

Representative 1H and 13CNMR Spectra

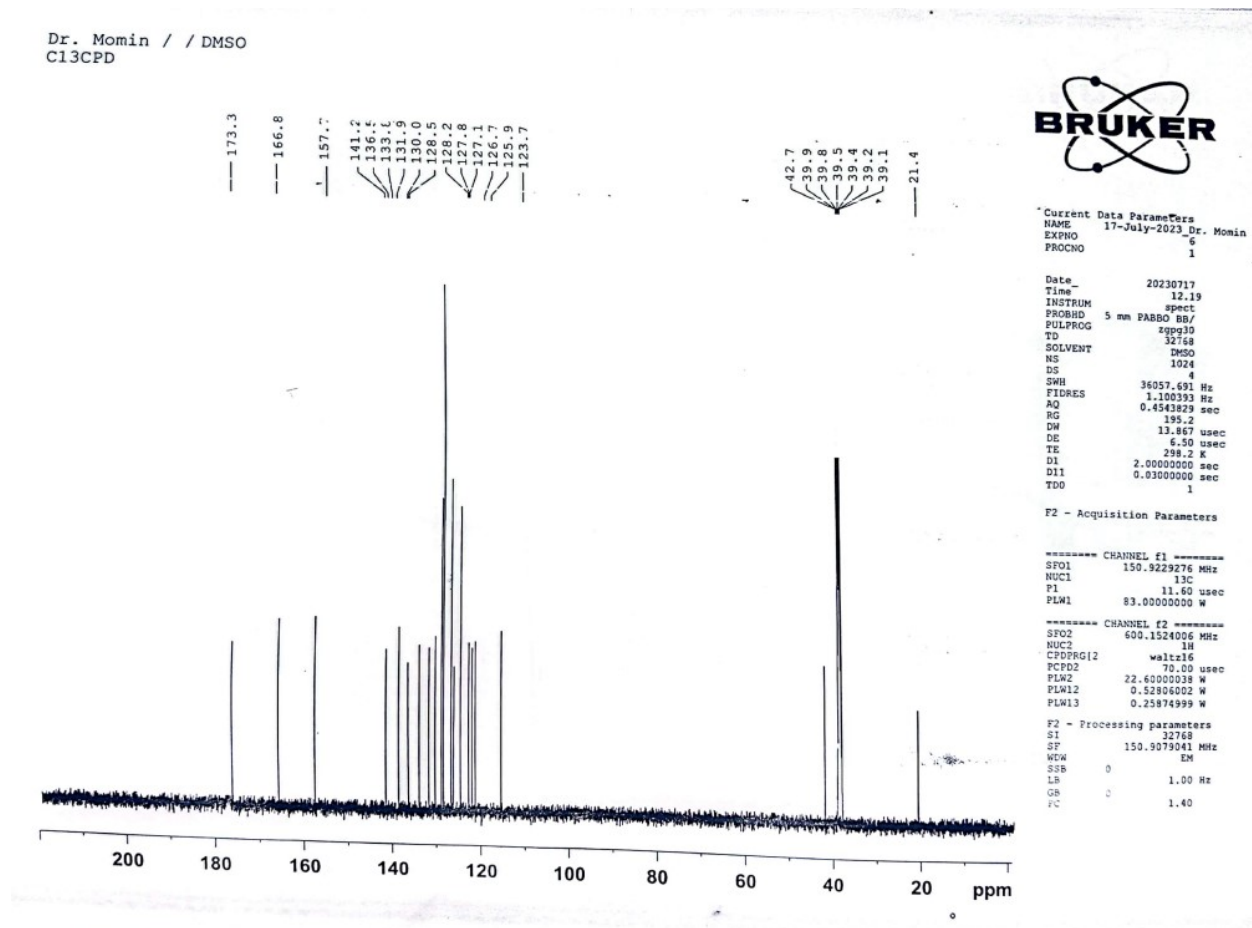


Figure-S1: ¹³CNMR of Compound 5

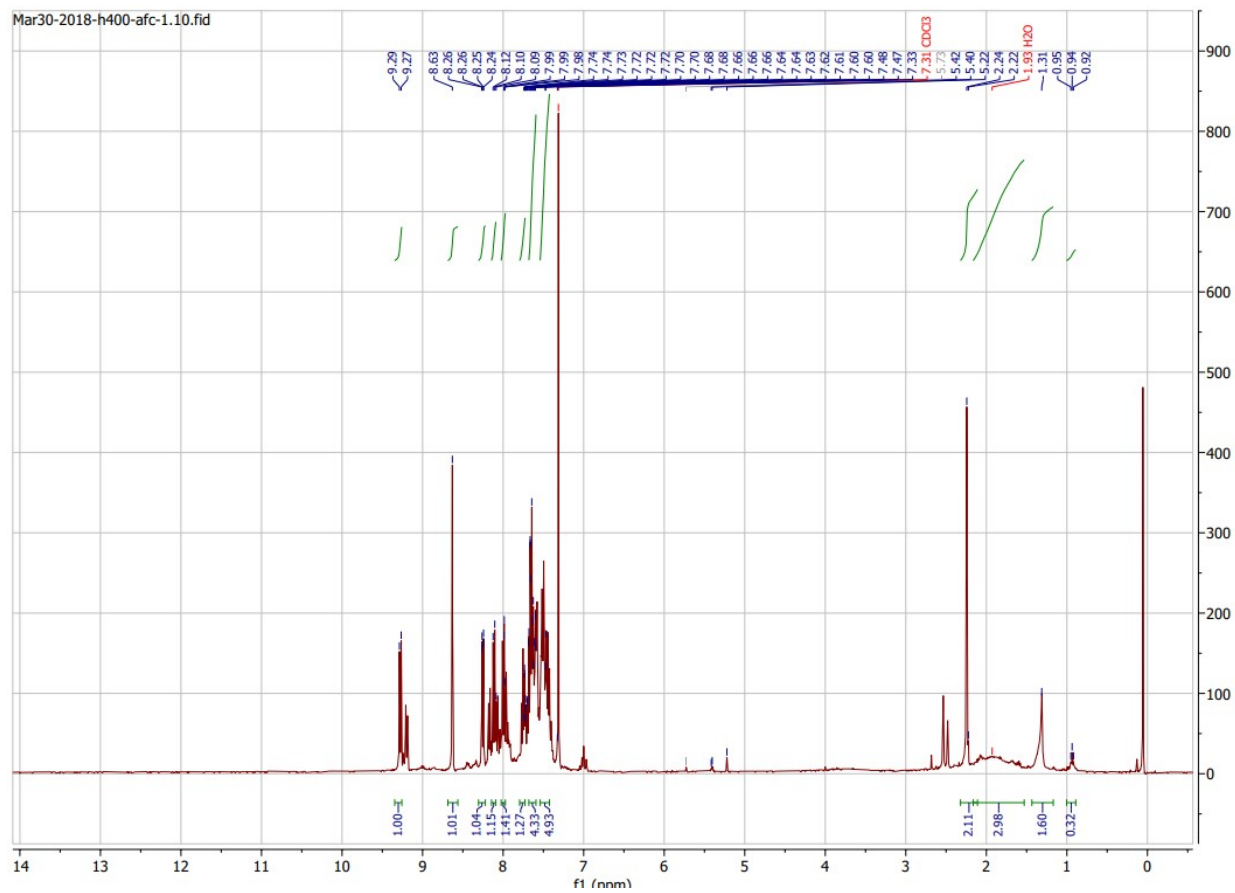
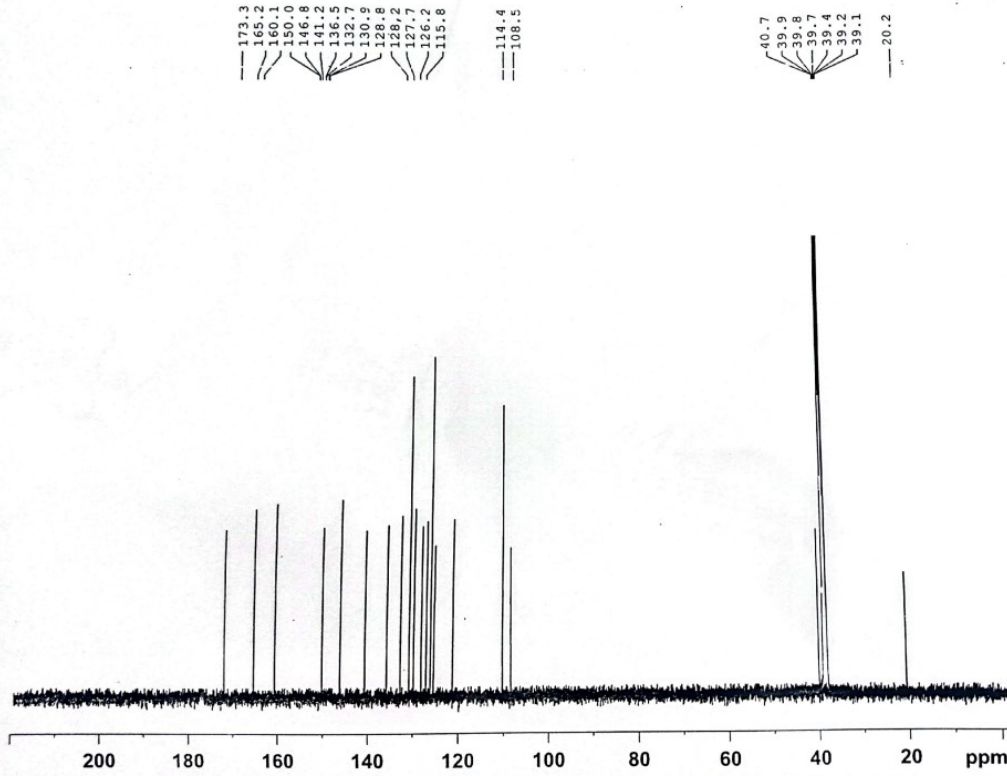


Figure-S2: ¹H NMR of Compound 5

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 27-July-2023, Dr. Momin
EXPHO 6
PROCNO 1

Date 20220717
Time 12.30
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TDO 1

F2 - Acquisition Parameters

----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.0000000 W

----- CHANNEL f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CPDPRG12 waltz16
PCPD2 70.00 usec
PLM2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S3: ¹³CNMR of Compound 6

