391.22318

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C



#	m/z	Res.	S/N	I	I %	FWHM
1	76.9973	21951	2854.1	44487	5.0	0.0035
2	120.9872	26437	2630.6	41244	4.6	0.0046
3	181.0819	31336	1931.4	32461	3.6	0.0058
4	197.0341	30532	3053.0	53365	6.0	0.0065
5	250.1662	32652	7276.6	142259	15.9	0.0077
6	253.0635	33783	45723.0	893087	100.0	0.0075
7	254.0669	33527	6993.9	136555	15.3	0.0076
8	262.1662	35085	1824.9	36611	4.1	0.0075
9	285.0897	34178	1319.4	29624	3.3	0.0083
10	294.1924	34833	1536.1	35834	4.0	0.0084
11	301.1410	35918	1623.2	39030	4.4	0.0084
12	307.0717	36685	1000.6	25261	2.8	0.0084
13	316.1743	35715	2934.8	78567	8.8	0.0089
14	413.2663	38535	732.6	35491	4.0	0.0107
15	441.2975	38669	1626.9	88363	9.9	0.0114
16	480.2405	39490	2049.7	134842	15.1	0.0122
17	481.2438	37498	609.1	40225	4.5	0.0128
18	502.2224	39398	8112.7	585391	65.5	0.0127
19	503.2255	38623	2400.9	173545	19.4	0.0130
20	504.2285	36655	382.1	27692	3.1	0.0138
21	524.2044	40169	1453.9	111597	12.5	0.0131
22	525.2075	38609	427.3	32875	3.7	0.0136
23	600.2205	40981	273.6	24736	2.8	0.0146
24	981.4562	43522	3710.2	257488	28.8	0.0226
25	982.4593	43027	2237.2	155184	17.4	0.0228
26	983.4623	42133	703.3	48763	5.5	0.0233
27	1003.4384	44234	516.9	34614	3.9	0.0227
28	1460.6912	44146	1689.8	63702	7.1	0.0331
29	1461.6942	44191	1573.8	59327	6.6	0.0331
30	1462.6972	43571	725.3	27341	3.1	0.0336

18941.d

Bruker Compass DataAnalysis 4.3

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Figure 23: HRMS report of 2-((4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (V8).

Elemental Analysis Report

Analysis Info	Acquisition Date 20-Jun-22 10:15:06 AM
Sample Name V8	Analysis Name D:\Data\maxis2022\18941.d
Method ESI_pos_50_1500_os.m	

Acquisition Parameter

Source Type	ESI	Set Capillary	3500 V	Set Nebulizer	0.3 Bar
Focus	Not active	Set End Plate Offset	-500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Charging Voltage	2000 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Corona	0 nA	Set Divert Valve	Waste
				Set APCI Heater	0 °C

