

## Supporting information

### **Design, Synthesis, and Biological Evaluation of Novel Ciprofloxacin Derivatives as Potential Anticancer Agents Targeting Topoisomerase II enzyme.**

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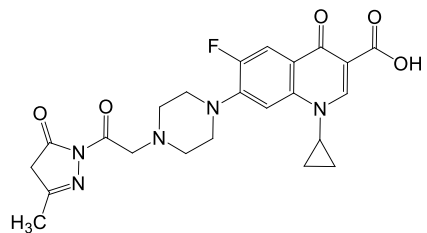
Tel: 002023639307.

Fax: 002023635140.

E-mail: [asmaa.kassab@pharma.cu.edu.eg](mailto:asmaa.kassab@pharma.cu.edu.eg)

Address: 33 Kasr El-Aini Street, Cairo, Egypt.

# Compound 3



Dr\_Hader\_Kamel-E1

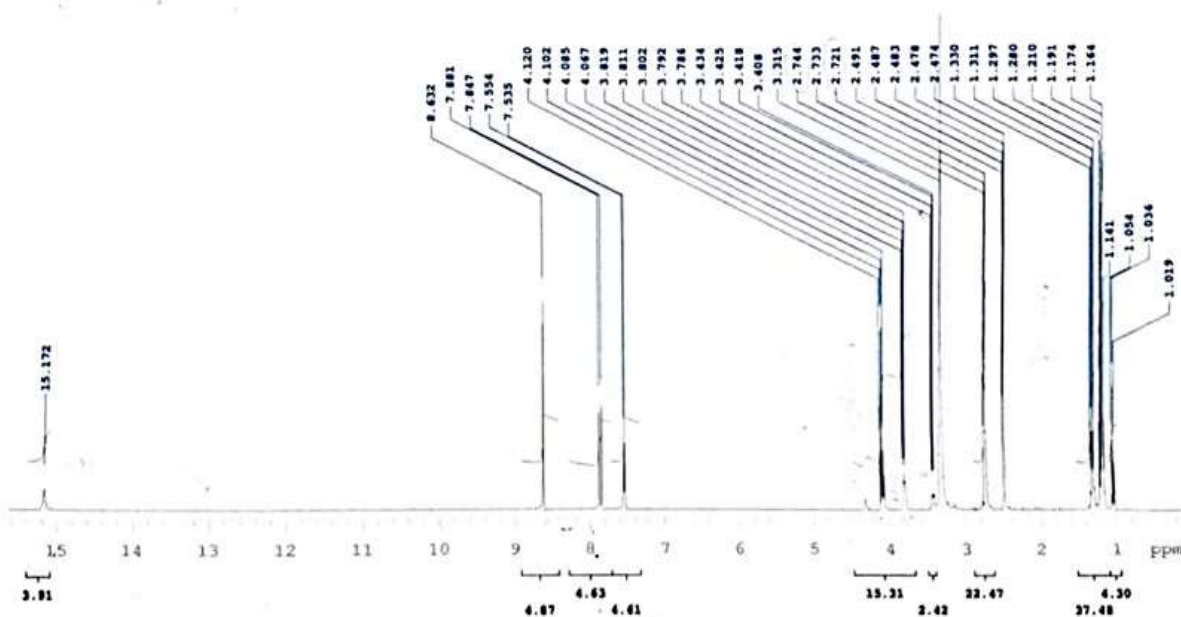
Dr\_Hader\_Kamel-E1

Sample Name: Dr\_Hader\_Kamel-E1  
Date collected: 2019-03-14

Pulse sequence: PROTON  
Solvent: DMSO

Temperature: 25  
Spectrometer: nuv400-maruzuy400

Laboratory: MOOCL  
NMR User:



Plotname: Dr\_Hader\_Kamel-E1\_PROTON\_01\_plot02

Data file: home\data\1M\Hnad2019\Mar\E1\_Hader\_Kamel\_E1\_20190314\_01\Dr\_Hader\_Kamel\_E1\_PROTON\_01

Plot date: 2019-03-14

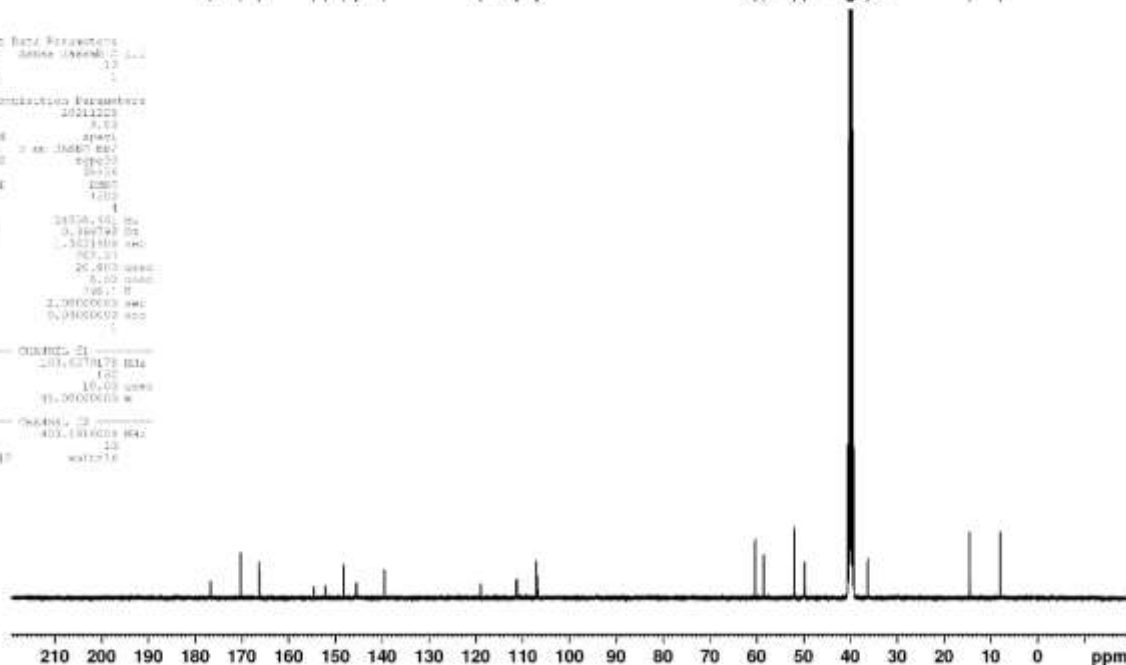
Asmaa Kassab\_C\_III

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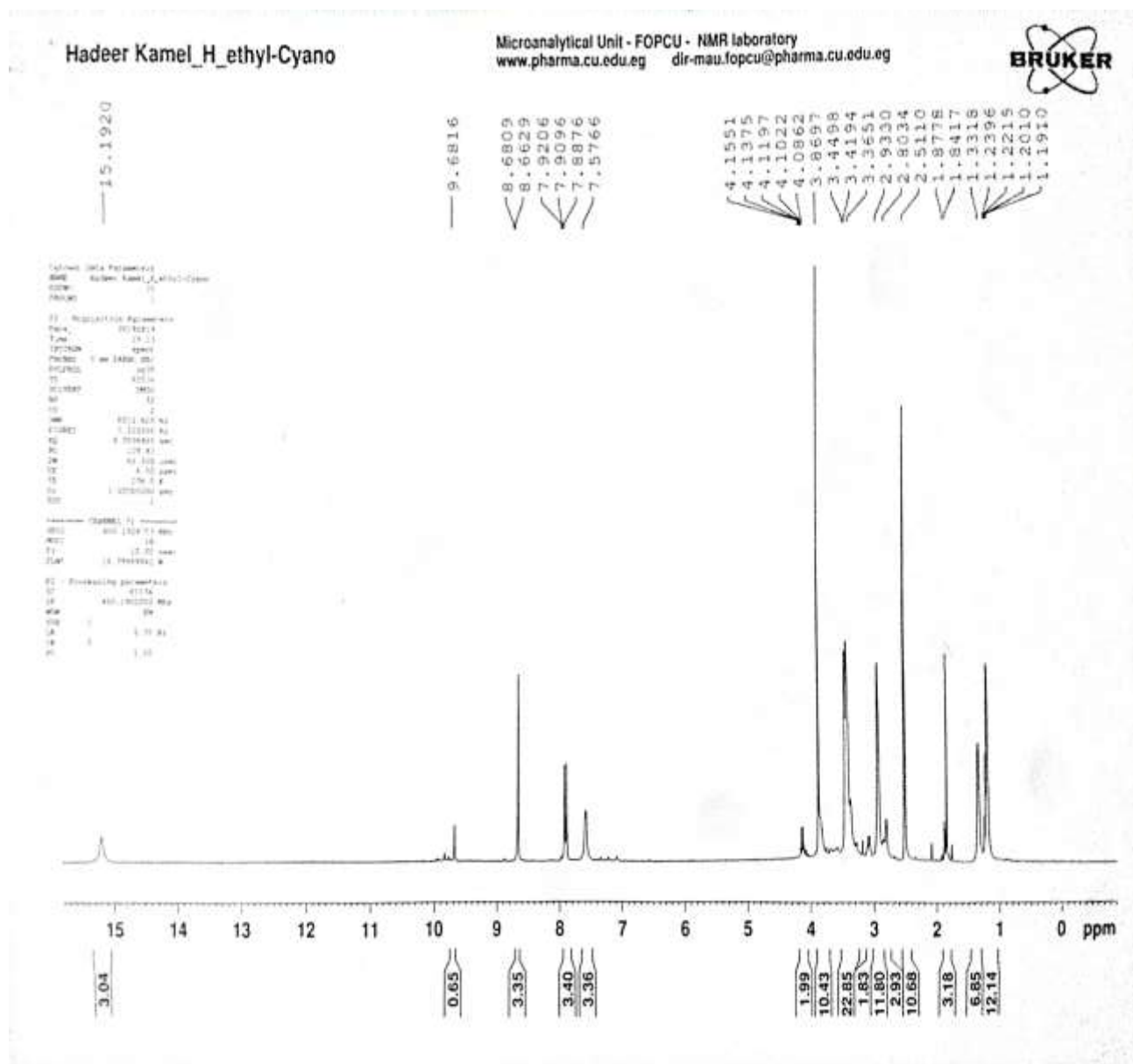
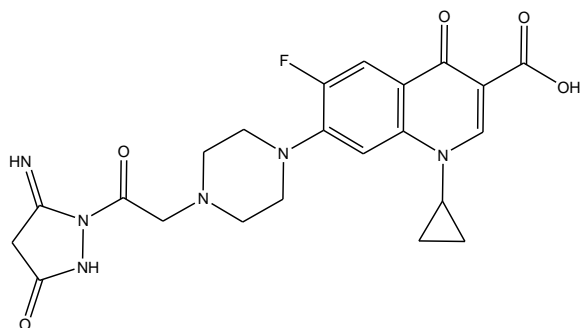


