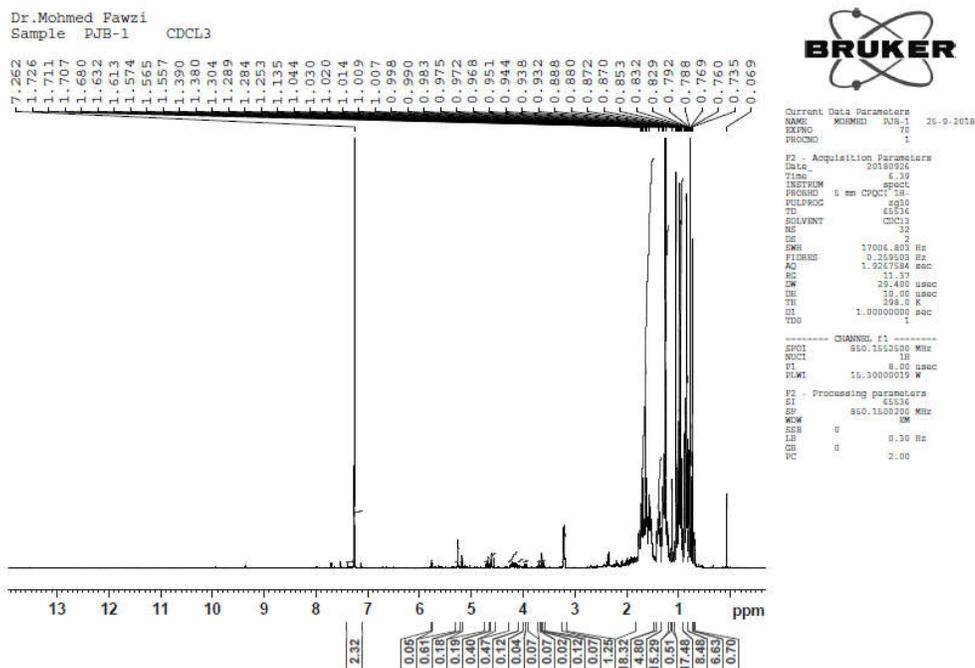
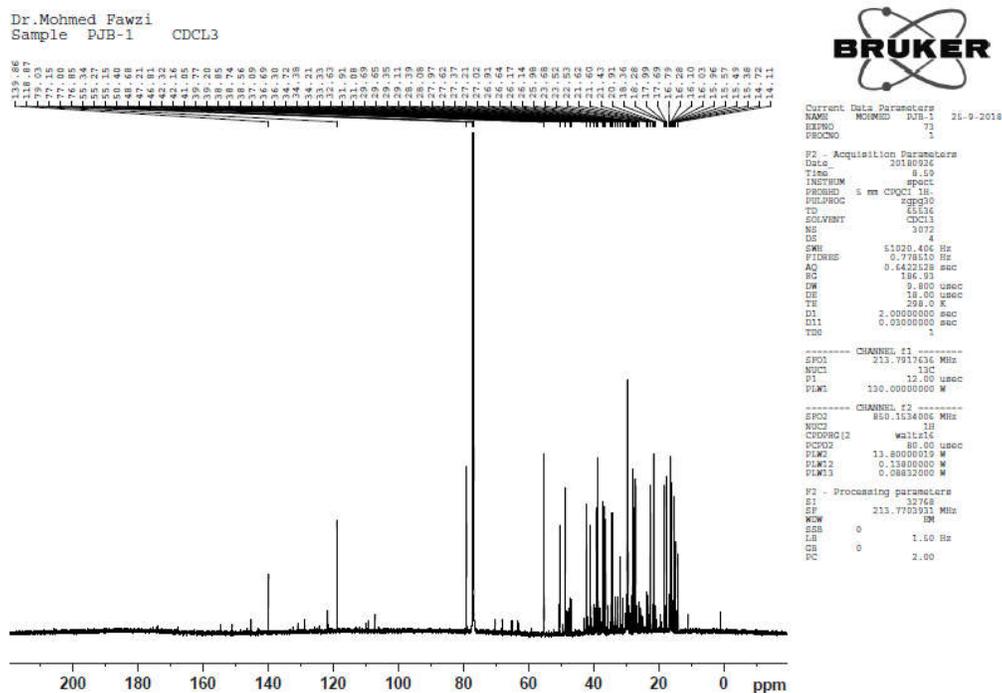


