

Supplementary Material

The synthesis of new pyrazolo[1,5-*a*]pyrimidine derivatives

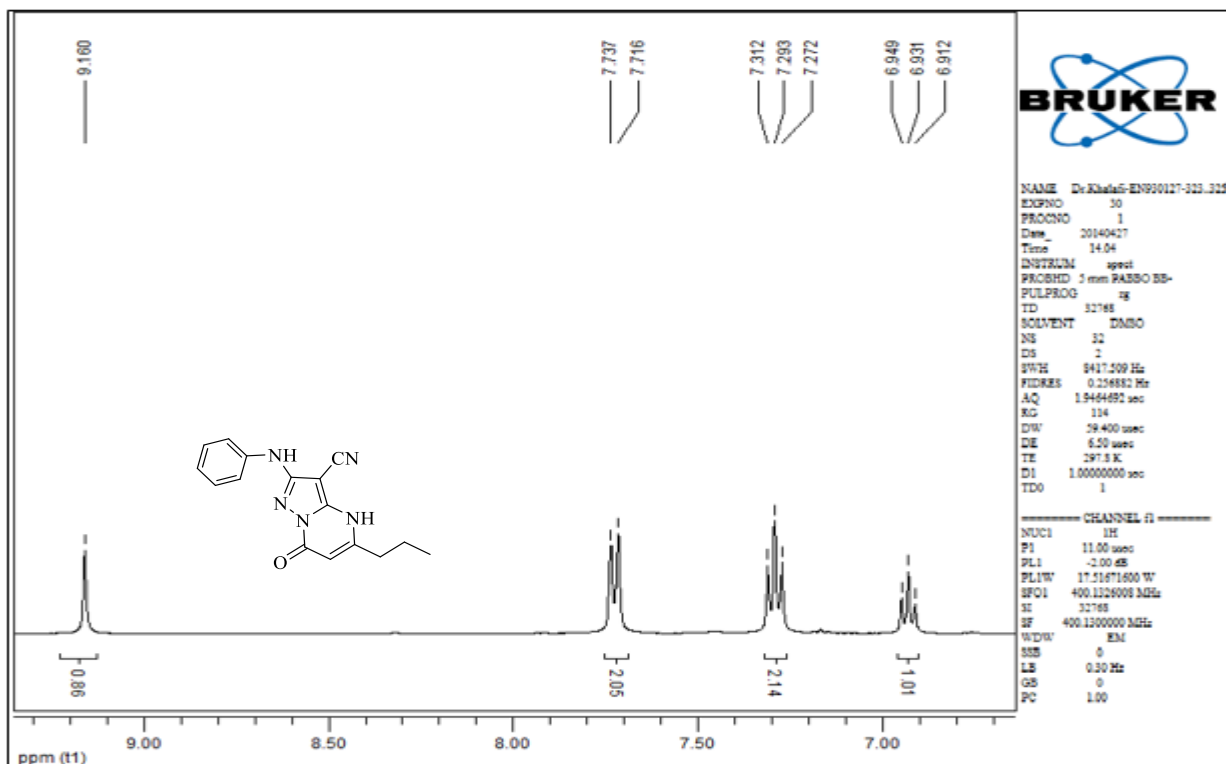
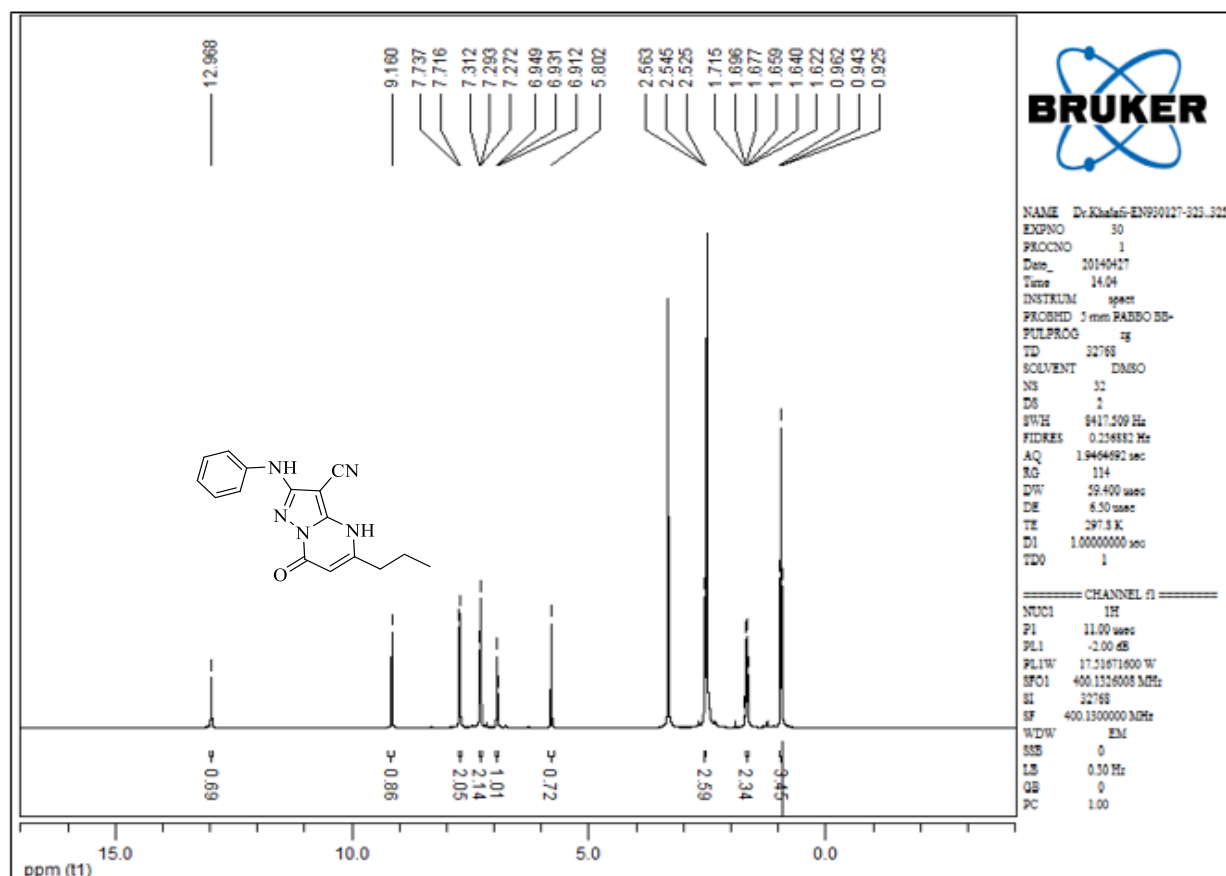
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Figure S1. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4a**.

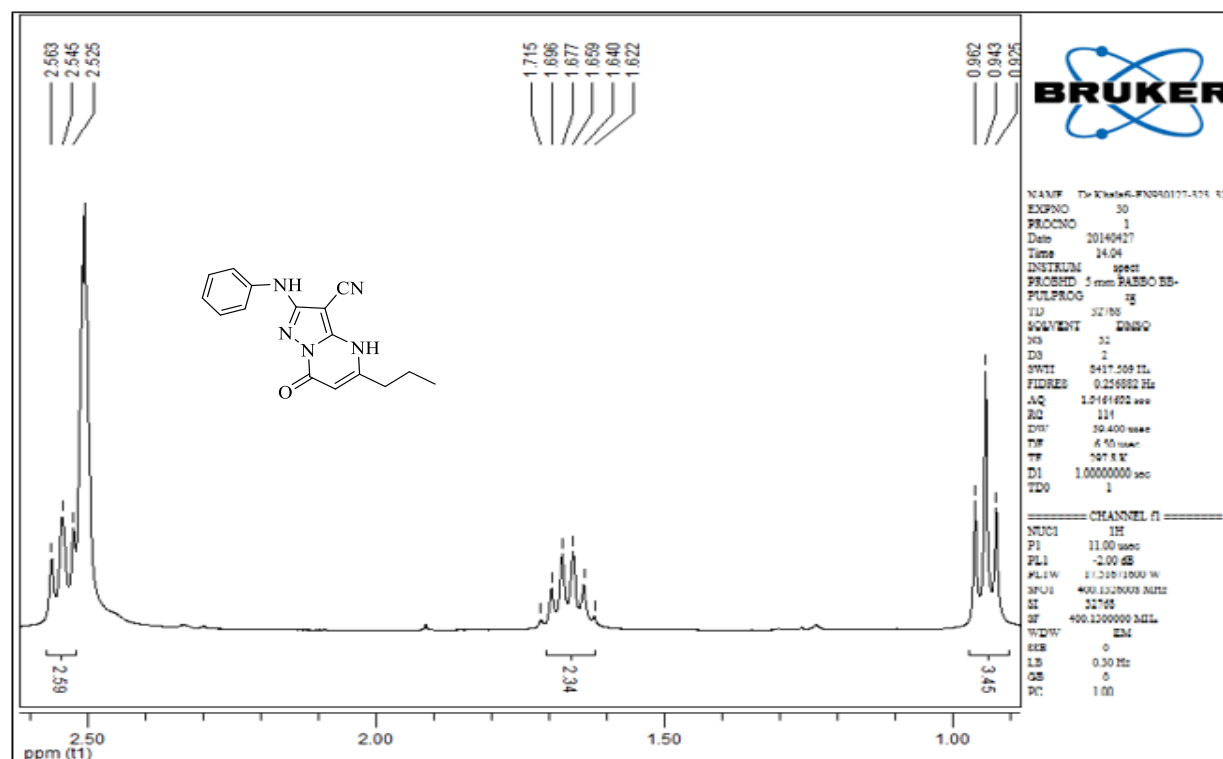


Figure S2. ¹³C NMR spectrum (300 MHz, DMSO-*d*₆) of compound 4a.

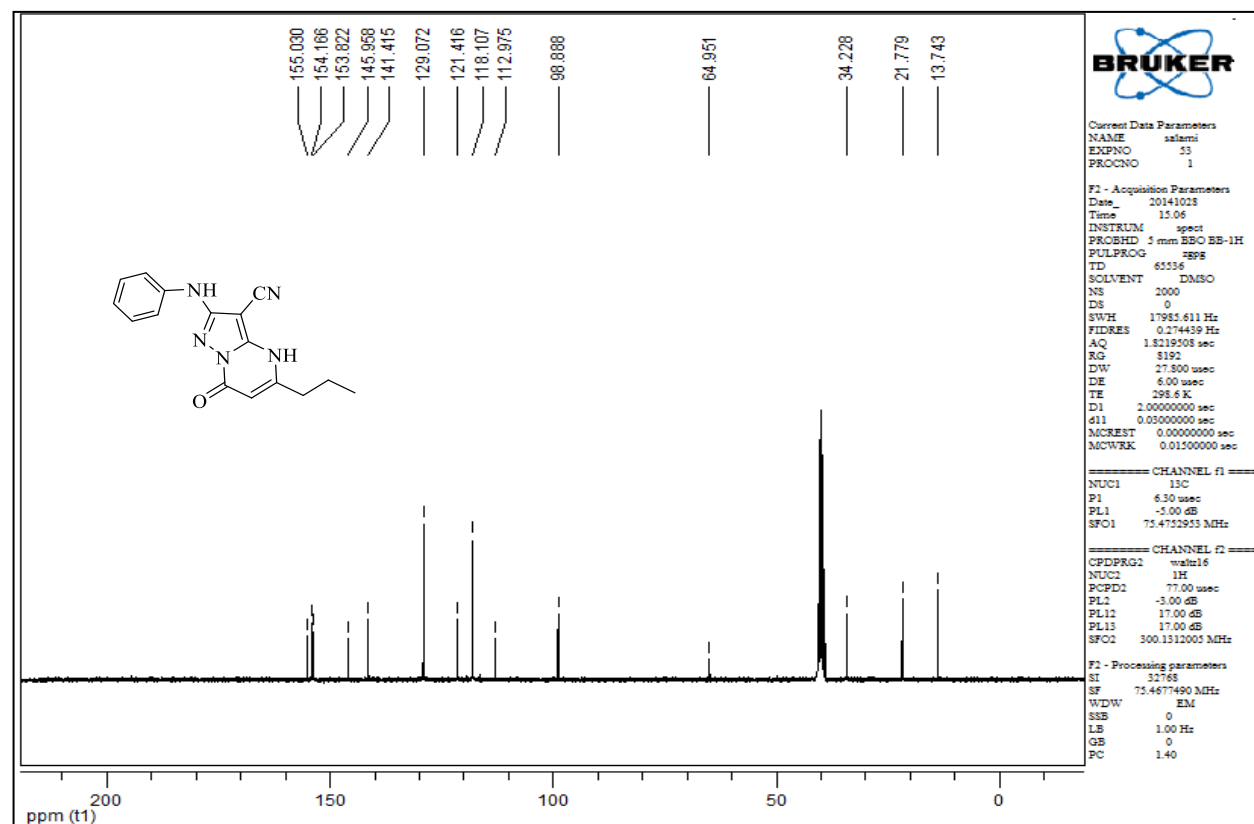
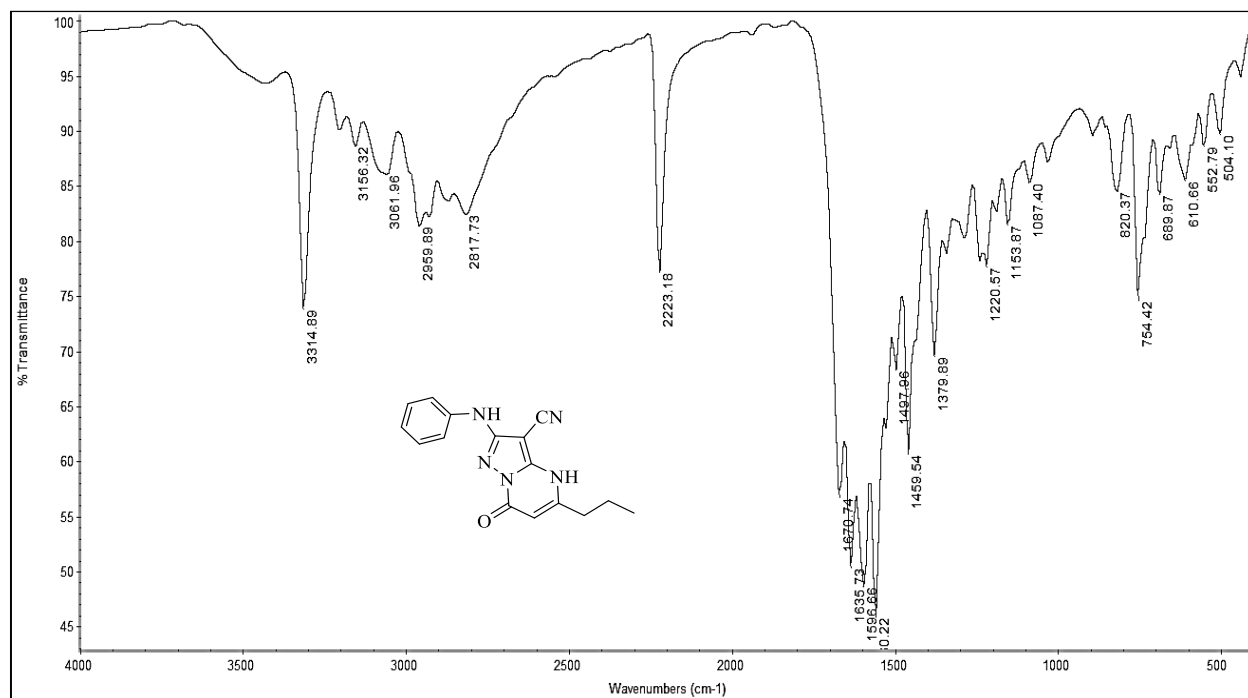
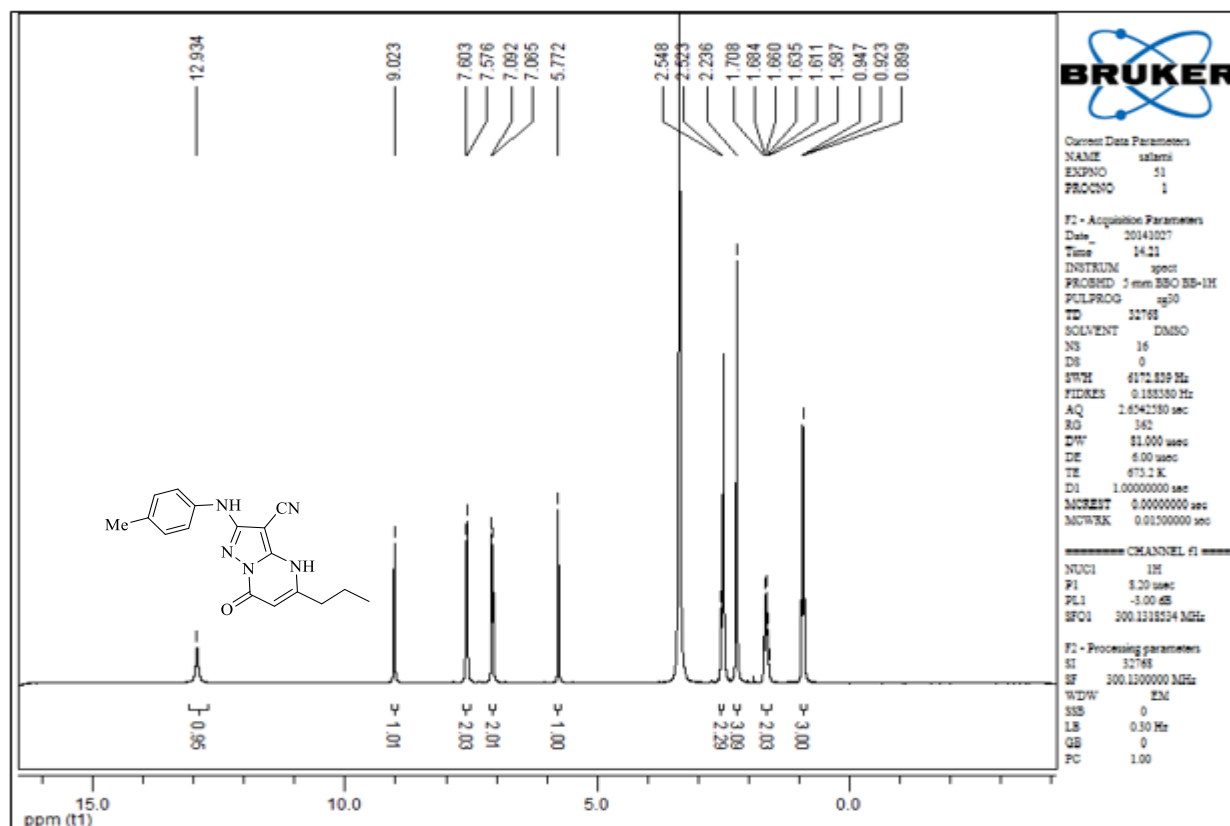


Figure S3. IR spectrum (KBr) of compound **4a**.**Figure S4.** ¹H NMR spectrum (300 MHz, DMSO-*d*₆) of compound **4b**.