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176.78  
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154.71  
152.23  
148.41  
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135.39  
133.63  
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113.00  
111.49  
111.26  
107.18  
106.90  
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58.63  
52.00  
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45.85  
40.62  
40.41  
40.20  
39.99  
39.78  
39.57  
39.36  
36.33  
14.62  
8.03

```
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PROCNO: 1
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Time: 8.13
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AQ: 0.321800 sec
RG2: 512.00
SFO: 25.130 MHz
AQ2: 5.00 sec
F4: 100.00 MHz
PC: 1.0000000 sec
SI1: 65536.000 sec
SI2: 1
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Channel f1
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NUC1: 13C
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PL1: 0.0000000 W
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Channel f2
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NAME: 403.130000 MHz
EXPNO: 13
PROCNO: 1
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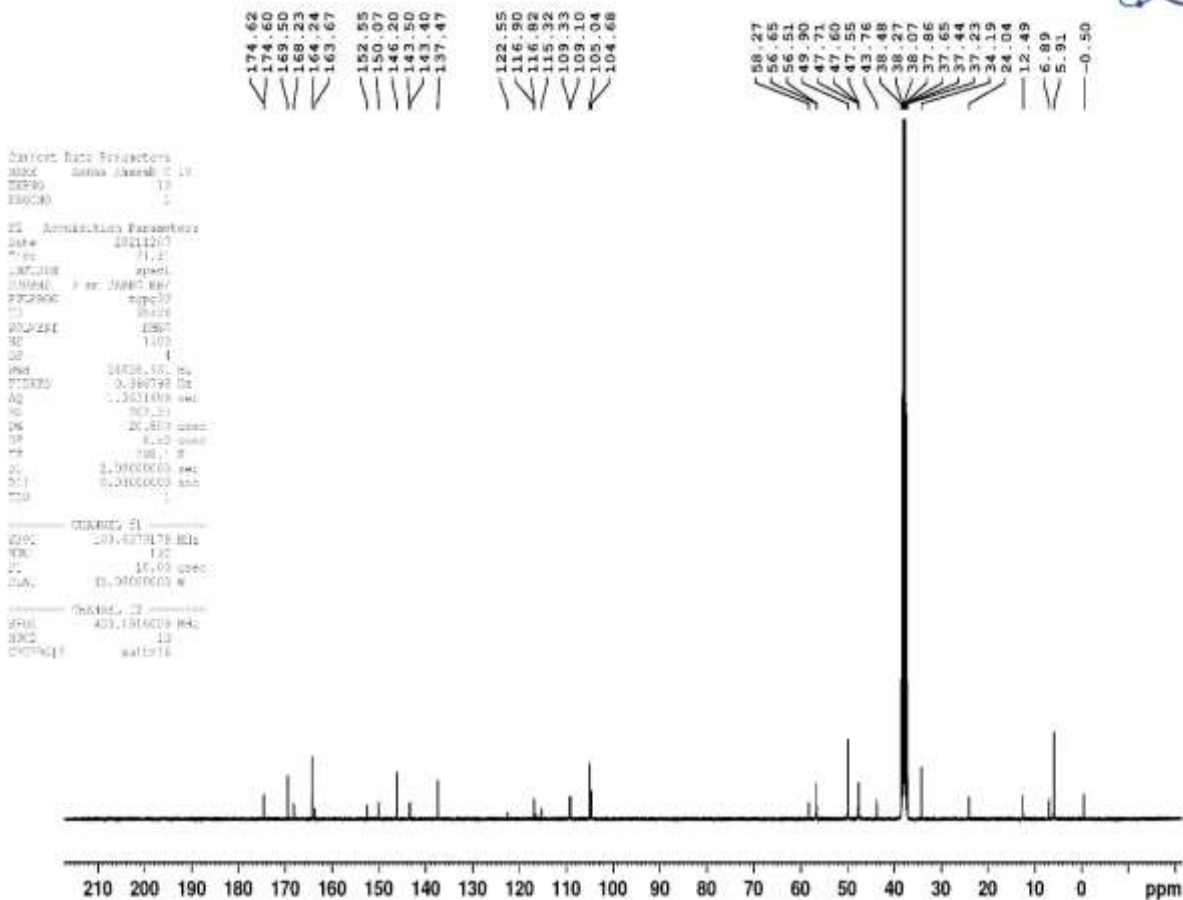


# Compound 4

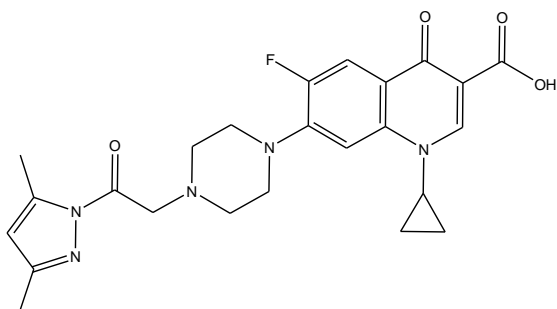


Asmaa Kassab\_C\_IV

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# Compound 5



Dr\_Haider\_Kamal-AC

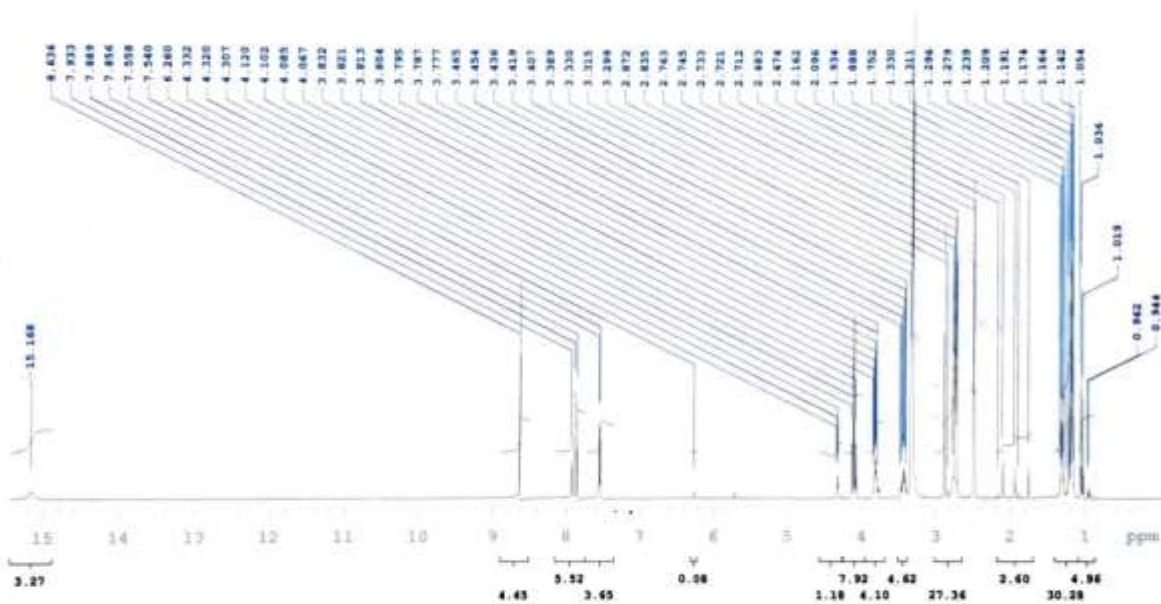
Dr\_Haider\_Kamal-AC

Sample Name: Dr\_Haider\_Kamal-AC  
Date collected: 2019-05-14

Pulse program: PROTON  
Solvent: DMSO

Temperature: 25  
Spectrometer: nmr-400-mercury400

Library: MOOCL  
NMR User:



#f1otname: Dr\_Haider\_Kamal-AC\_PROTON\_01\_plot02

File: /home/haider/Work/2019/05/14/Dr\_Haider\_Kamal-AC\_20190514\_01.D; Haider\_Kamal-AC\_PROTON\_01

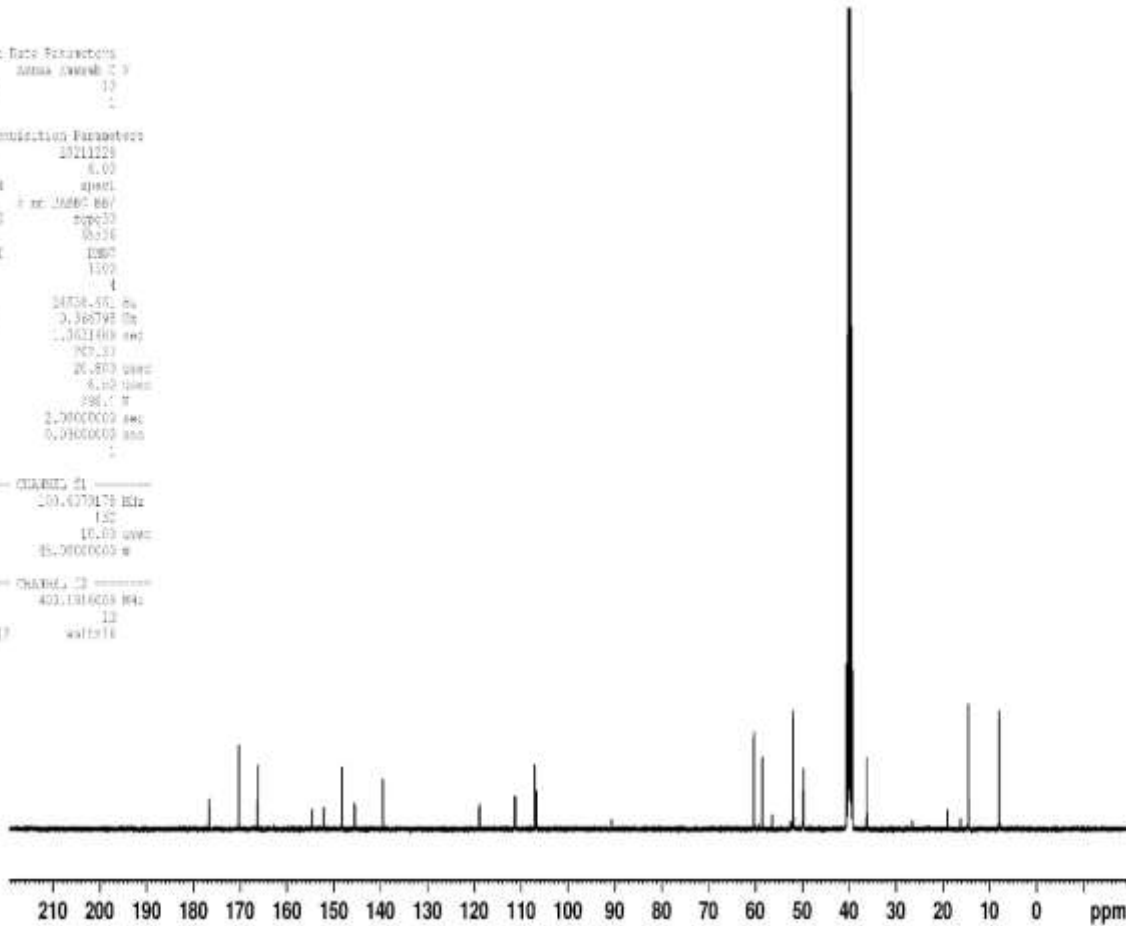
Printed: 2019-05-14



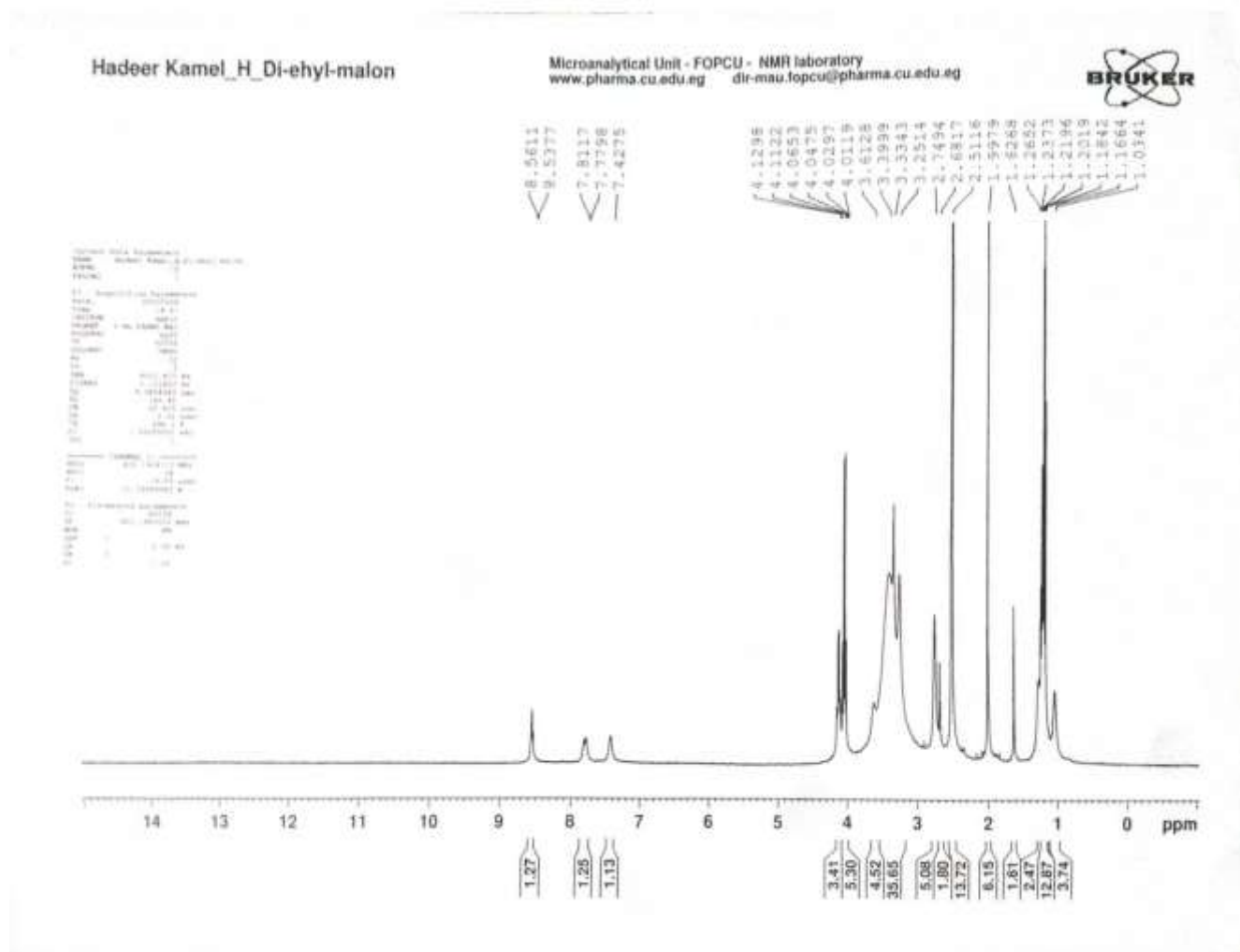
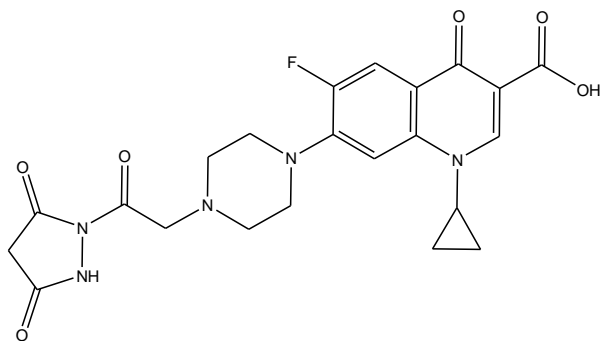
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 118.96  
 111.46  
 111.23  
 107.17  
 106.85  
 106.82  
  
 60.37  
 58.63  
 56.49  
 52.00  
 49.88  
 49.84  
 40.62  
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 40.20  
 39.99  
 39.78  
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 39.37  
 36.31  
 19.02  
 14.61  
 8.02

```

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PROCNO    1
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AQ        1.00
RG         4
DELTA     24758.000 sec
FIDRES    0.366798 Hz
AQ        1.3031400 sec
SFO       100.62
PC        20.870 sec
PR        8.00 sec
RG         981.00
AQ        2.7000000 sec
SFO       0.2500000 sec
TD        1
----- CHANNEL f1 -----
NUC1      13C
P1        120.0000000 Hz
NUC2      13C
PC        10.00 sec
PL1       05.0000000 dB
----- CHANNEL f2 -----
NAME      400.1316000 MHz
EXPNO     10
PROCNO    1
    
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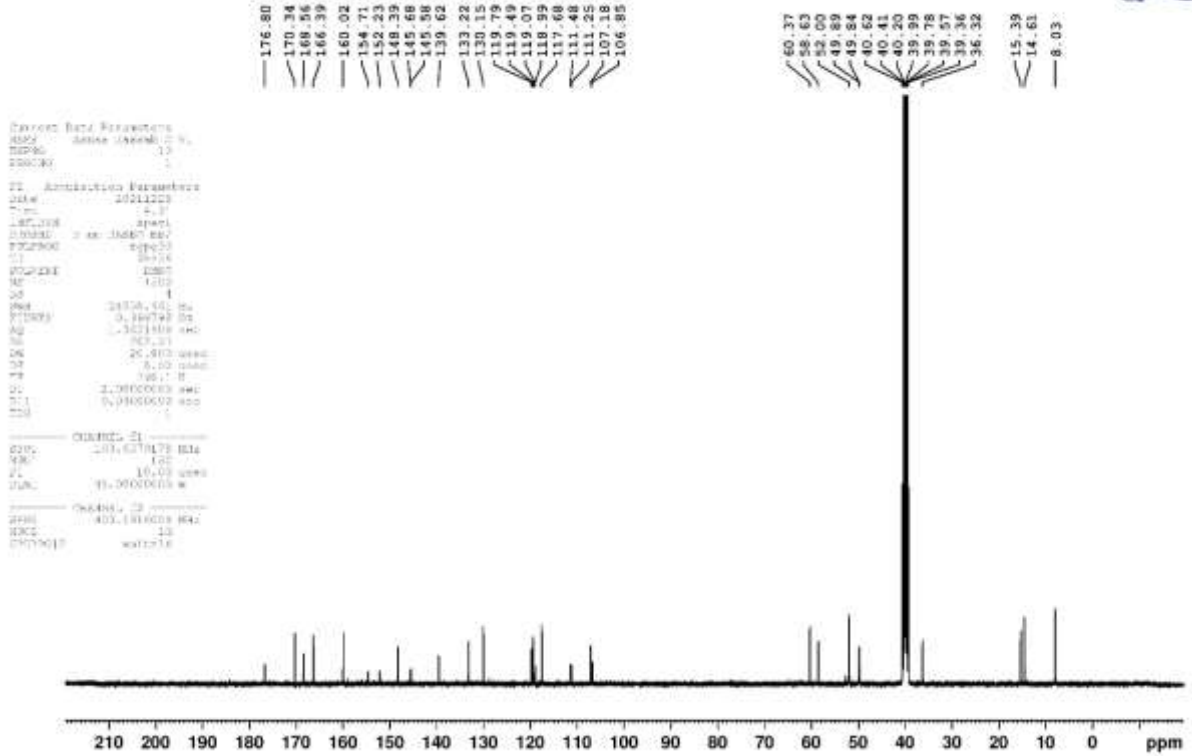
# Compound 6



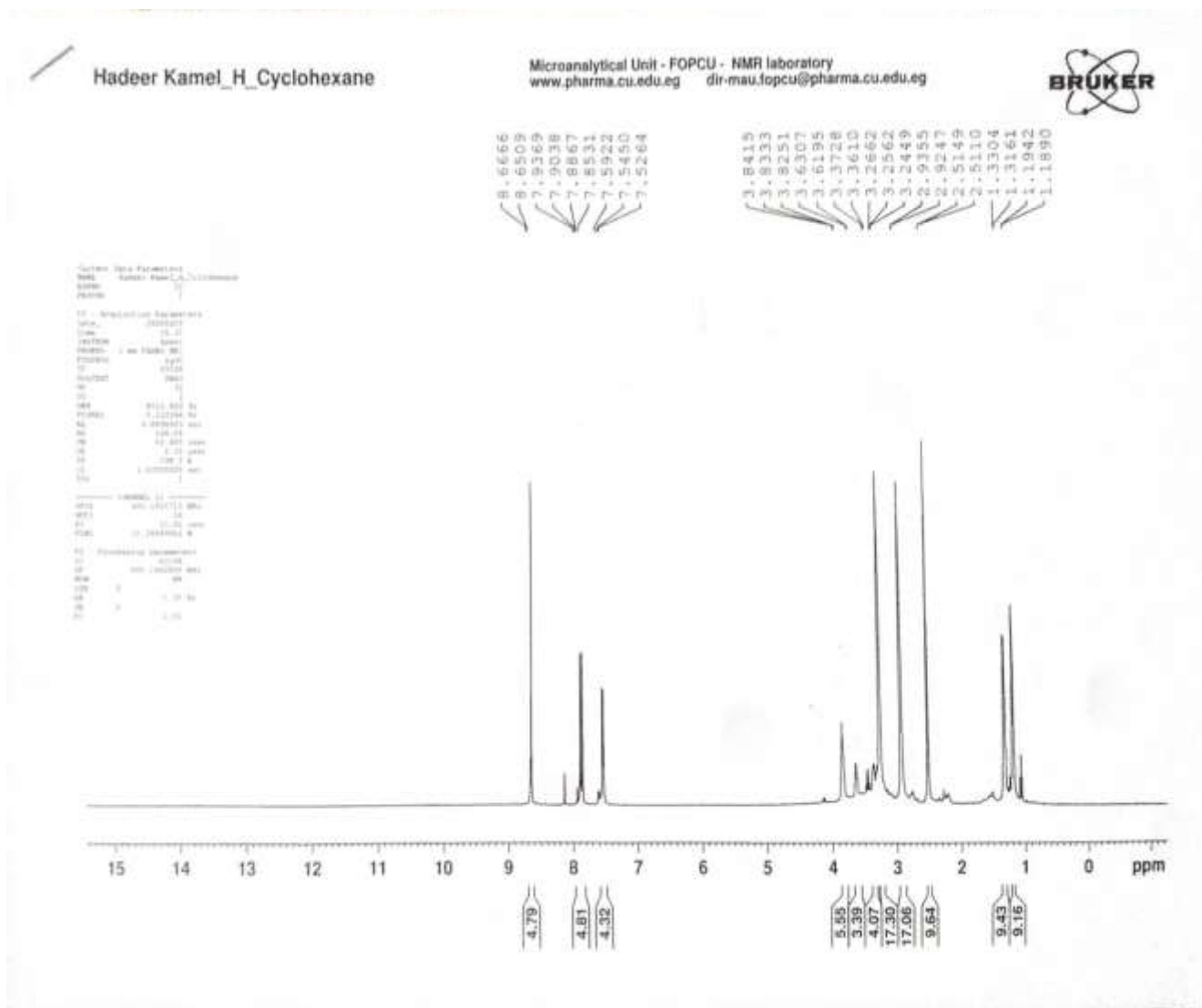
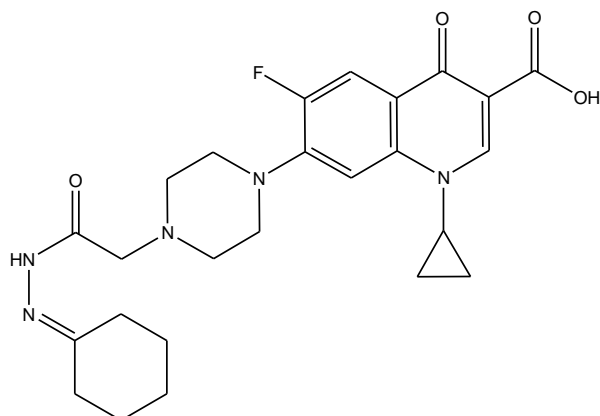