# Supplementary material

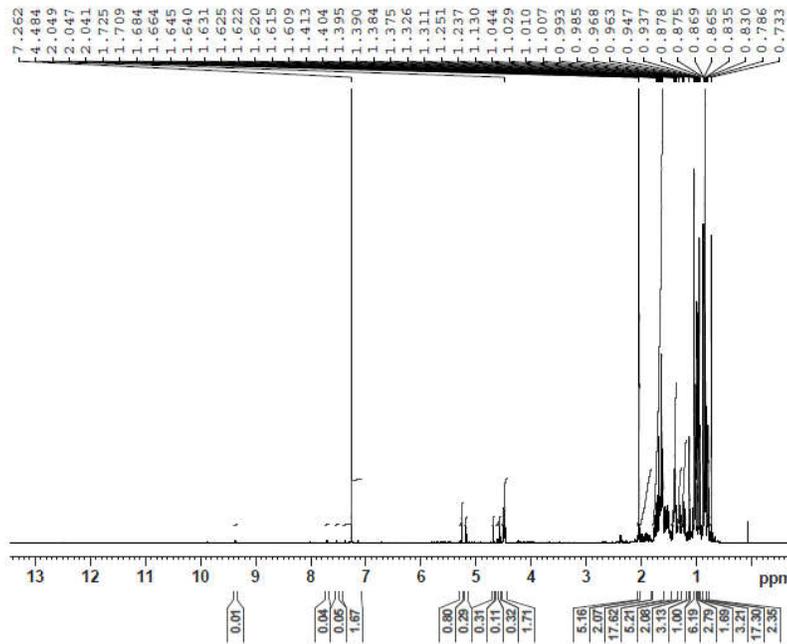


<sup>1</sup>H NMR of compound 1.