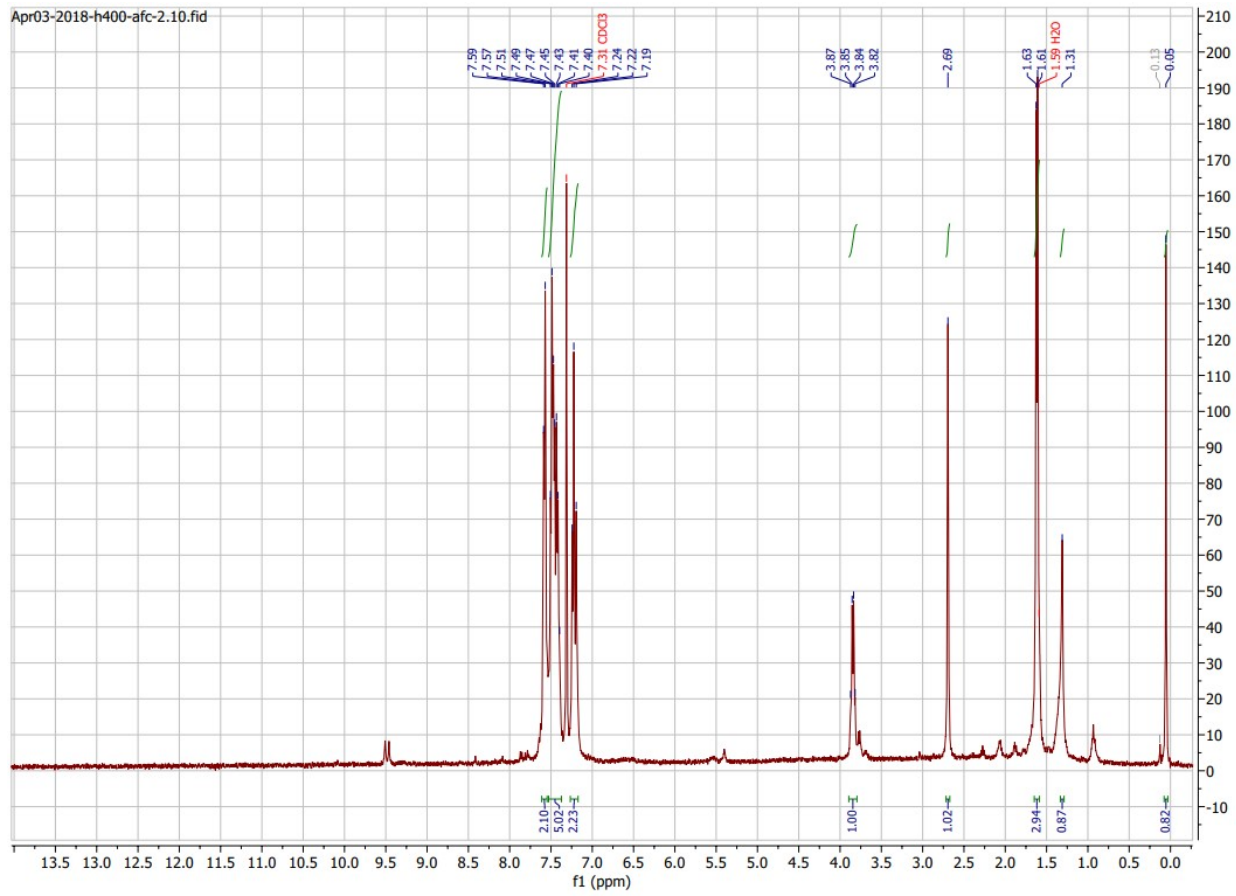
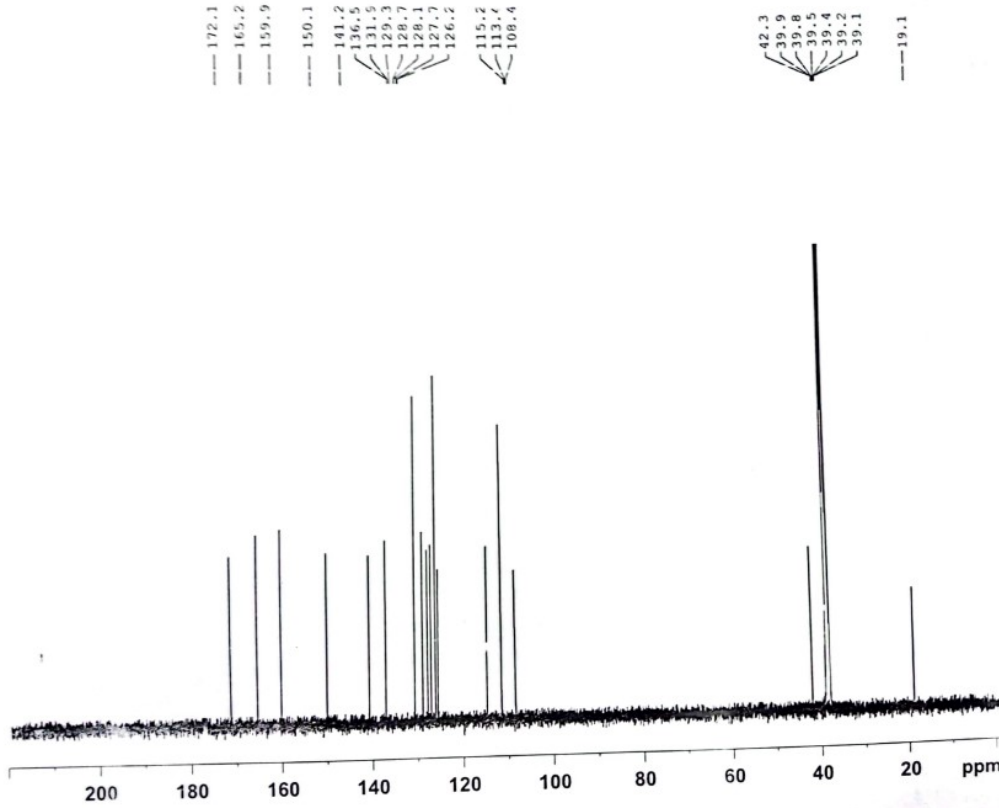


Figure-S4: ¹H NMR of Compound 6

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023_Dr. Momin
EXPNO 6
PROCNO 1
Date_ 20230717
Time 12.40
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 2
SWH 36057.694 Hz
FIDRES 1.100393 Hz
AQ 0.4543629 sec
RG 195.2
CW 13.967 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
d11 0.03000000 sec
TDO 1

F2 - Acquisition Parameters
----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.40 usec
PLW1 83.0000000 W
----- Channel f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CPOPRG(2) waltz16
PCPD2 70.00 usec
PLW2 22.6000000 W
PLW12 0.52806002 W
PLW13 0.25874999 W
F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S5: ¹³CNMR of Compound 7

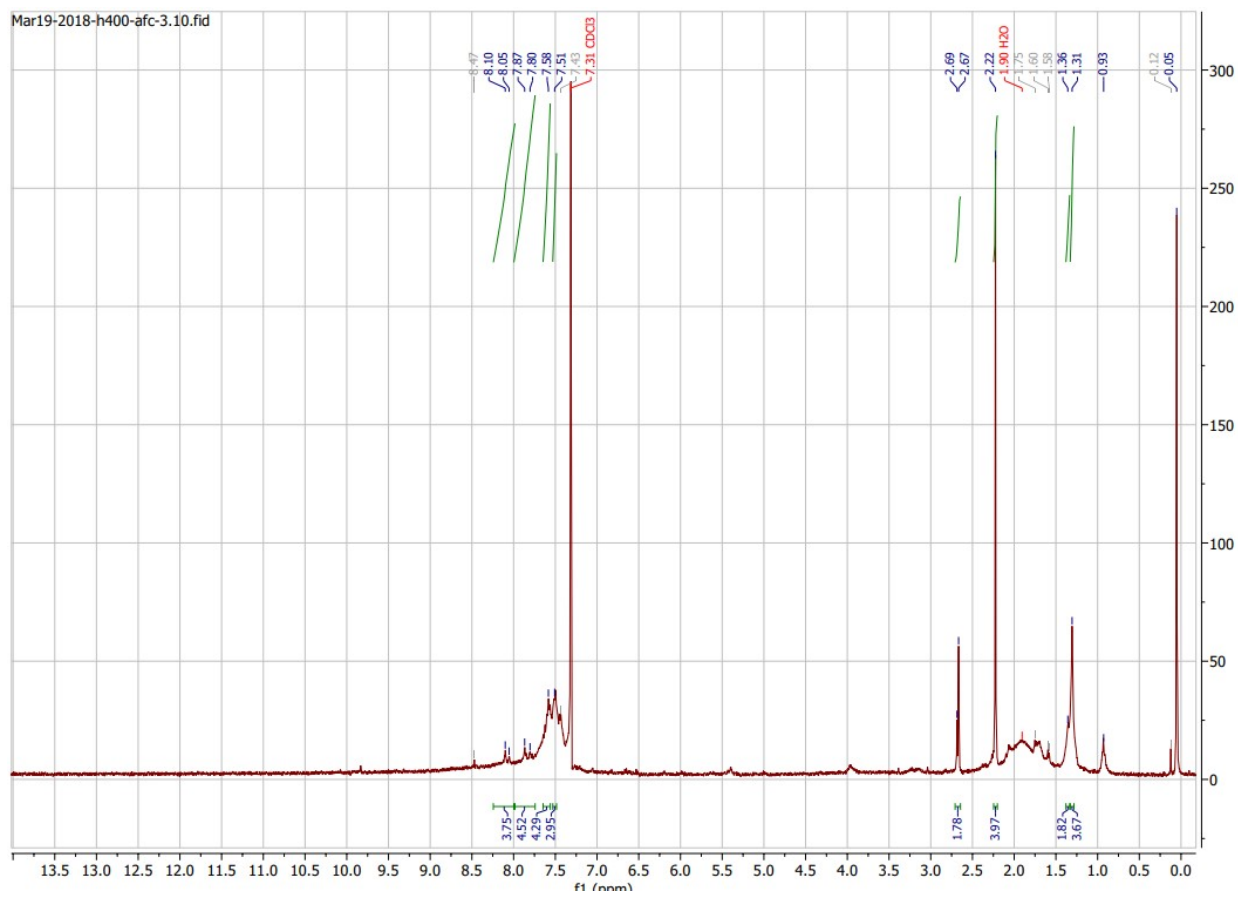
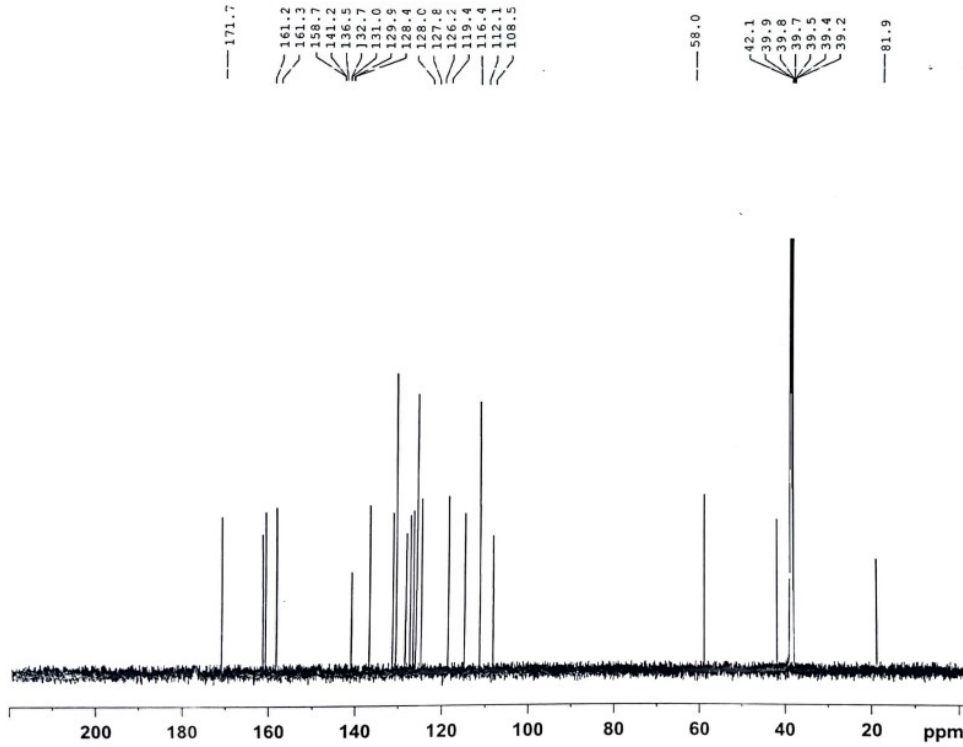


Figure-S6: ^1H NMR of Compound 7

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023_Dr. Momin
EXPNO 6
PROCNO 1

Date_ 20230717
Time_ 12.47
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

F2 - Acquisition Parameters

===== CHANNEL f1 =====
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.0000000 W

===== CHANNEL f2 =====
SFO2 600.1524006 MHz
NUC2 1H
CPDPRG(2) waltz16
PCPD2 70.00 usec
PLW2 22.60000039 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079943 MHz
KDK EM
SBB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S7: ¹³CNMR of Compound 9