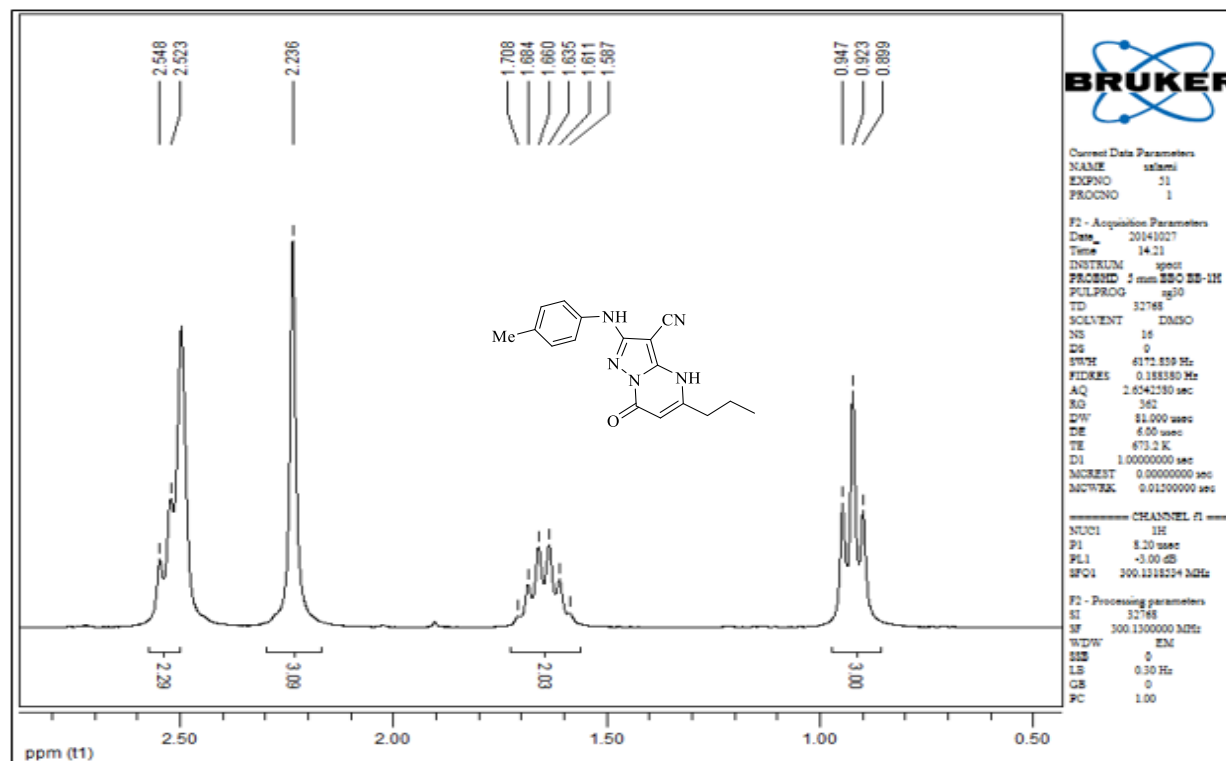
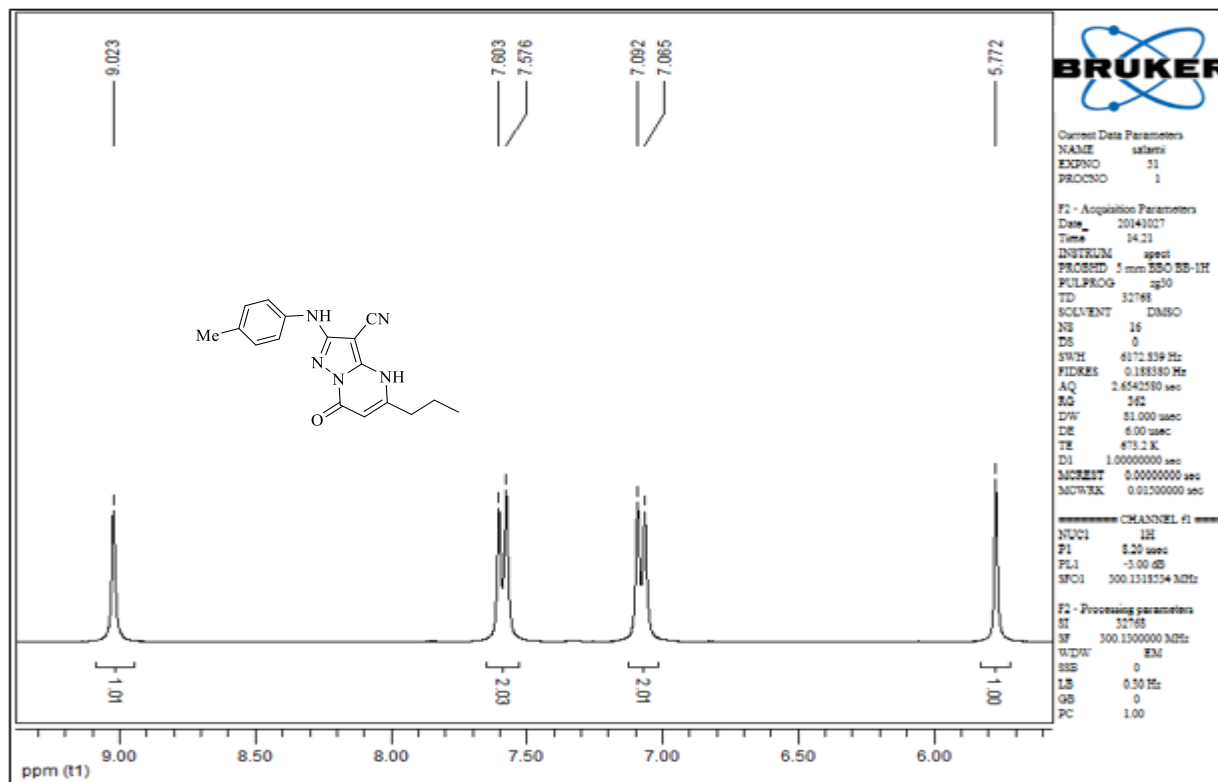


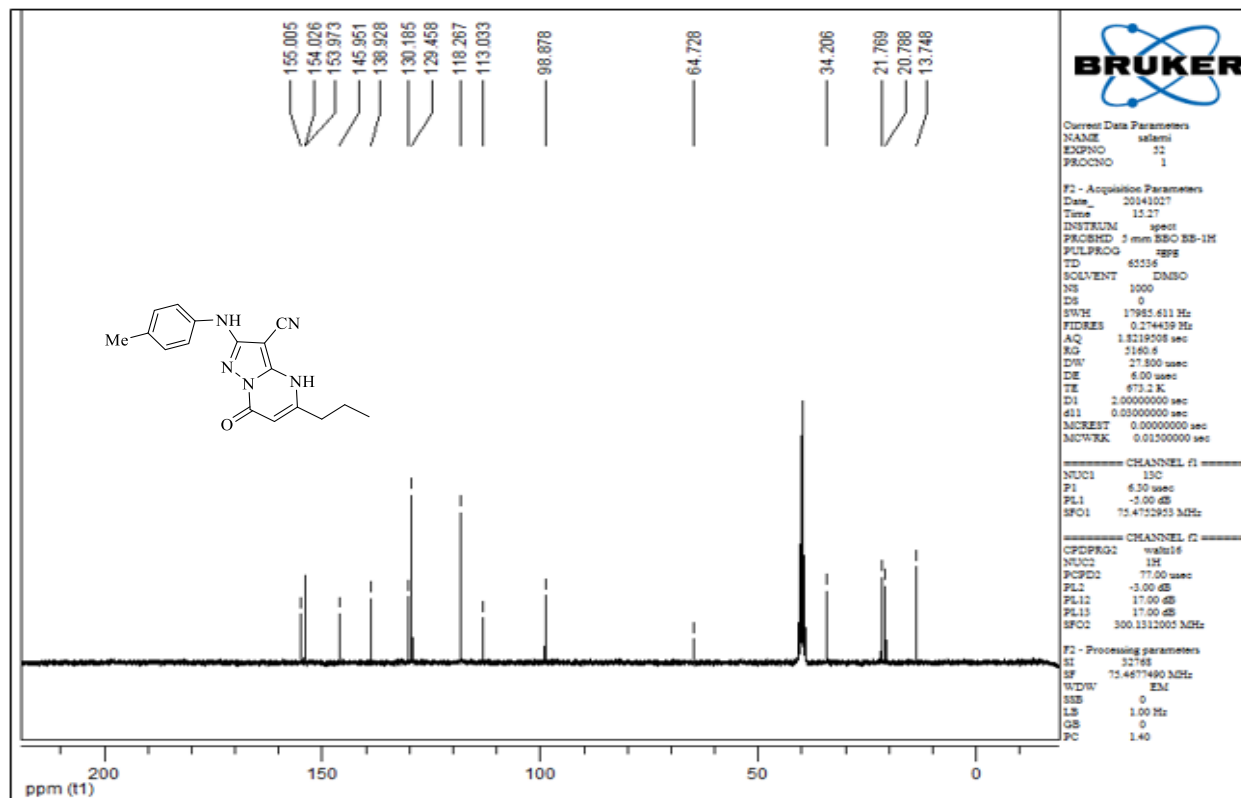
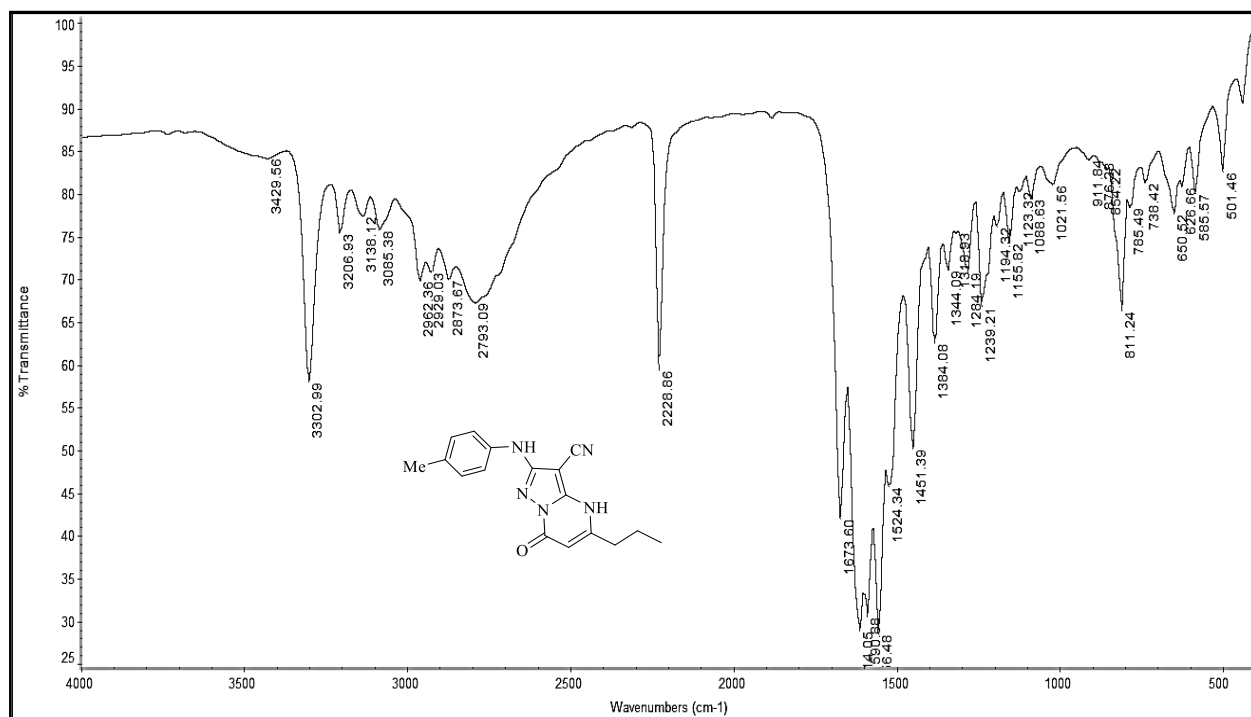
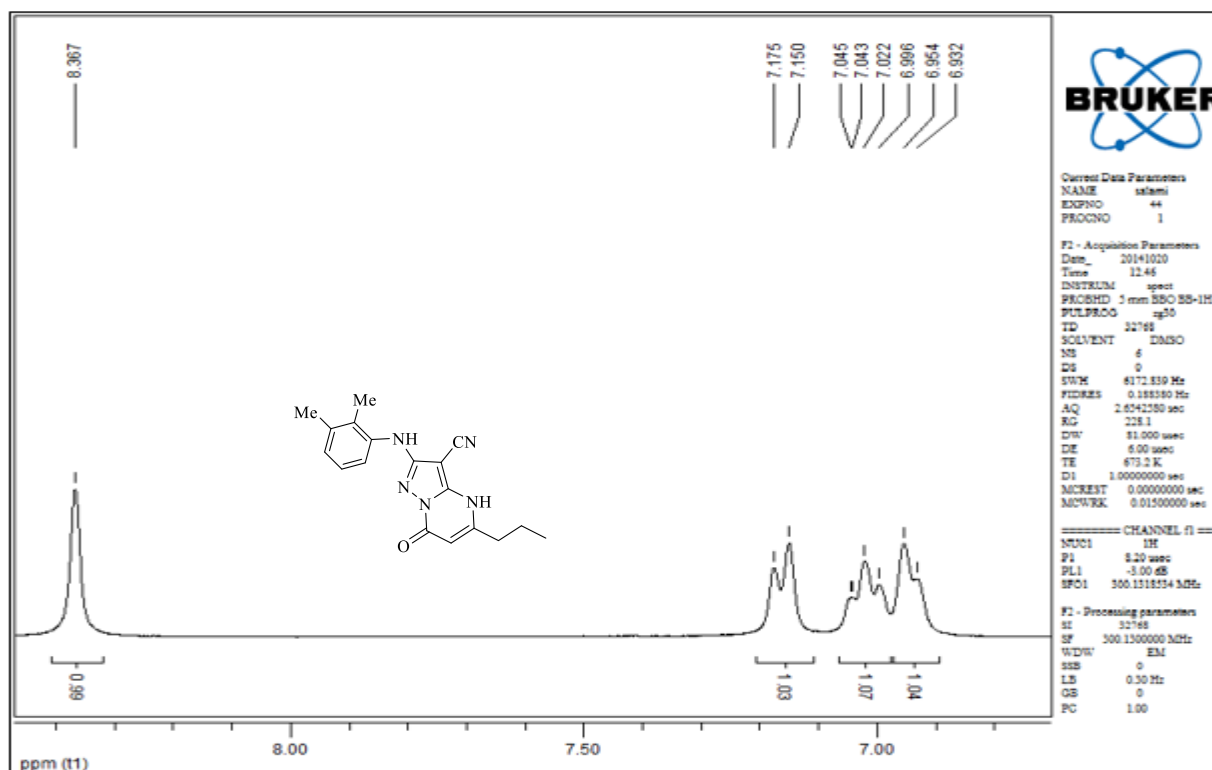
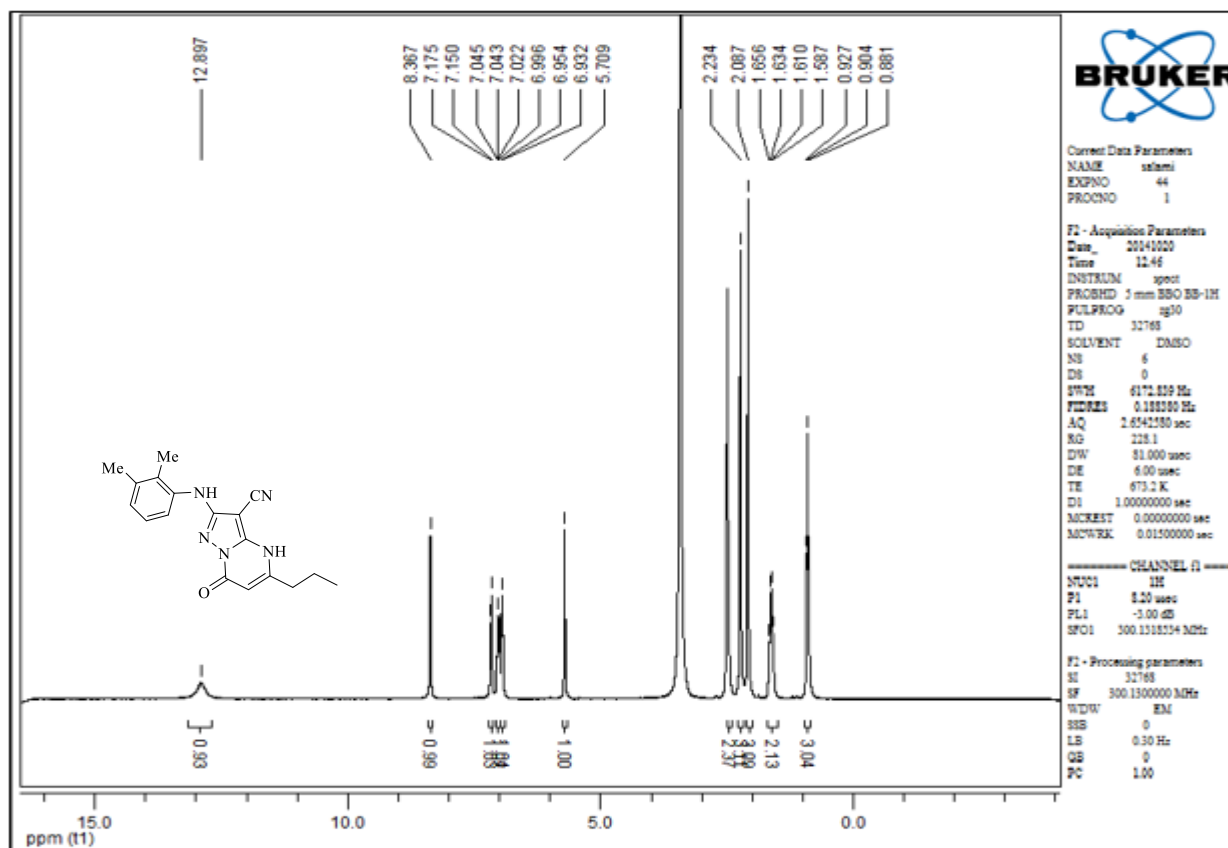
Figure S5. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4b**.**Figure S6.** IR spectrum (KBr) of compound **4b**.