Asmaa Kassab\_C\_VI

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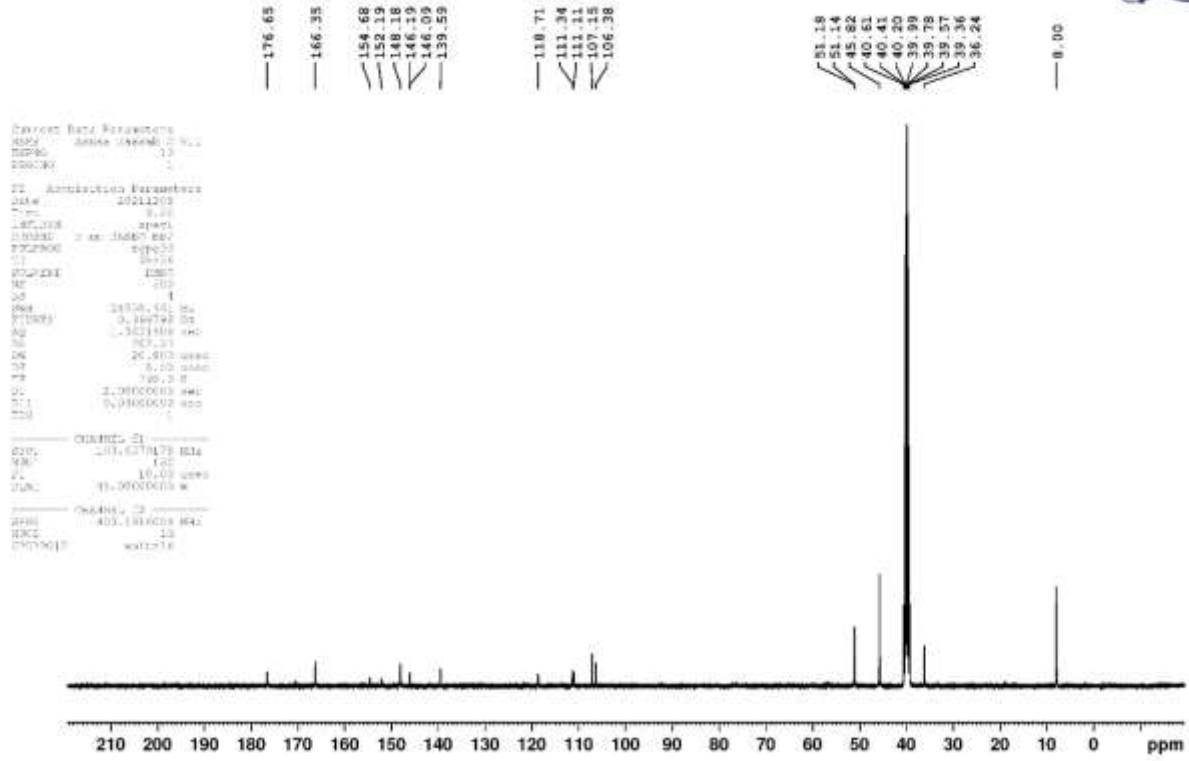


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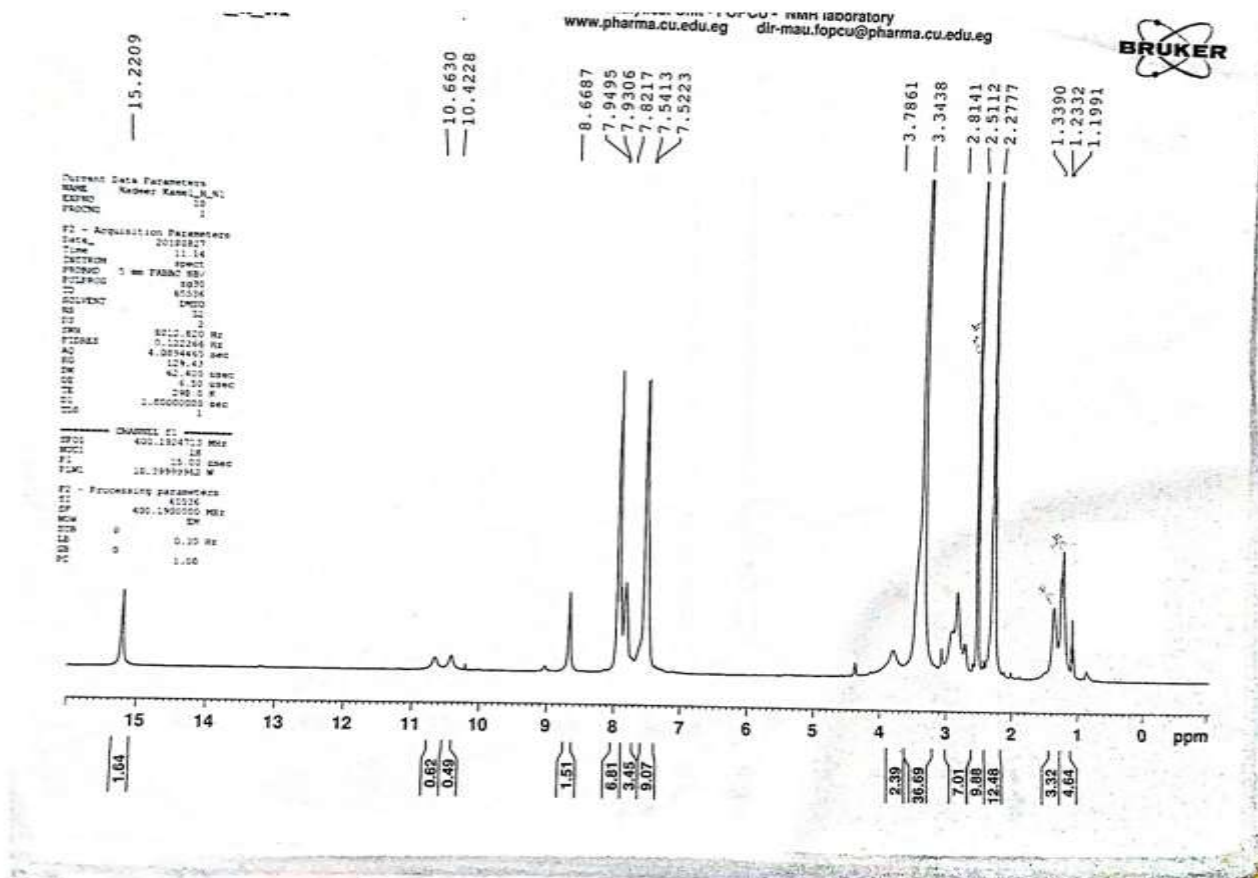
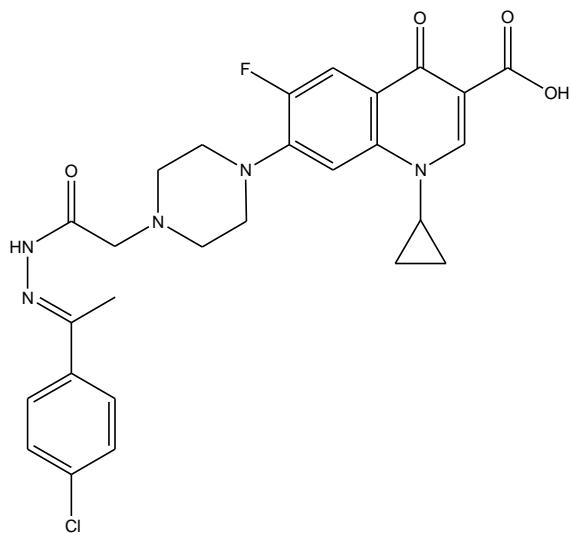


Asmaa Kassab\_C\_VII

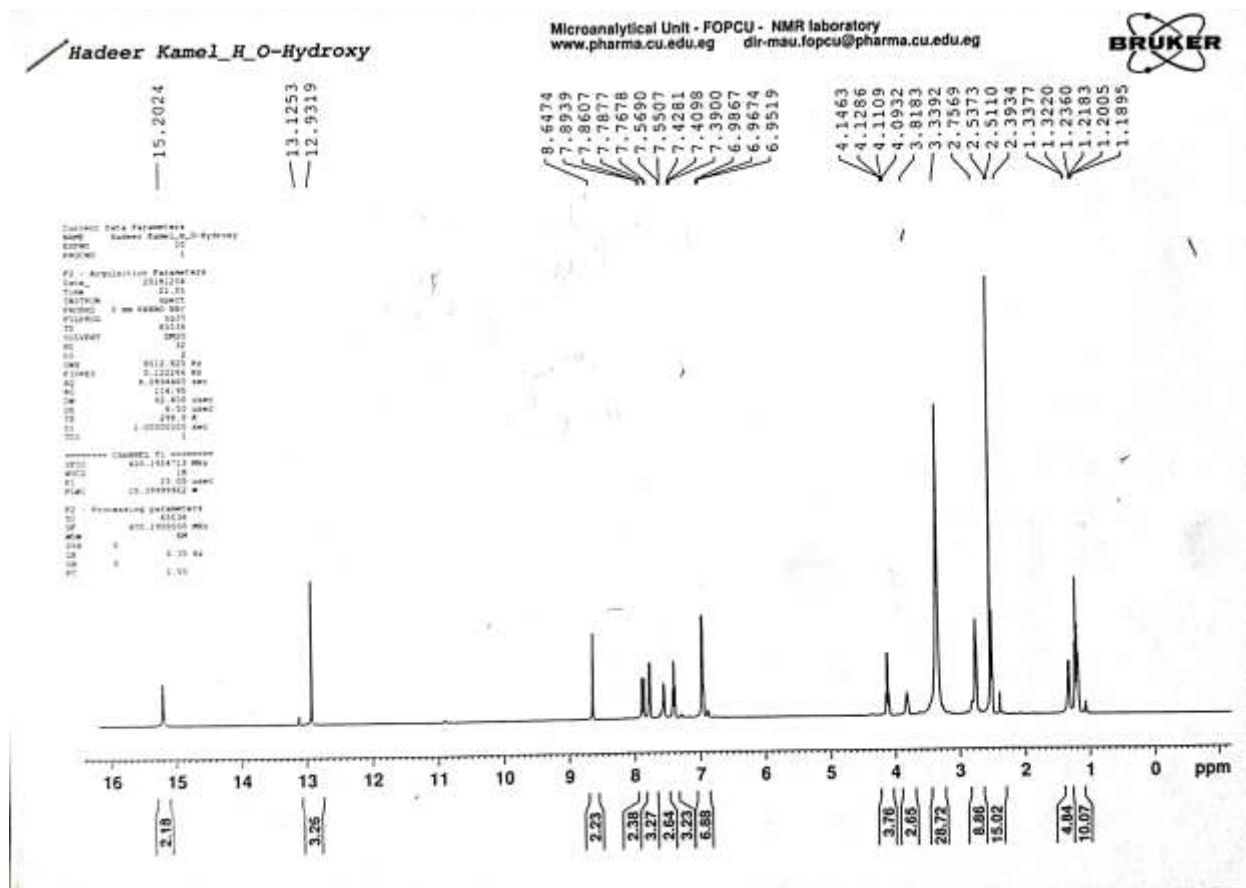
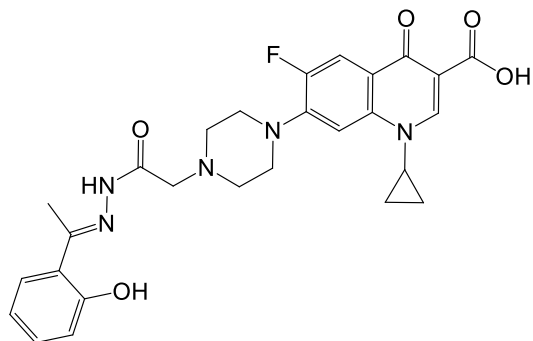
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# Compound 7b

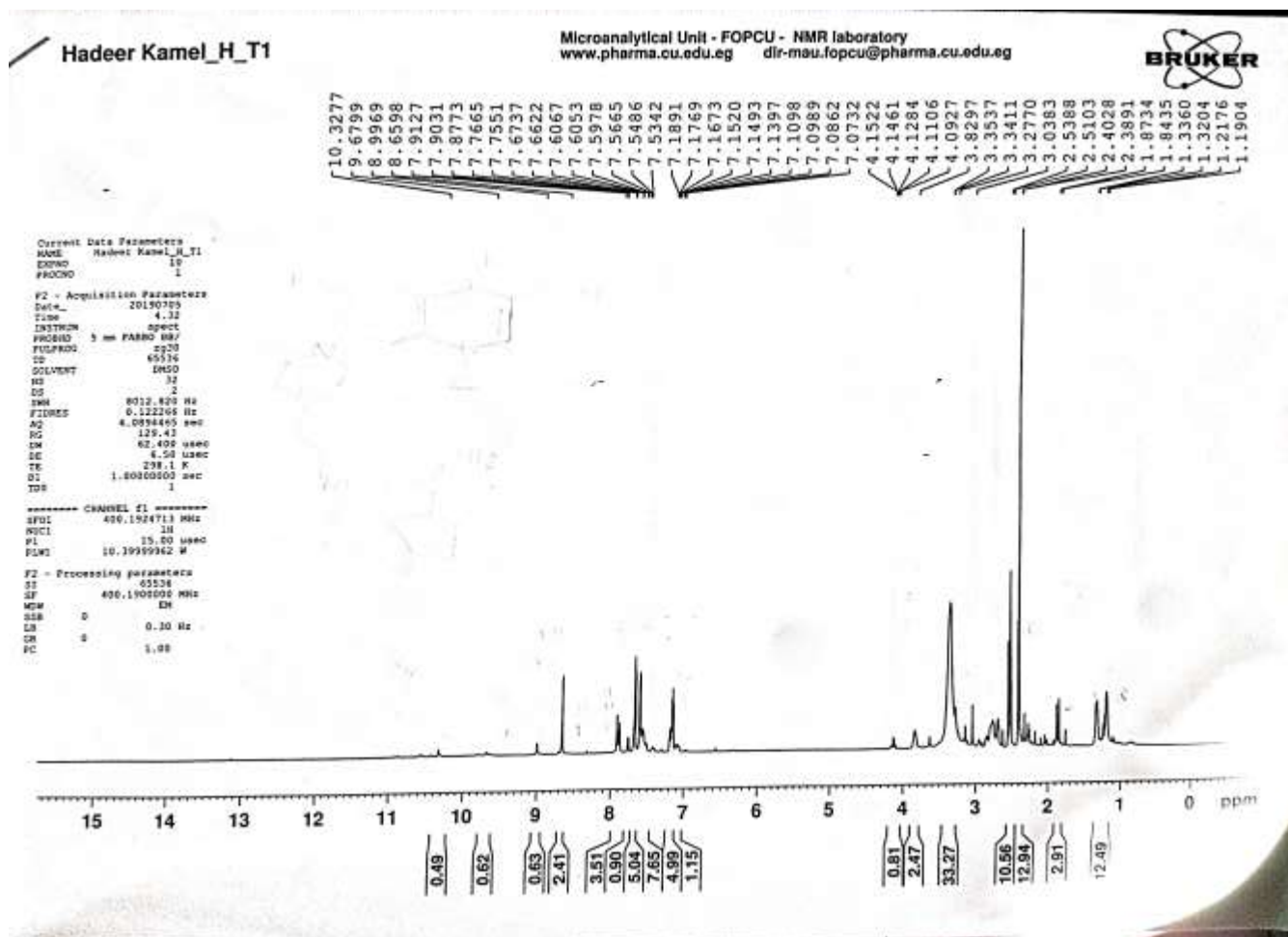
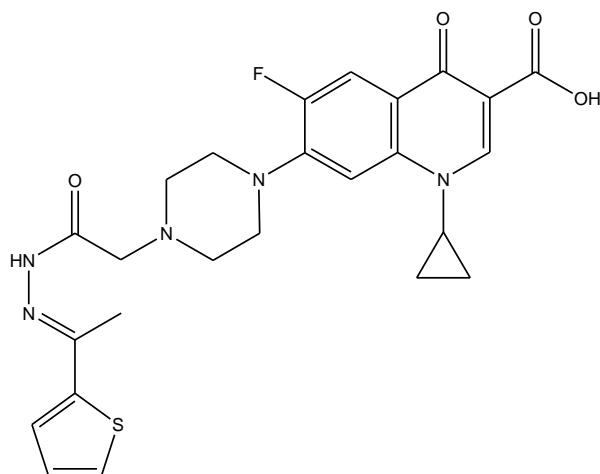