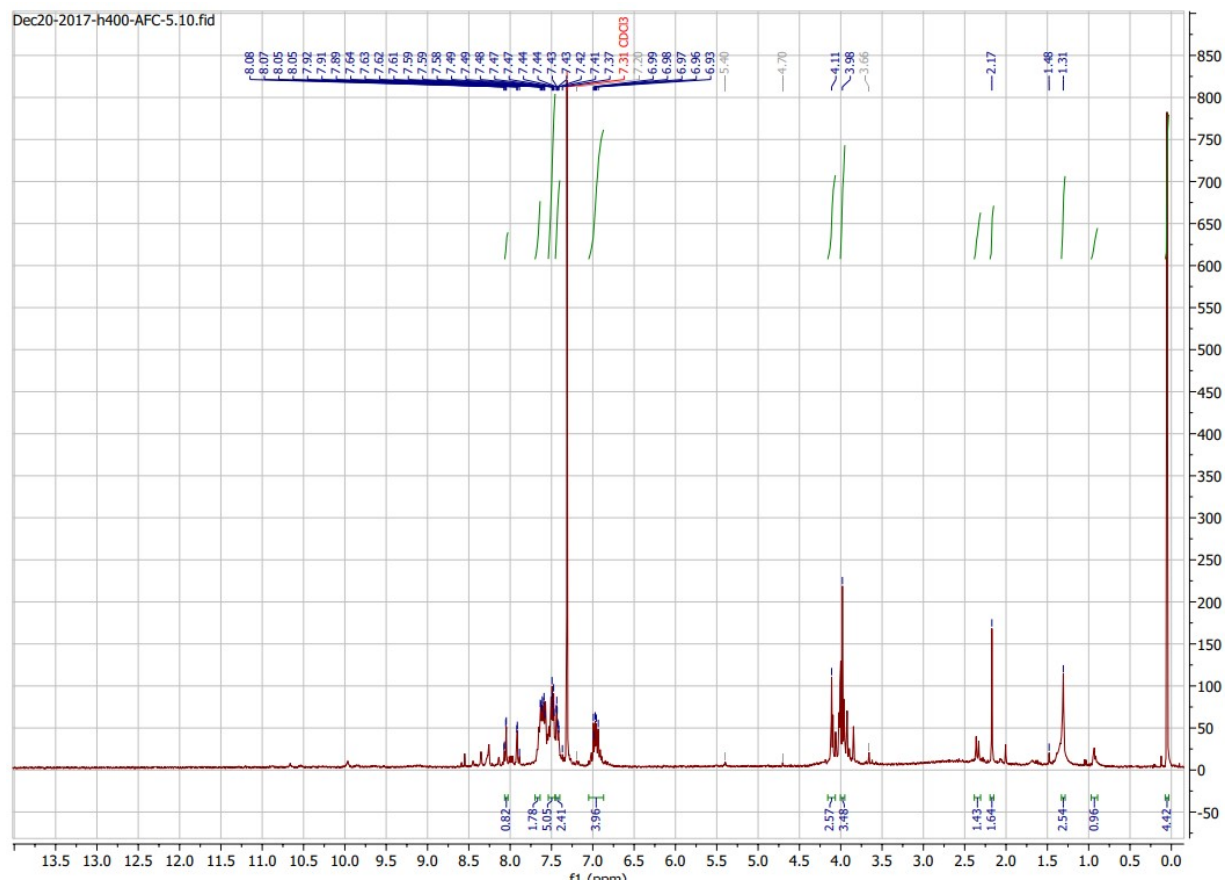
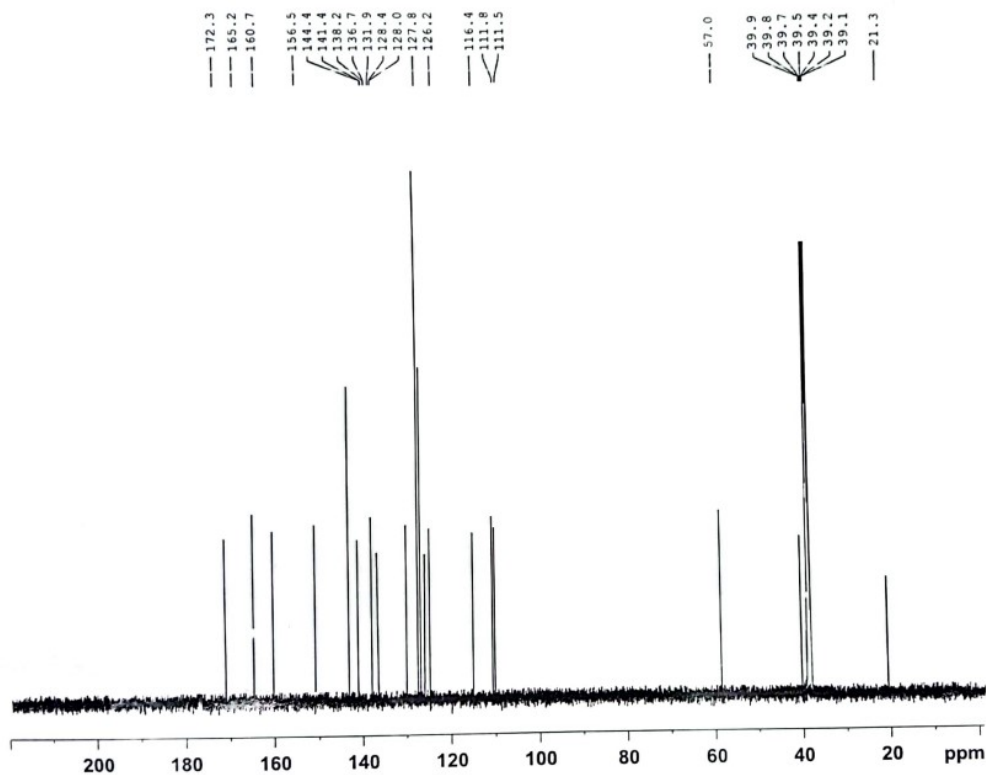


Figure-S8: ¹H NMR of Compound 9

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023_Dr. Momin
EXPRO 6
PFOCHO 1

Date_ 20230717
Time 12.55
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.631 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DM 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

F2 - Acquisition Parameters

----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.00000000 W

----- CHANNEL f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CDDPRG12 waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S9: ¹³CNMR of Compound 10

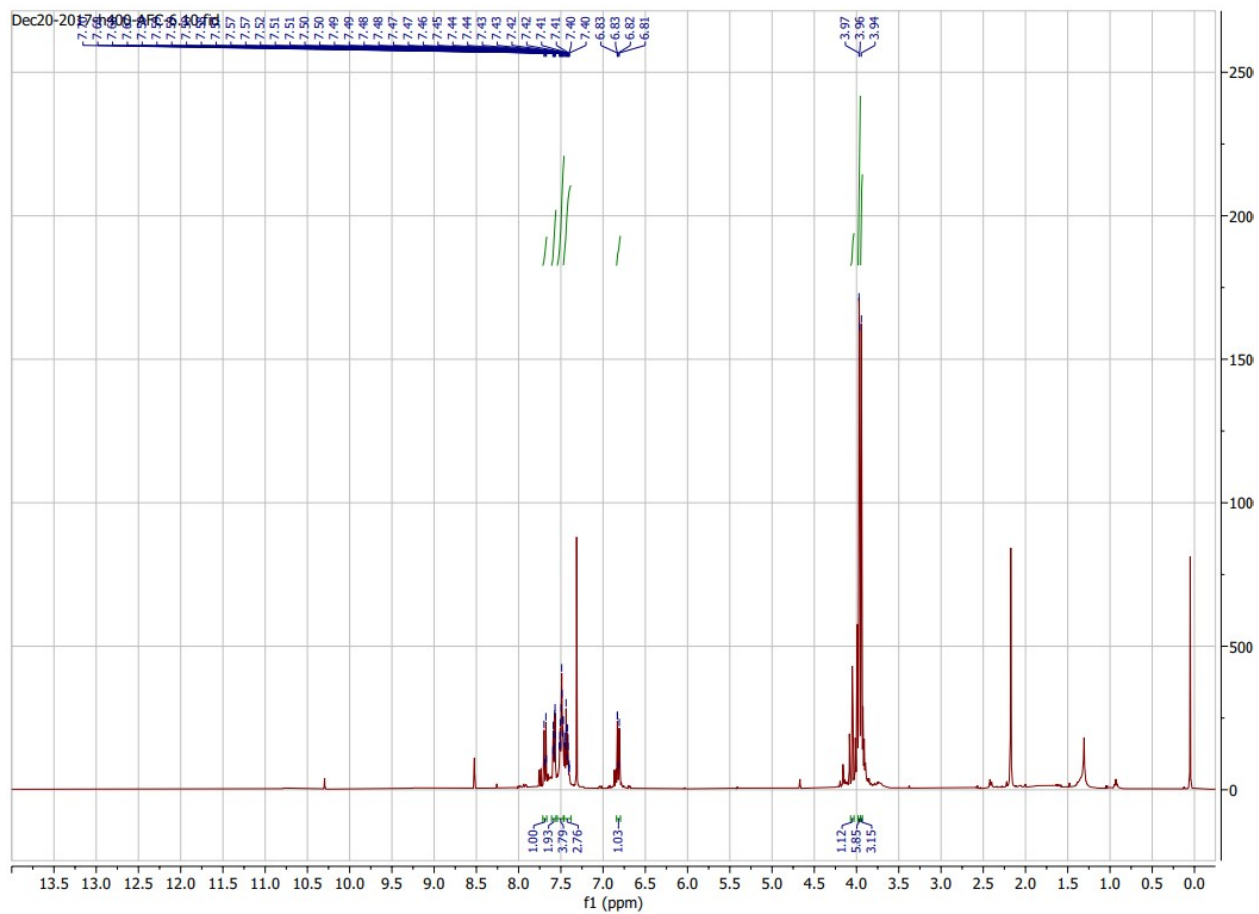
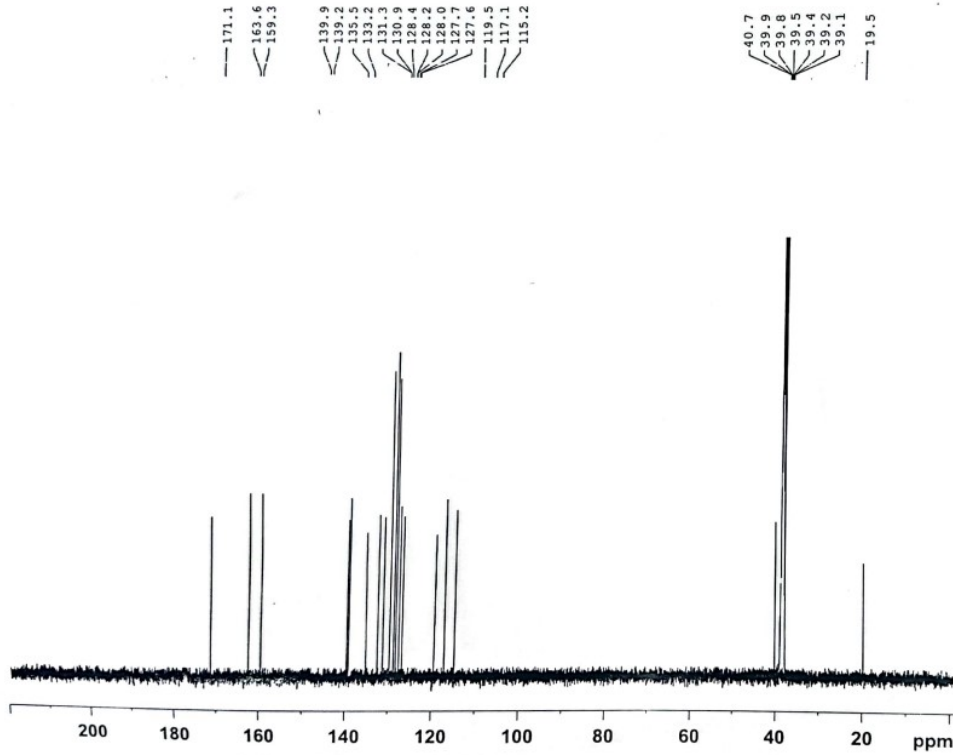


Figure-S10: ¹H NMR of Compound 10

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023 Dr. Momin
EXPNO 6
PROCNO 1

Date_ 20220717
Time 1.03
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1

F2 - Acquisition Parameters

----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.00000000 W

----- CHANNEL f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S11: ¹³CNMR of Compound 11