Figure S7. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4c**.

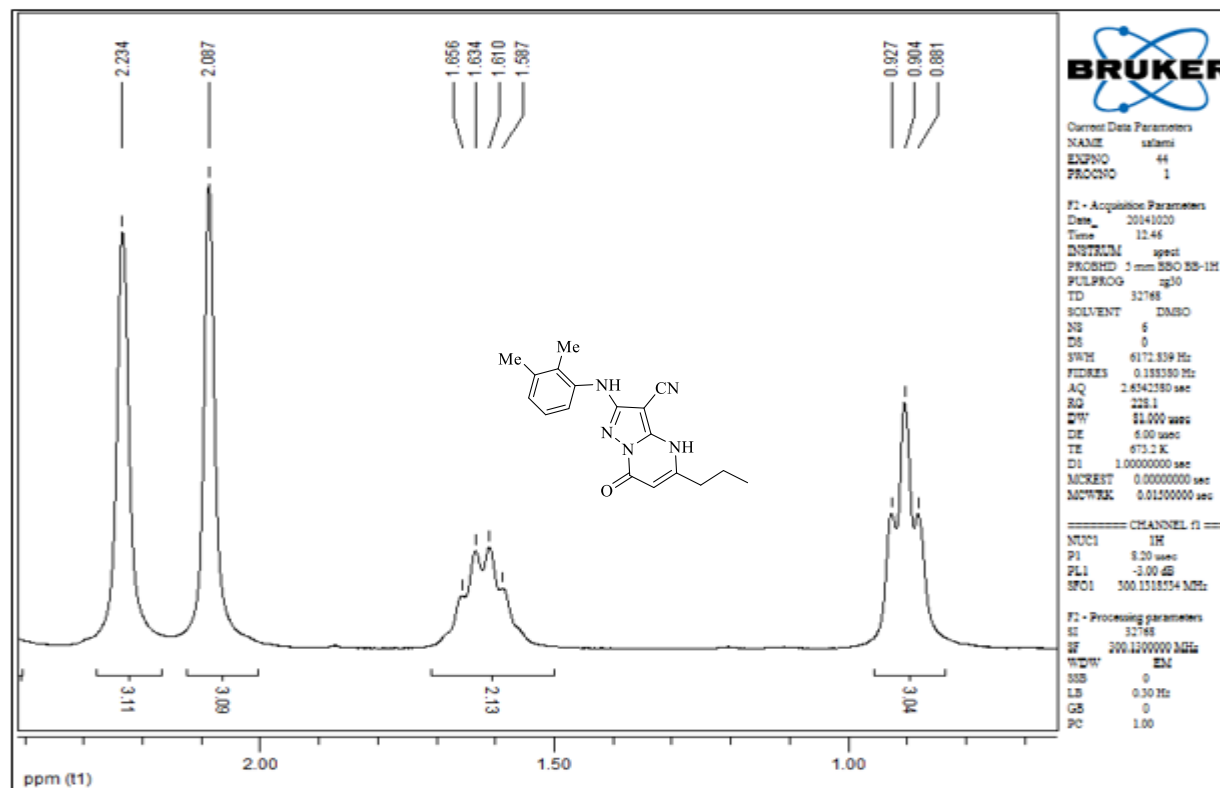


Figure S8. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4c**.

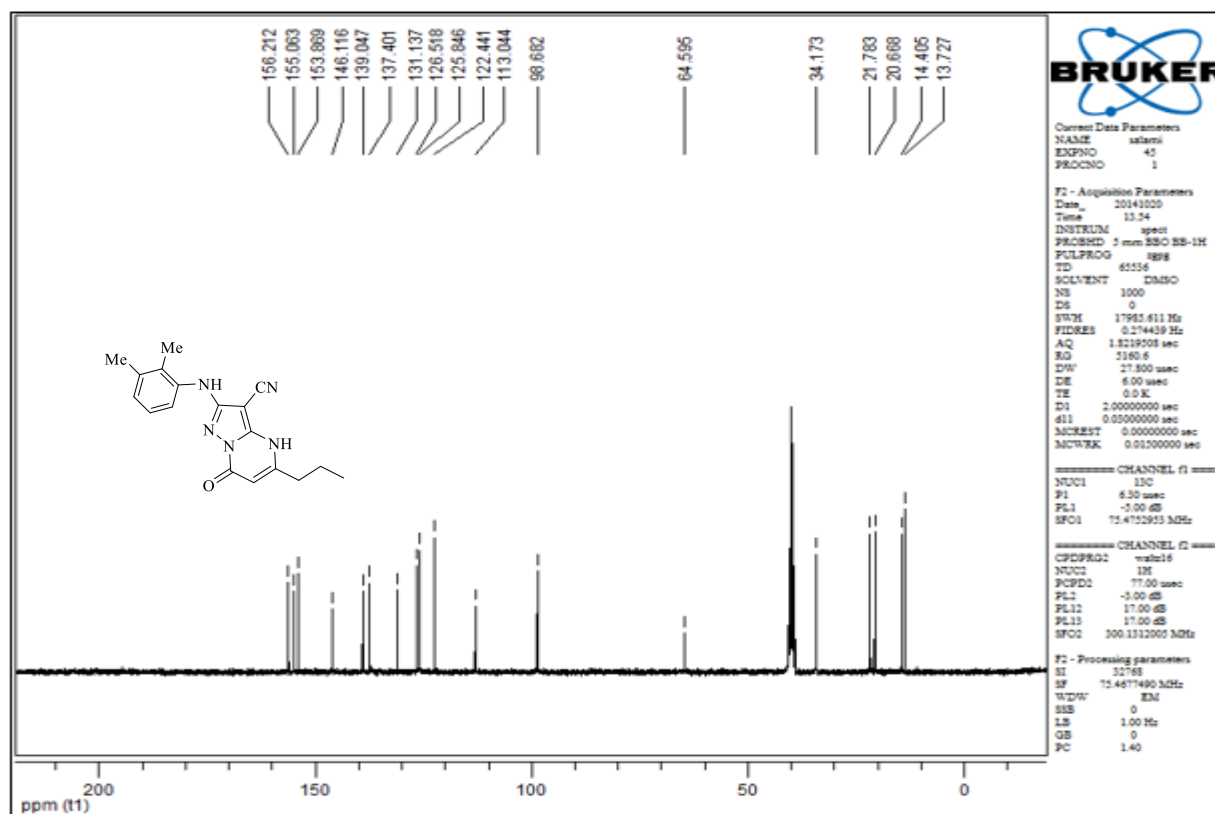
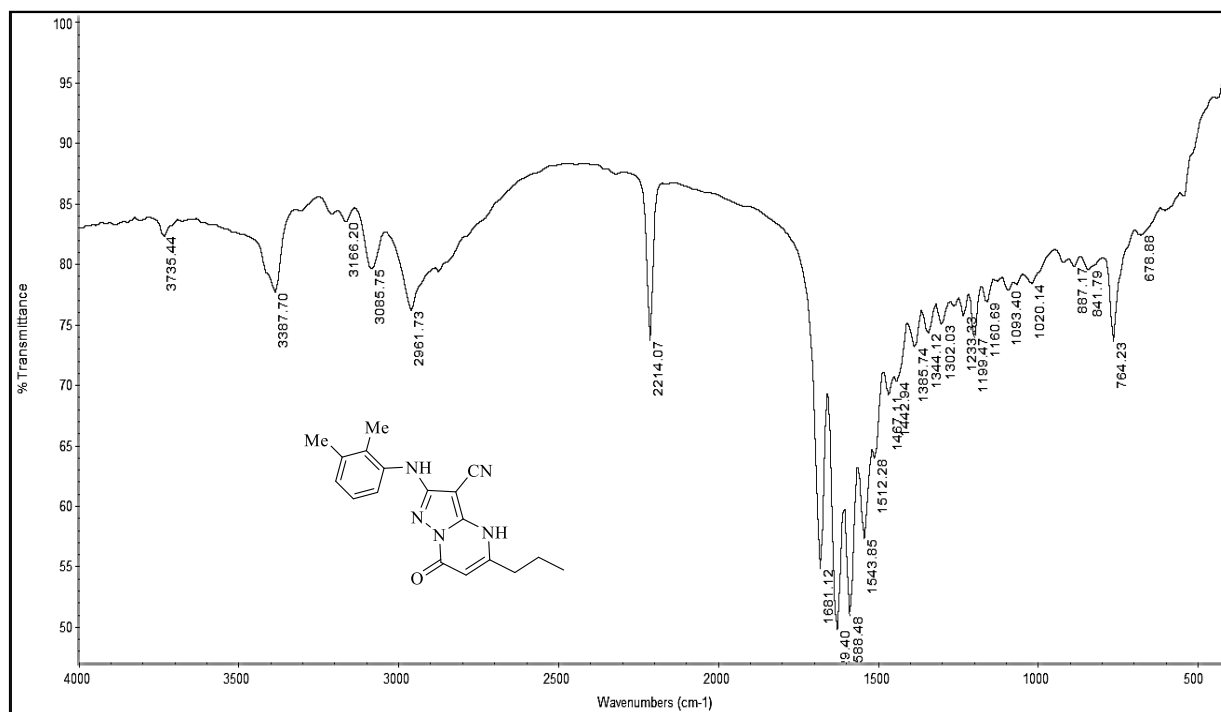
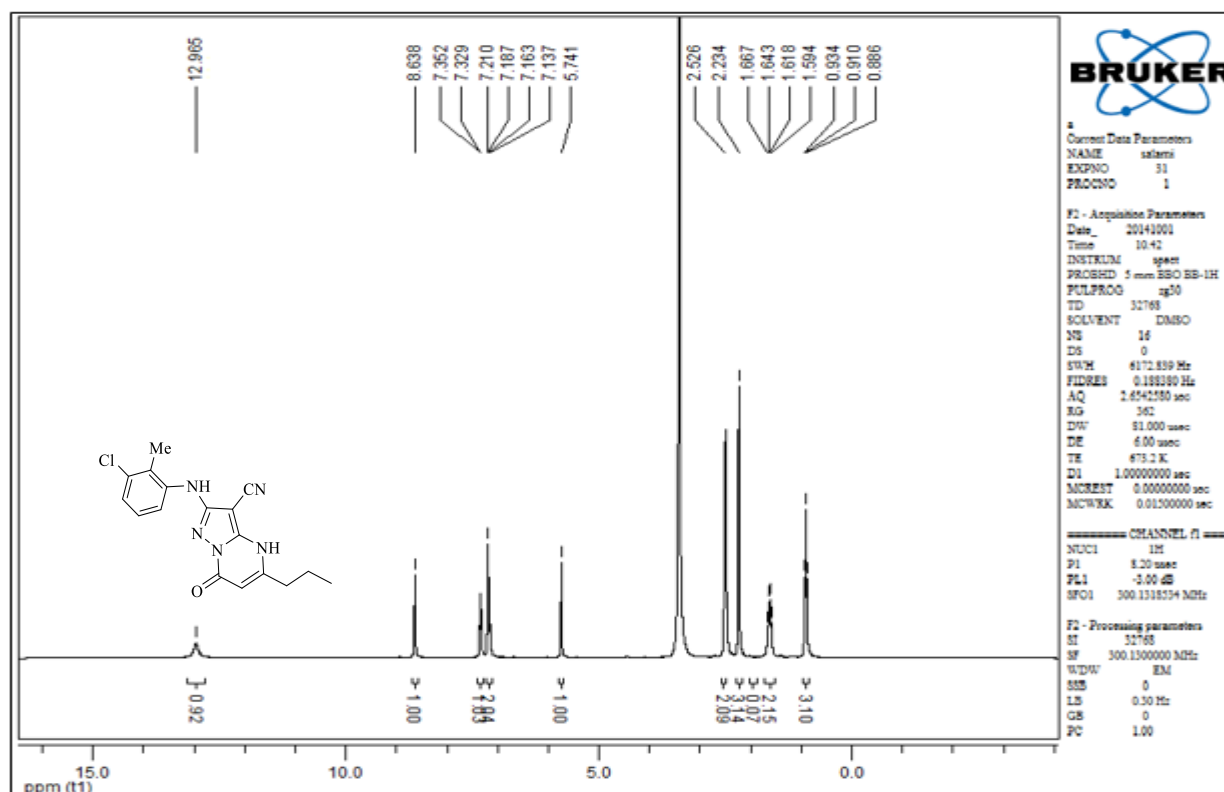


Figure S9. IR spectrum (KBr) of compound **4c**.**Figure S10.** ¹H NMR spectrum (300 MHz, DMSO-*d*₆) of compound **4d**.

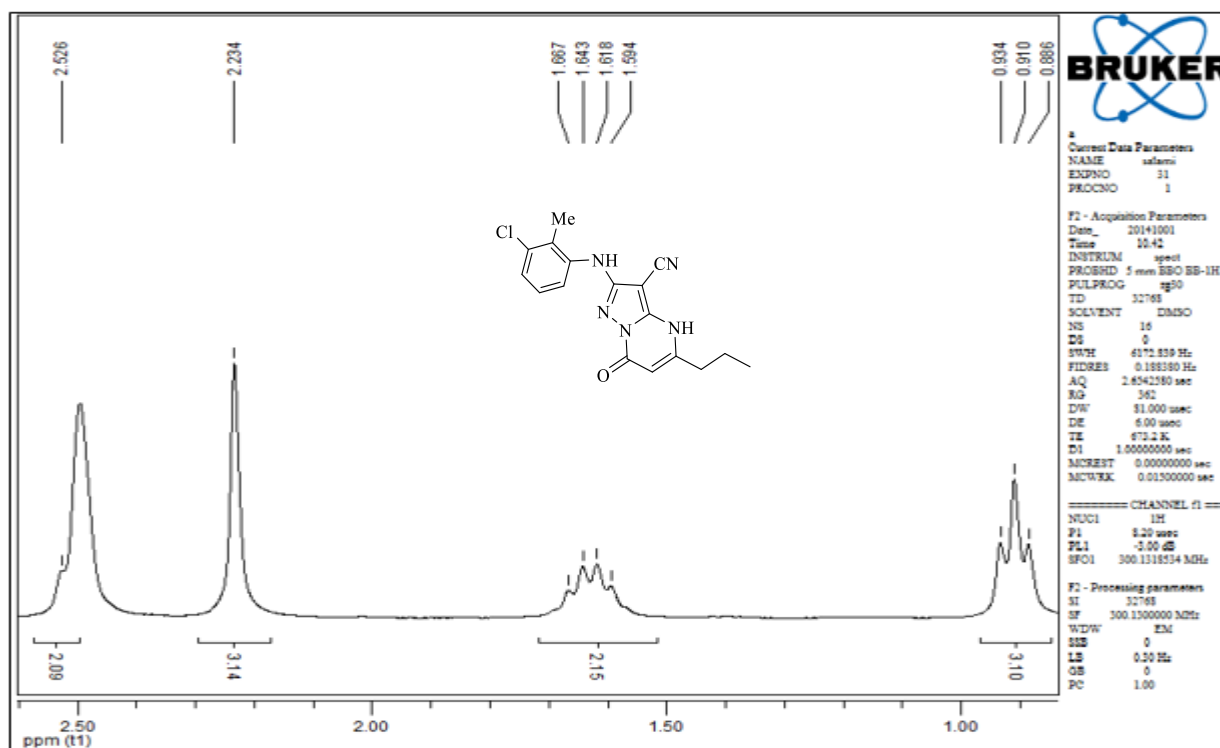
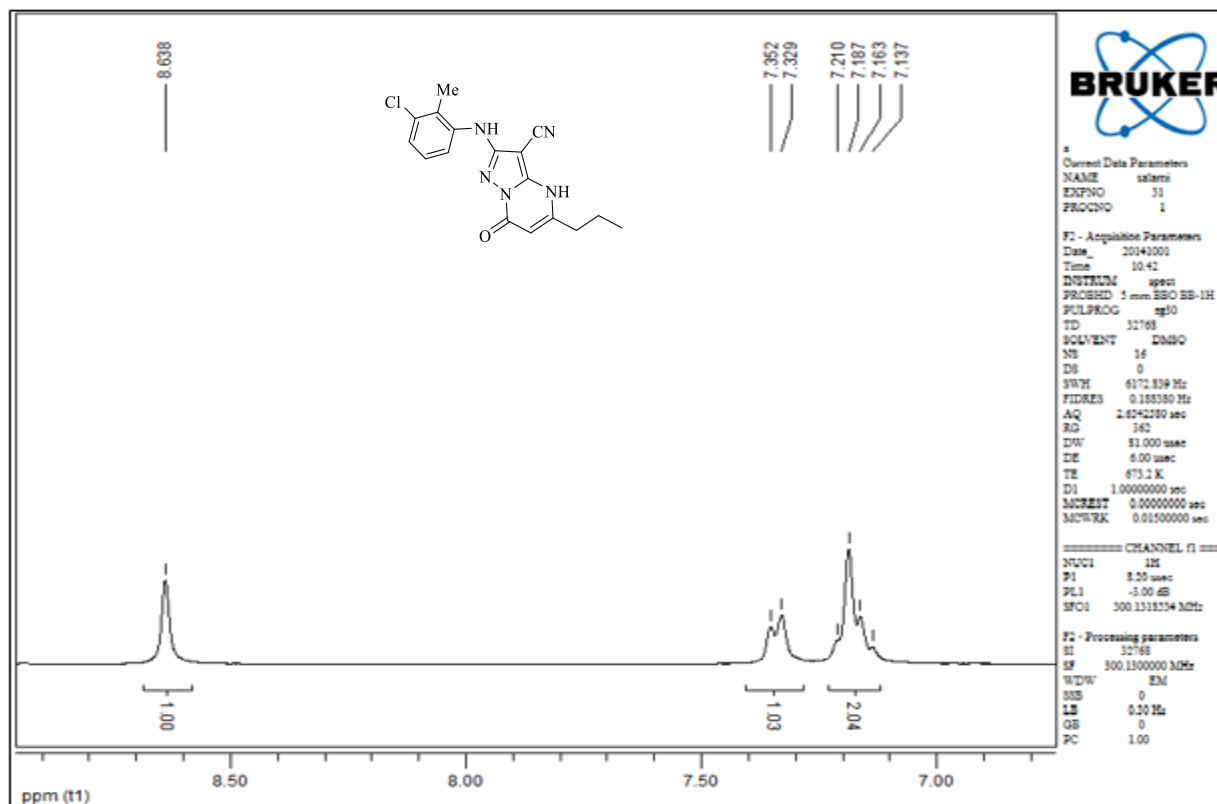