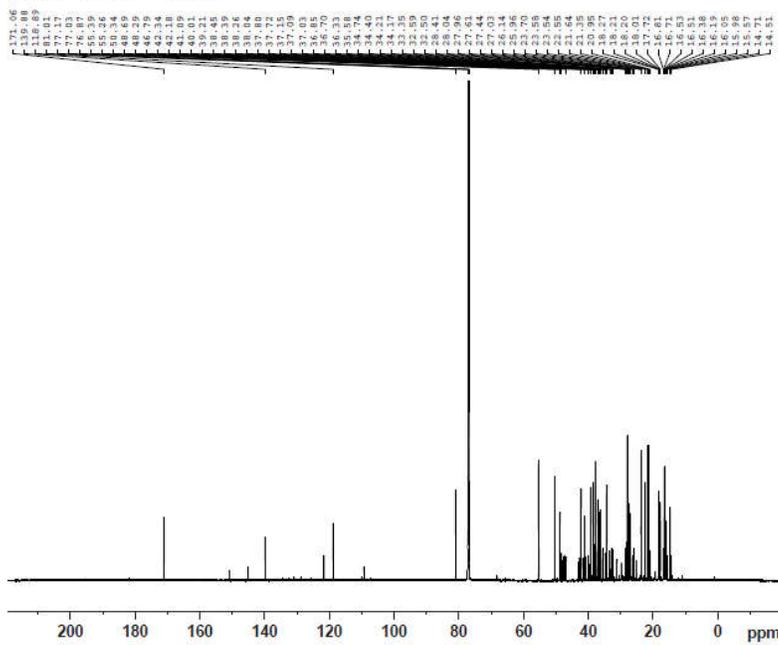
<sup>13</sup>C NMR of compound 1

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Sample PJA-3 CDCL3



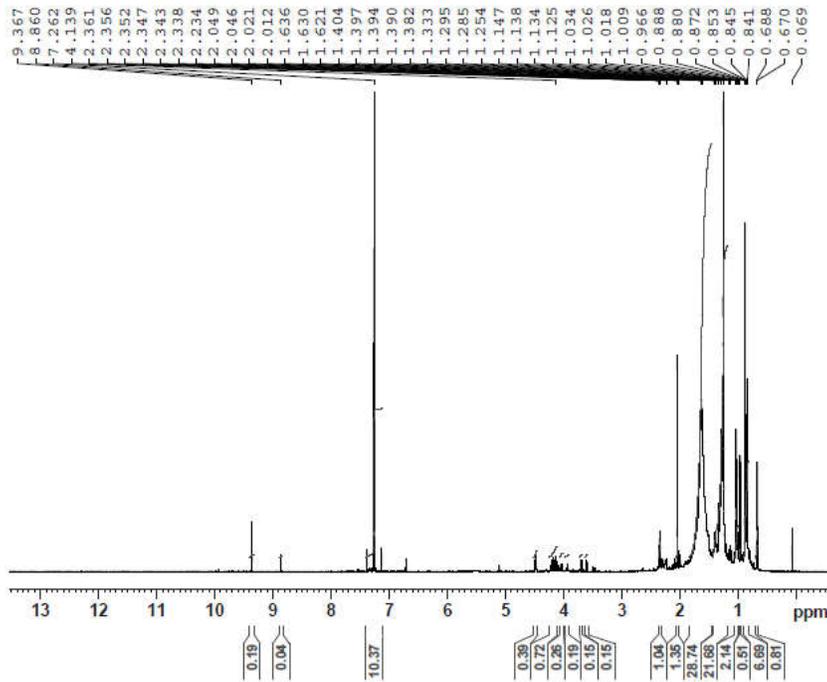
<sup>1</sup>H NMR of compound 2

Dr.Mohmed Fawzi  
Sample PJA-3 CDCL3



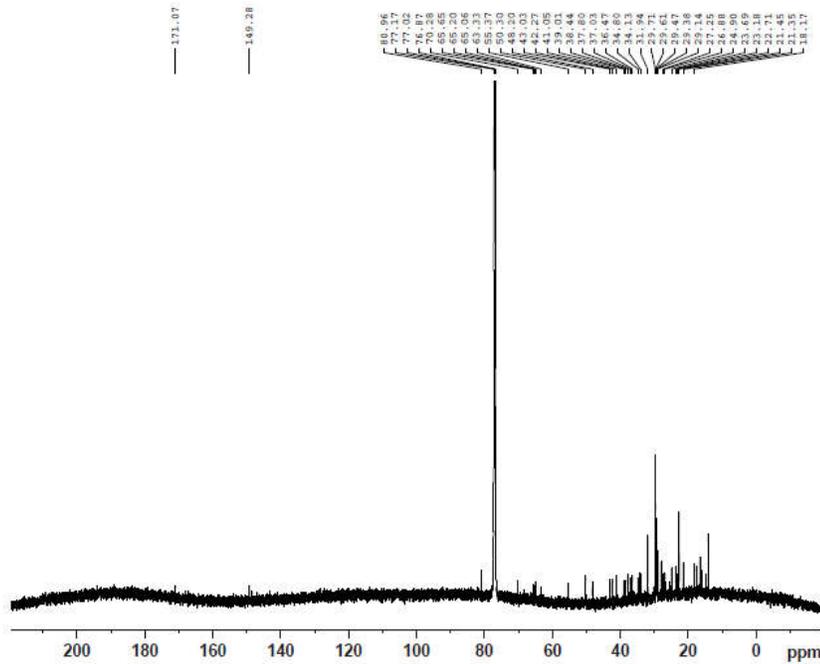
<sup>13</sup>C NMR of compound 2

Dr.Mohmed Fawzi  
Sample PJC-1 CDCL3



<sup>1</sup>H NMR of compound 3

Dr.Mohmed Fawzi  
Sample PJC-1 CDCL3



<sup>13</sup>C NMR of compound 3



Current Data Parameters  
NAME MOHMED PJC-1 25-9-2018  
EXPRO 110  
PROCNO 1

F2 - Acquisition Parameters  
Date 20180926  
Time 12.12  
INSTRUM spect  
PROBHD 5 mm CPQCI 1H-  
PULPROG zgpg30  
TD 65536  
SOLVENT CDCl3  
NS 32  
DS 2  
SWH 17004.903 Hz  
FIDRES 0.259203 Hz  
AQ 1.9247584 sec  
RG 64  
INW 23.400 usec  
DE 10.00 usec  
TE 298.0 K  
D1 1.00000000 sec  
TDO 1