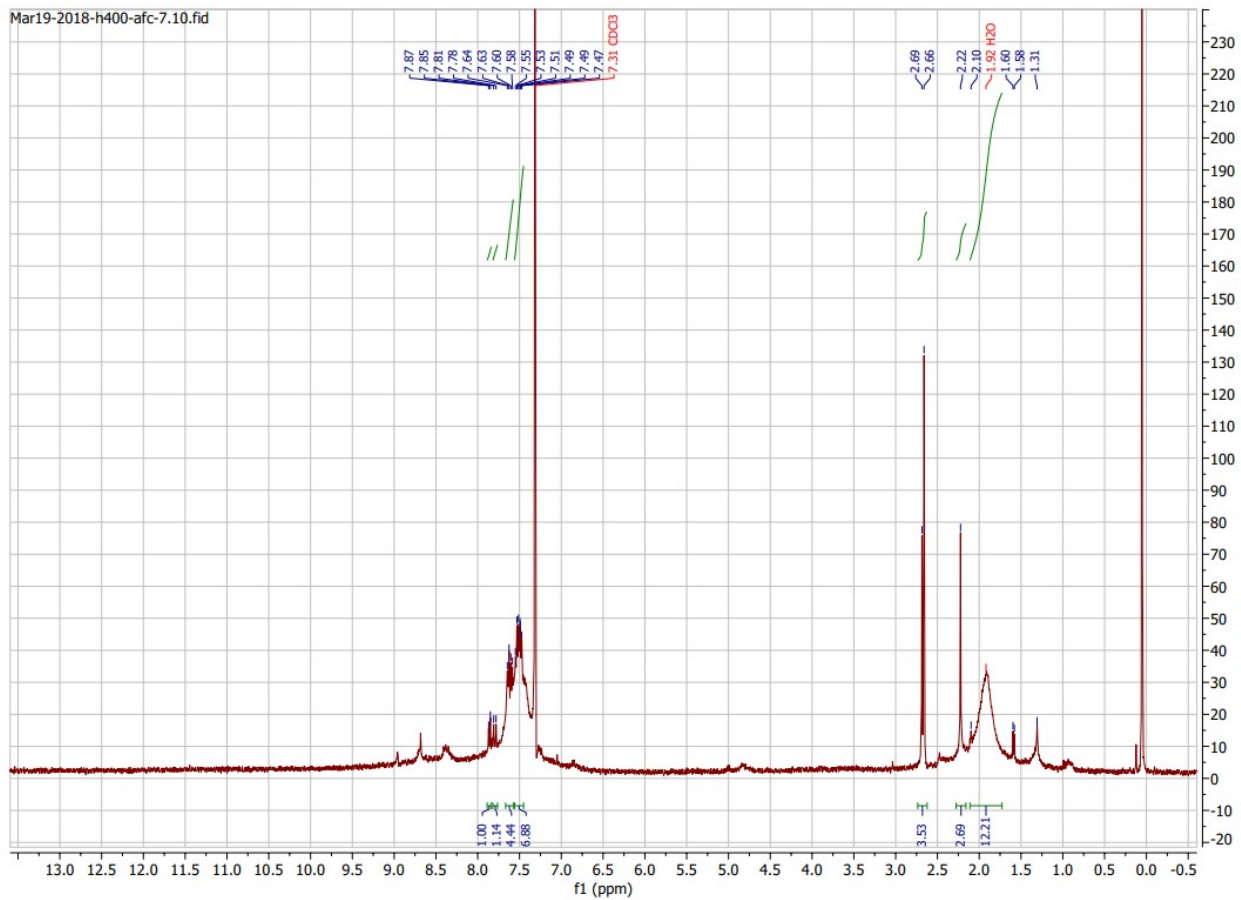


Figure-S12: ¹H NMR of Compound 11

Dr. Momin / / DMSO
C13CPD

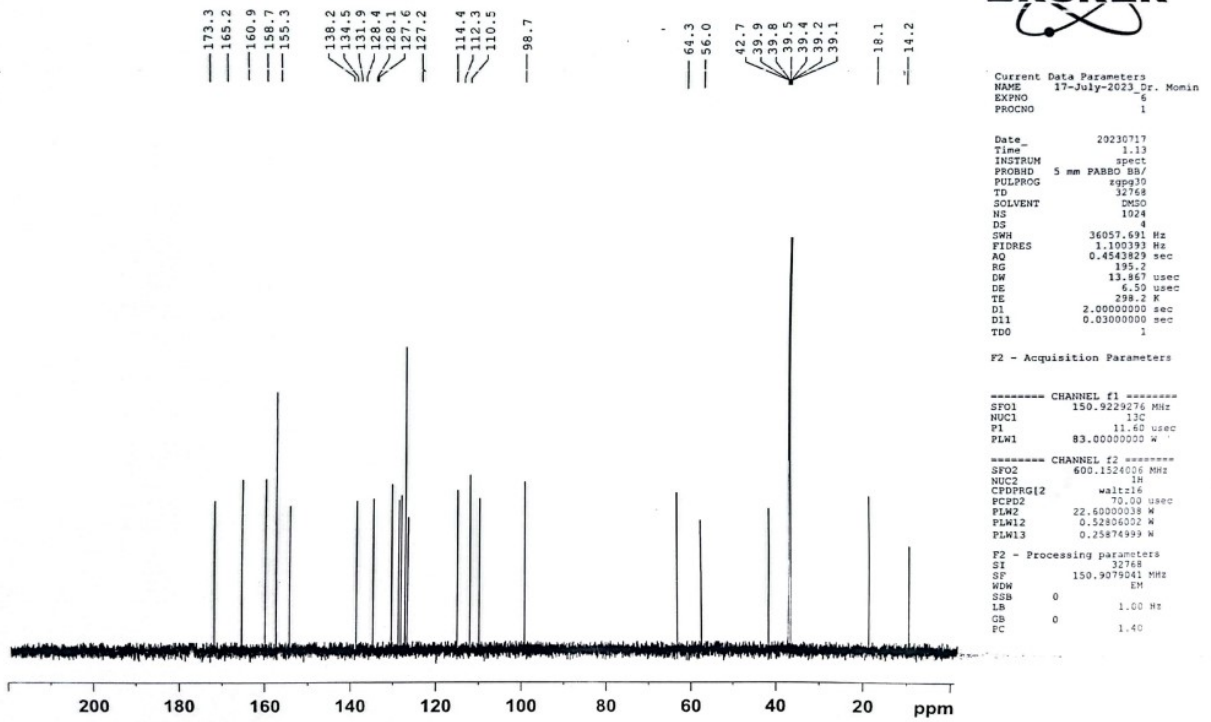


Figure-S13: ¹³CNMR of Compound 12

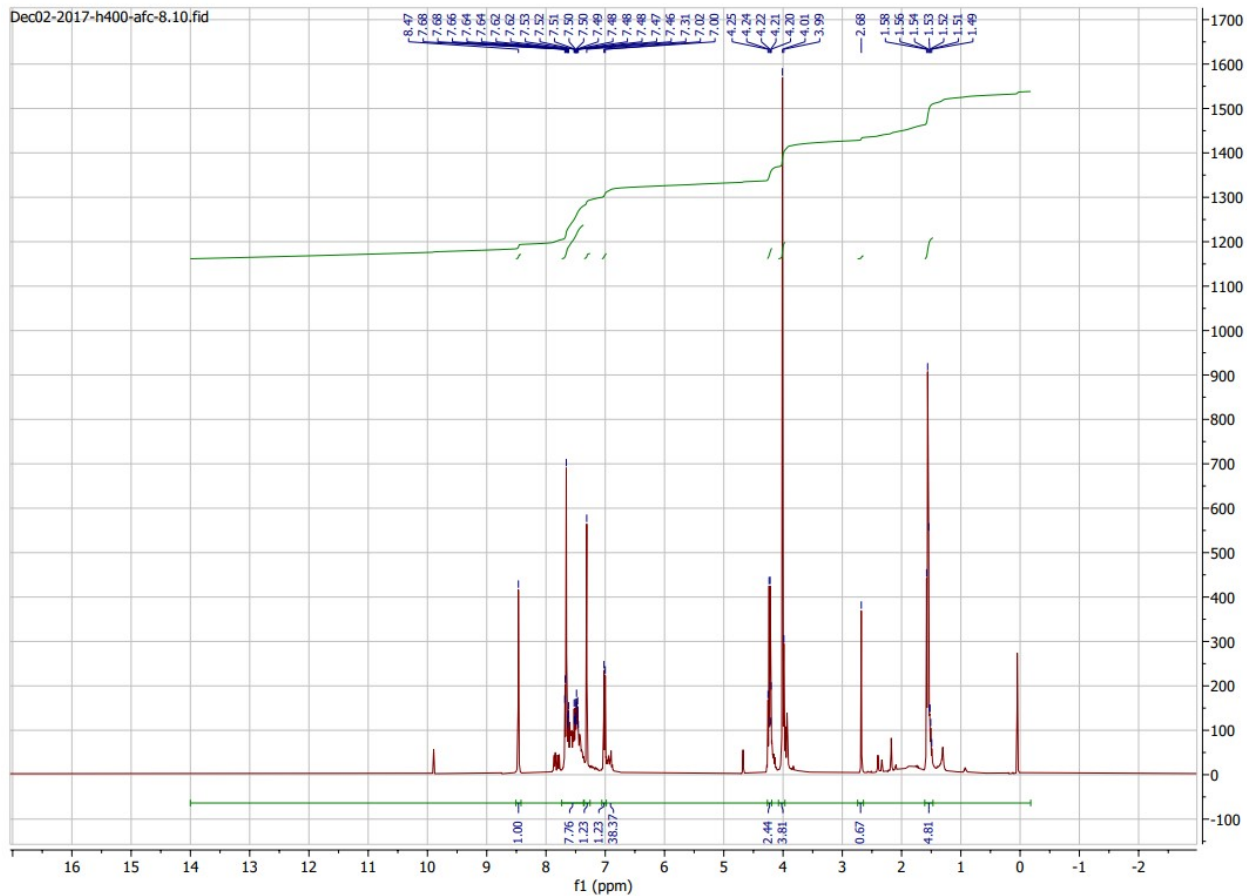


Figure-S14: ¹H NMR of Compound 12

Dr. Momin / / DMSO
C13CPD

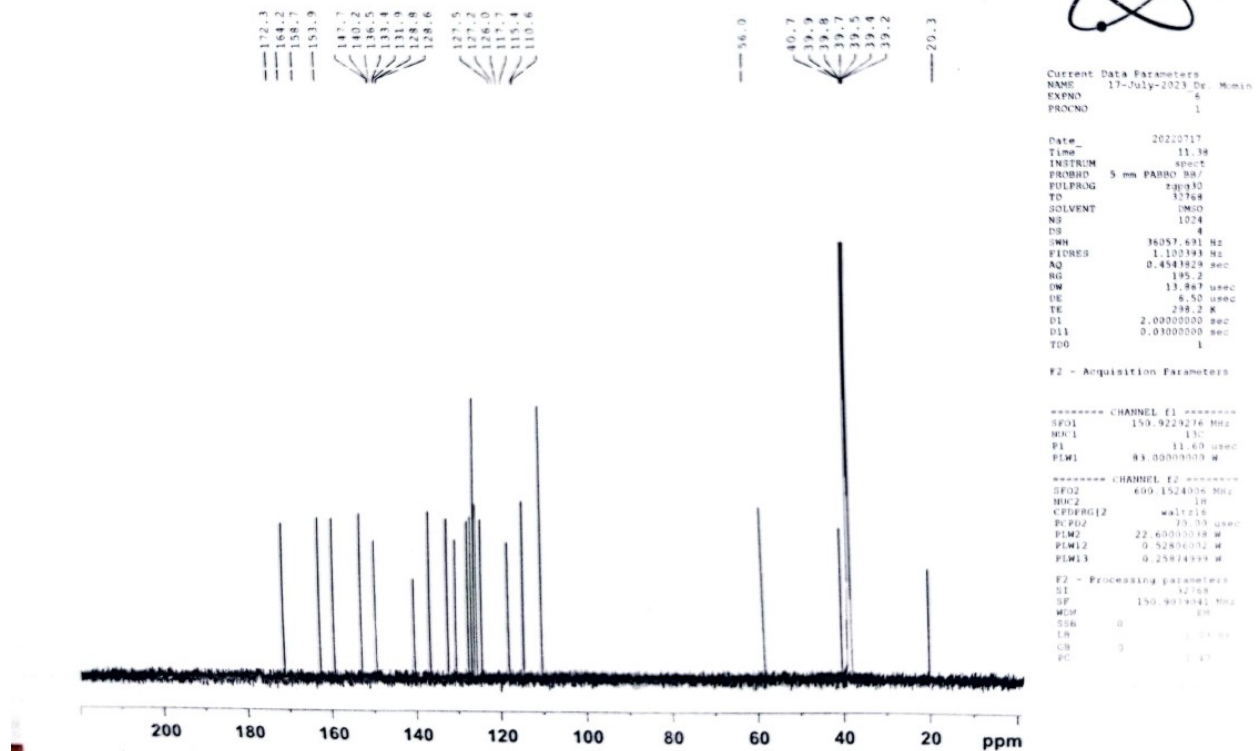


Figure-S15: ¹³CNMR of Compound 13

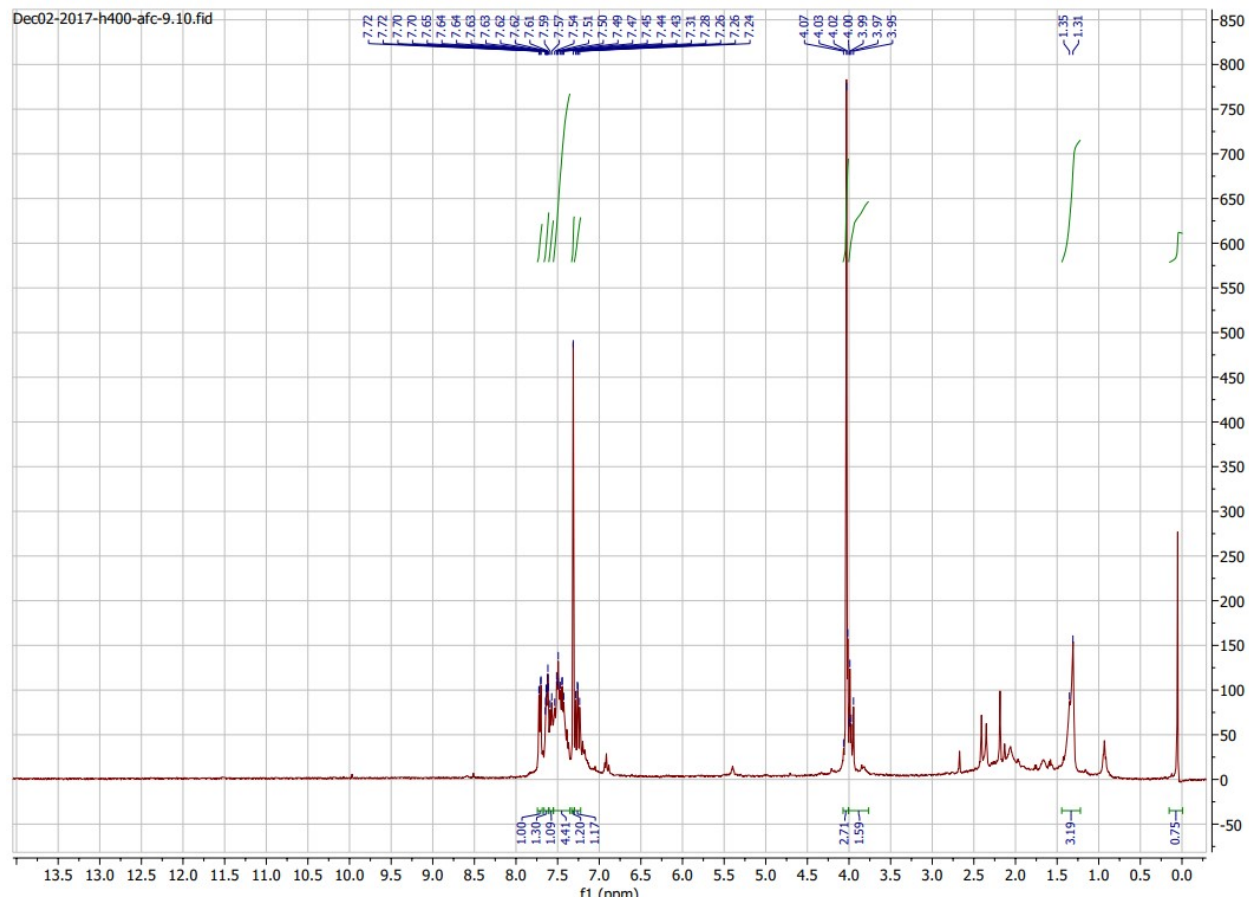
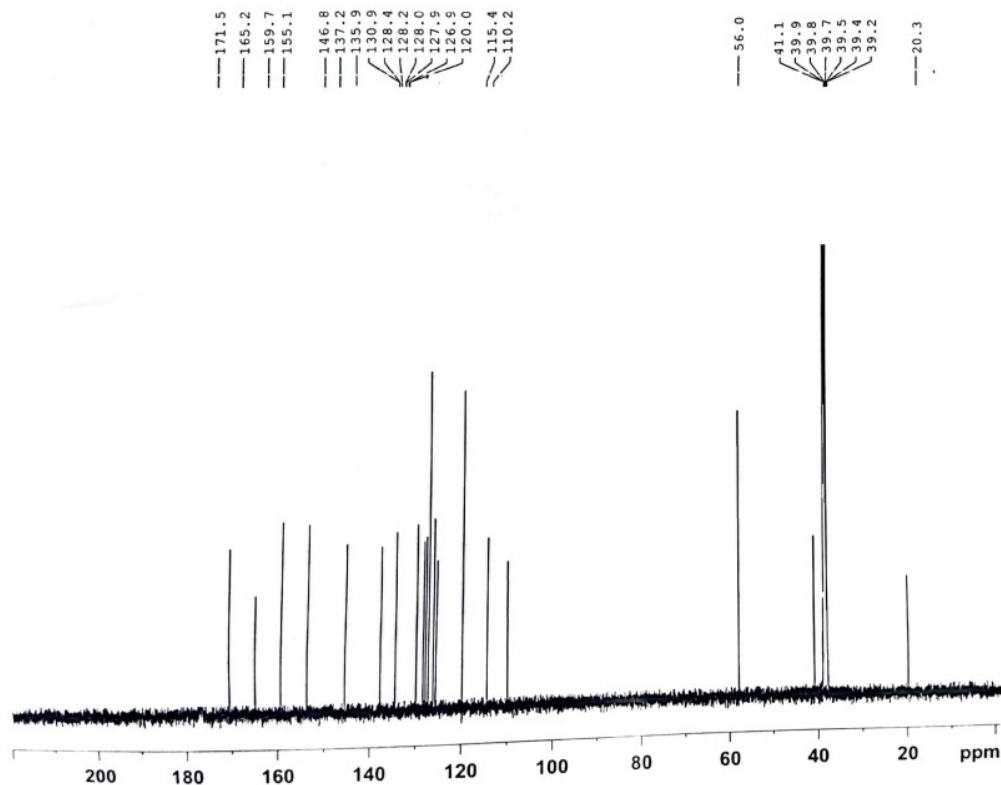


Figure-S16: ¹H NMR of Compound 13

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 27-MaJuly-2023_Dr. M