# Compound 7d



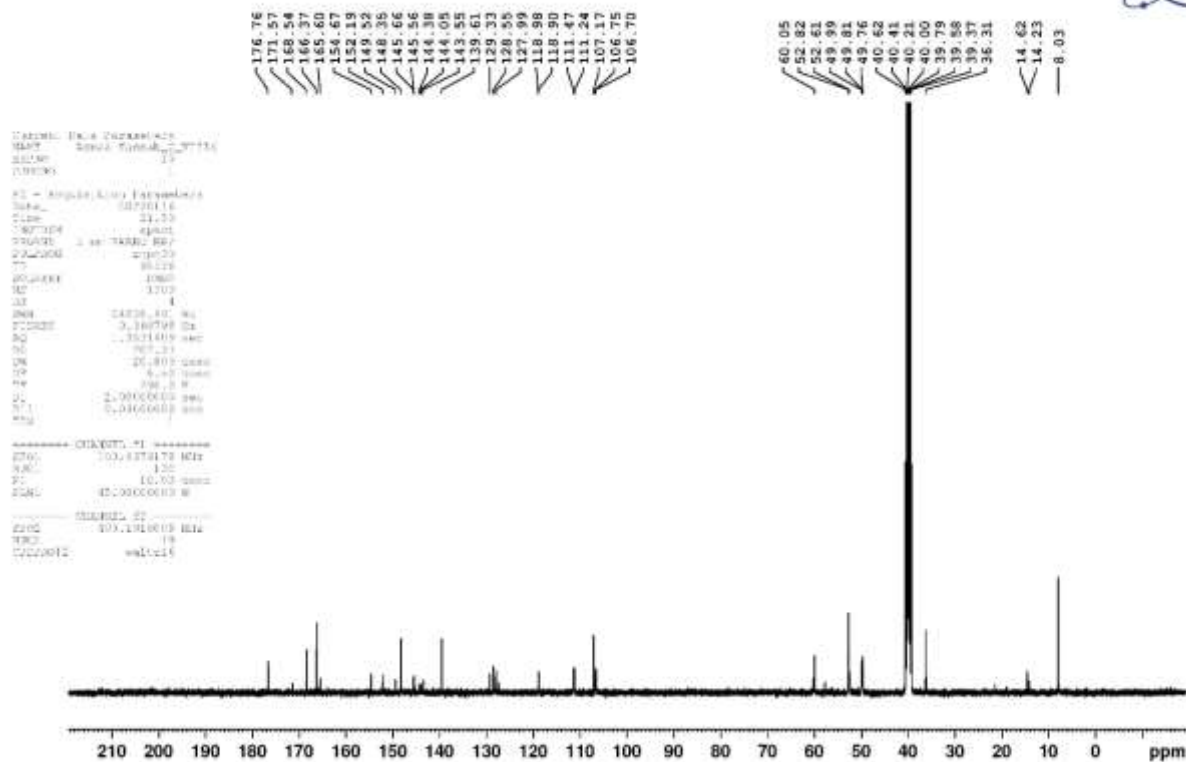


# Compound 7e



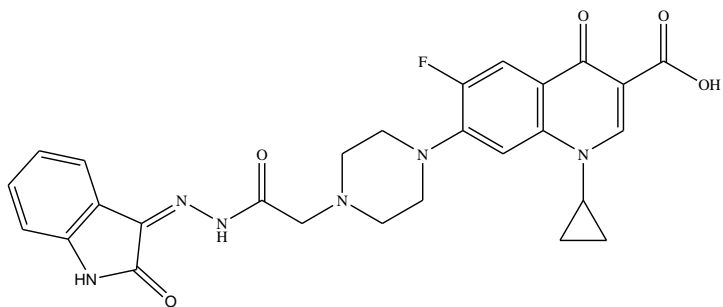
Asmaa Kassab\_C\_VIId

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# Compound 8a



Dr\_Hader\_Kamal-18

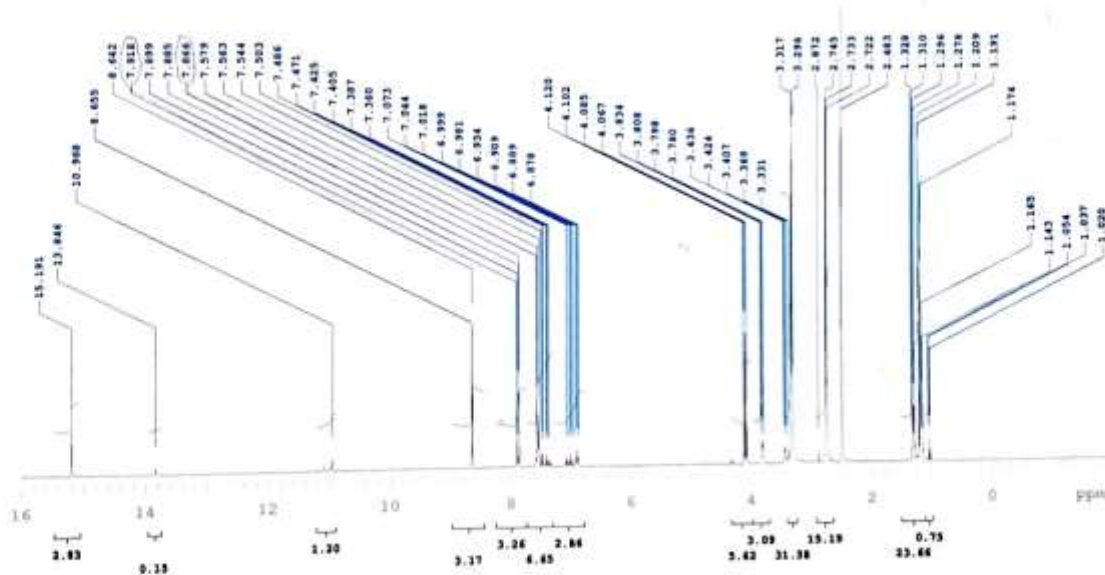
Dr\_Hader\_Kamal-18

Sample Name: Dr\_Hader\_Kamal-18  
Date collected: 2019-03-14

Pulse sequence: PROTON  
Solvent: DMSO

Temperature: 35  
Spectrometer: spect-400

Lab: MOCC  
Lab: SAR USA



Plotname: Dr\_Hader\_Kamal-18\_PROTON\_01\_plot02

Data file: hader\drhader\20190314\Dr\_Hader\_Kamal-18\_20190314\_01.D, Dr\_Hader\_Kamal-18\_20190314\_01.F2

Printed: 2019-03-14



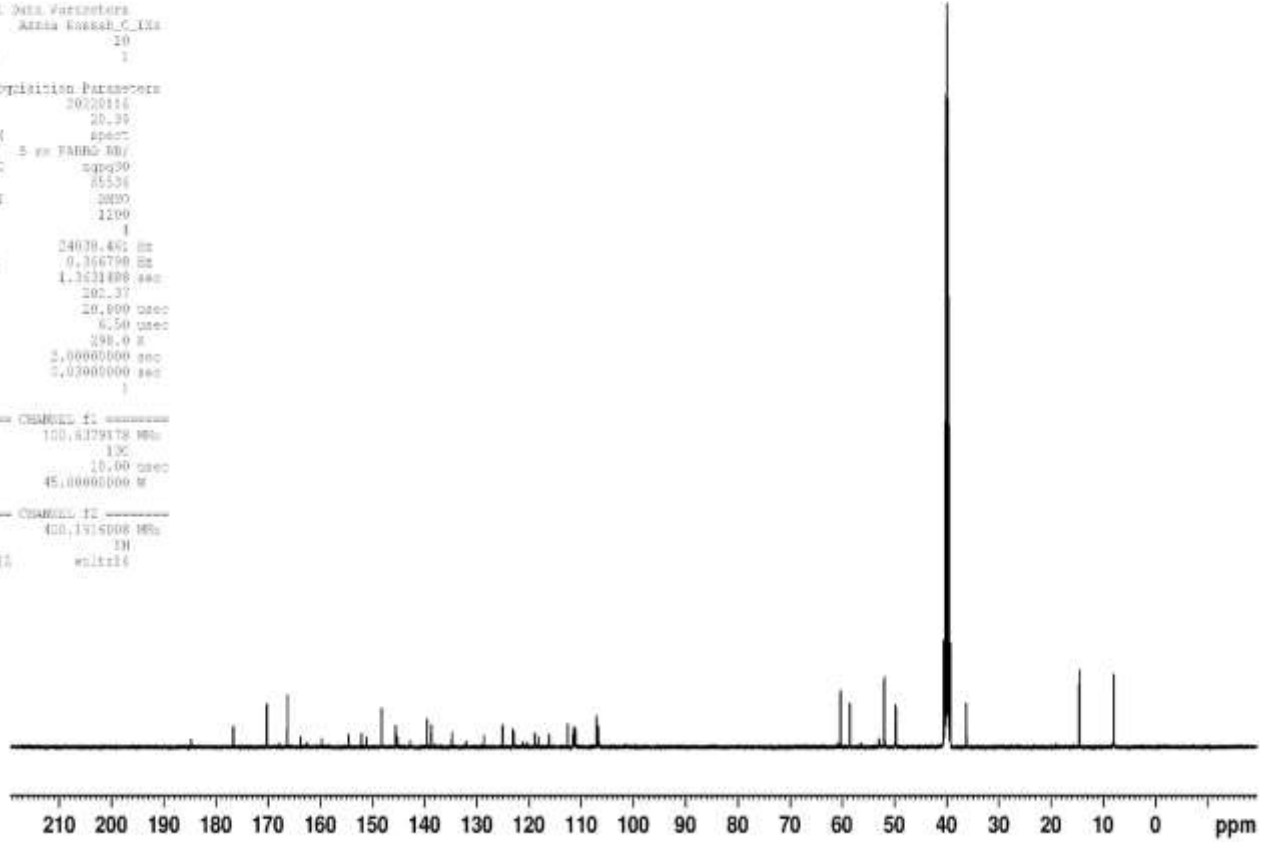
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 134.85  
 128.66  
 125.12  
 123.20  
 122.99  
 119.02  
 118.95  
 118.26  
 116.24  
 112.64  
 111.56  
 111.44  
 111.21  
 107.17  
 106.81  
 60.77  
 58.63  
 52.00  
 49.88  
 49.83  
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 36.30  
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 8.03

Current Data Variables  
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 EXPNO 10  
 PROCNO 1

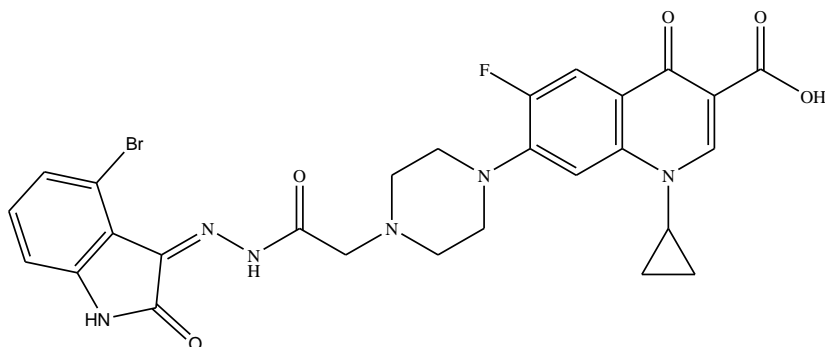
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 PULPROG zgpg30  
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 DS 4  
 SWH 24039.462 Hz  
 FIDRES 0.366790 Hz  
 AQ 1.3331888 sec  
 RG 202.37  
 DN 20.000 c/sec  
 DE 6.50 c/sec  
 TE 300.2 K  
 U1 2.00000000 sec  
 U11 2.02000000 sec  
 TD0 1

===== CHANNEL f1 =====  
 NUC1 100.6179178 MHz  
 NUQ1 13C  
 P1 10.00 c/sec  
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 NUQ2 1H  
 P1PFGH2 waltz16

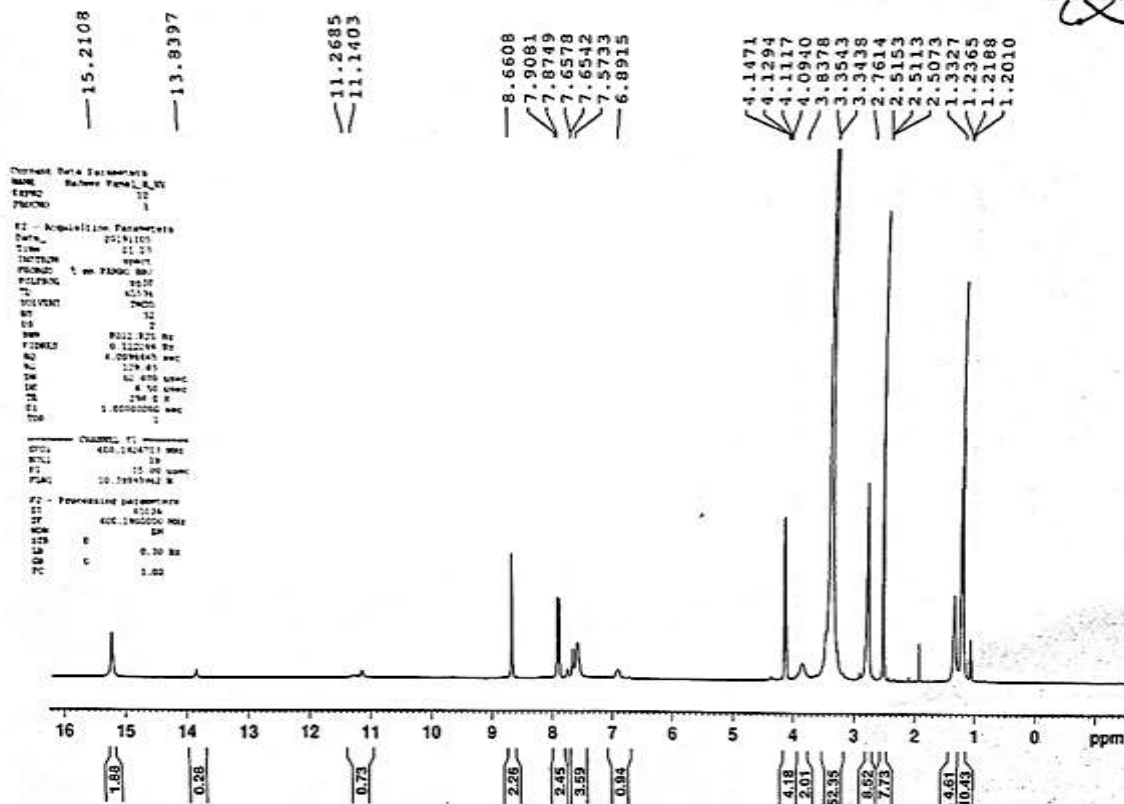


# Compound 8b



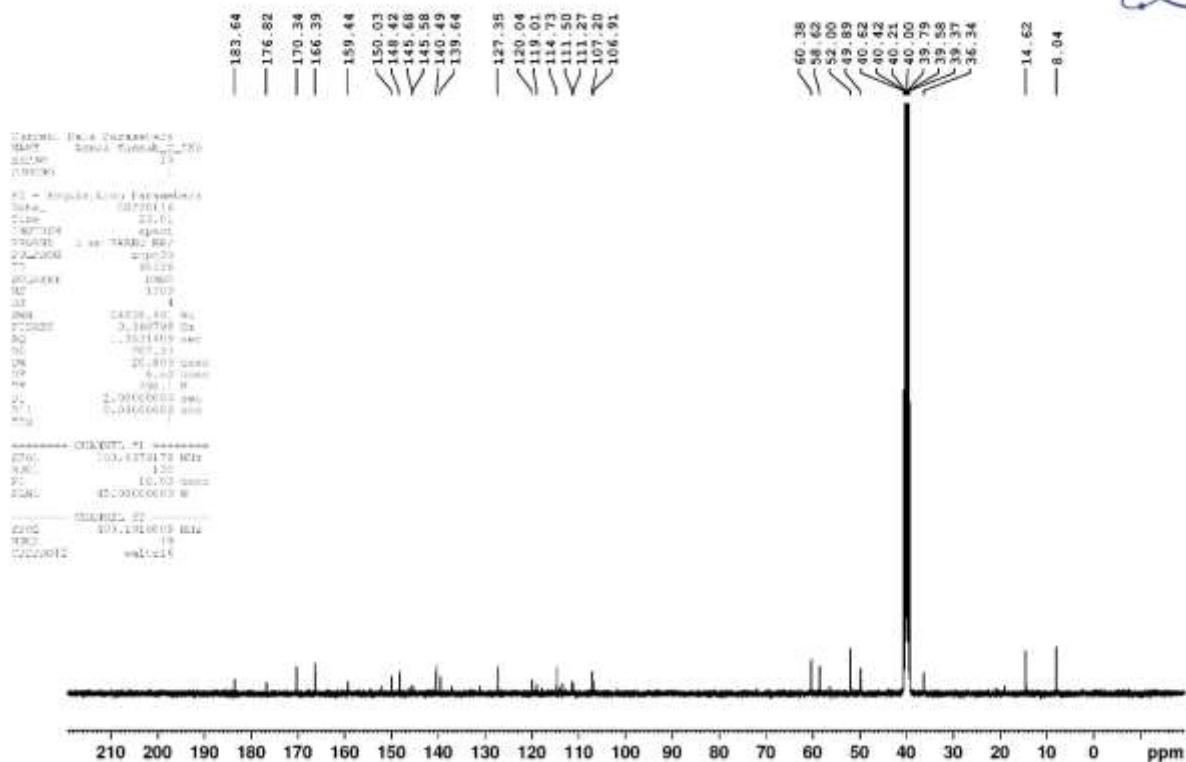
Hadeer Kamel\_H\_XV

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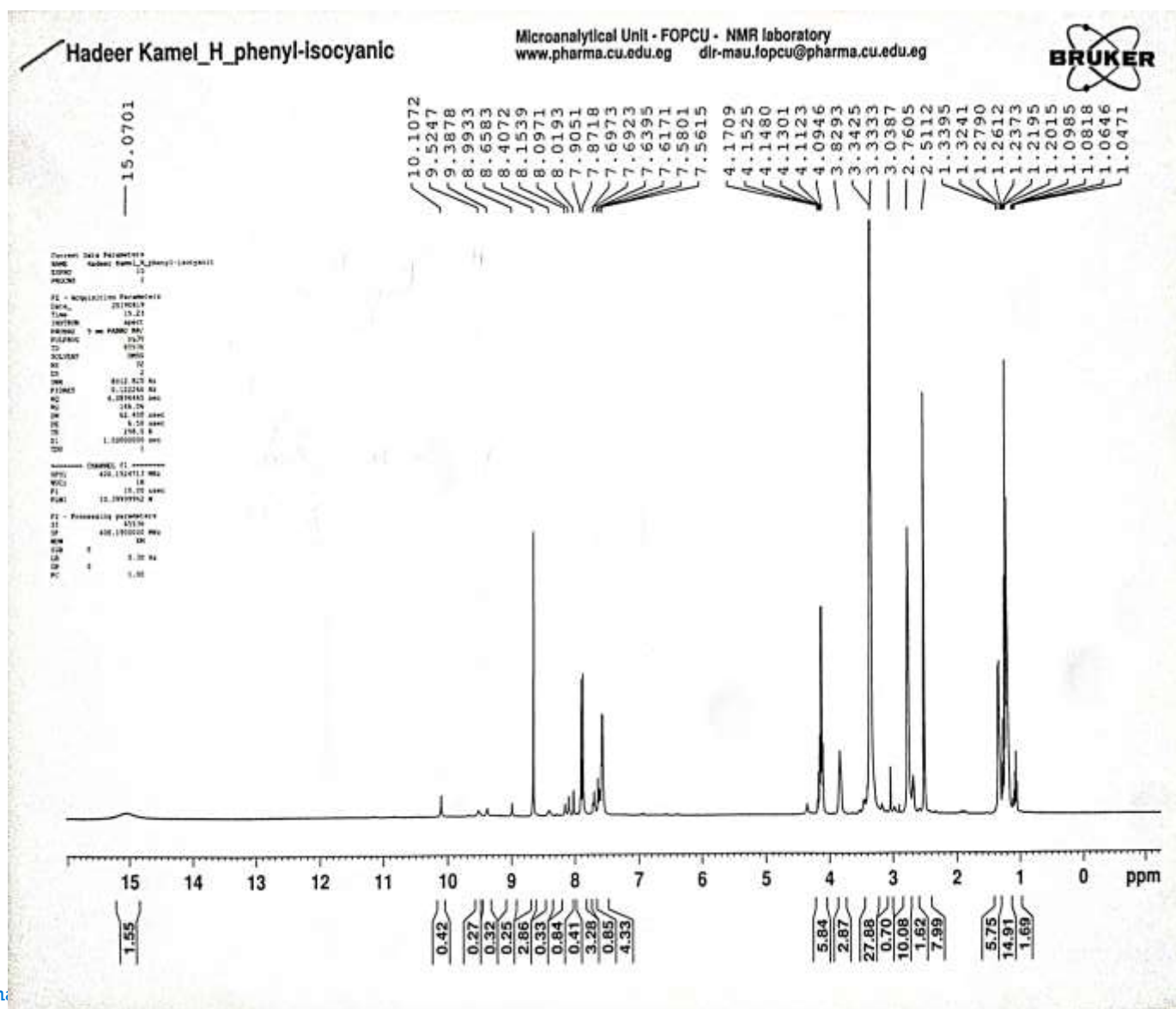
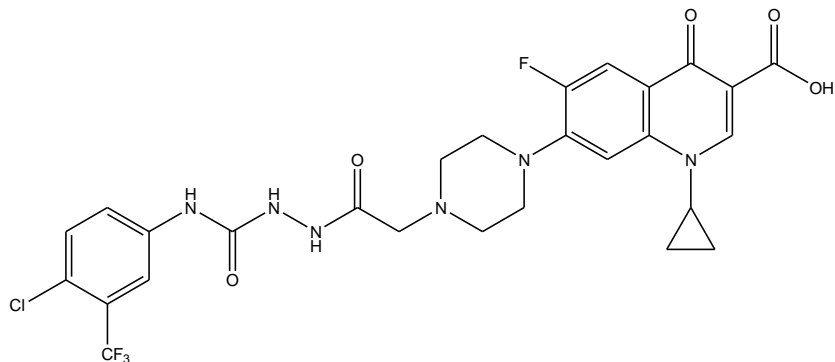