----- CHANNEL f1 -----  
SFO1 800.1522500 MHz  
NUC1 1H  
P1 8.00 usec  
PLM1 15.10000019 W

F2 - Processing parameters  
SI 65536  
SF 800.1500200 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 2.00



Current Data Parameters  
NAME MOHMED PJC-1 25-9-2018  
EXPRO 112  
PROCNO 1

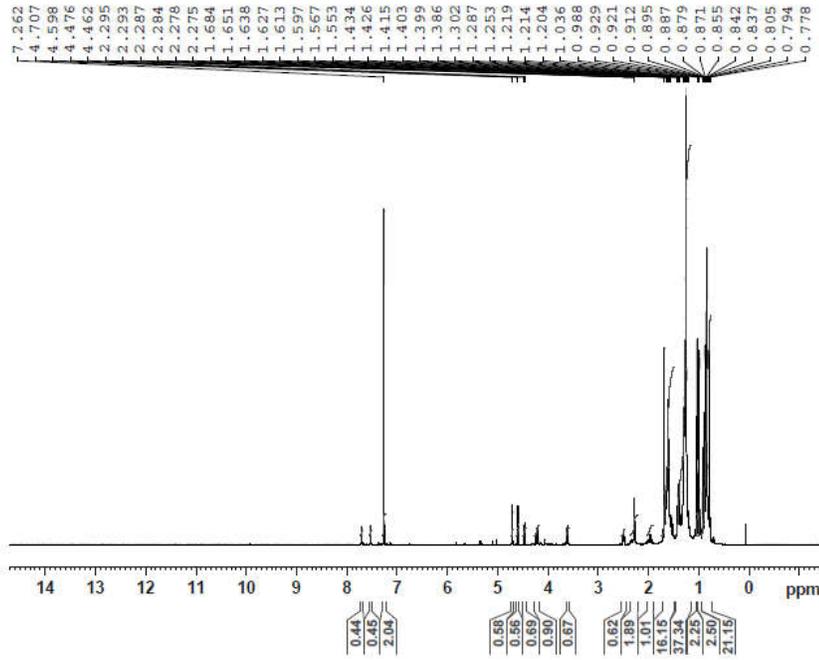
F2 - Acquisition Parameters  
Date 20180926  
Time 12.44  
INSTRUM spect  
PROBHD 5 mm CPQCI 1H-  
PULPROG zgpg30  
TD 65536  
SOLVENT CDCl3  
NS 4  
DS 4  
SWH 51020.406 Hz  
FIDRES 0.778910 Hz  
AQ 0.6423258 sec  
RG 166.03  
INW 7.800 usec  
DE 18.00 usec  
TE 298.0 K  
D1 2.00000000 sec  
D11 0.03000000 sec  
TDO 1

----- CHANNEL f1 -----  
SFO1 213.7917436 MHz  
NUC1 13C  
P1 12.00 usec  
PLM1 130.00000000 W

----- CHANNEL f2 -----  
SFO2 850.1534000 MHz  
NUC2 1H  
CPOPRG2 waltz16  
PCPO2 80.00 usec  
PLM2 13.80000019 W  
PLM3 0.13800000 W  
PLM3 0.08881000 W

F2 - Processing parameters  
SI 12718  
SF 213.7703875 MHz  
WDW EM  
SSB 0  
LB 2.00 Hz  
GB 0  
PC 2.00

Dr.Mohmed Fawzi  
Sample PJB-3 CDCL3



Current Data Parameters  
NAME MORMED SUB-3 25-9-2018  
EXPNO 100  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20180926  
Time 9.46  
INSTRUM spect  
PROBHD 5 mm CPQCI 1H-  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 32  
DS 2  
SWH 17006.803 Hz  
FIDRES 0.219503 Hz  
AQ 1.9267584 sec  
RG 10.55  
DM 29.400 usec  
DE 10.00 usec  
TE 298.0 K  
D1 1.0000000 sec  
TDO 1