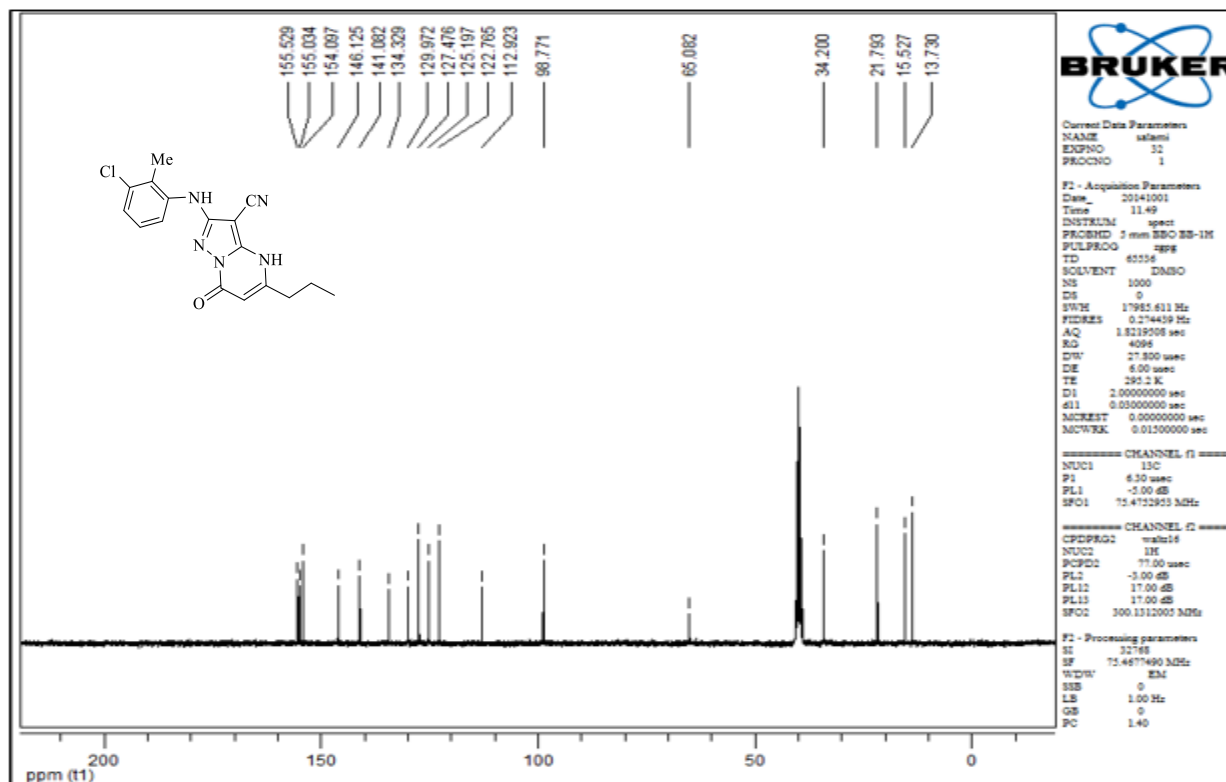
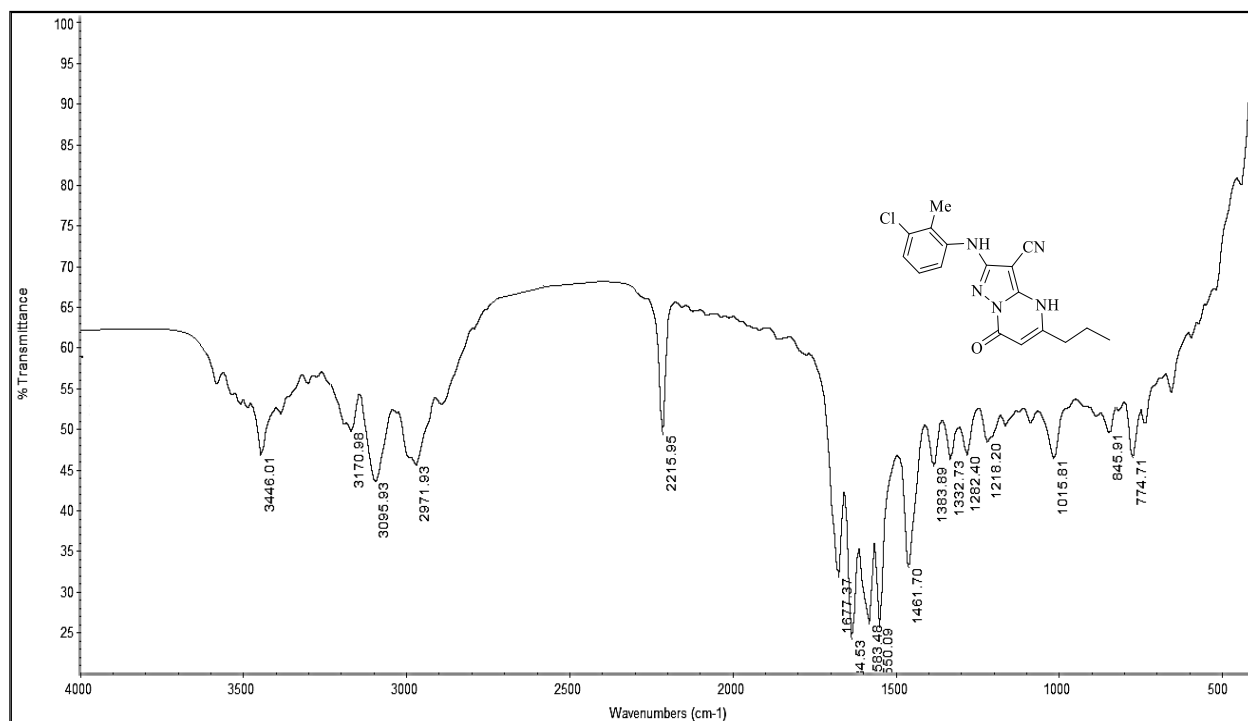
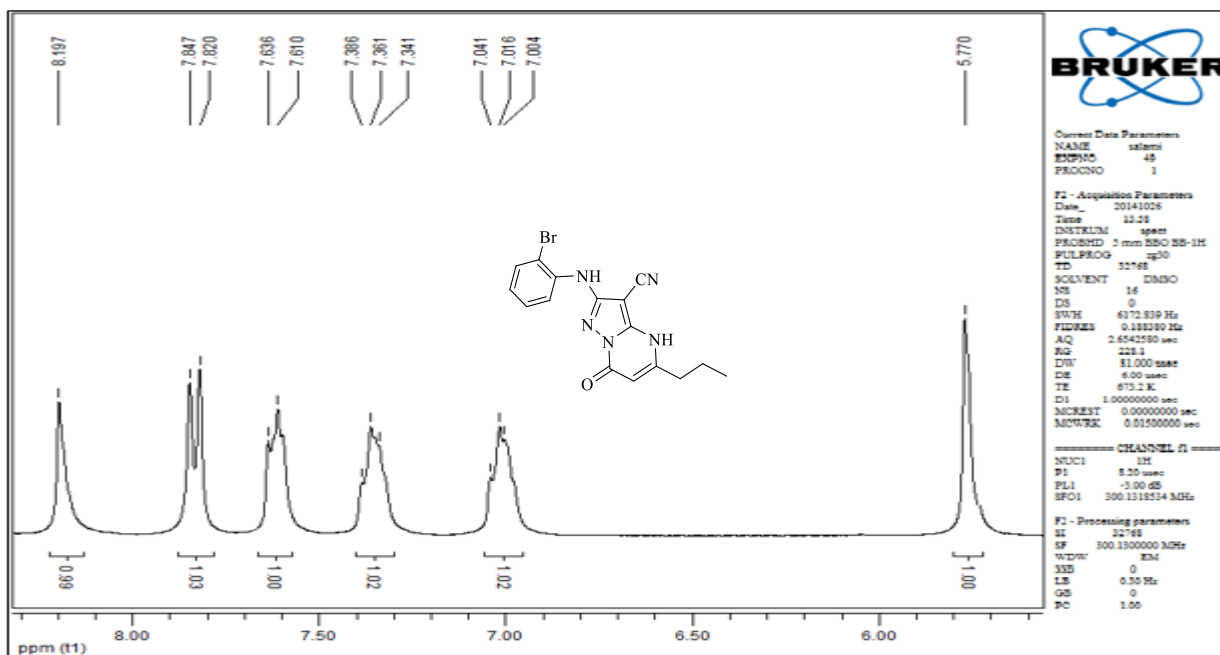
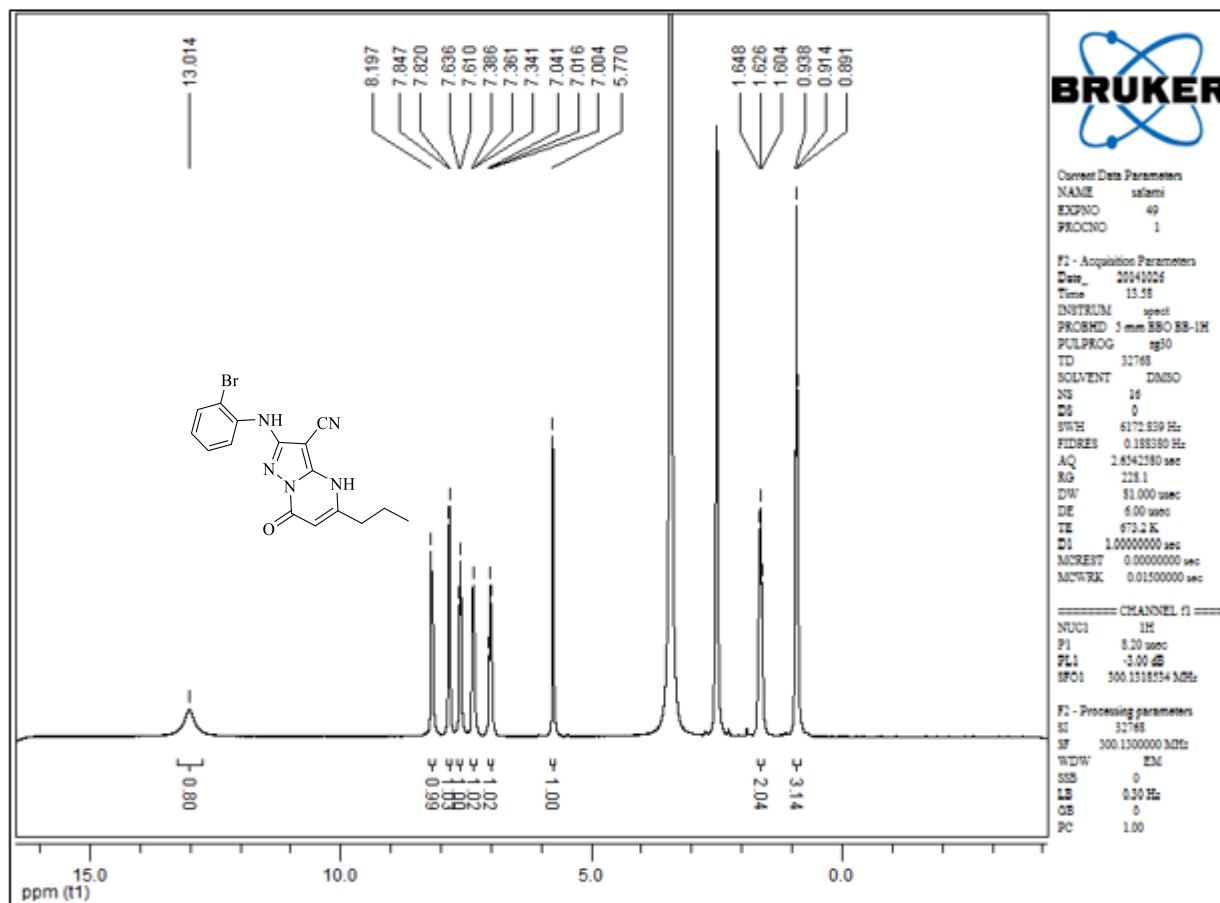
Figure S11. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4d**.**Figure S12.** IR spectrum (KBr) of compound **4d**.

Figure S13. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4e**.