Asmaa Kassab\_C\_IXb

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# Compound 9a



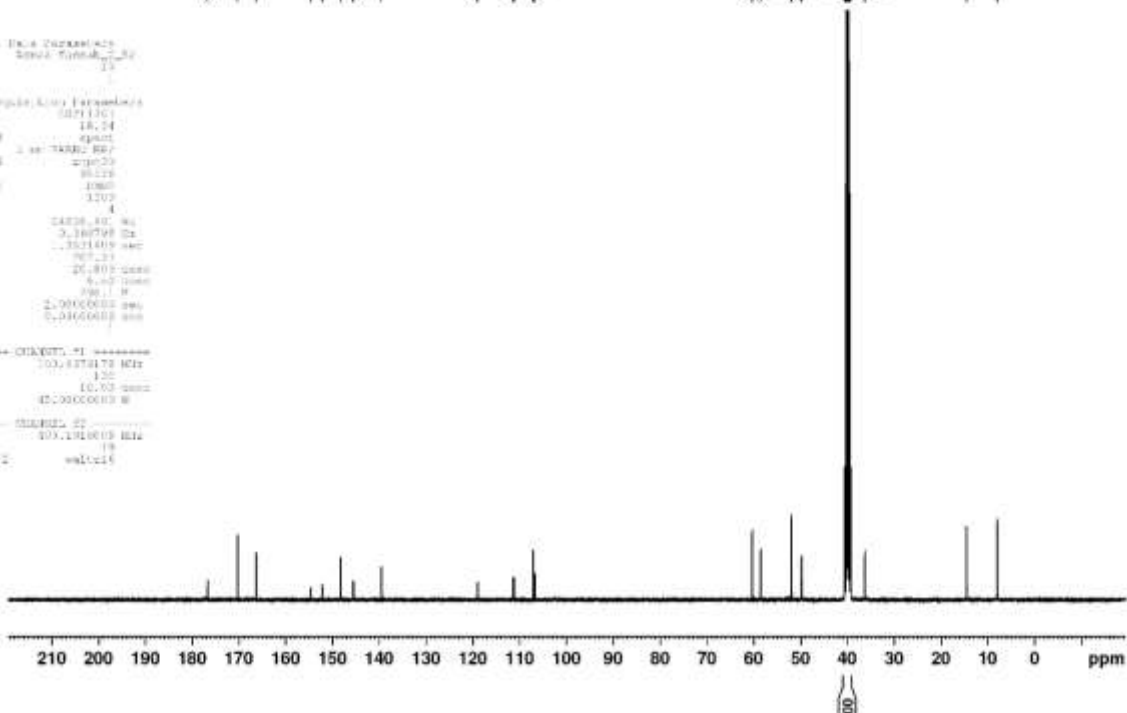
Asmaa Kassab\_C\_Xa

Microanalytical Unit - FOPCU - NMR laboratory  
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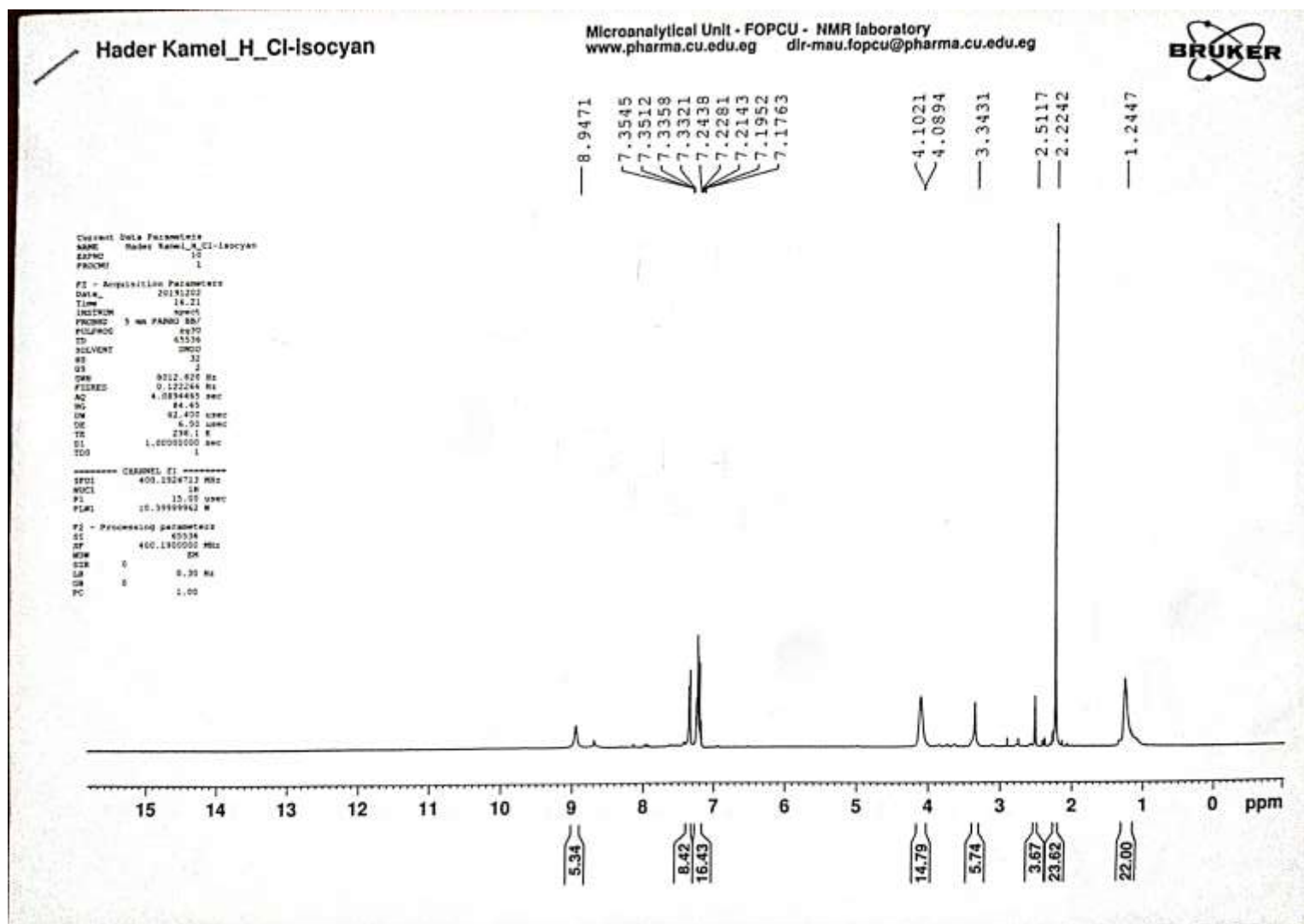
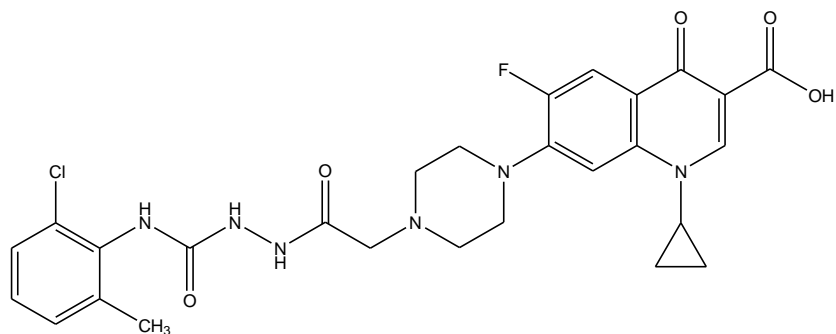