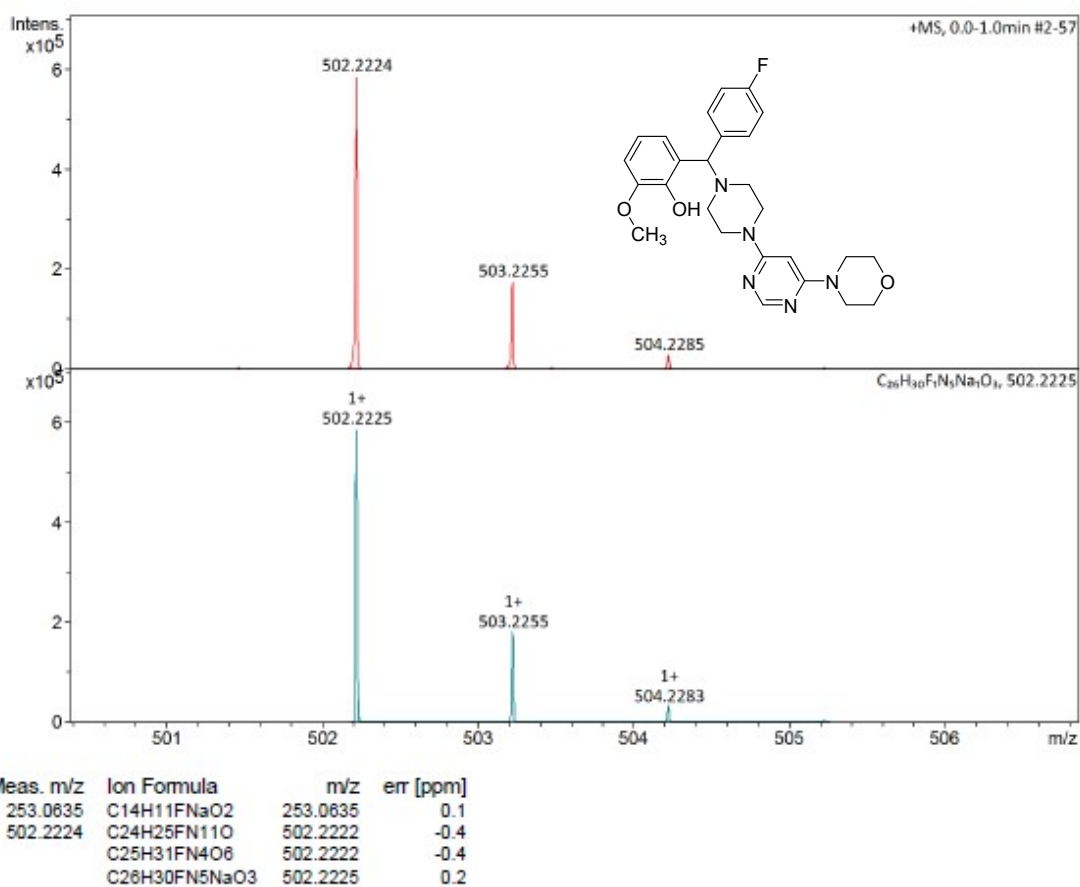
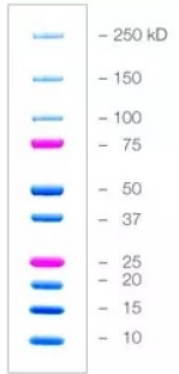


Figure 24: Elemental analysis report of 2-((4-fluorophenyl)(4-(6-morpholinopyrimidin-4-yl)piperazin-1-yl)methyl)-6-methoxyphenol (**V8**).



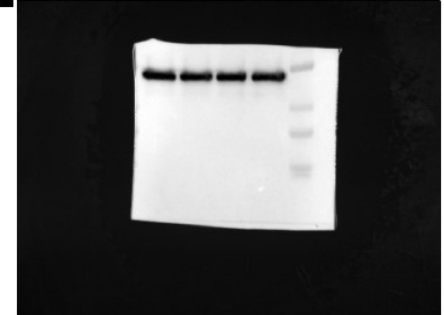
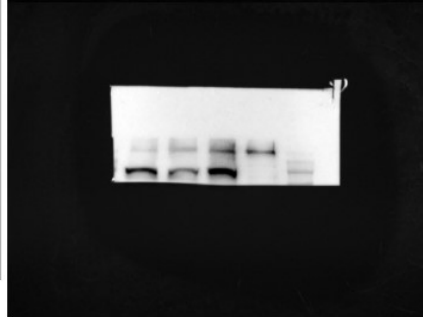
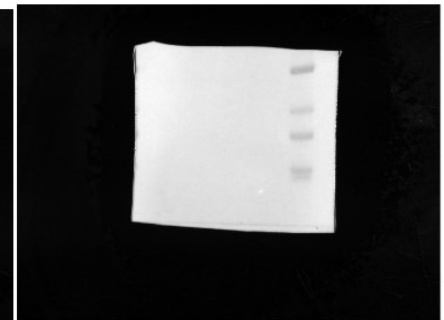
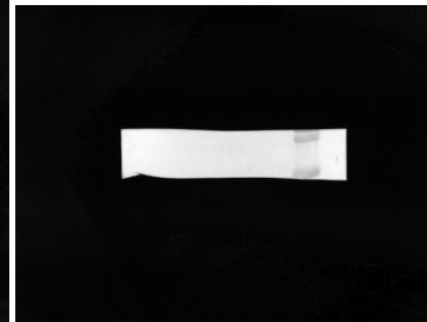
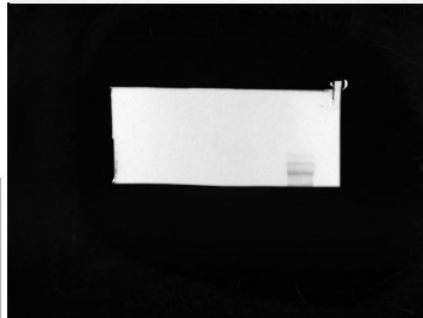
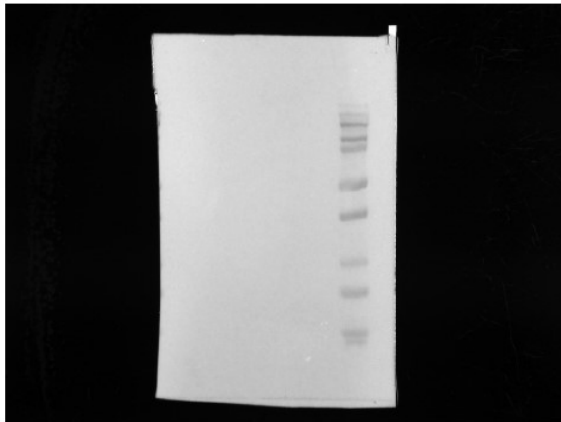
Inos