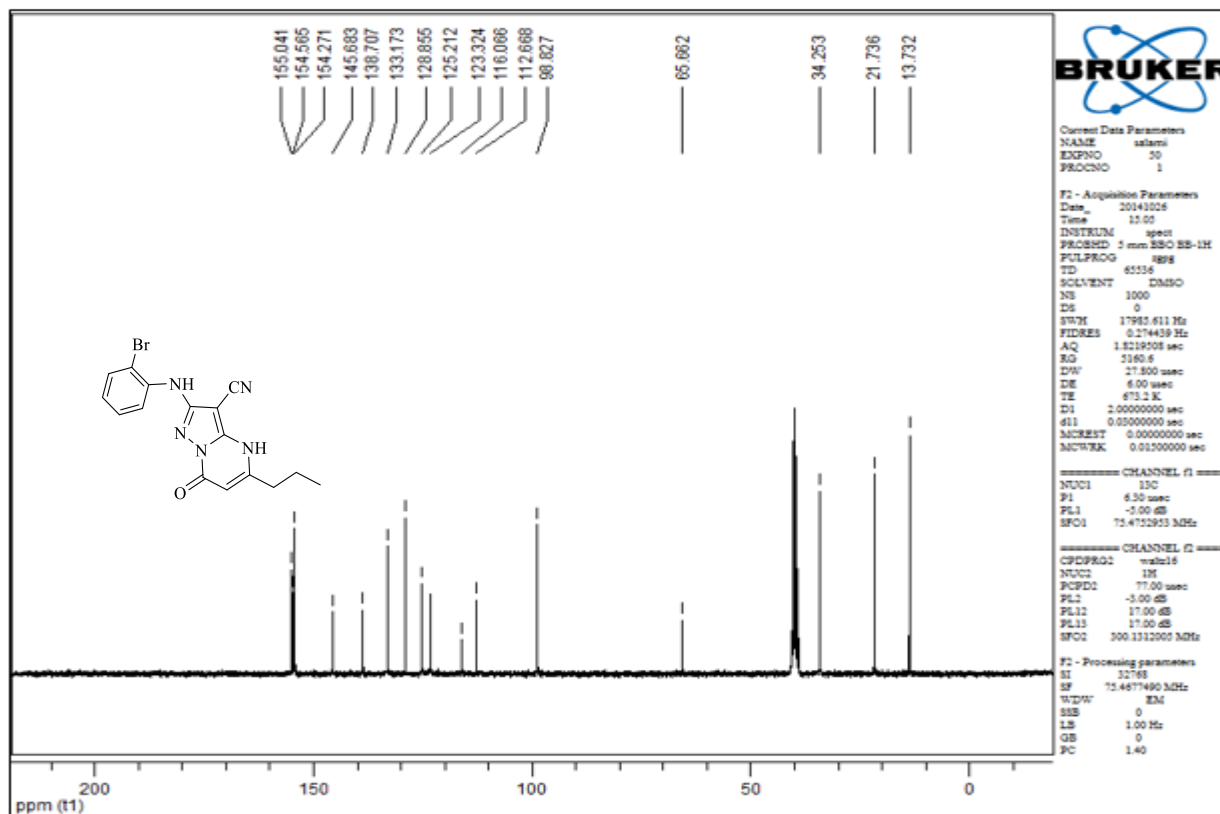
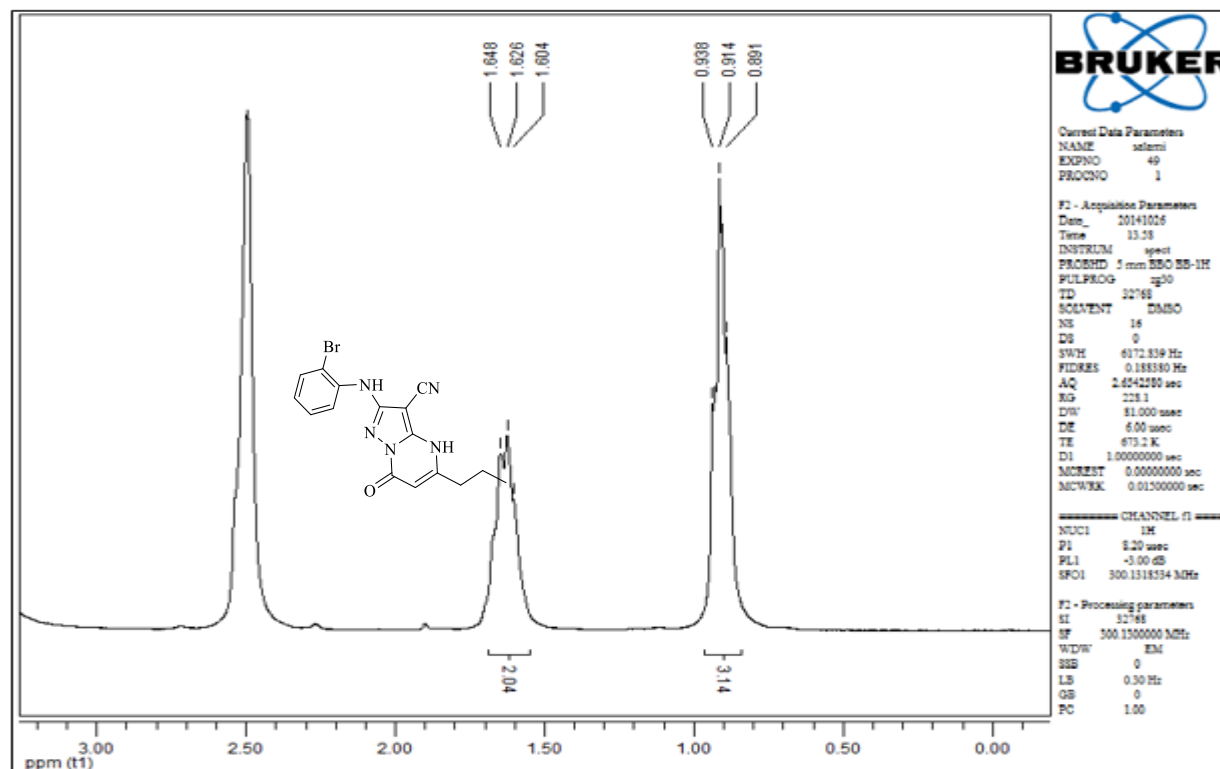
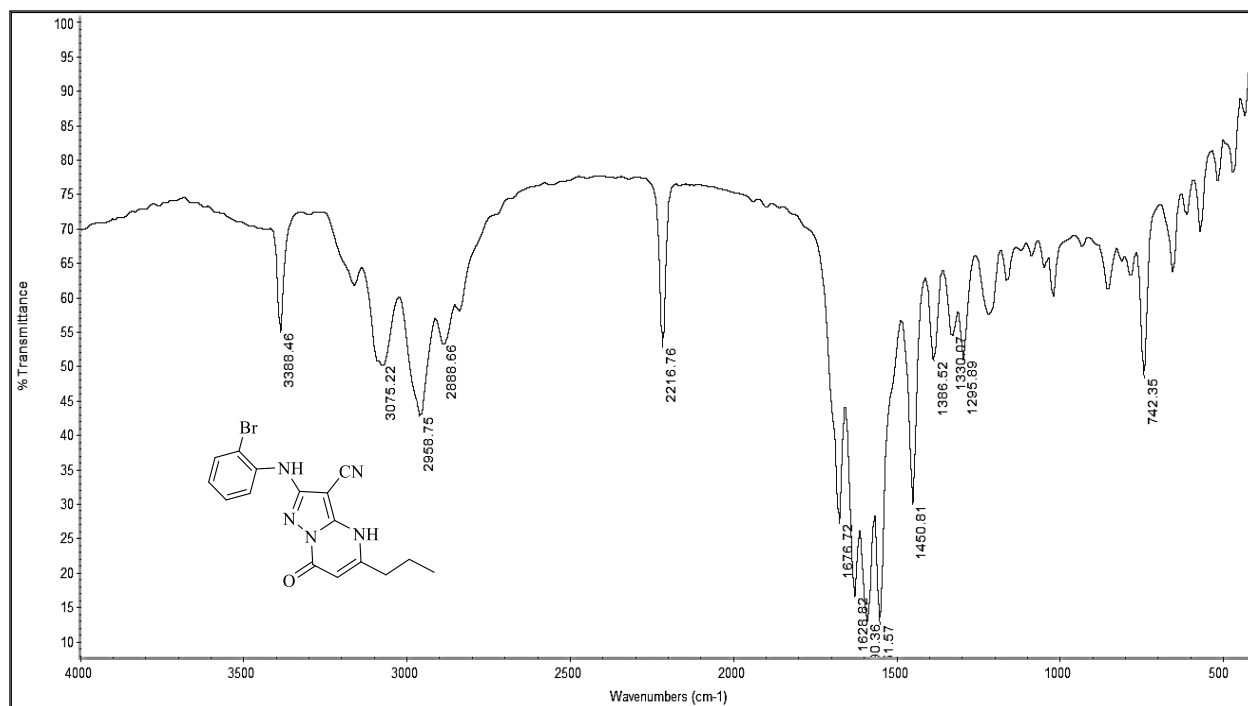
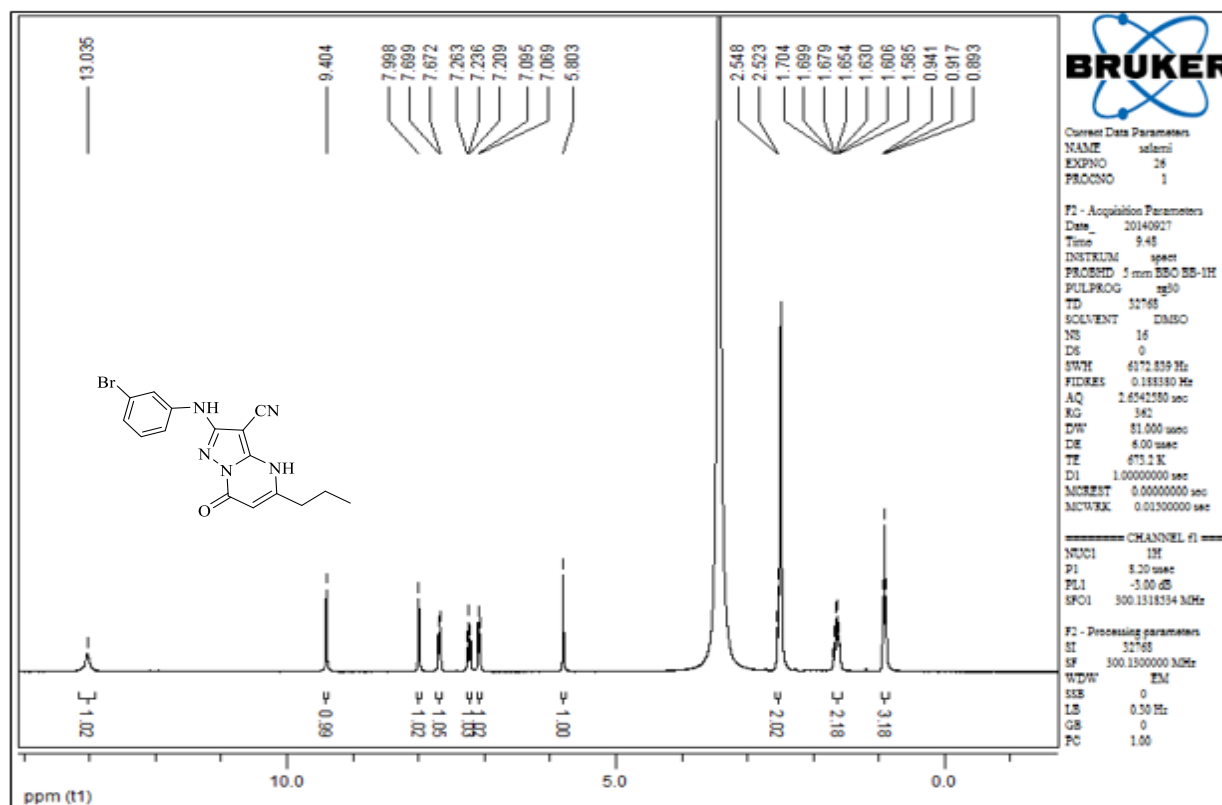


Figure S15. IR spectrum (KBr) of compound **4e**.**Figure S16.** ¹H NMR spectrum (300 MHz, DMSO-*d*₆) of compound **4f**.

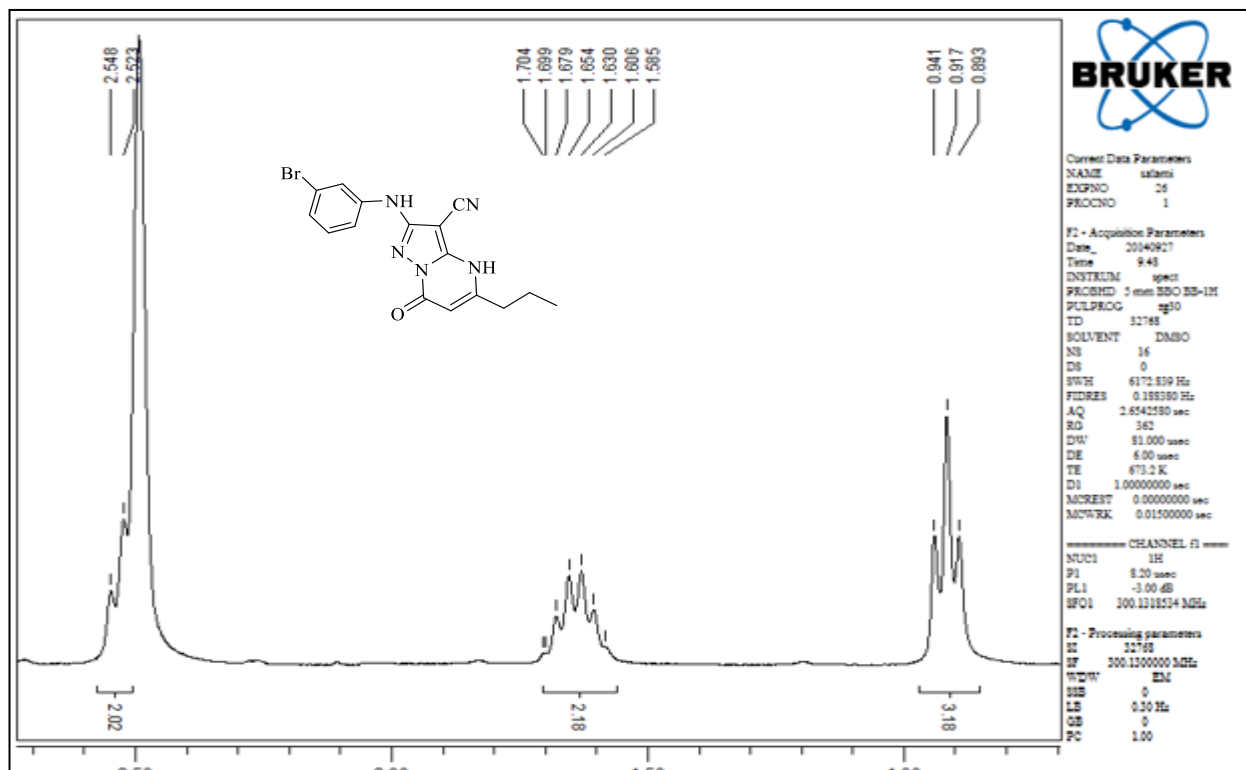
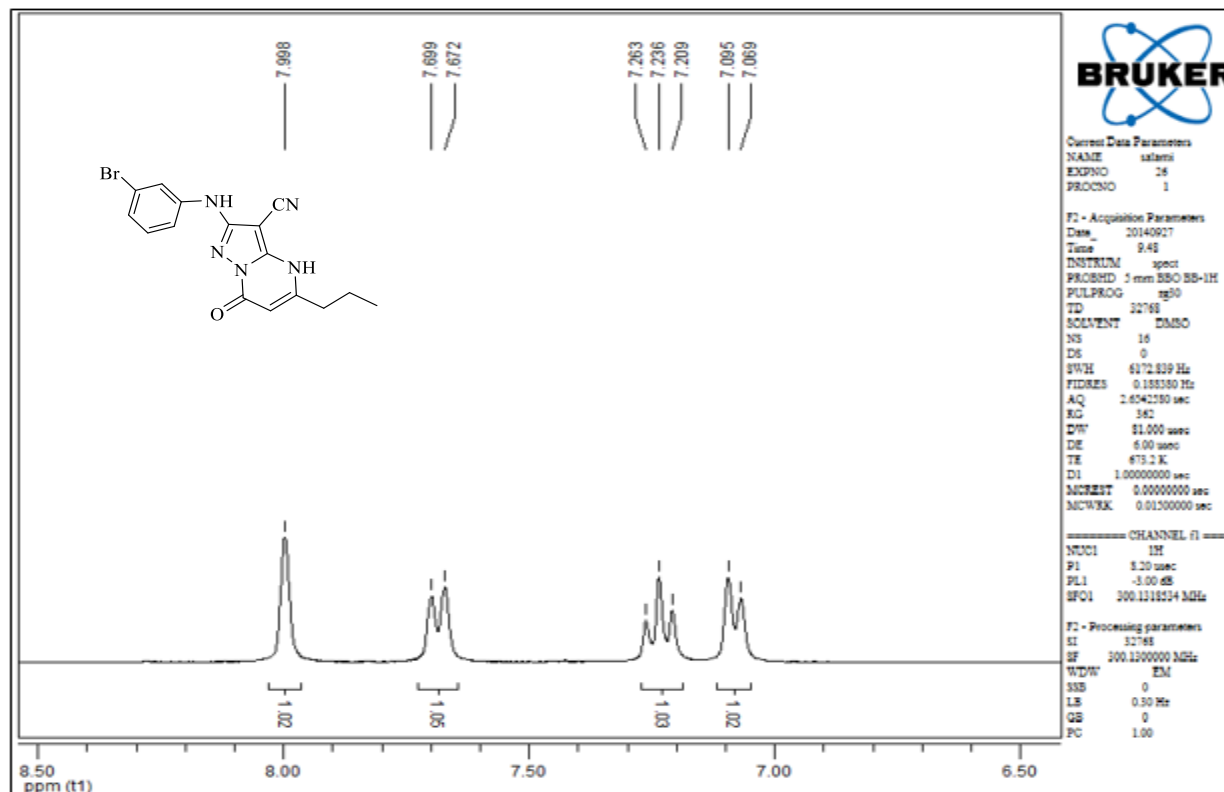