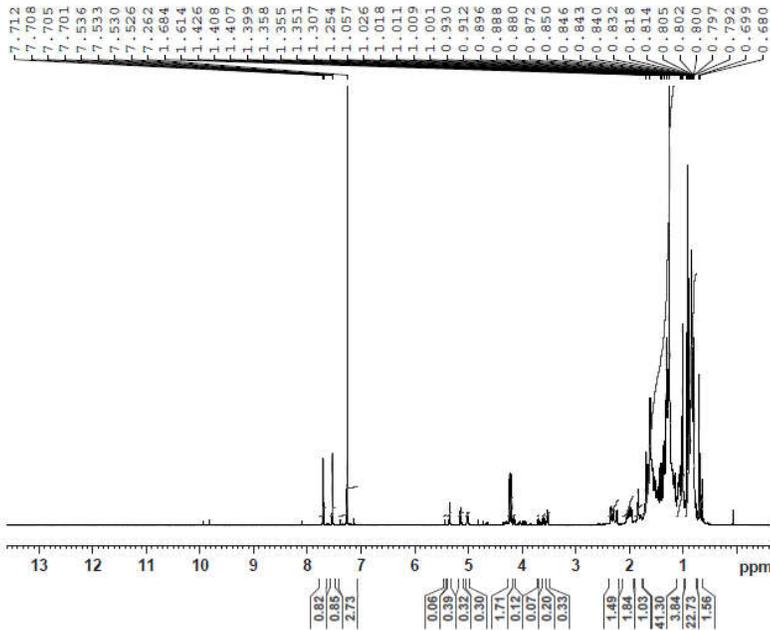
----- CHANNEL f1 -----  
SFO1 850.1562500 MHz  
NUC1 1H  
P1 8.00 usec  
PL1 15.30000019 W

F2 - Processing parameters  
SI 65536  
SF 850.1500000 MHz  
WDW DM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 2.00

<sup>1</sup>H NMR of compound 4

<sup>13</sup>C NMR of compound 4

Dr.Mohmed Fawzi  
Sample PJB-4 CDCL3



Current Data Parameters  
NAME MORMED SUB-4 25-9-2018  
EXPNO 100  
PROCNO 1

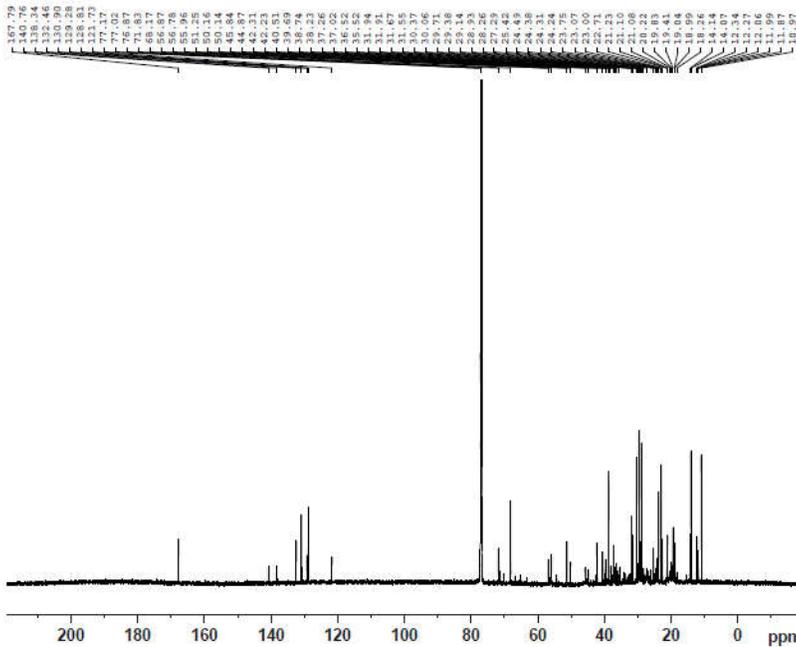
F2 - Acquisition Parameters  
Date\_ 20180926  
Time 10.34  
INSTRUM spect  
PROBHD 5 mm CPQCI 1H-  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 32  
DS 2  
SWH 17006.803 Hz  
FIDRES 0.219503 Hz  
AQ 1.9267584 sec  
RG 11.17  
DM 29.400 usec  
DE 10.00 usec  
TE 298.0 K  
D1 1.0000000 sec  
TDO 1