cox 2

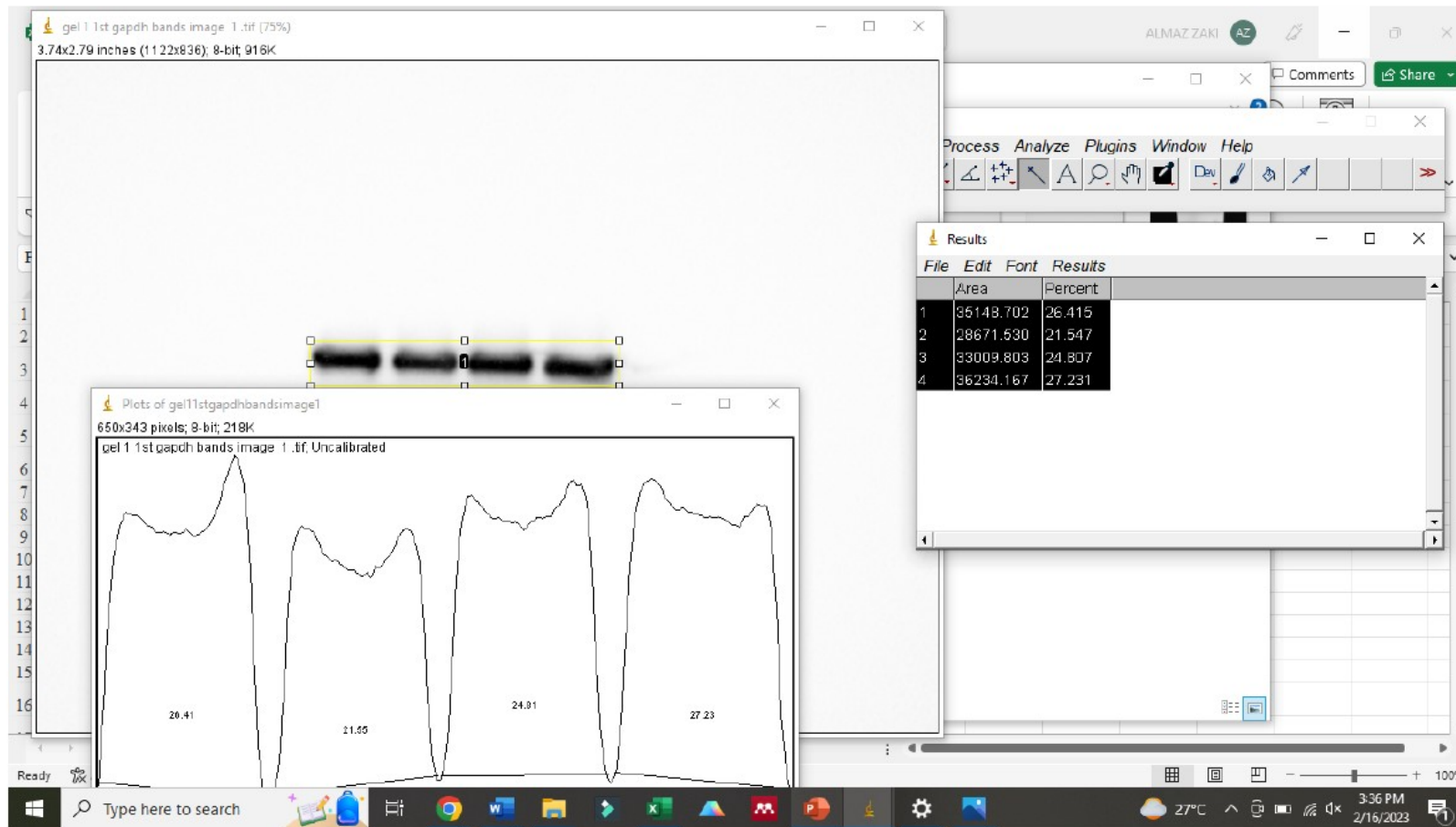


gapdh

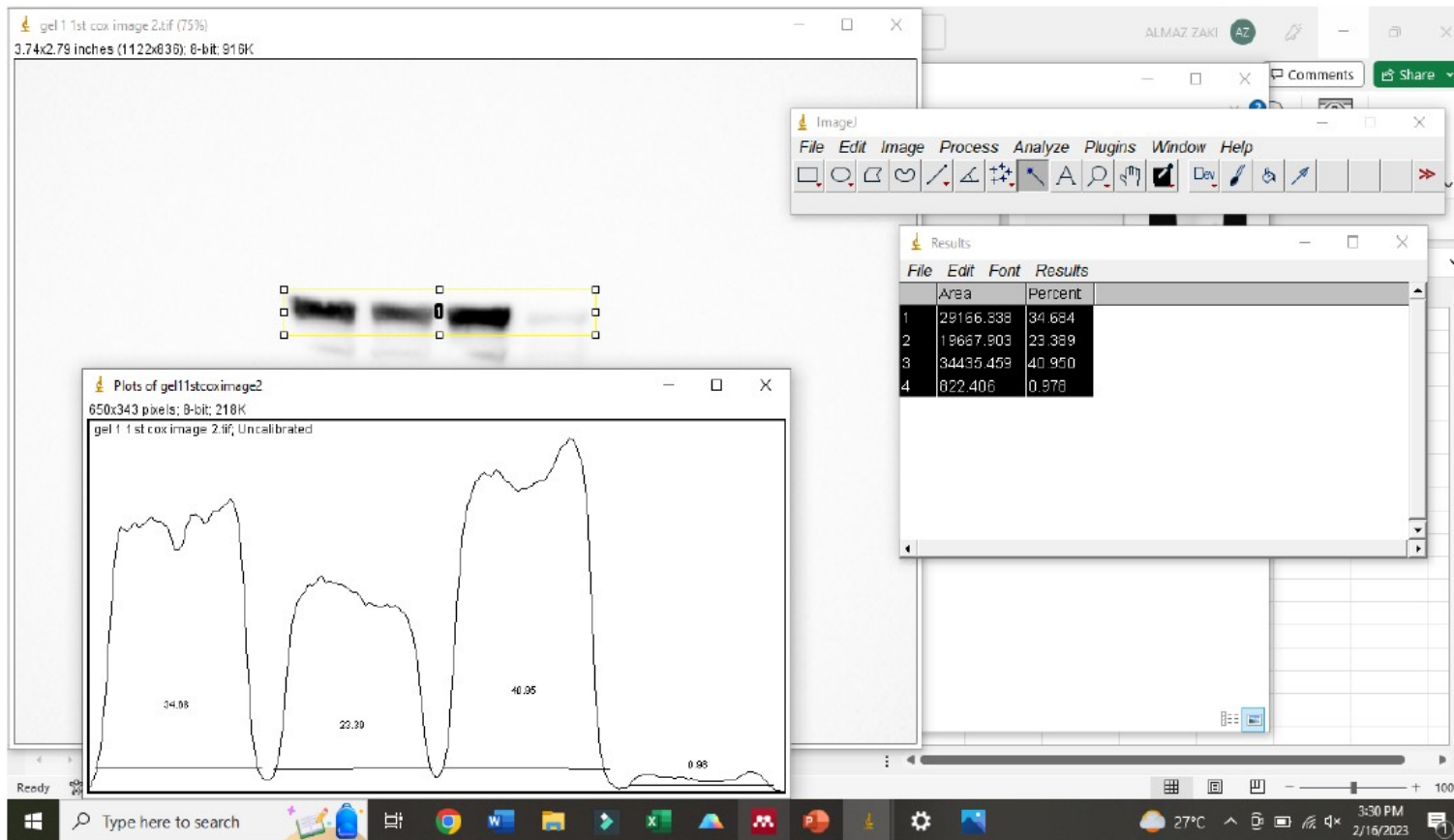


1	35148.702	26.415
2	28671.530	21.547
3	33009.803	24.807
4	36234.167	27.231

GAPDH



1	29166.338	34.684	
2	19667.903	23.389	COX-2
3	34435.459	40.950	
4	822.406	0.978	

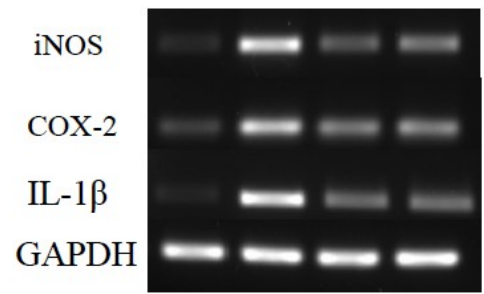


iNOS

The screenshot displays the iNOS software interface with several