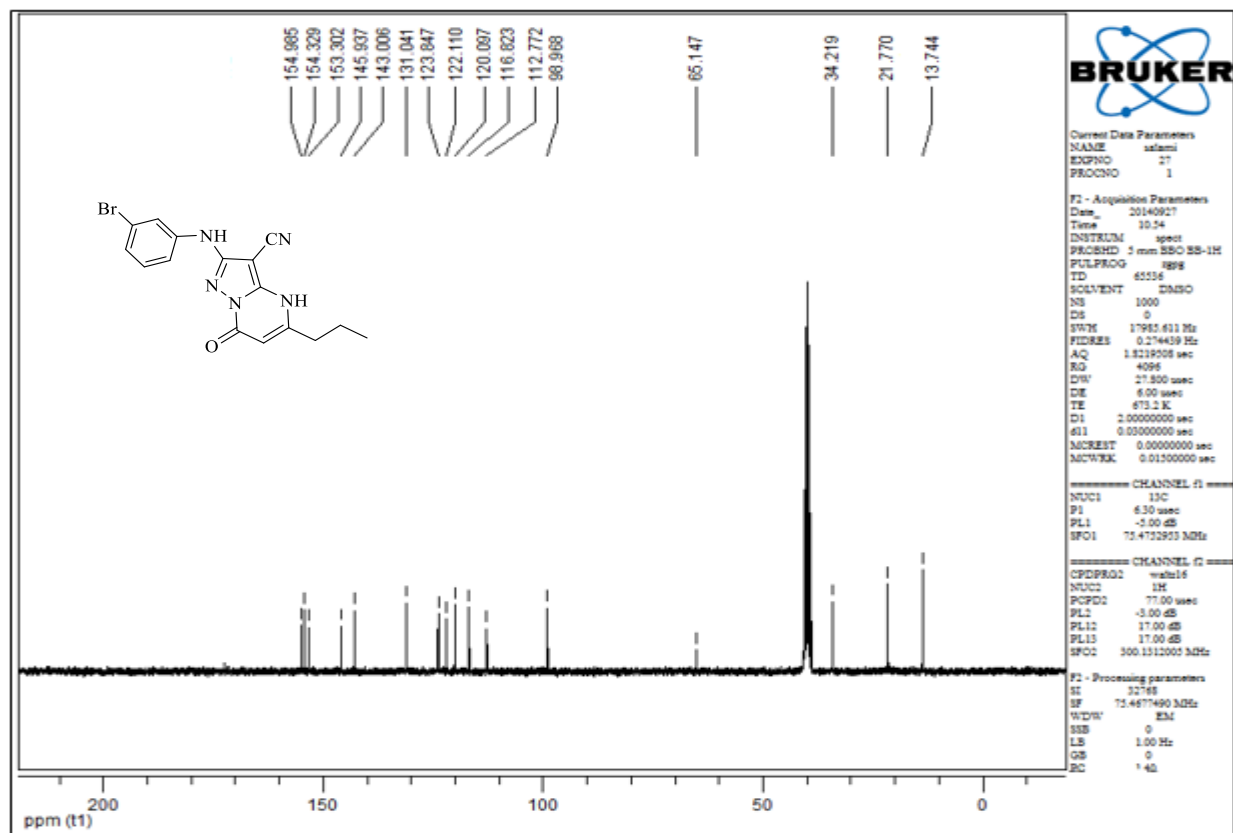
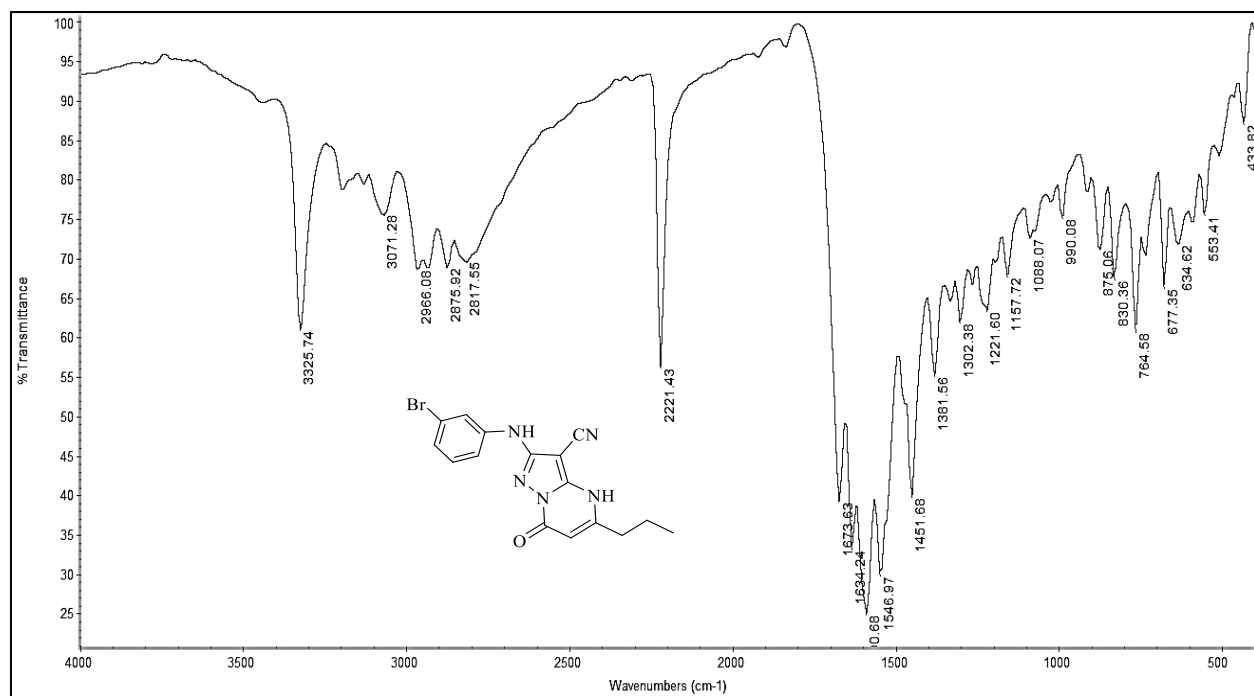
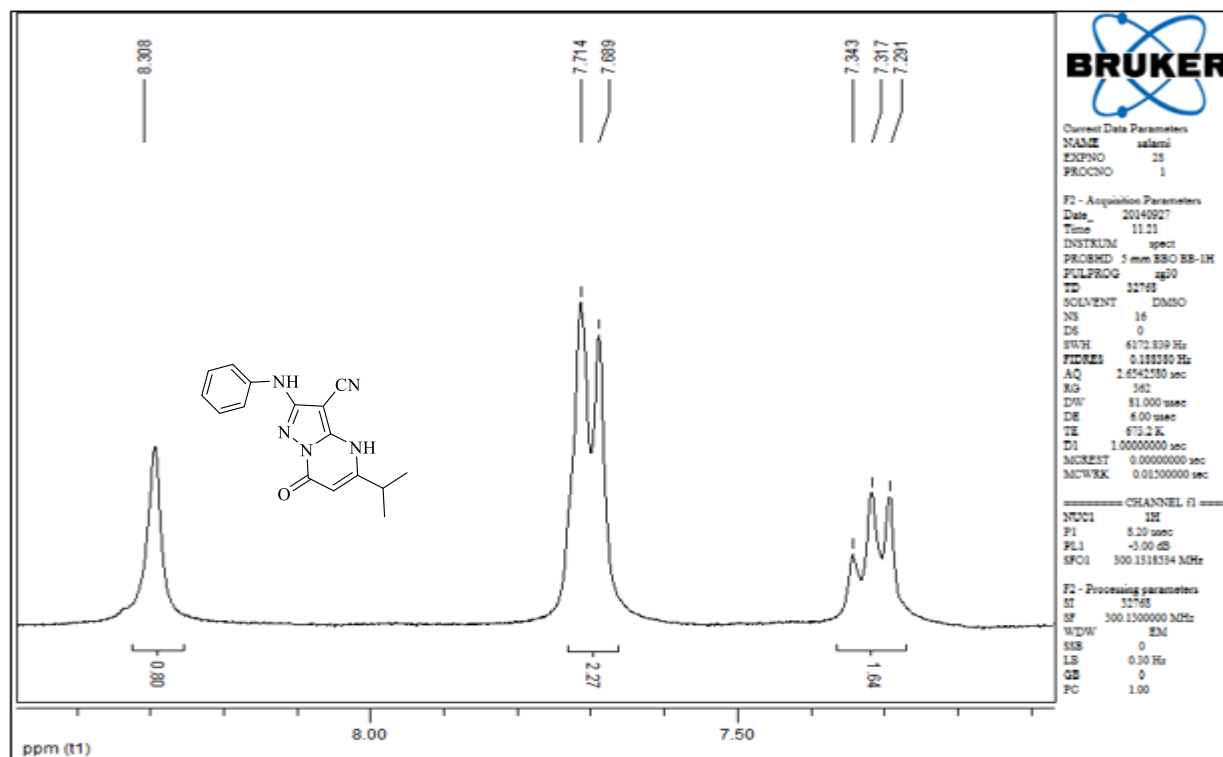
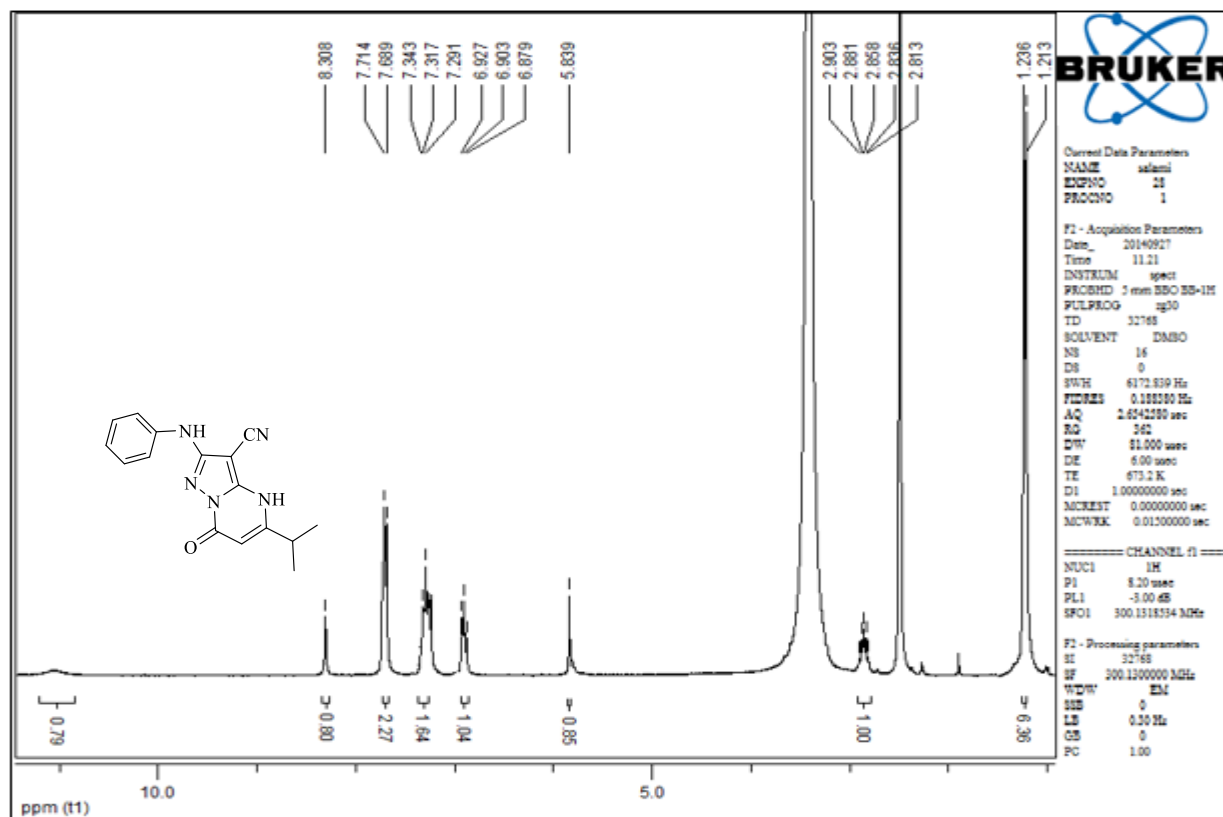
Figure S17. ^{13}C NMR spectrum (300 MHz, $\text{DMSO-}d_6$) of compound **4f**.**Figure S18.** IR spectrum (KBr) of compound **4f**.

Figure S19. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4g**.

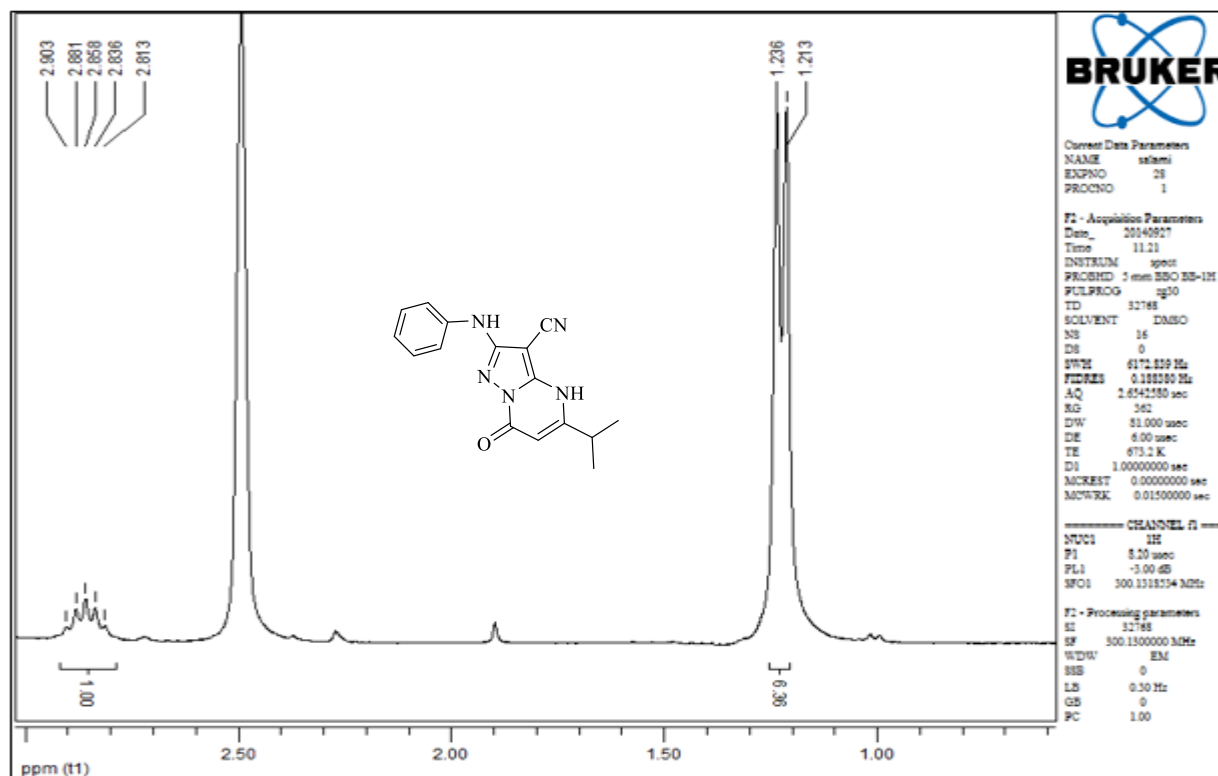
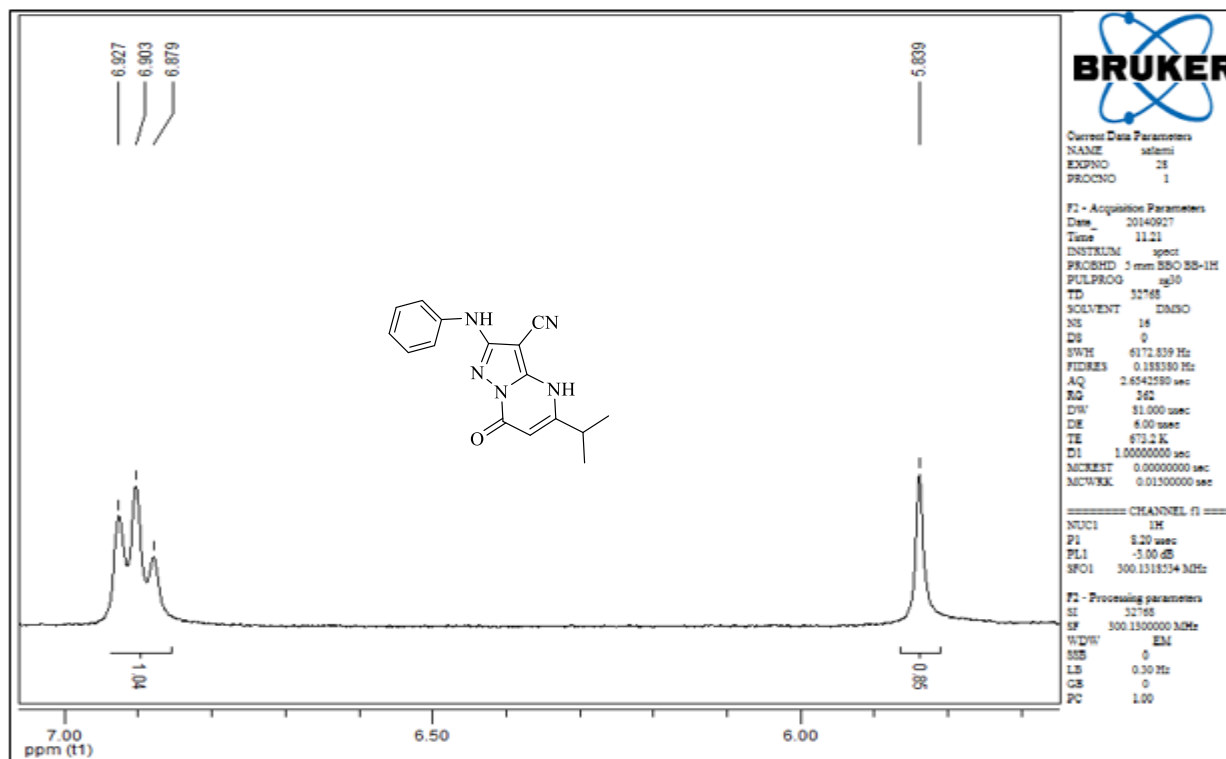