EXPNO 6
PROCNO 1

Date 20230717
Time 11.21
INSTRUM spect
PROBHD 5 mm PABBO BB/
F1PR0G zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
RW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

F2 - Acquisition Parameters

----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.00000000 W

----- CHANNEL f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CPCPRG12 waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S17: ¹³CNMR of Compound 17

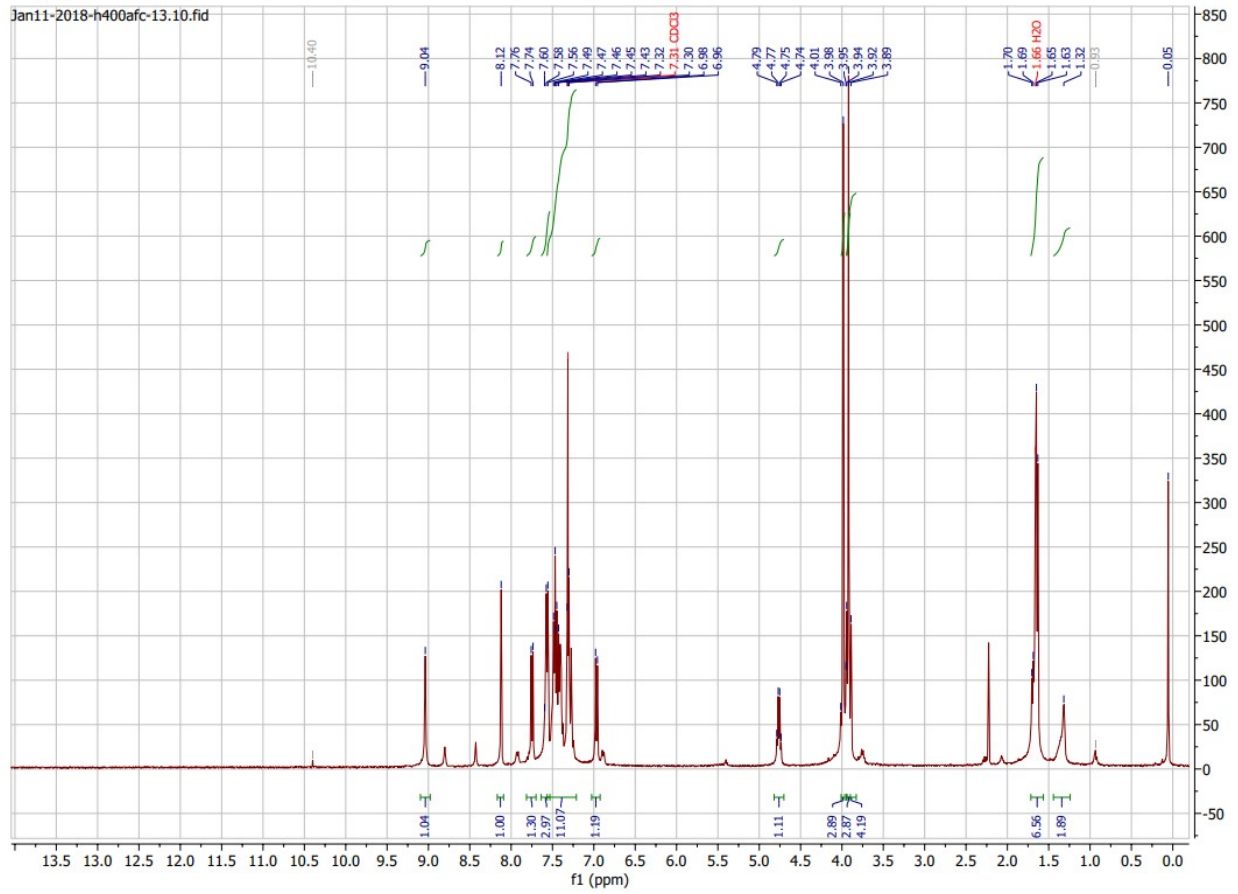
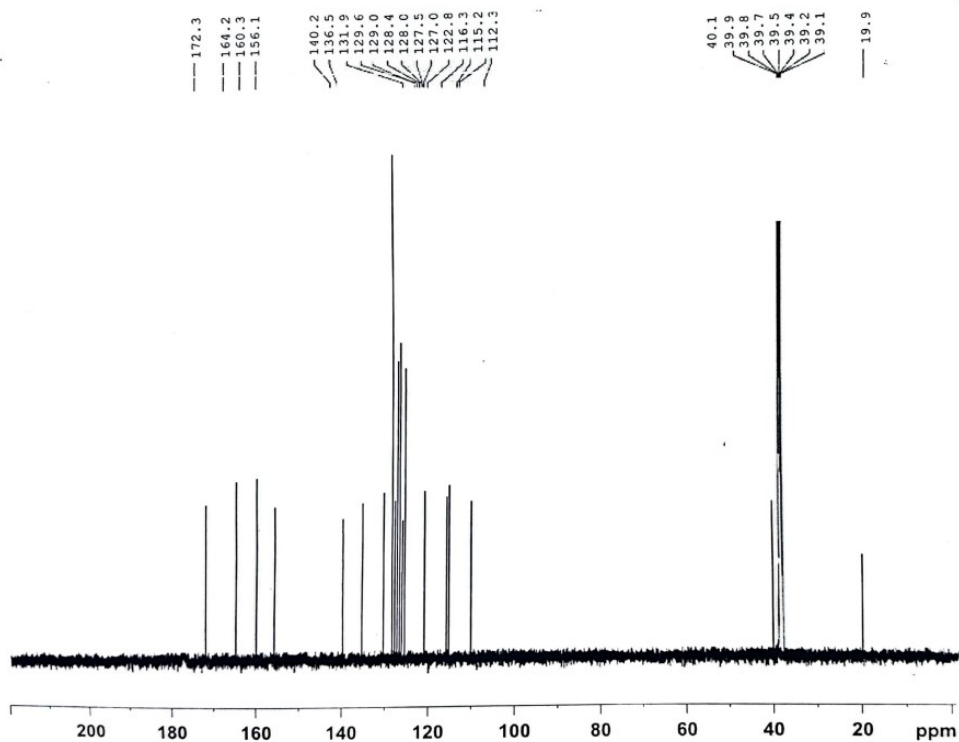