----- CHANNEL f1 -----  
SFO1 850.1562500 MHz  
NUC1 1H  
P1 8.00 usec  
PL1 15.30000019 W

F2 - Processing parameters  
SI 65536  
SF 850.1500000 MHz  
WDW DM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 2.00

<sup>1</sup>H NMR of compound 5

Dr.Mohmed Fawzi  
Sample PJB-4 CDCL3



Current Data Parameters  
NAME MOHMED PJB.4 25-9-2018  
EXPNO 102  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20180926  
Time 10.40  
INSTRUM spect  
PROBHD 5 mm CPQCI 1H-  
PULPROG zgpg30  
TD 65536  
FIDRES 0.18653  
SOLVENT CDCl3  
NS 2032  
DS 2  
SWH 51020.400 Hz  
FIDRES 0.778510 Hz  
AQ 0.6422528 sec  
RG 186.93  
DM 9.800 usec  
DE 18.00 usec  
TE 298.0 K  
D1 2.00000000 sec  
D11 0.03000000 sec  
TDO 1

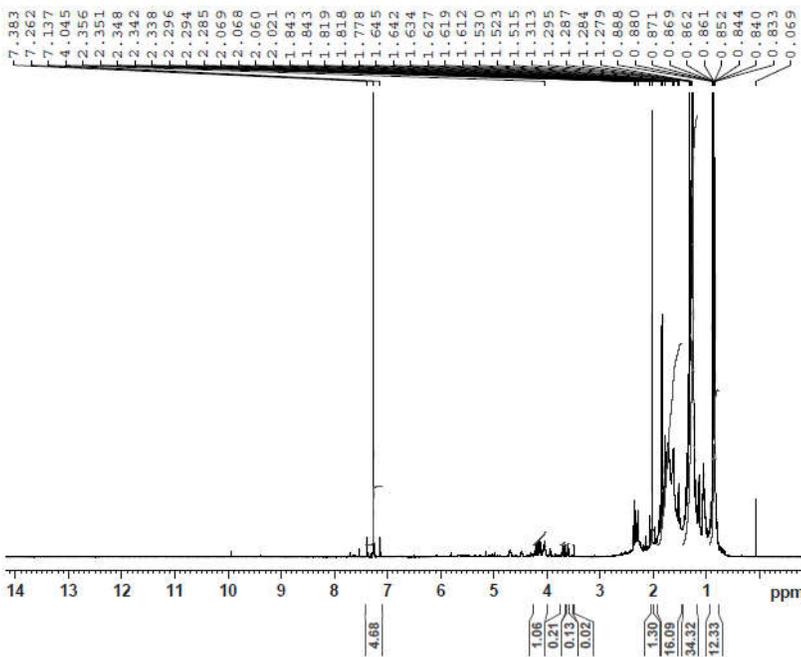
----- CHANNEL f1 -----  
SFO1 213.7917616 MHz  
NUC1 13C  
P1 12.00 usec  
PLM1 130.0000000 W

----- CHANNEL f2 -----  
SFO2 850.1534006 MHz  
NUC2 1H  
PULPROG2 waltz16  
PCPD2 80.00 usec  
PLM2 13.80000019 W  
PLM12 0.13800000 W  
PLM13 0.08832000 W

F2 - Processing parameters  
SI 32768  
SF 213.77031815 MHz  
WDM DM  
SFR 0  
LR 1.50 Hz  
GB 0  
PC 2.00