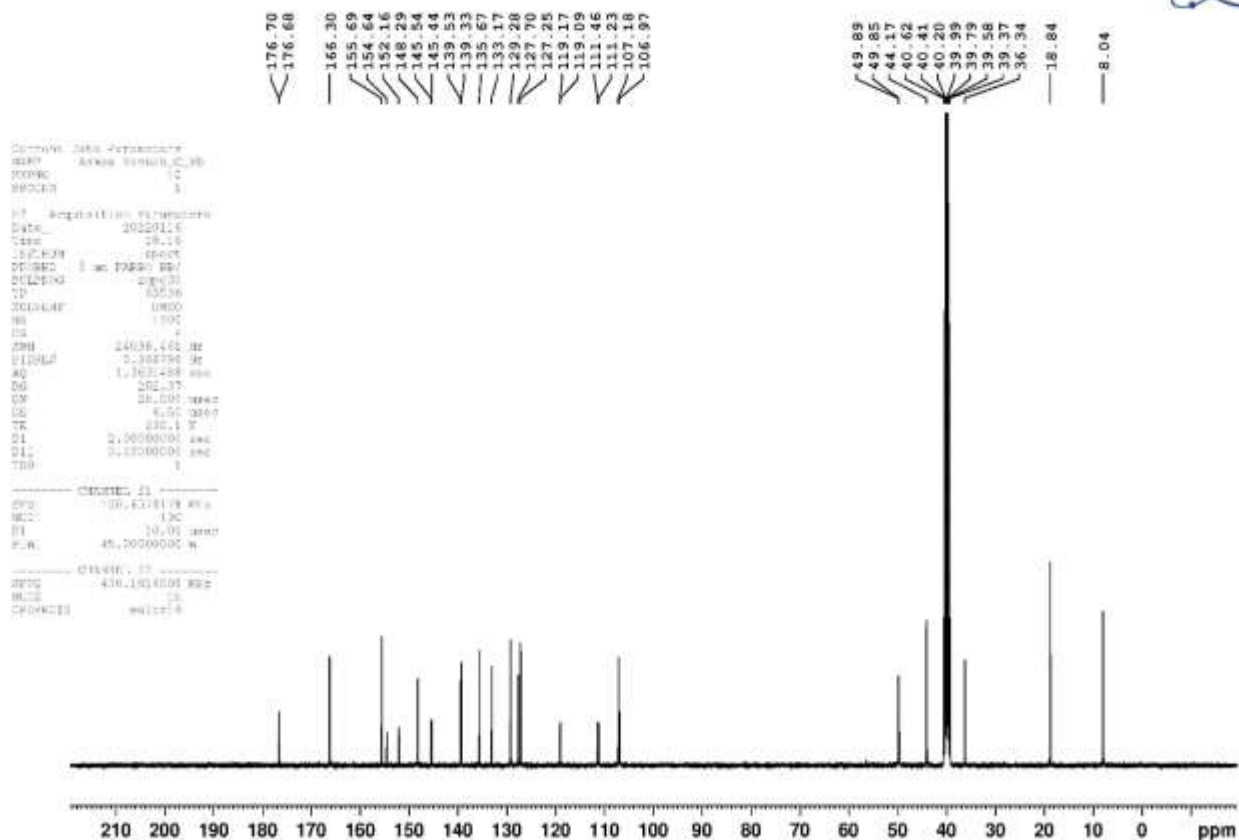
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111.48  
111.25  
107.18  
106.88  
106.85  
60.37  
58.63  
52.00  
49.89  
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40.41  
40.20  
39.99  
39.78  
39.58  
39.37  
36.32  
14.62  
8.03

```
===== CHANNEL F1 =====  
NAME: 103.1374173 MHz  
NUC1: 13C  
PC: 10.00 sec  
===== CHANNEL F2 =====  
NAME: 400.1418019 MHz  
NUC2: 1H  
PC: 1.00 sec
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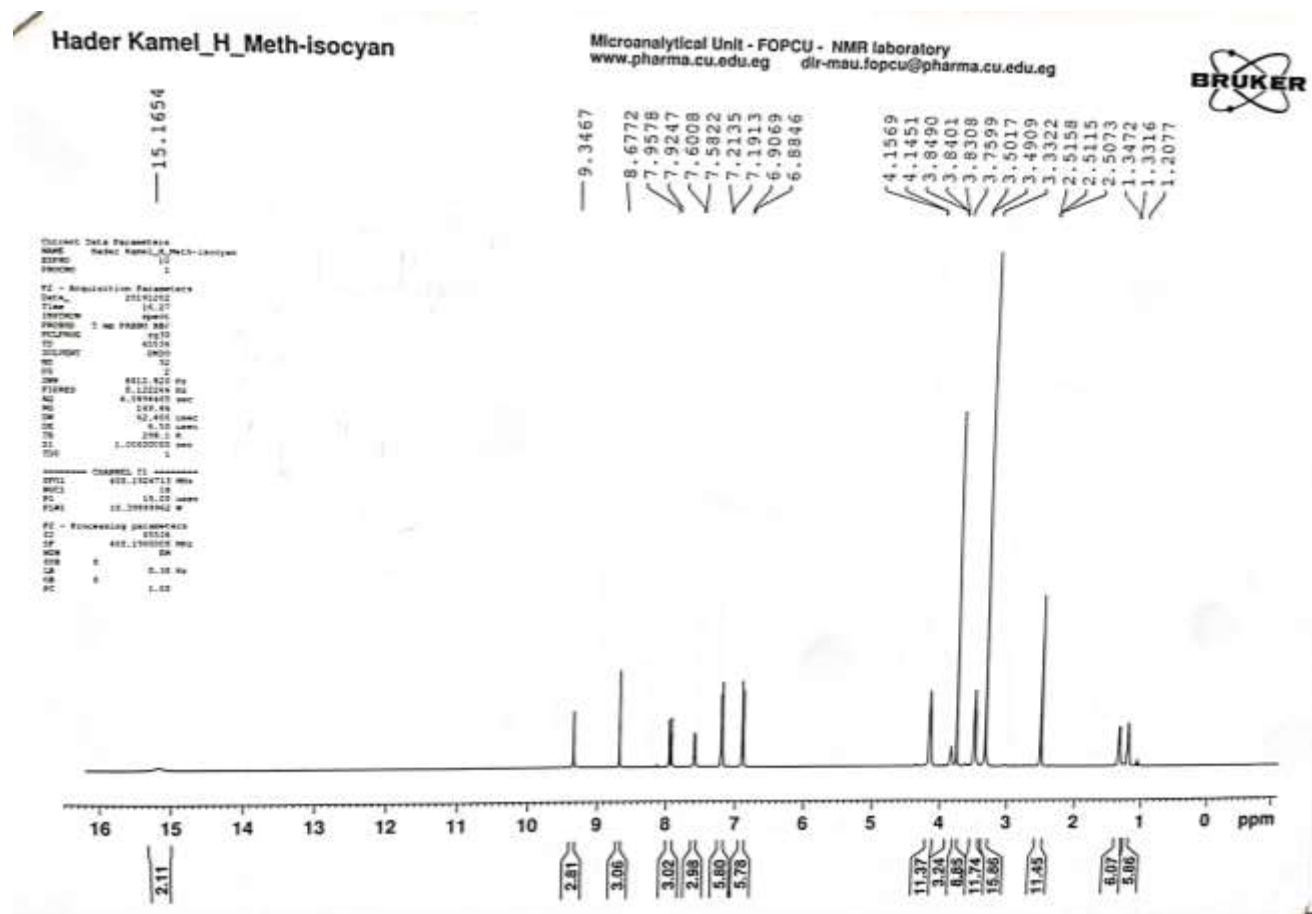
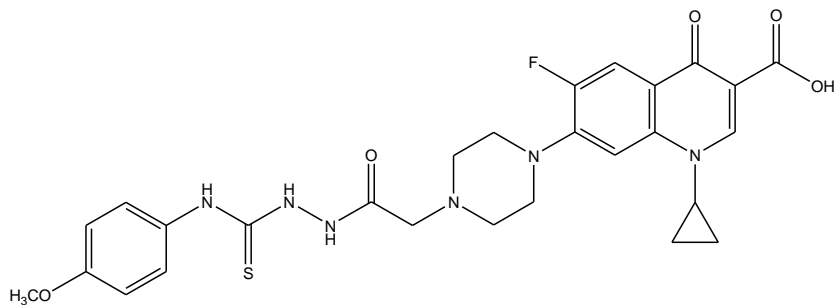
# Compound 9b







# Compound 9c



# Hadeer Kamel\_C\_Methoxy-Iso-Cyn

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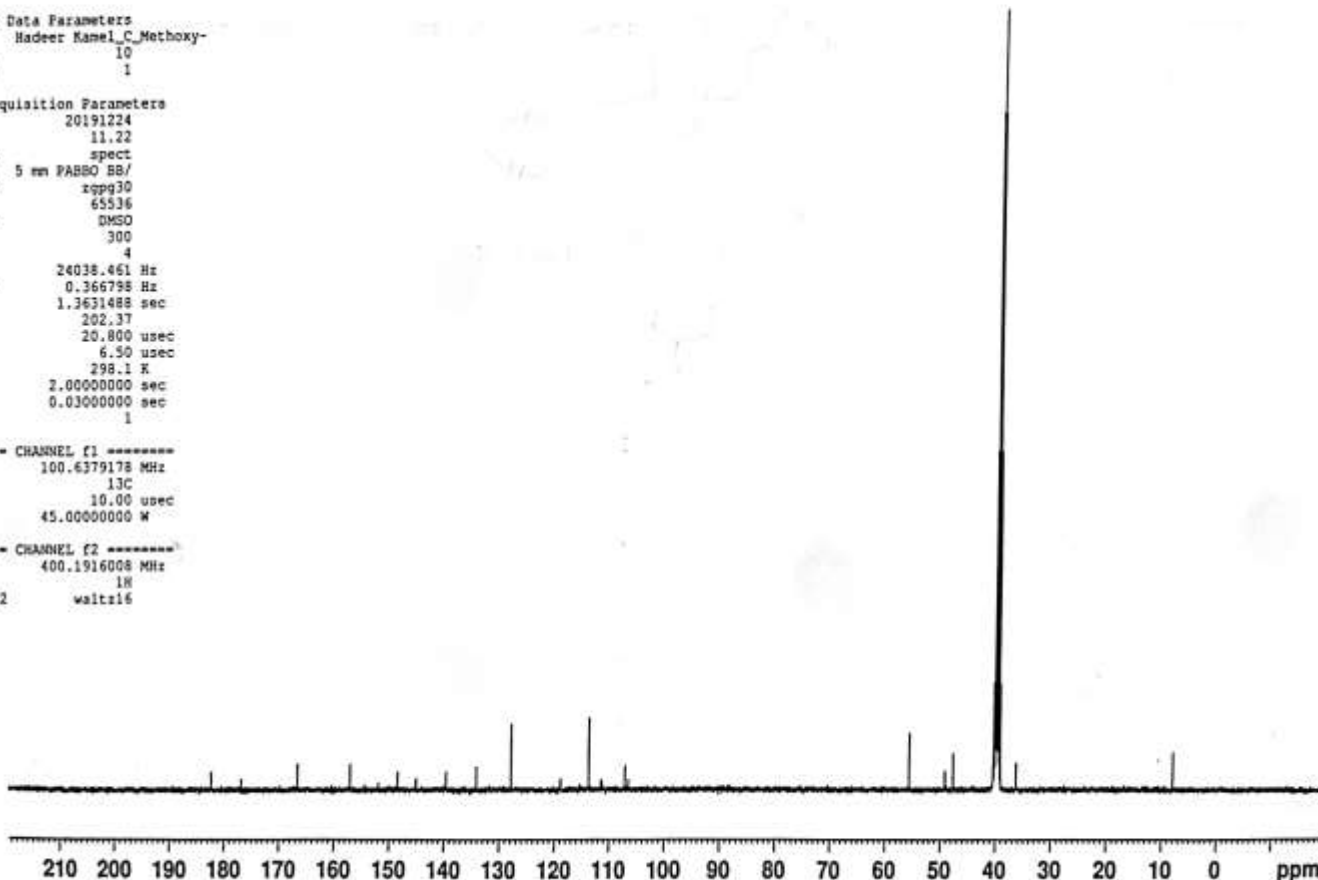
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111.32  
107.12  
106.53  
55.66  
49.18  
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40.26  
40.06  
39.85  
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8.06

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PROCNO 1

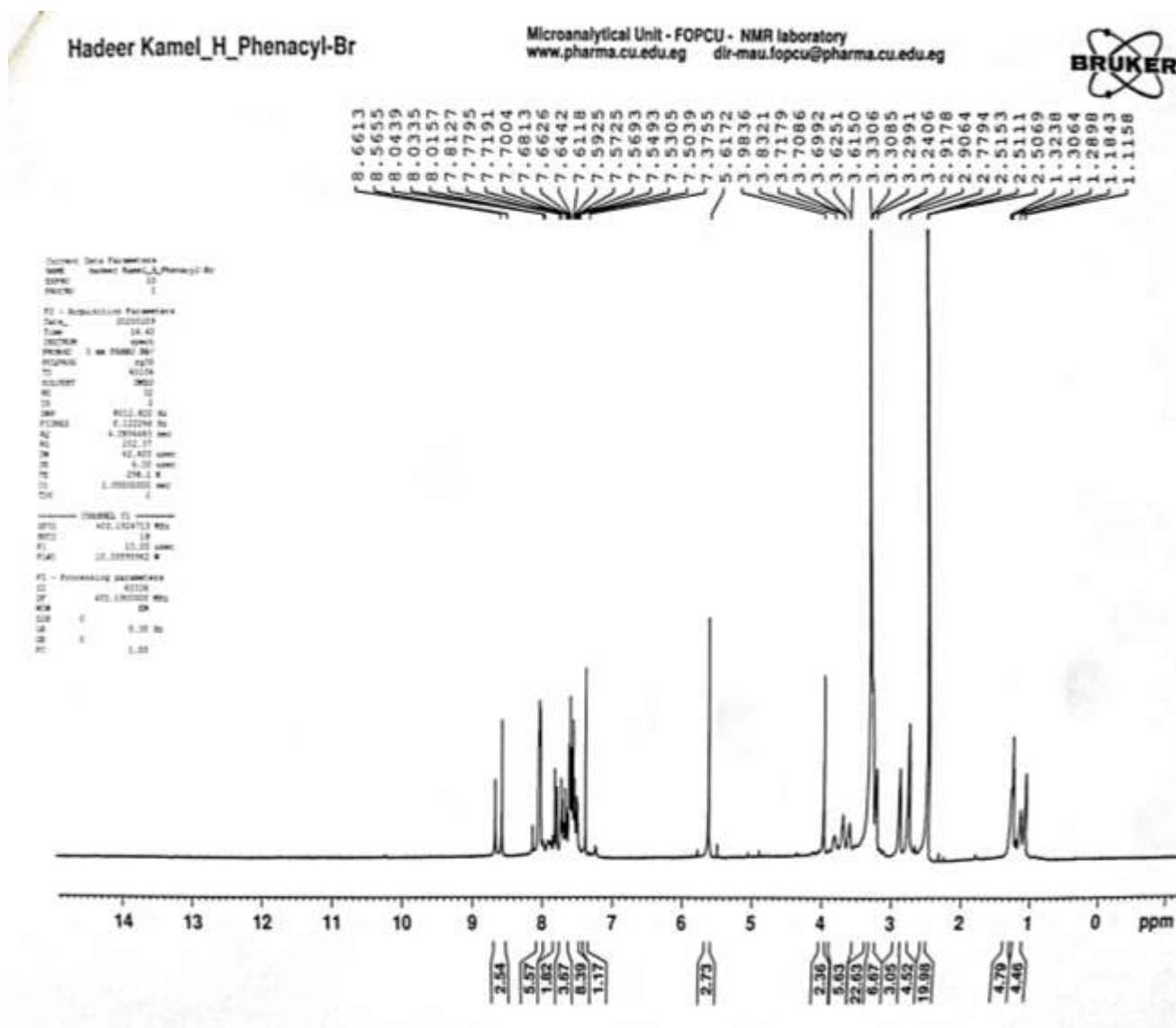
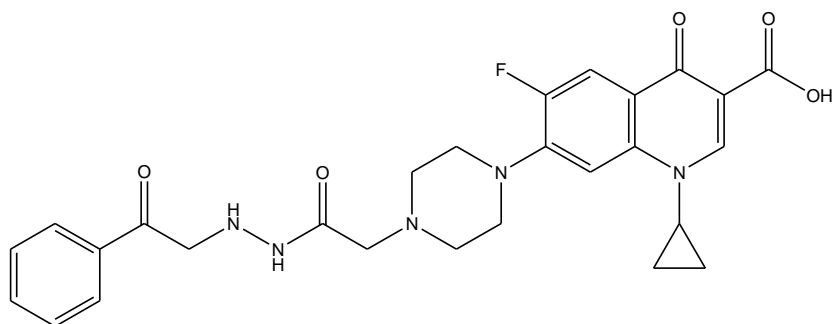
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SOLVENT DMSO  
NS 300  
DS 4  
SWH 24038.461 Hz  