Figure-S18: ¹H NMR of Compound 17

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023_Dr. Momin
EXPNO 6
PROCNO 1

Date_ 20230717
Time 2.25
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.957 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TDO 1

F2 - Acquisition Parameters

----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.0000000 W

----- CHANNEL f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CPDPRG12 waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S19: ¹³CNMR of Compound 18

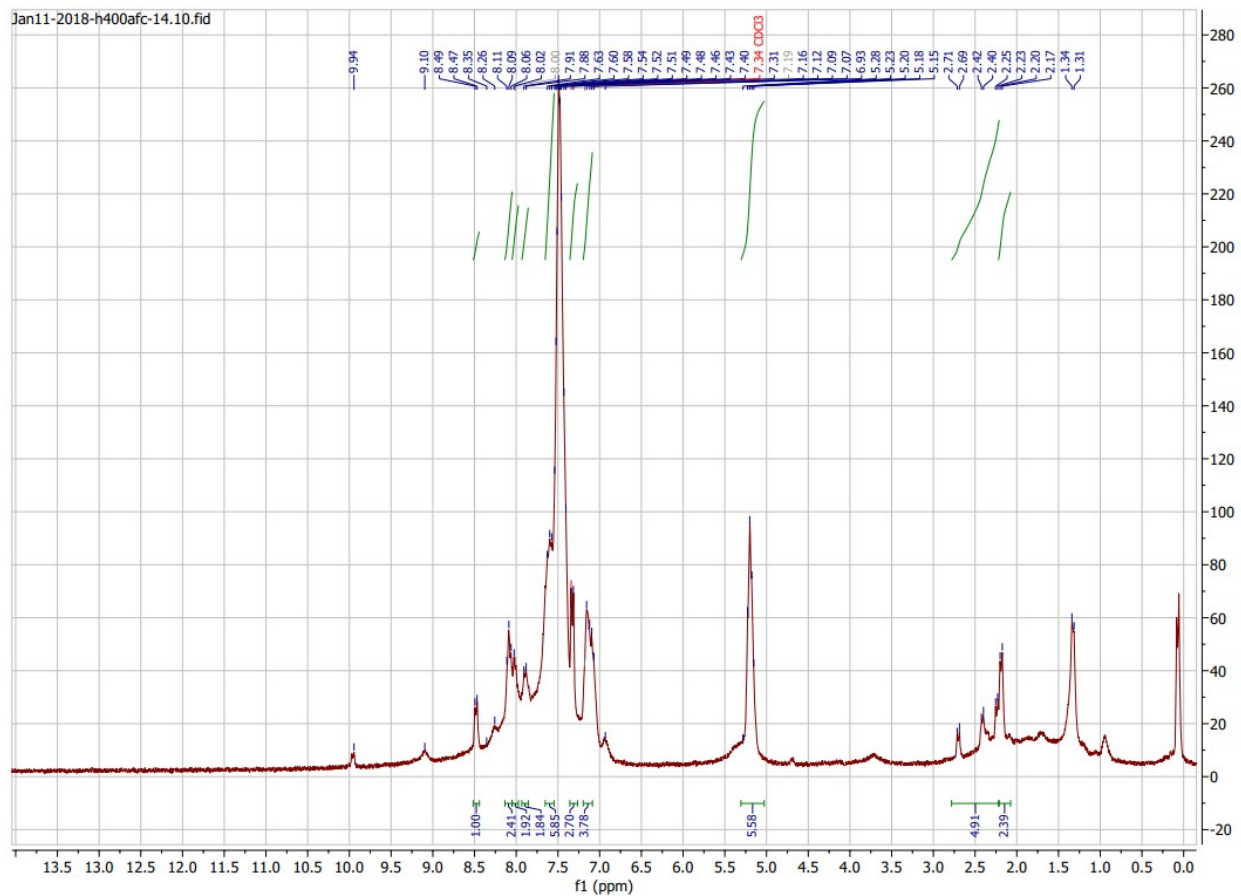
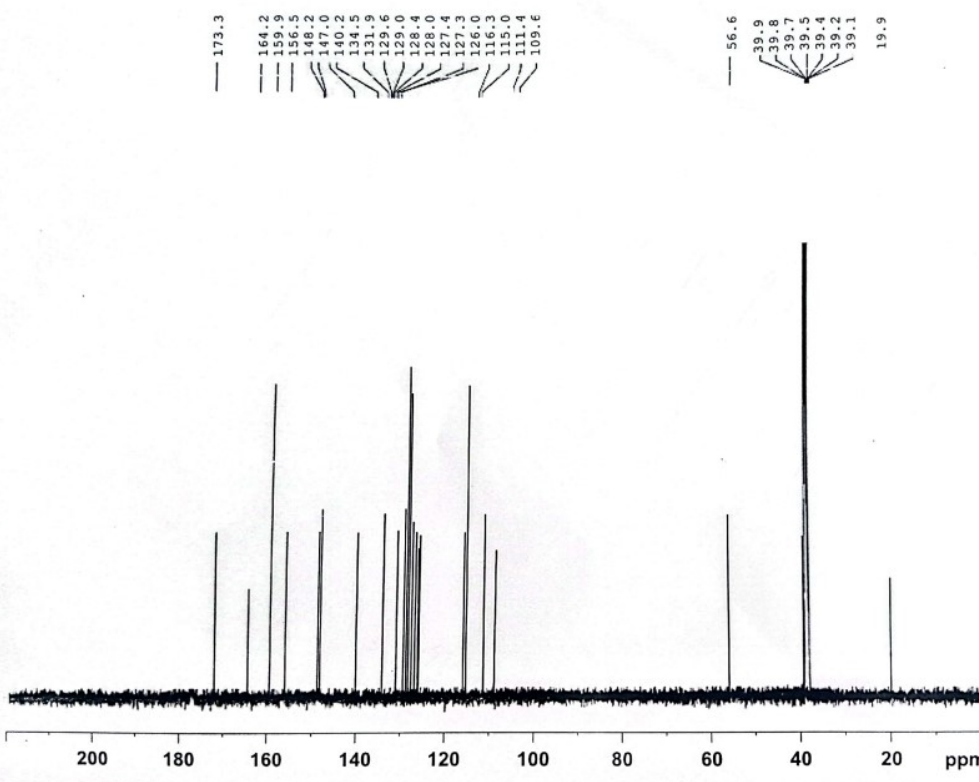


Figure-S20: ^1H NMR of Compound 18

Dr. Momin / / DMSO
C13CPD



173.3
164.2
159.9
156.5
149.2
140.2
134.5
131.9
129.6
129.0
128.4
128.0
127.4
127.3
126.0
116.3
115.0
111.4
109.6

56.6
39.9
39.8
39.7
39.6
39.5
39.4
39.3
39.2
39.1
19.9

Current Data Parameters
NAME 17-July-2023_Dr. Momin
EXPNO 6
PROCNO 1

Date_ 20230717
Time_ 1.45
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36957.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

F2 - Acquisition Parameters

===== CHANNEL f1 =====
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.00000000 W

===== CHANNEL f2 =====
SFO2 600.1524006 MHz
NUC2 1H
CPOPRG[2] waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52866003 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S21: ¹³CNMR of Compound 19

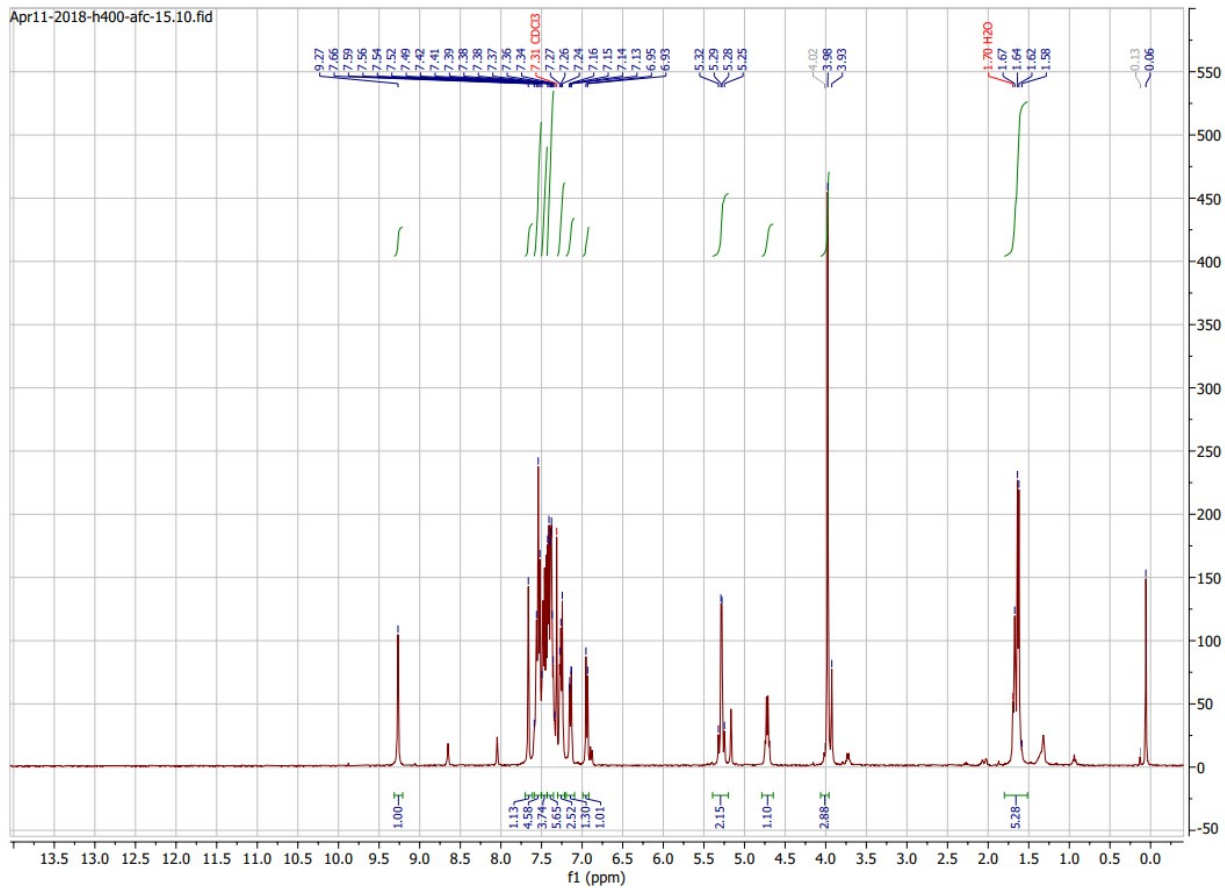
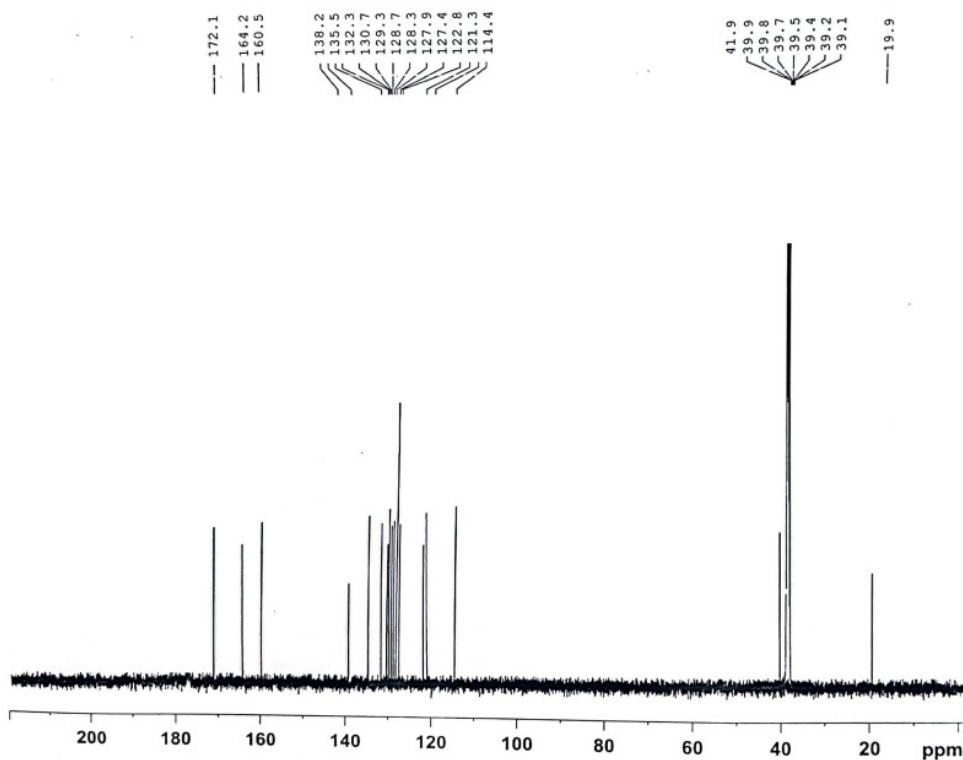