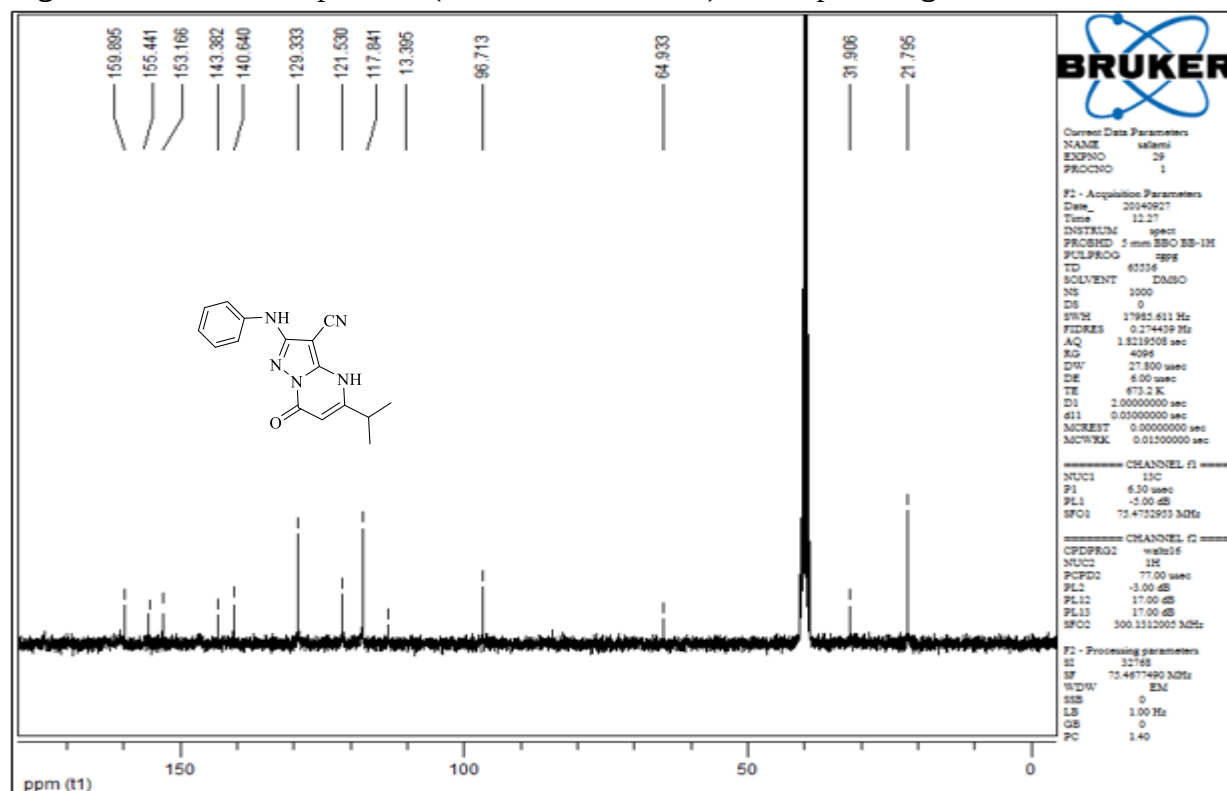
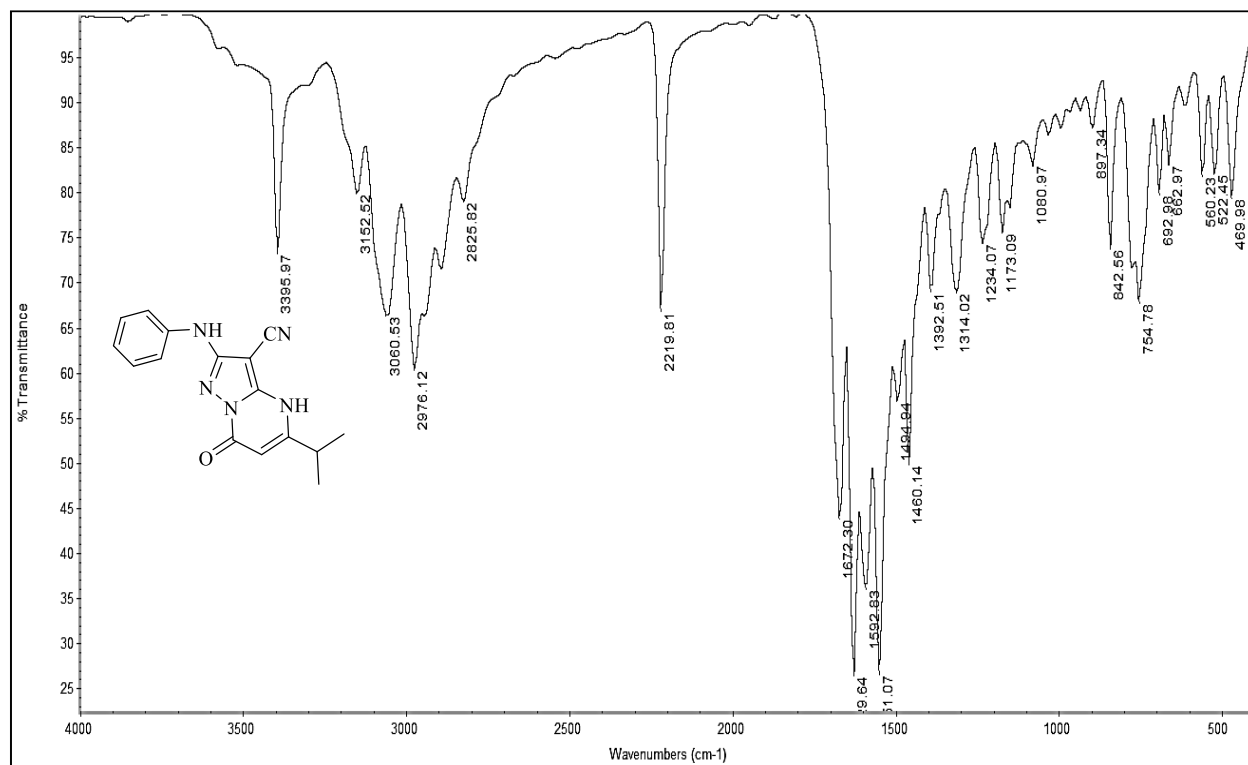
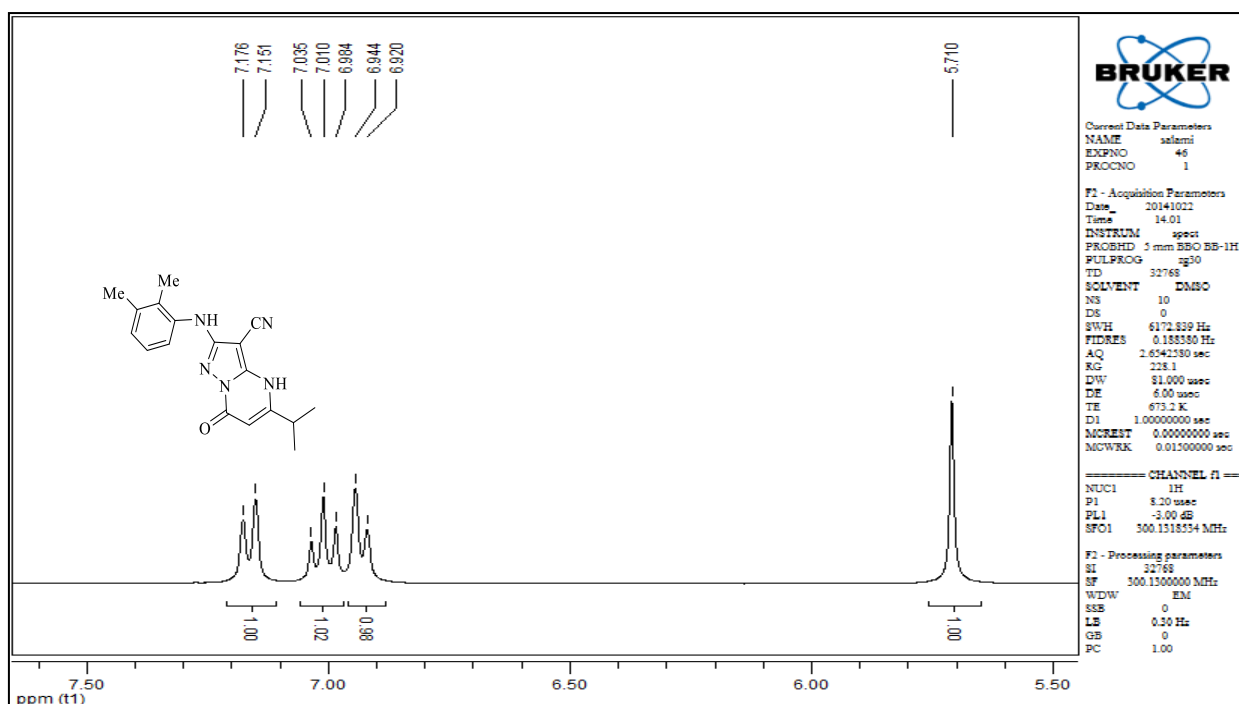
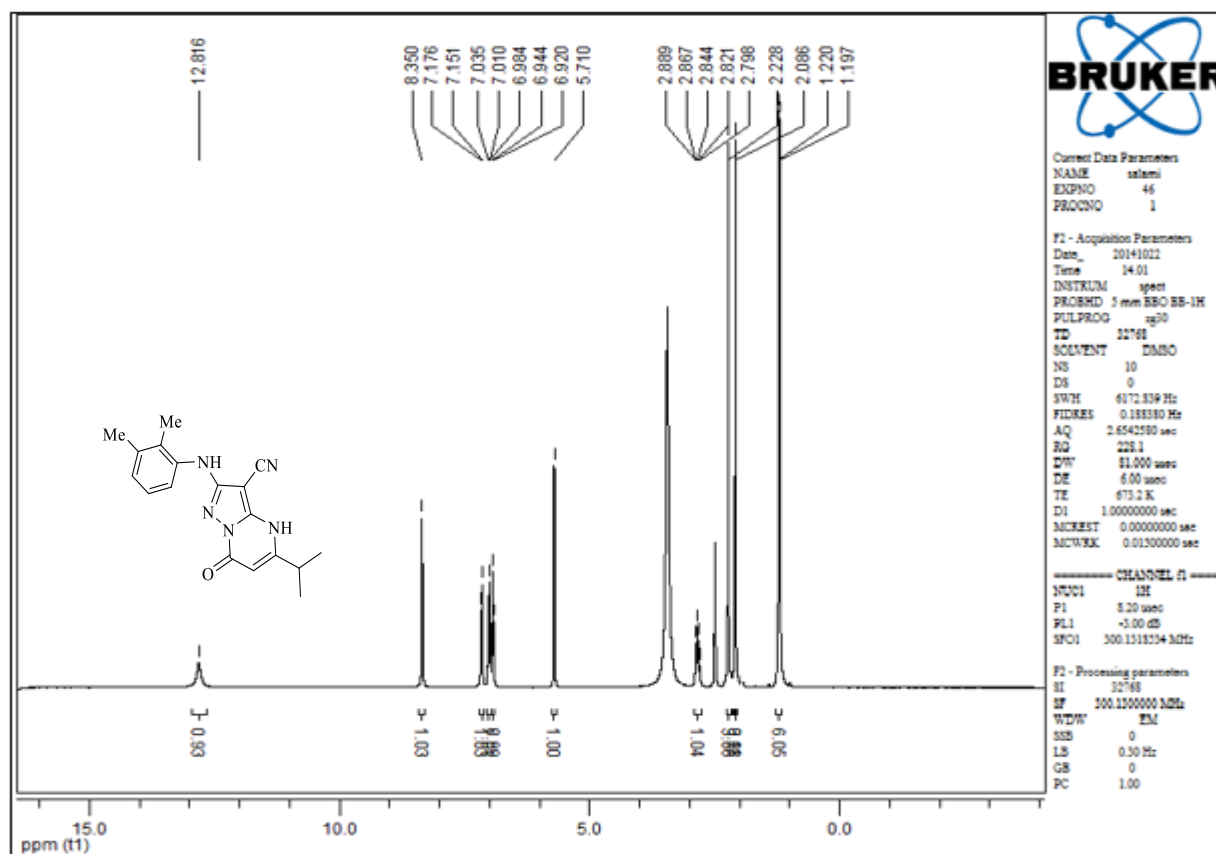
Figure S20. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4g**.**Figure S21.** IR spectrum (KBr) of compound **4g**.

Figure S22. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4h**.

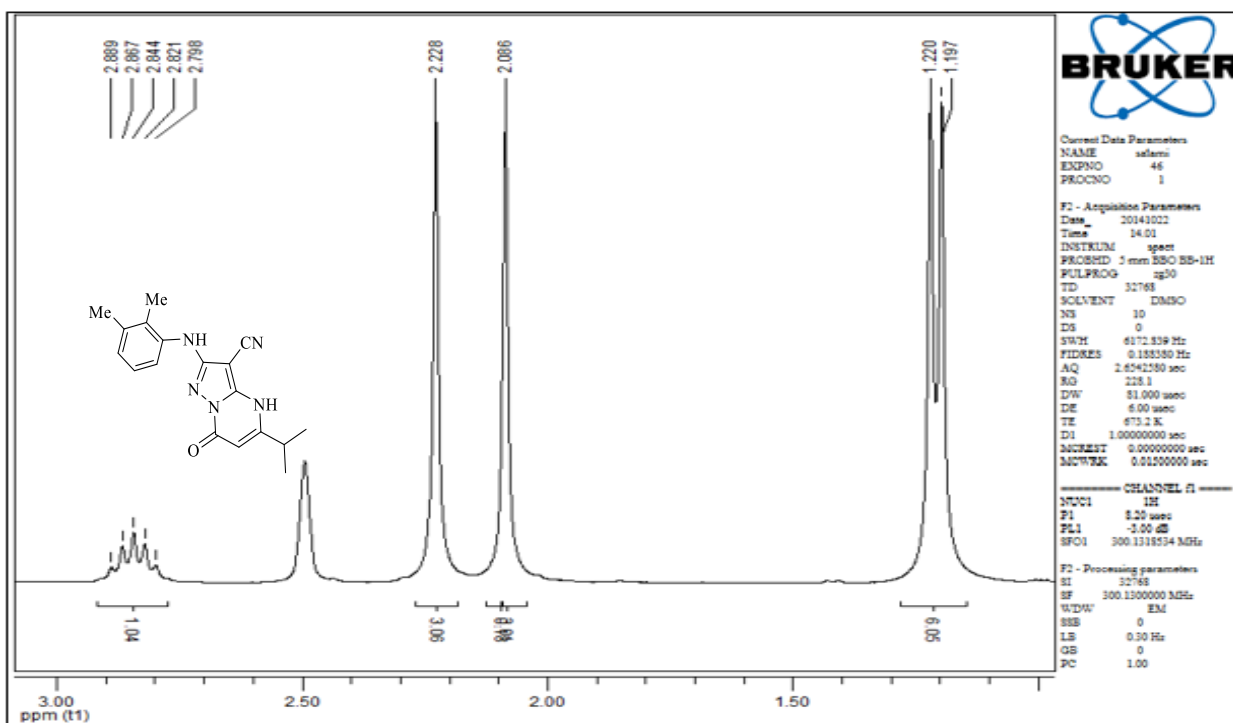


Figure S23. ¹³C NMR spectrum (300 MHz, DMSO-d₆) of compound 4h.