<sup>13</sup>C NMR of compound 5

Dr.Mohmed Fawzi  
Sample PJC-2 CDCL3



Current Data Parameters  
NAME MOHMED PJC.2 25-9-2018  
EXPNO 100  
PROCNO 1

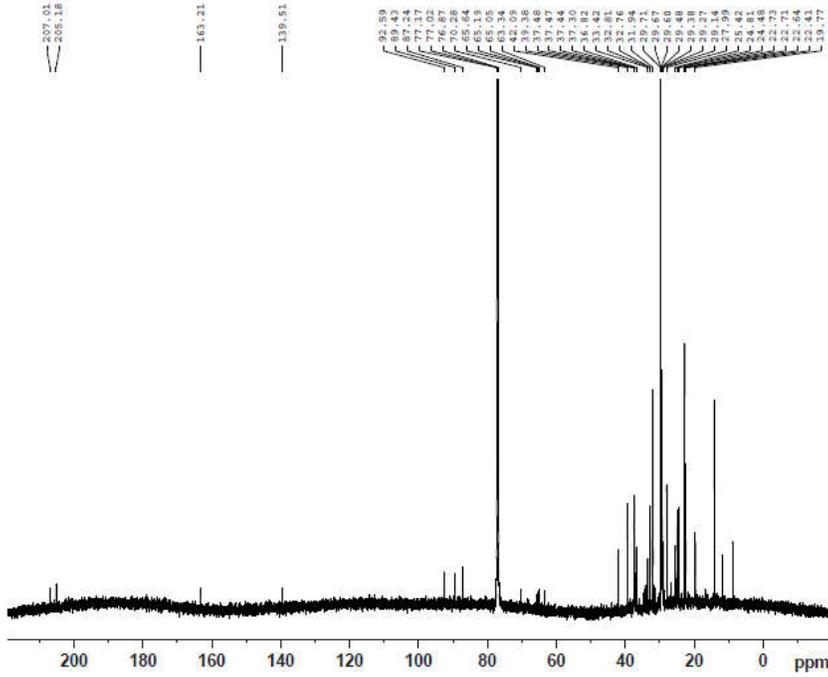
F2 - Acquisition Parameters  
Date\_ 20180926  
Time 14.37  
INSTRUM spect  
PROBHD 5 mm CPQCI 1H-  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 32  
DS 2  
SWH 17006.803 Hz  
FIDRES 0.259503 Hz  
AQ 1.2257384 sec  
RG 12.46  
DM 29.400 usec  
DE 10.00 usec  
TE 298.0 K  
D1 1.00000000 sec  
TDO 1

----- CHANNEL f1 -----  
SFO1 850.1552500 MHz  
NUC1 1H  
P1 8.00 usec  
PLM1 15.30000019 W

F2 - Processing parameters  
SI 65536  
SF 850.1500200 MHz  
WDM DM  
SFR 0  
LR 0.30 Hz  
GB 0  
PC 2.00

<sup>1</sup>H NMR of compound 6

Dr.Mohmed Fawzi  
Sample PJC-2 CDCL3



```
Current Data Parameters
NAME      MCHMED PJC-2      25-9-2018
EXPNO    122
PROCNO   1

F2 - Acquisition Parameters
Date_     20180926
Time      11:57
INSTRUM   spect
PROBHD    5 mm CPQCI 1H-
PULPROG   zgpg30
TD         65536
SOLVENT   CDCL3
NS         3072
DS         4
SWH        51020.400 Hz
FIDRES     0.778510 Hz
AQ         0.6422528 sec
RG         385.93
LW         9.800 usec
DE         18.00 usec
TE         298.0 K
D1         2.00000000 sec
d11        0.03000000 sec
TDO        1

----- CHANNEL f1 -----
SFO1      253.7917626 MHz
NUC1       13C
P1         12.00 usec
PLM1      130.00000000 W

----- CHANNEL f2 -----
SFO2      80.1534006 MHz
NUC2       1H
CPDPRG2    waltz16
PCPD2      80.00 usec
PLM2      13.80000019 W
PLM12     0.13800000 W
PLM13     0.08821000 W

F2 - Processing parameters
SI         32768
SF         253.7703875 MHz
MCH        EM
SSB        0
LB         1.50 Hz
GB         0
PC         2.00
```

<sup>13</sup>C NMR of compound 6