windows open. The main window shows a gel image with four bands. A yellow box highlights the bands, and a plot below it shows the intensity profile of these bands. The plot has four peaks labeled with their respective percentages: 33.98, 20.30, 45.04, and 0.68. A results table in the center window provides the following data:

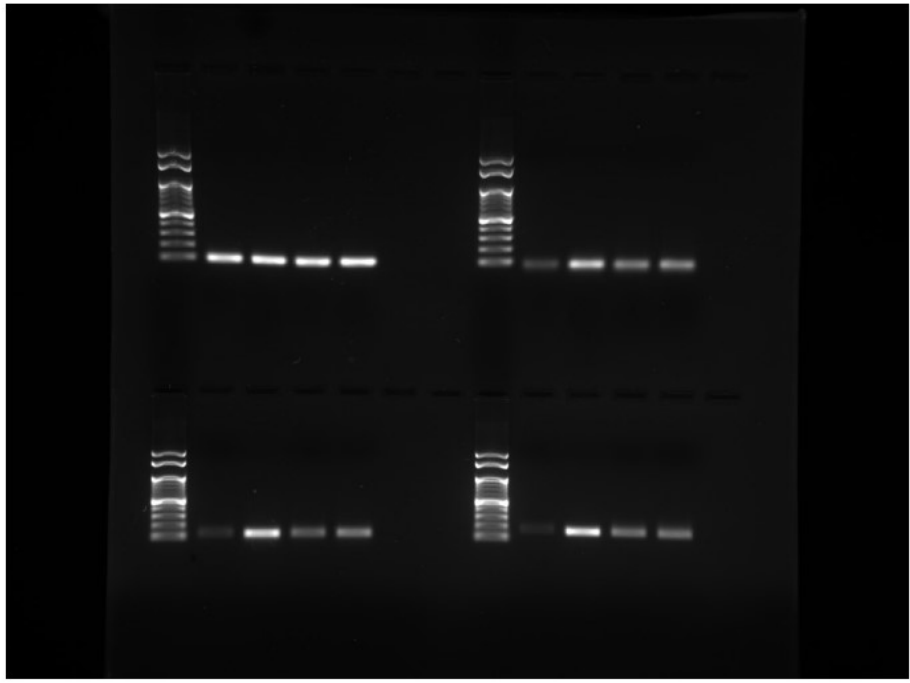
Line	Area	Percent
1	24341.510	33.979
2	14543.167	20.301
3	32268.066	45.044
4	484.335	0.676

The interface also includes a 'Format Background' panel on the right with options for fill (Solid, Gradient, Picture or texture, Pattern) and background graphics. The bottom status bar shows 'Slide 9 of 9', 'Accessibility: Investigate', and system information like '25°C' and '5:56 PM 2/16/2023'.