FIDRES 0.366798 Hz  
AQ 1.3631488 sec  
RG 202.37  
DW 20.800 usec  
DE 6.50 usec  
TE 298.1 K  
D1 2.00000000 sec  
D11 0.03000000 sec  
TD0 1

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P1 10.00 usec  
PLW1 45.00000000 W

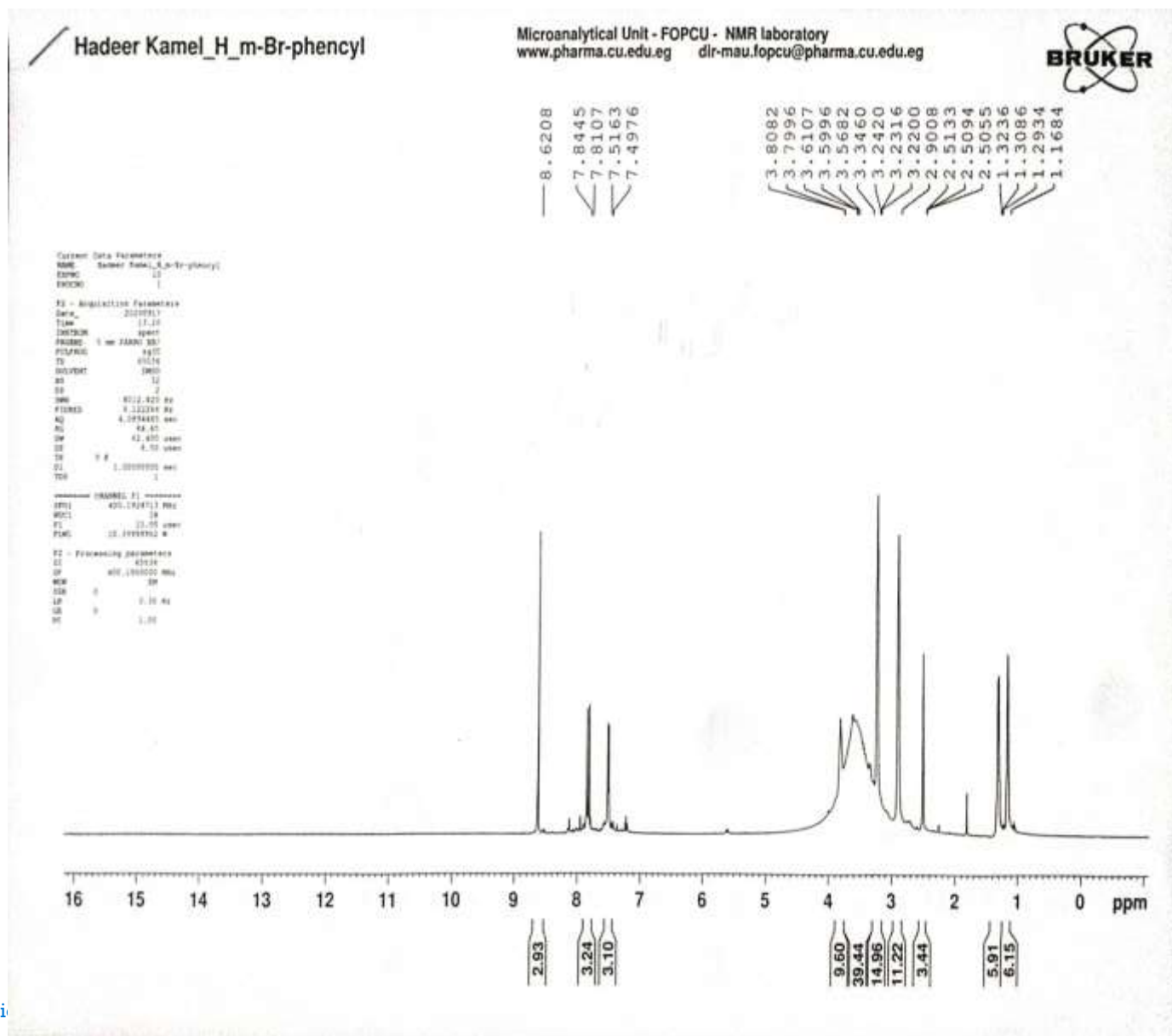
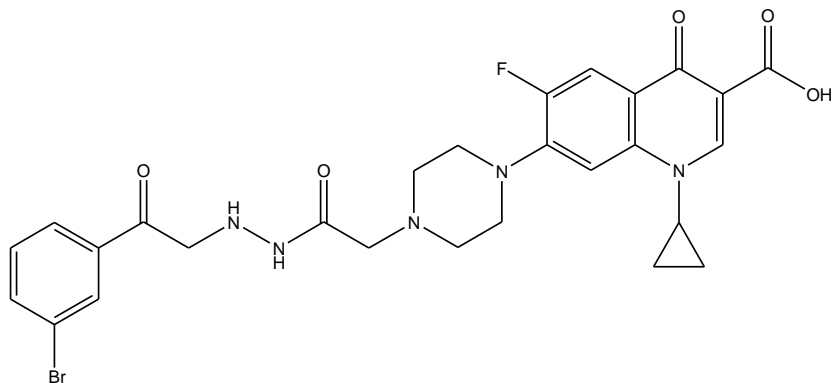
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# Compound 10a

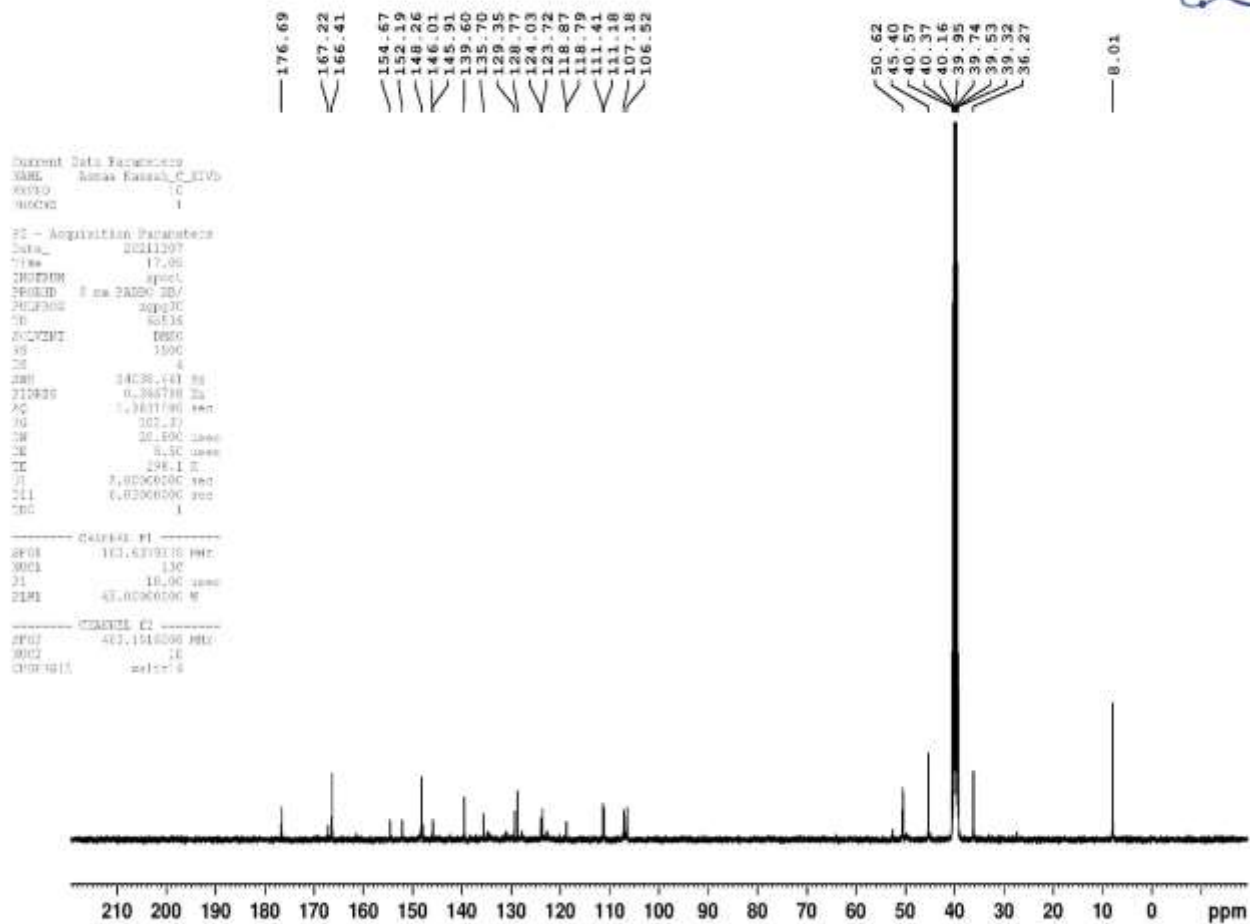


# Compound 10b

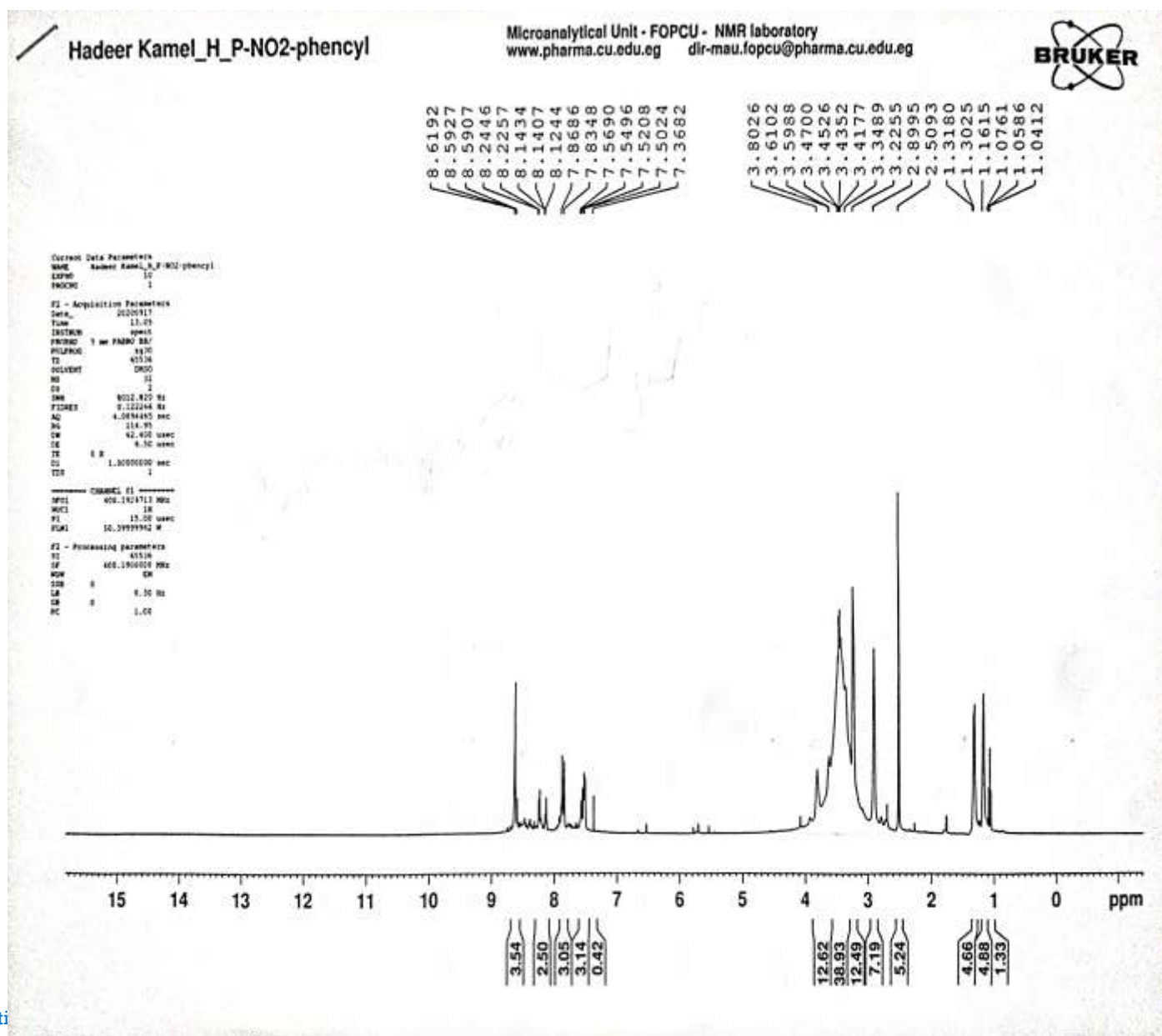
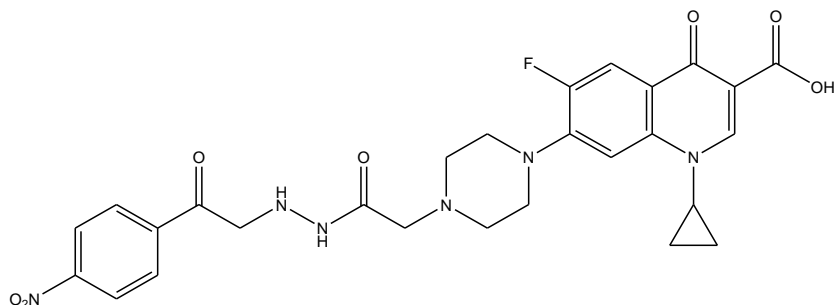


Asmaa Kassab\_C\_XIVb

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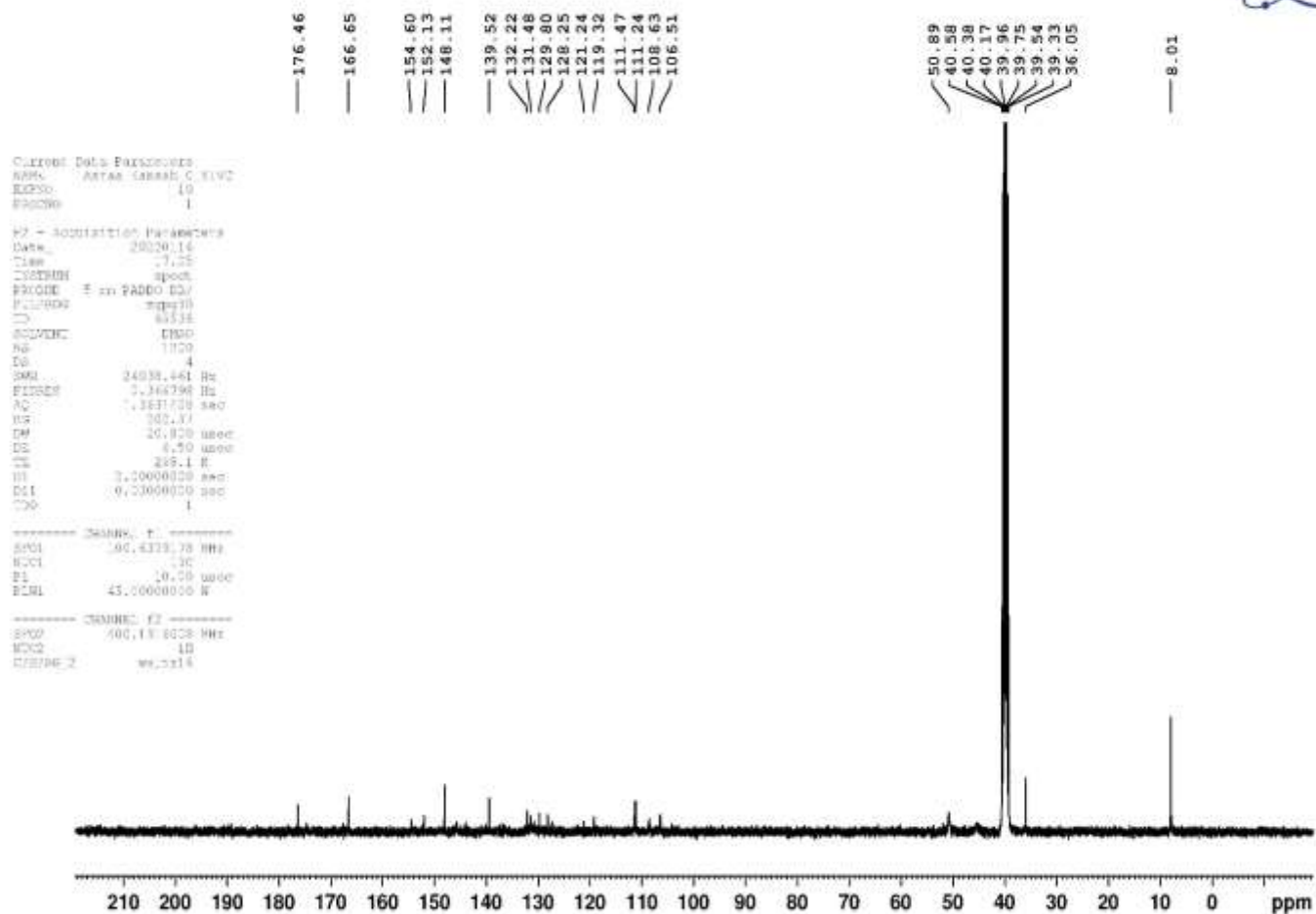


# Compound 10c

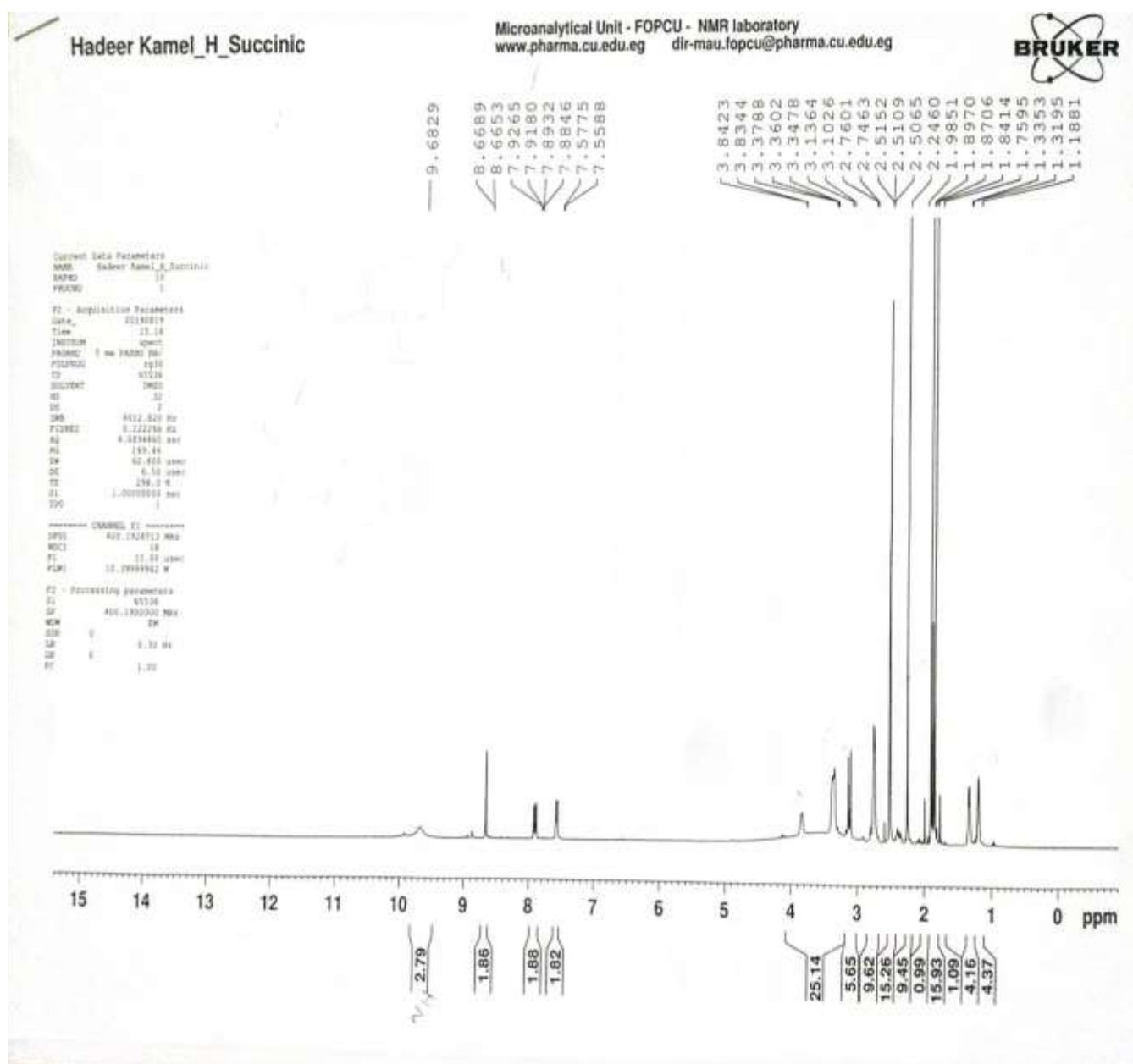
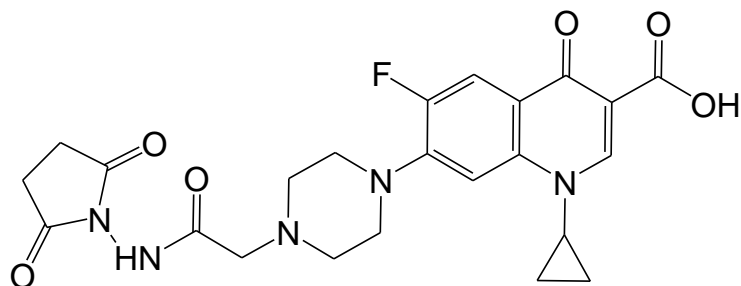


Asmaa Kassab\_C\_XIVC

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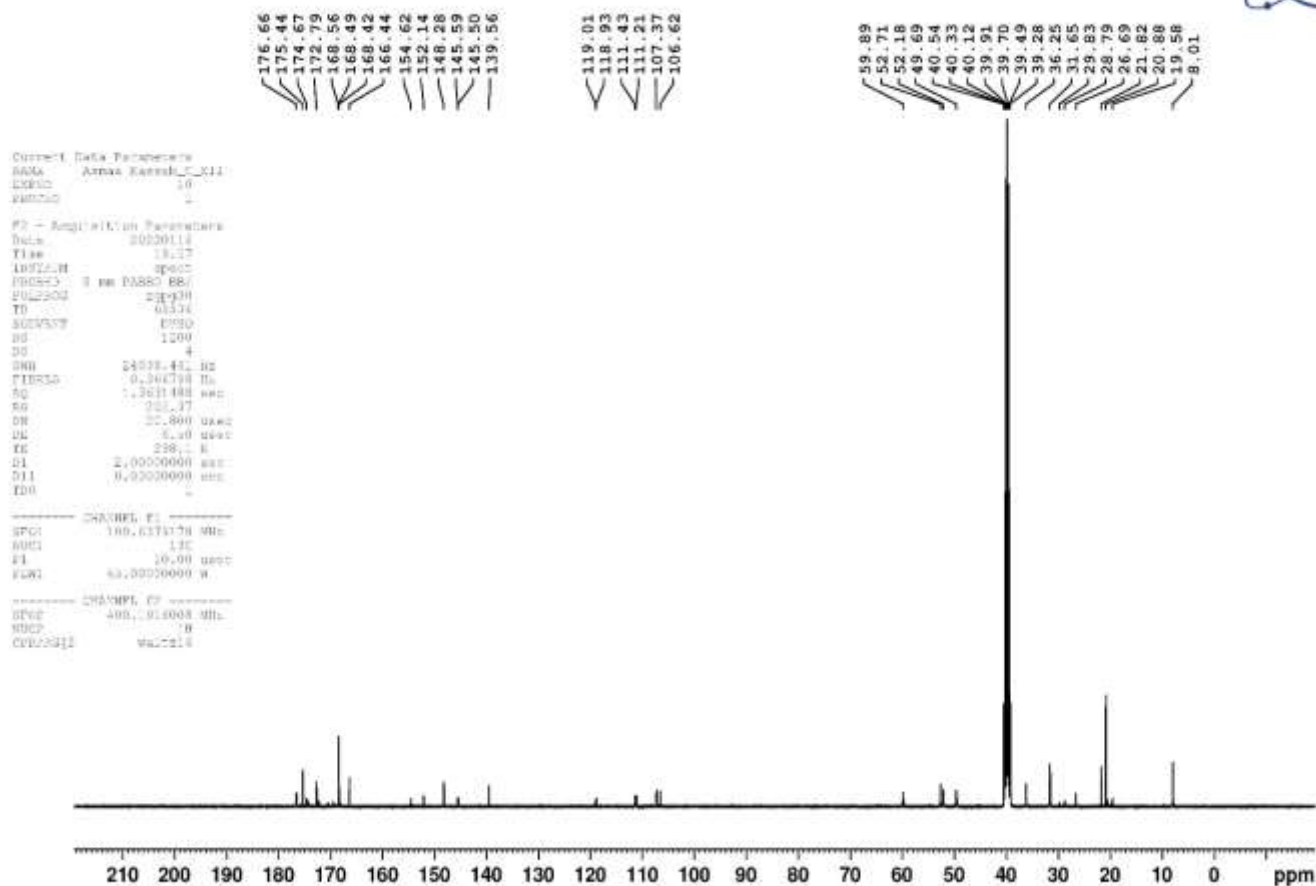
# Compound 11



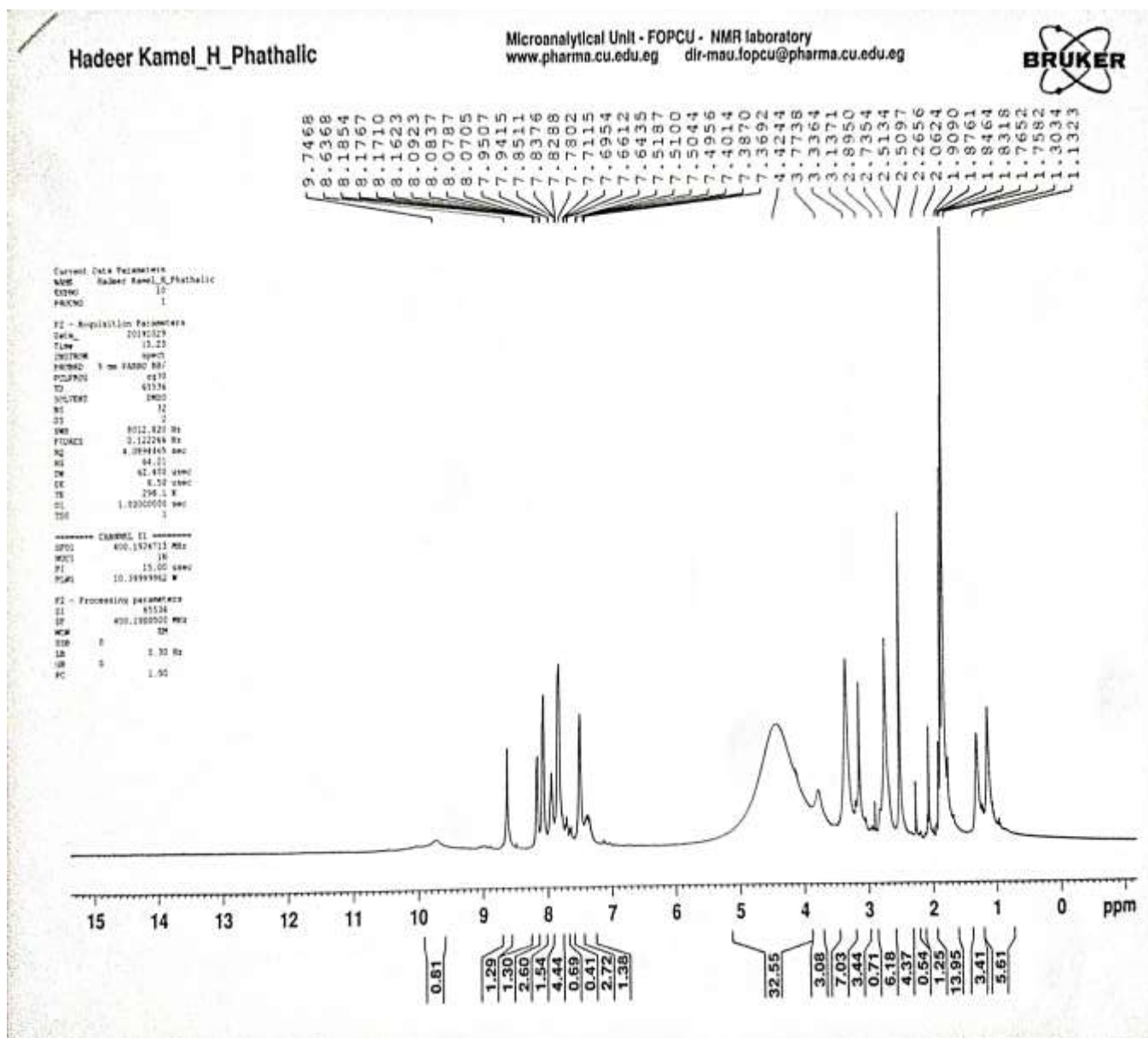
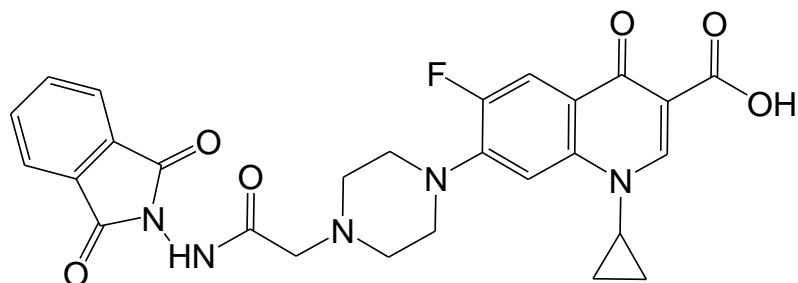


Asmaa Kassab\_C\_XII

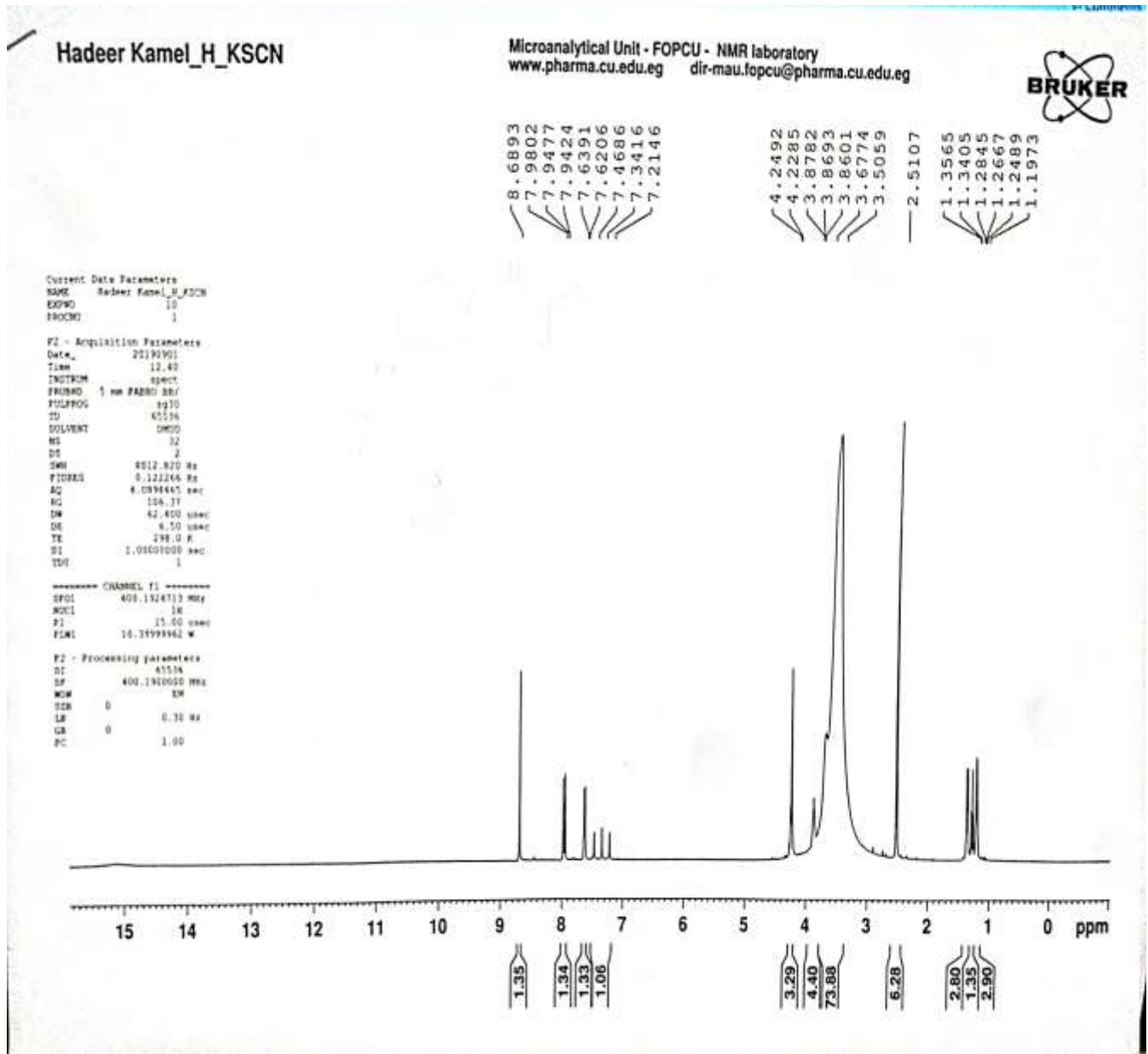
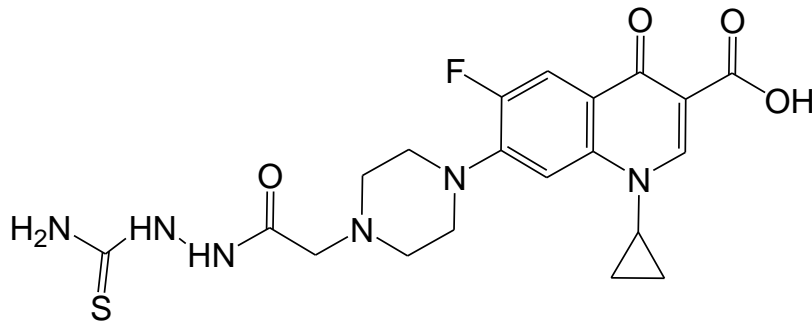
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# Compound 12



# Compound 13



Asmaa Kassab\_C\_XV

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176.75  