Figure-S22: ¹HNMR of Compound 19

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023_Dr. Momin
EXPNO 6
PROCNO 1

Date_ 20230717
Time 2.12
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

F2 - Acquisition Parameters

===== CHANNEL f1 =====
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.00000000 W

===== CHANNEL f2 =====
SFO2 600.1524006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S23: ¹³CNMR of Compound 21

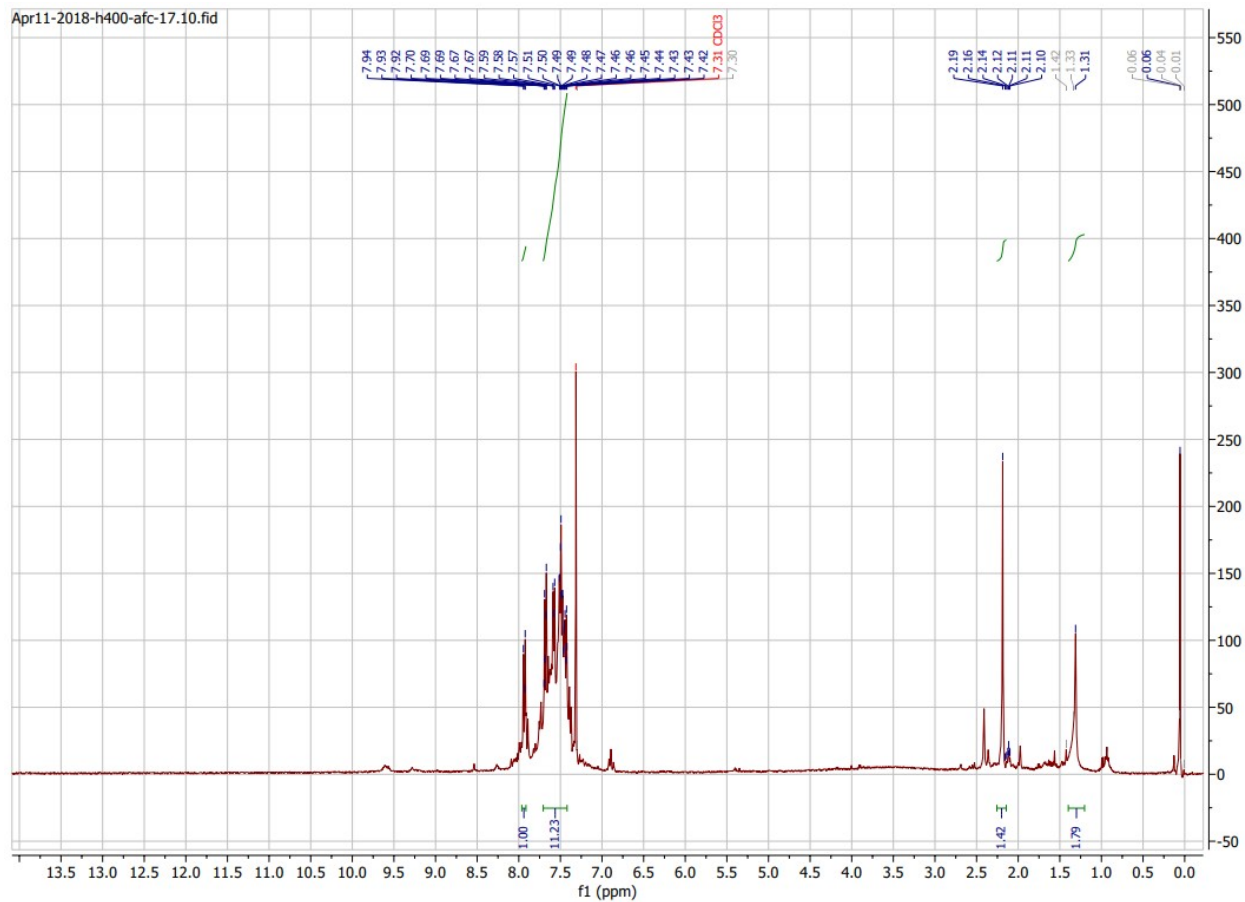
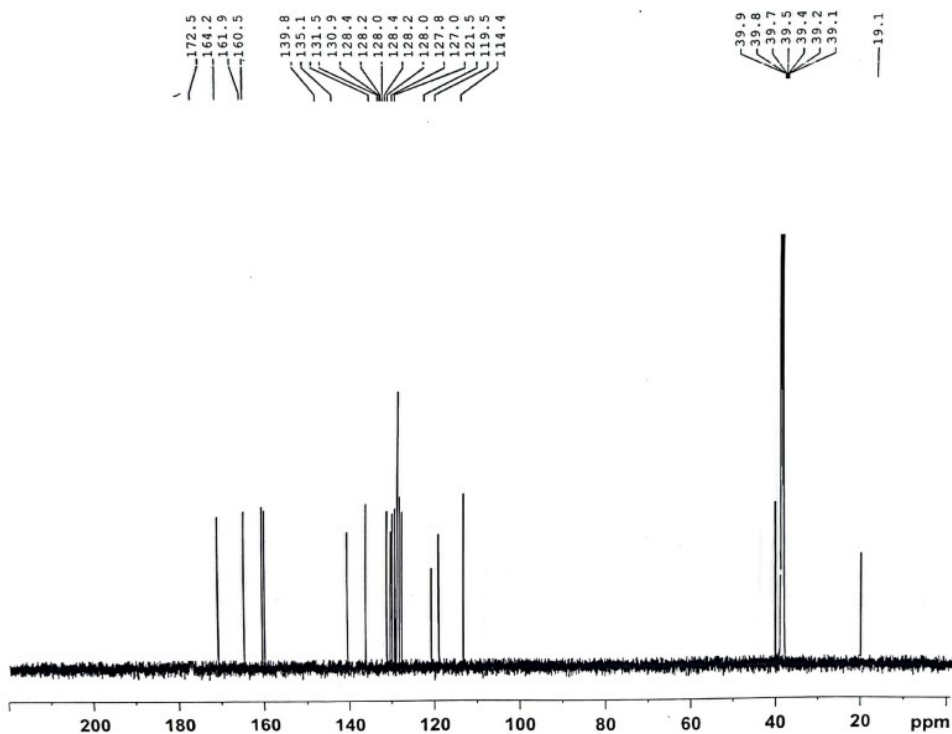


Figure-S24: ¹H NMR of Compound 21

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 22-Mar-2018_Dr. Momin
Date 20230717
Time 1.59
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TDO 1
F2 - Acquisition Parameters

===== CHANNEL f1 =====
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.0000000 W

===== CHANNEL f2 =====
SFO2 600.1524006 MHz
NUC2 1H
CPOPRG[2] waltz16
PCPD2 70.00 usec
PLW2 22.6000000 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S25: ¹³CNMR of Compound 24

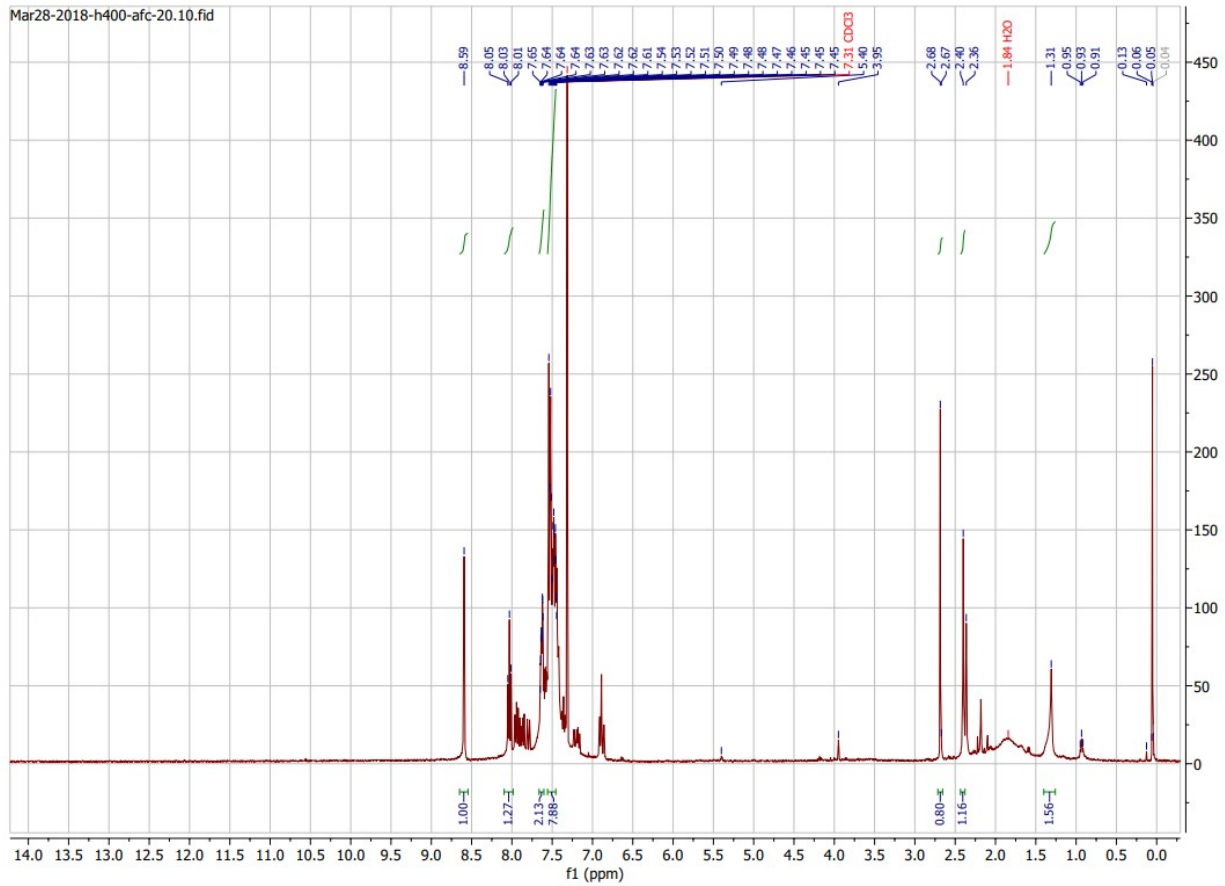
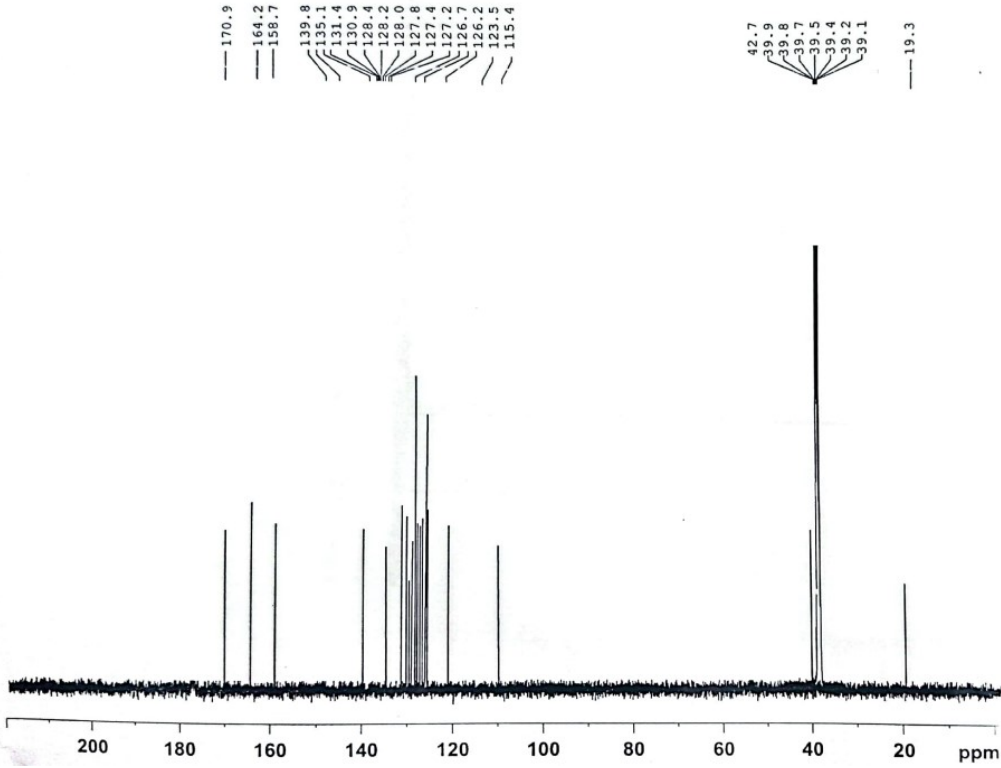