GAPDH

iNOS



COX-2

IL-1β

1	30756.924	23.428
2	32664.267	24.881
3	32922.631	25.078
4	34939.167	26.614

GAPDH

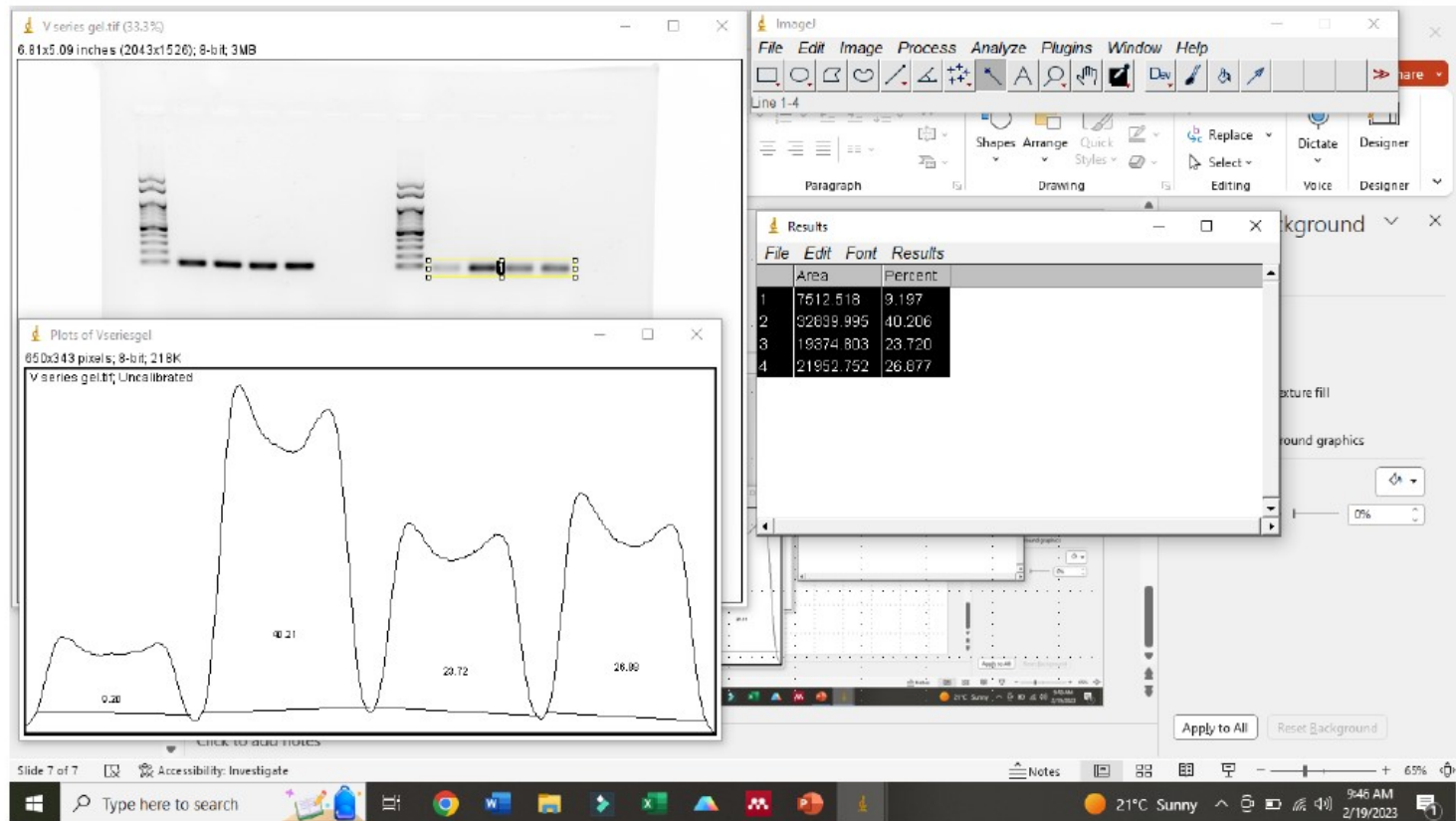
The screenshot displays a software interface for image analysis. The main window shows a gel electrophoresis image with four lanes. A densitometry plot is overlaid on the gel, showing four distinct peaks. The x-axis of the plot is labeled with values: 23.40, 24.88, 25.08, and 26.61. A 'Results' window is open, showing a table with the following data:

File	Area	Percent
1	30756.924	23.428
2	32664.267	24.881
3	32922.631	25.078
4	34939.167	26.614

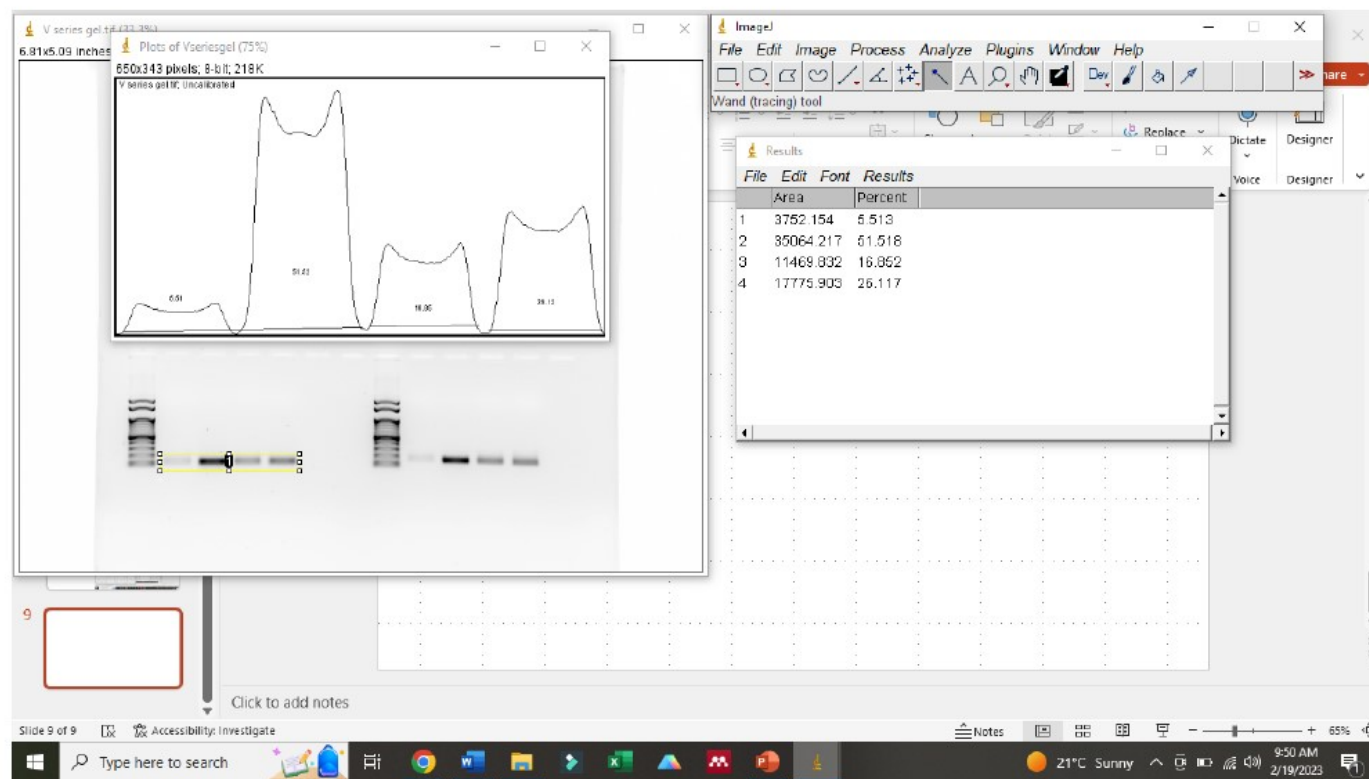
The software interface also shows various toolbars and a status bar at the bottom indicating 'Slide 7 of 7' and system information like '21°C Sunny' and '9:43 AM 2/19/2023'.

1	7512.518	9.197
2	32839.995	40.206
3	19374.803	23.720
4	21952.752	26.877

COX-2



1	3752.154	5.513	
2	35064.217	51.518	iNOS
3	11469.832	16.852	
4	17775.903	26.117	



1	1960.004	0.910	
2	35111.359	16.295	IL-1 β
3	15228.711	7.067	
4	17020.004	7.899	