168.51  
166.32  
166.29  
154.59  
154.54  
152.11  
152.06  
148.50  
148.42  
144.96  
144.86  
144.48  
144.38  
139.53  
139.51  
130.08  
119.65  
119.57  
119.39  
119.31  
111.67  
111.57  
111.44  
111.34  
107.25  
107.10

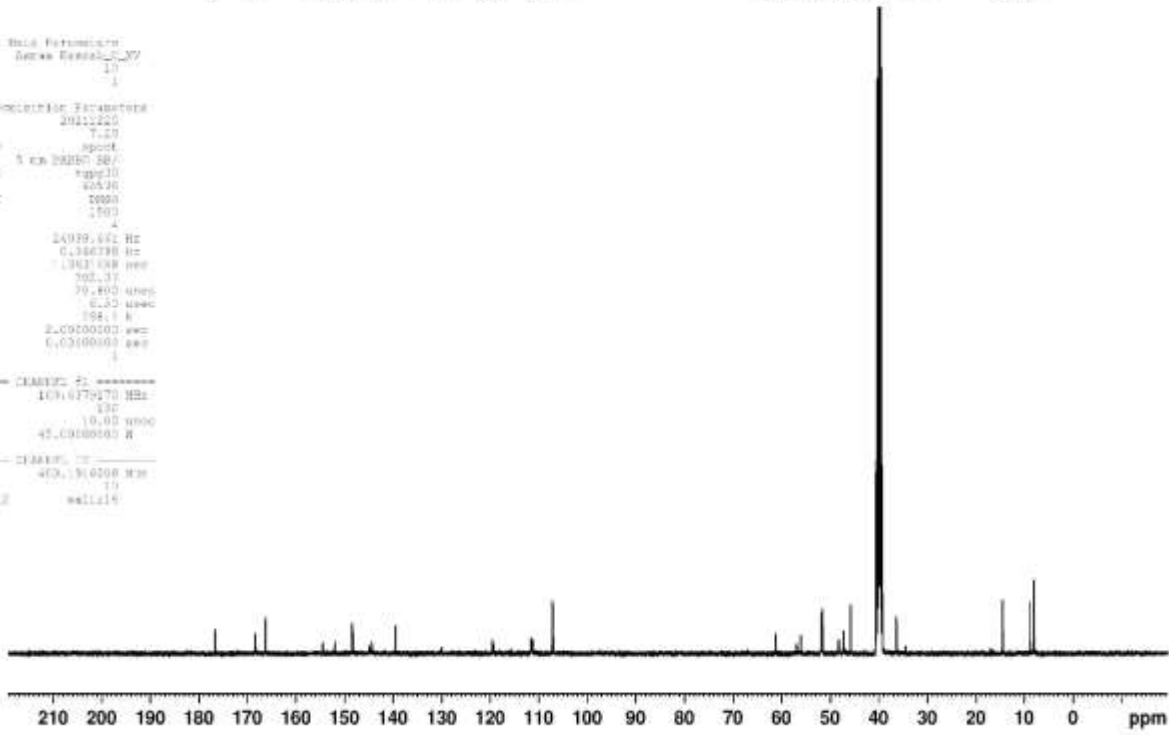
61.30  
56.95  
56.74  
54.84  
51.06  
49.33  
47.33  
45.86  
40.39  
40.18  
39.57  
39.76  
39.55  
39.34  
36.44  
36.40  
34.56  
17.02  
14.51  
8.91  
8.08

Current Build Parameters  
NAME Asmaa Kassab\_C\_XV  
EXPNO 10  
PROCNO 1

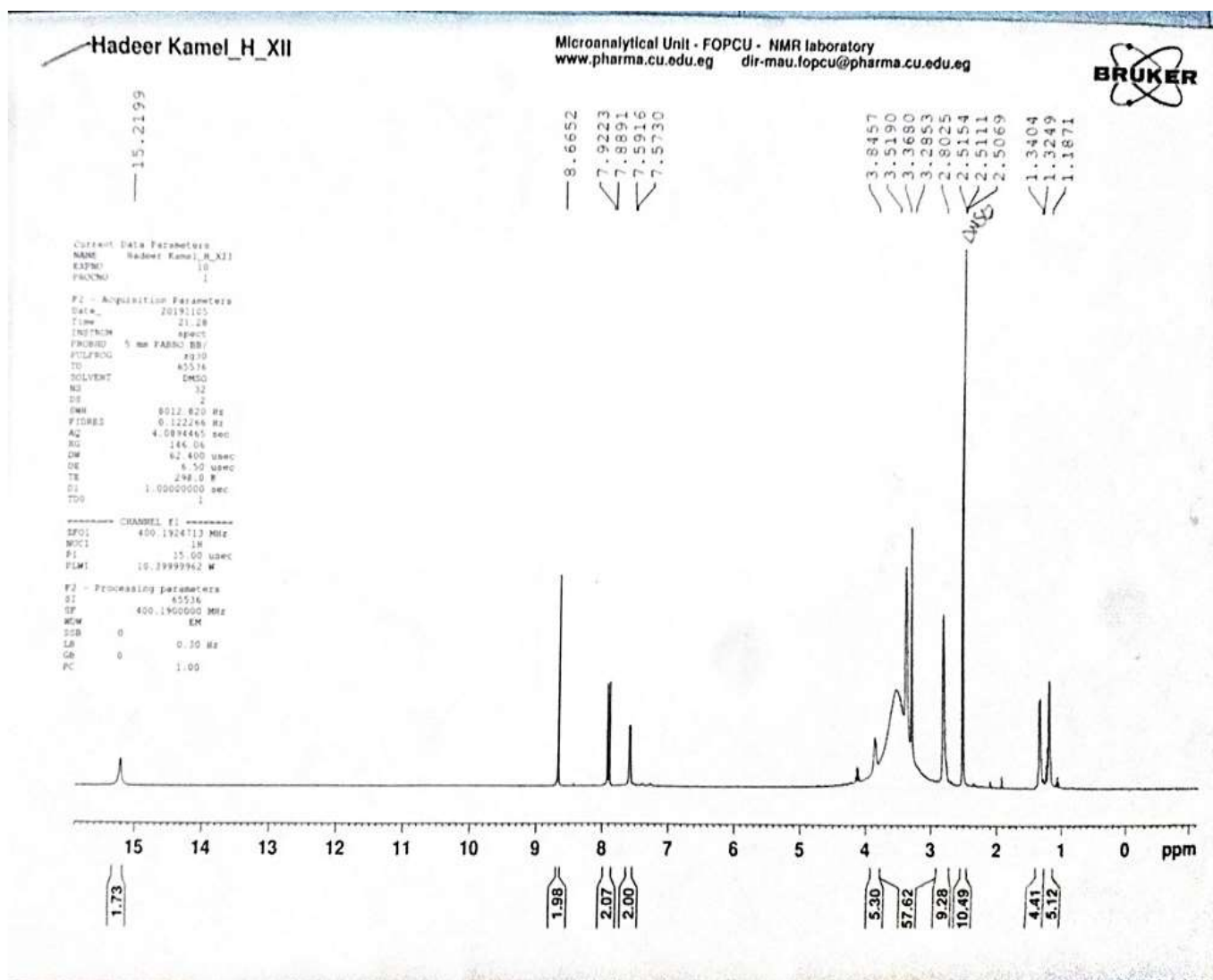
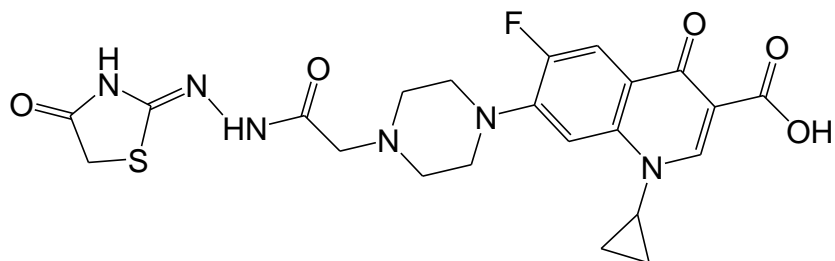
F2 - Acquisition Parameters  
DATE\_ 20111220  
TIME 7:20  
F2OPROB spect  
PROBHD 5 mm BBOBO 50/  
PULPROG zgpg30  
TD 65536  
SOLVENT  
AQ 1.000  
RG 320  
DD 4  
SFO 500.136114 Hz  
FIDRES 0.186138 Hz  
AQ 1.181148 sec  
RG 320.33  
RN 79.800 MHz  
DS 2.00 MHz  
SS 164.1 Hz  
SI 2.00000000 sec  
D11 0.03000000 sec  
TD 1

===== CHANNEL f1 =====  
NUC1 13C  
P1 10.00 MHz  
PCPD 45.00000000 W

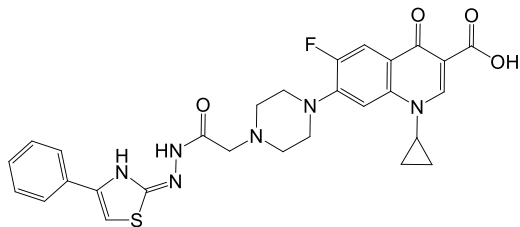
===== CHANNEL f2 =====  
NUC2 13C  
P2 10.00 MHz  
PCPD 45.00000000 W



# Compound 14



# Compound 15



Hadeer Kamel\_H\_XIIV

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