Figure-S26: ¹H NMR of Compound 24

Dr. Momin / / DMSO
C13CPD



---170.9
---164.2
---158.7
139.8
135.1
131.4
130.9
128.4
128.2
128.0
127.8
127.4
127.2
126.7
126.2
123.5
115.4

42.7
39.8
39.7
39.5
39.4
39.2
39.1

---19.3

Current Data Parameters
NAME 17-July-2023_Dr. Momin
Date_ 20230717
Time_ 1.45
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1
F2 - Acquisition Parameters

===== CHANNEL f1 =====
SF01 150.9229276 MHz
NUC1 13C
P1 11.50 usec
PLW1 83.00000000 W

===== CHANNEL f2 =====
SF02 600.1524006 MHz
NUC2 1H
CPCPRG[2] waltz16
PCPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.52806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S27: ¹³CNMR of Compound 26

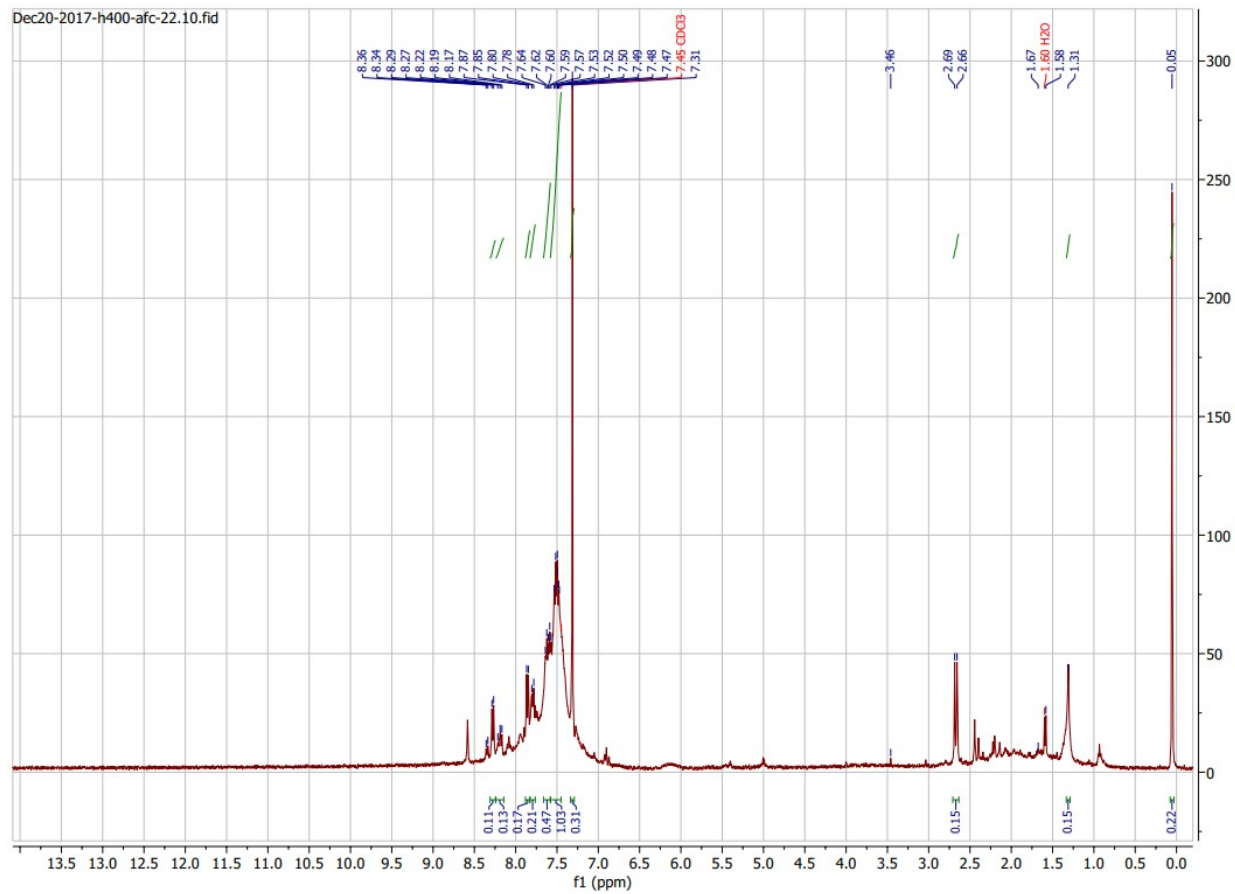
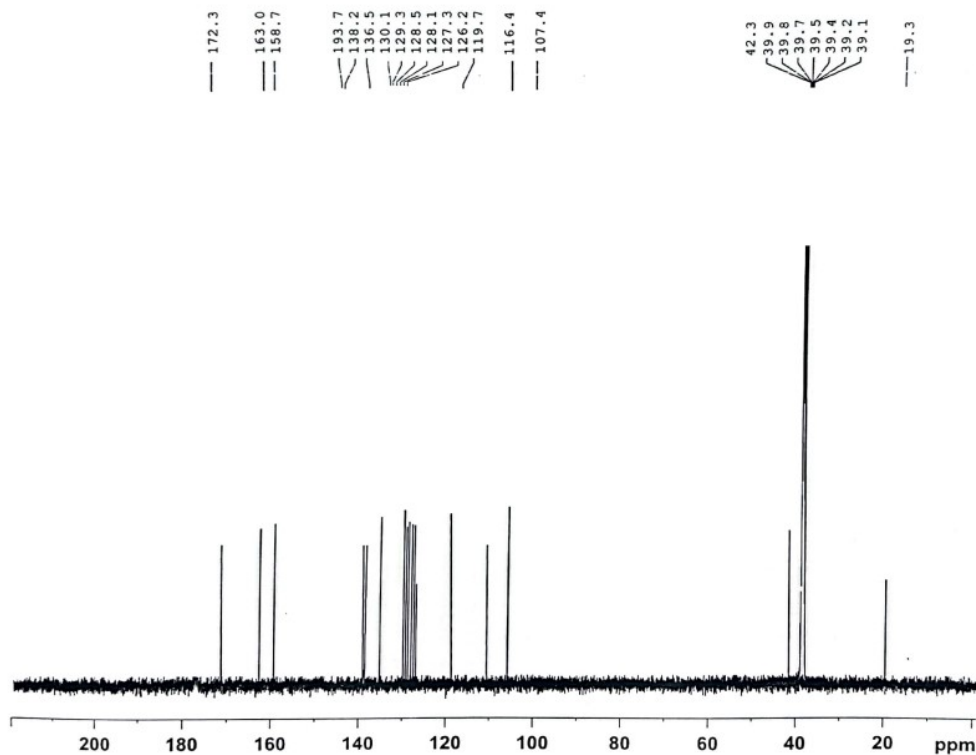


Figure-S28: ¹H NMR of Compound 26

Dr. Momin / / DMSO
C13CPD



Current Data Parameters
NAME 17-July-2023_Dr. Momin
Date 20230717
Time 1.53
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT DMSO
NS 1024
DS 4
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 195.2
DW 13.867 usec
DE 6.50 usec
TE 298.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1

F2 - Acquisition Parameters

----- CHANNEL f1 -----
SFO1 150.9229276 MHz
NUC1 13C
P1 11.60 usec
PLW1 83.00000000 W

----- CHANNEL f2 -----
SFO2 600.1524006 MHz
NUC2 1H
CHPRG2 waltz16
ECPD2 70.00 usec
PLW2 22.60000038 W
PLW12 0.32806002 W
PLW13 0.25874999 W

F2 - Processing parameters
SI 32768
SF 150.9079041 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

Figure-S29: ¹³CNMR of Compound 32

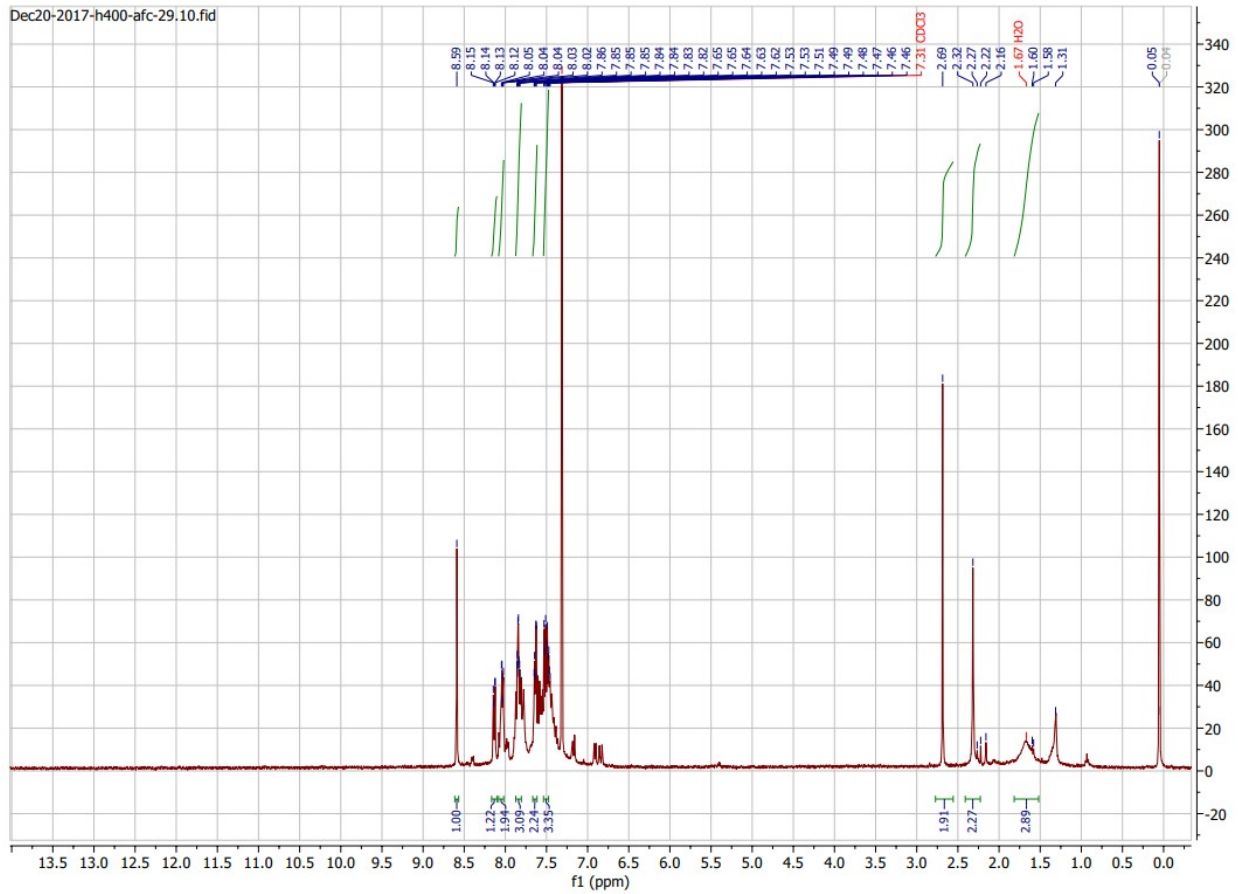


Figure-S30: ¹H NMR of Compound 32