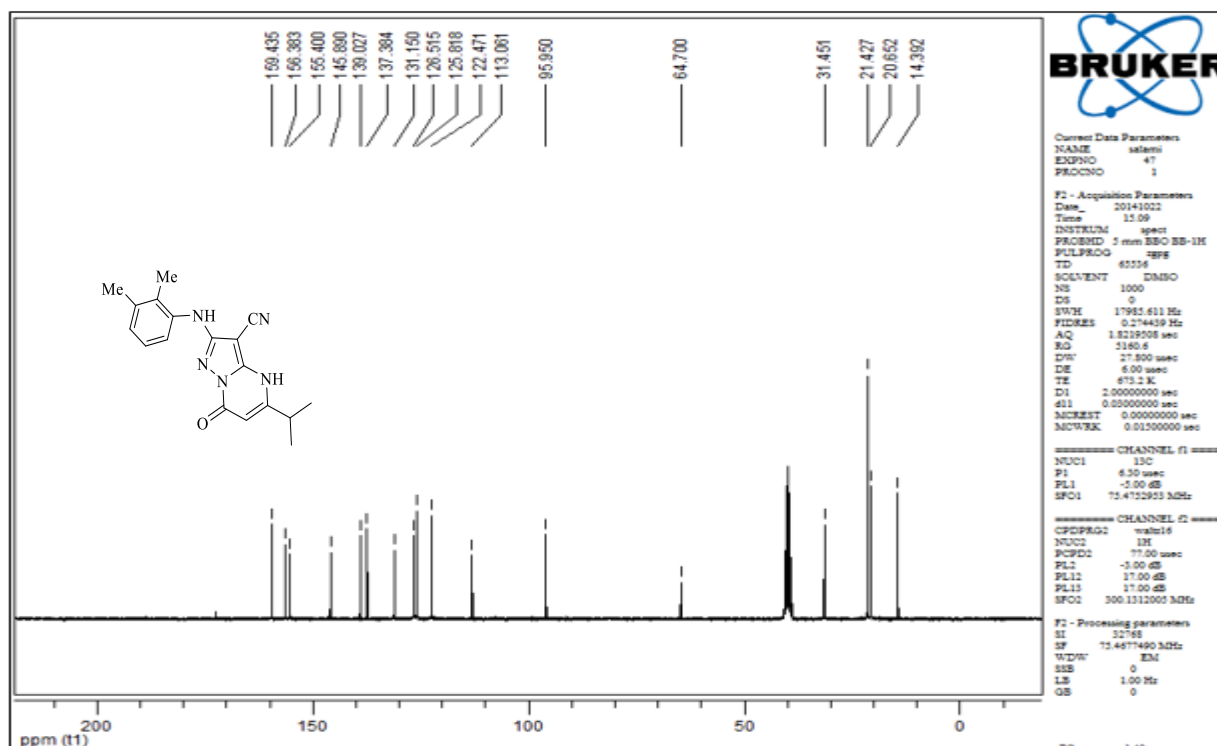
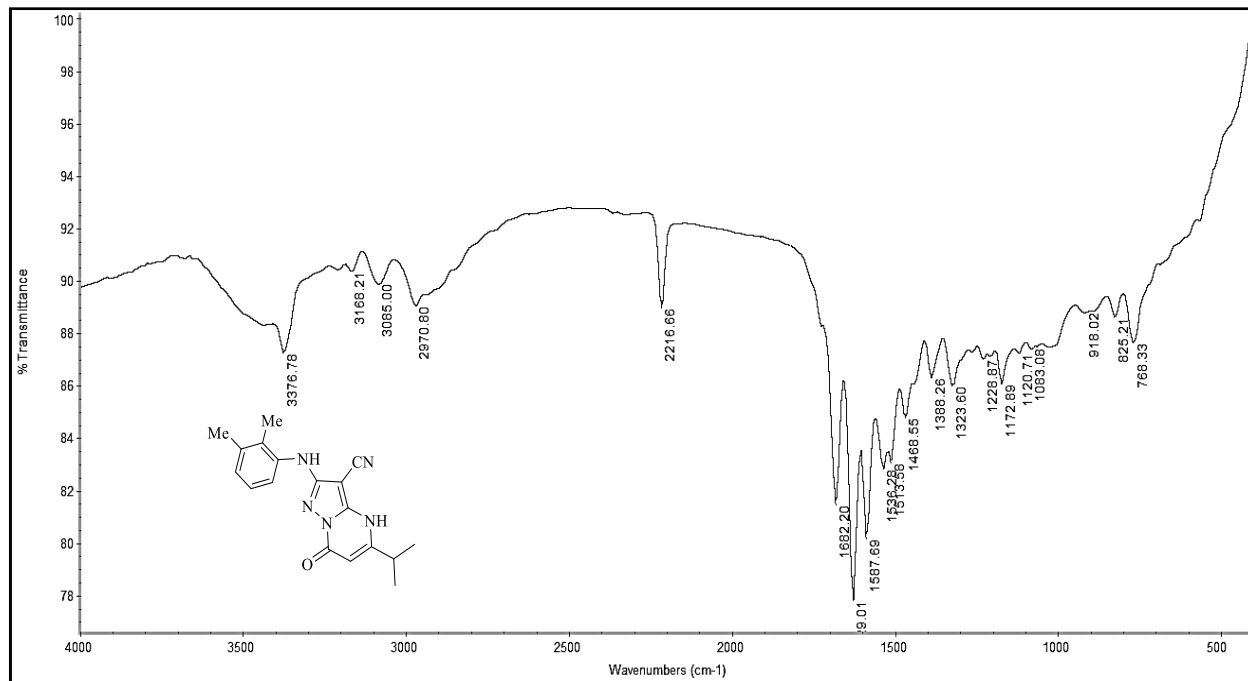
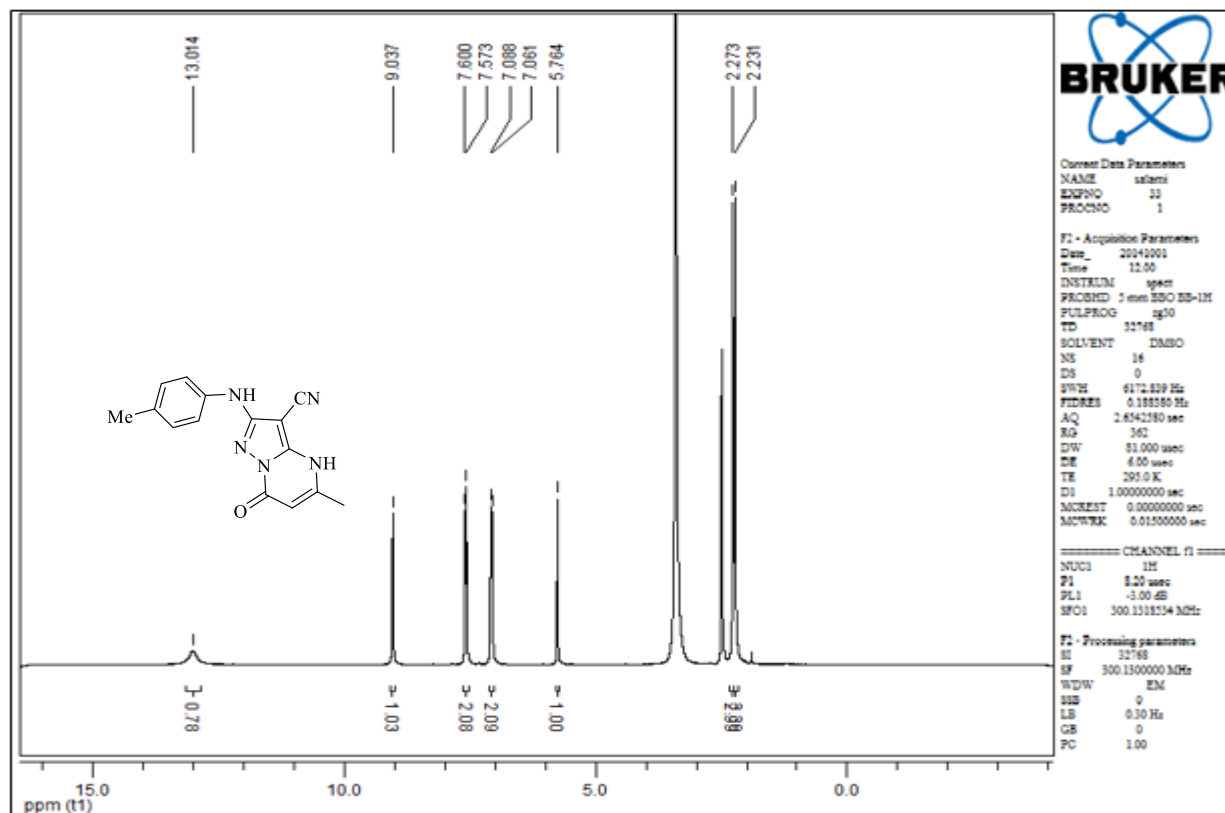


Figure S24 . IR spectrum (KBr) of compound 4h.**Figure S25. ¹H NMR spectrum (300 MHz, DMSO-*d*₆) of compound 4i.**

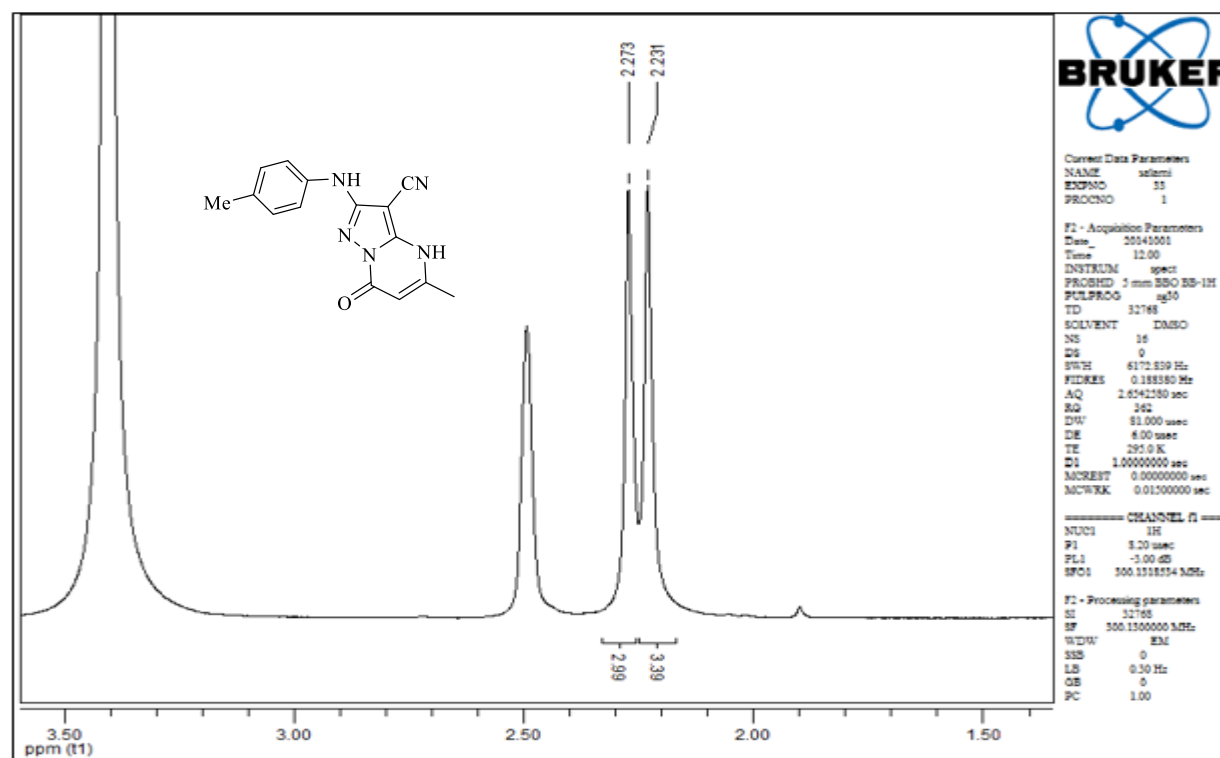
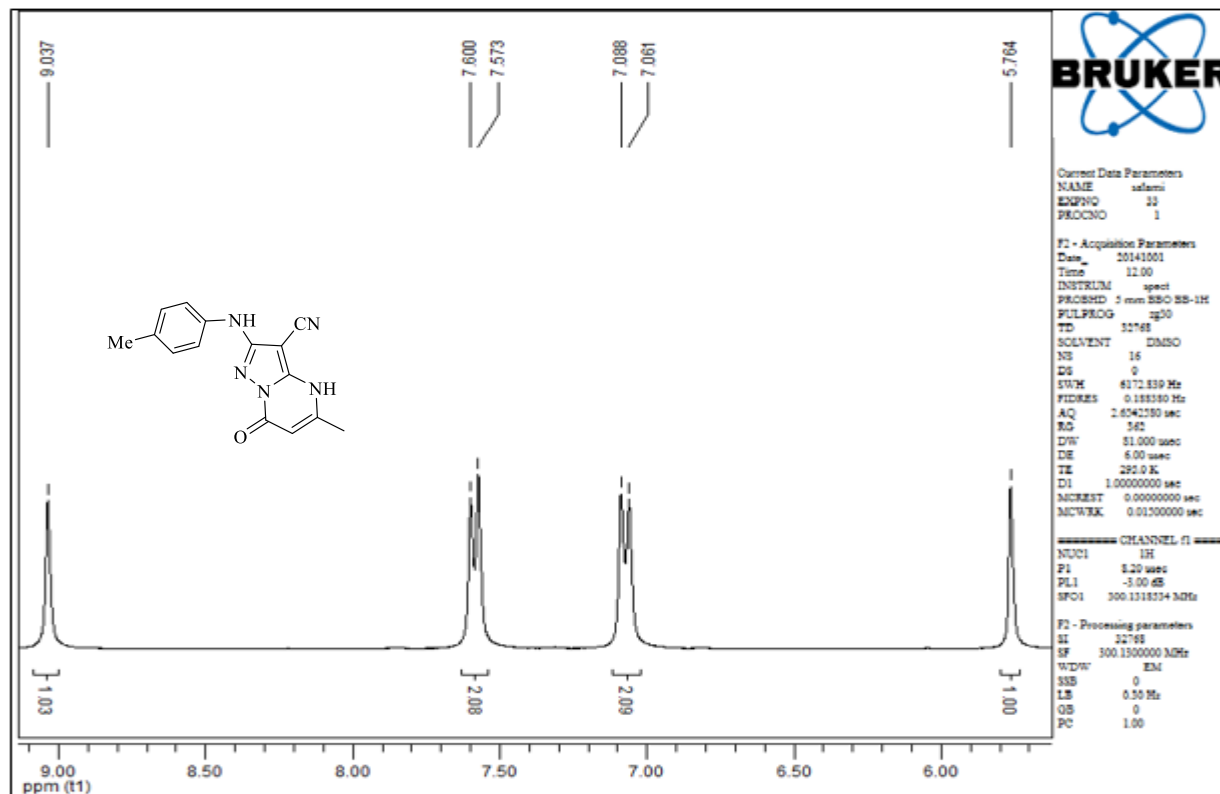
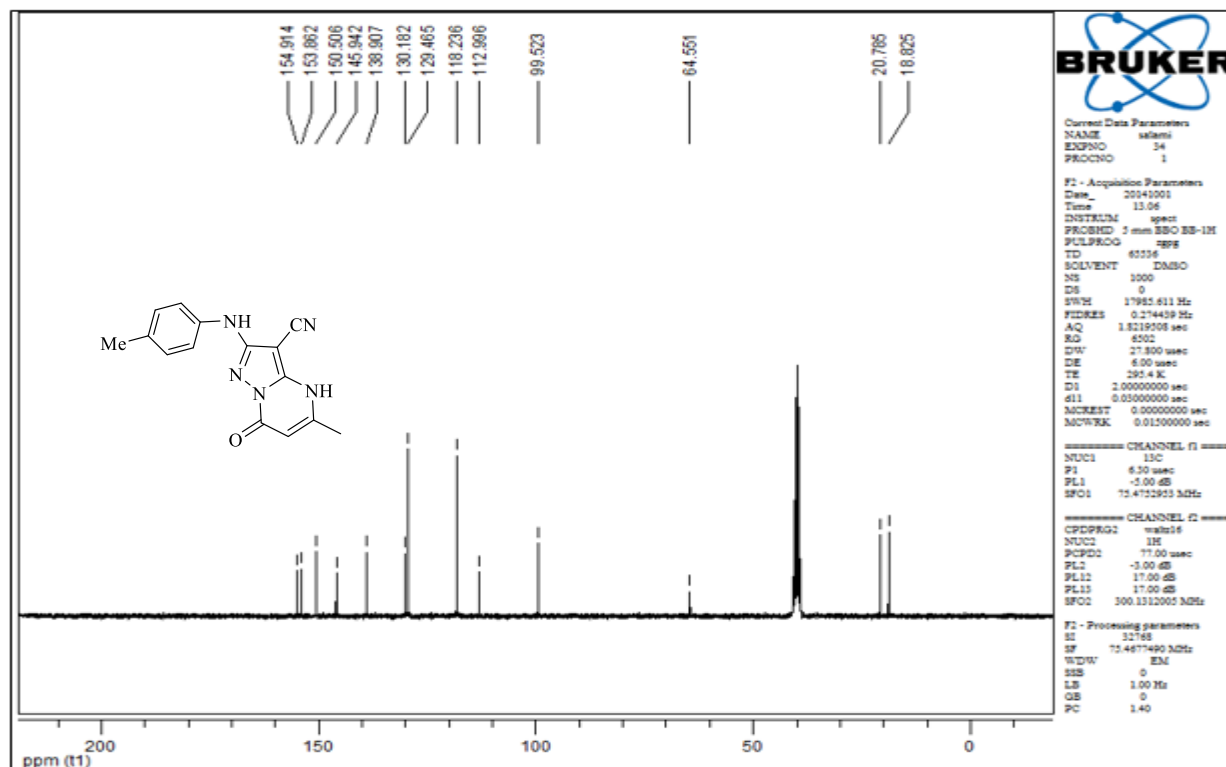
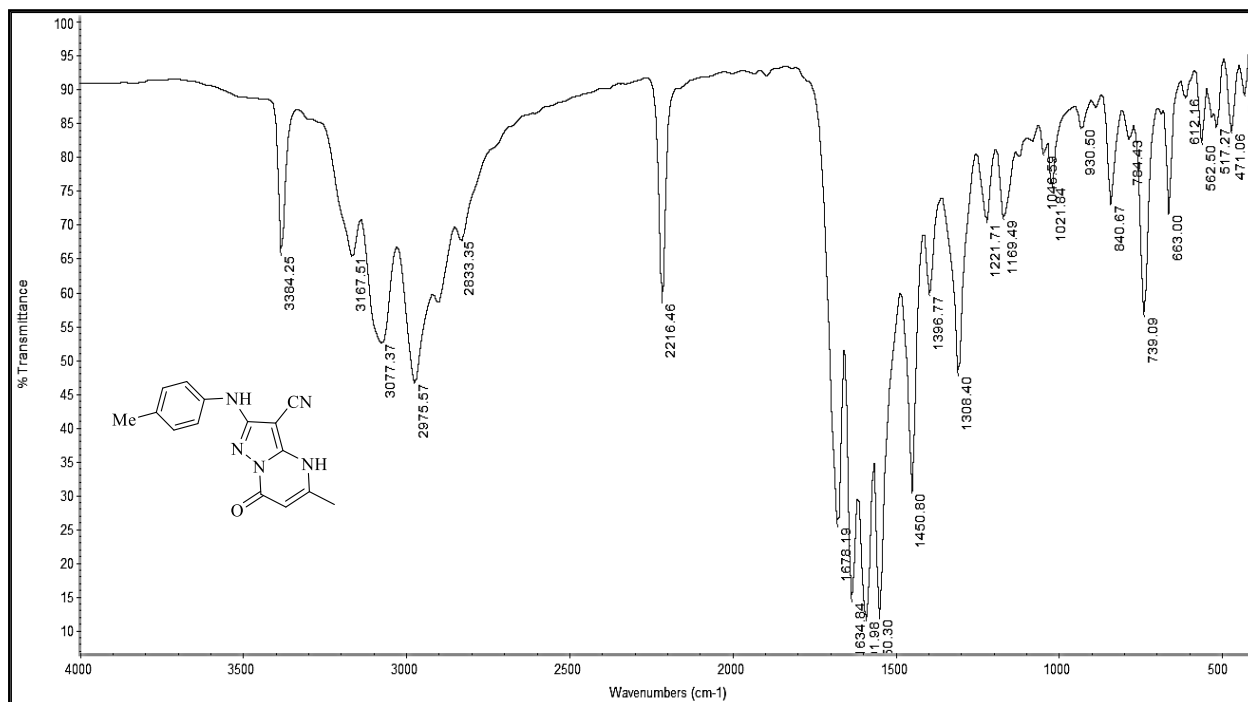


Figure S26. ^{13}C NMR spectrum (300 MHz, $\text{DMSO-}d_6$) of compound **4i**.**Figure S27.** IR spectrum (KBr) of compound **4i**.

Chemical Structure: 2-(2,6-dimethylphenyl)-4,5-dimethyl-1H-benzotriazole

1H NMR Data (DMSO-d₆):

Chemical Shift (ppm)	Integration
8.744	1.08
7.222	1.09
7.196	1.08
7.078	3.09
7.053	3.19
7.027	3.07
6.994	
6.969	
6.942	
2.535	
2.485	
2.257	
2.126	

Current Data Parameters:

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PROCNO	1

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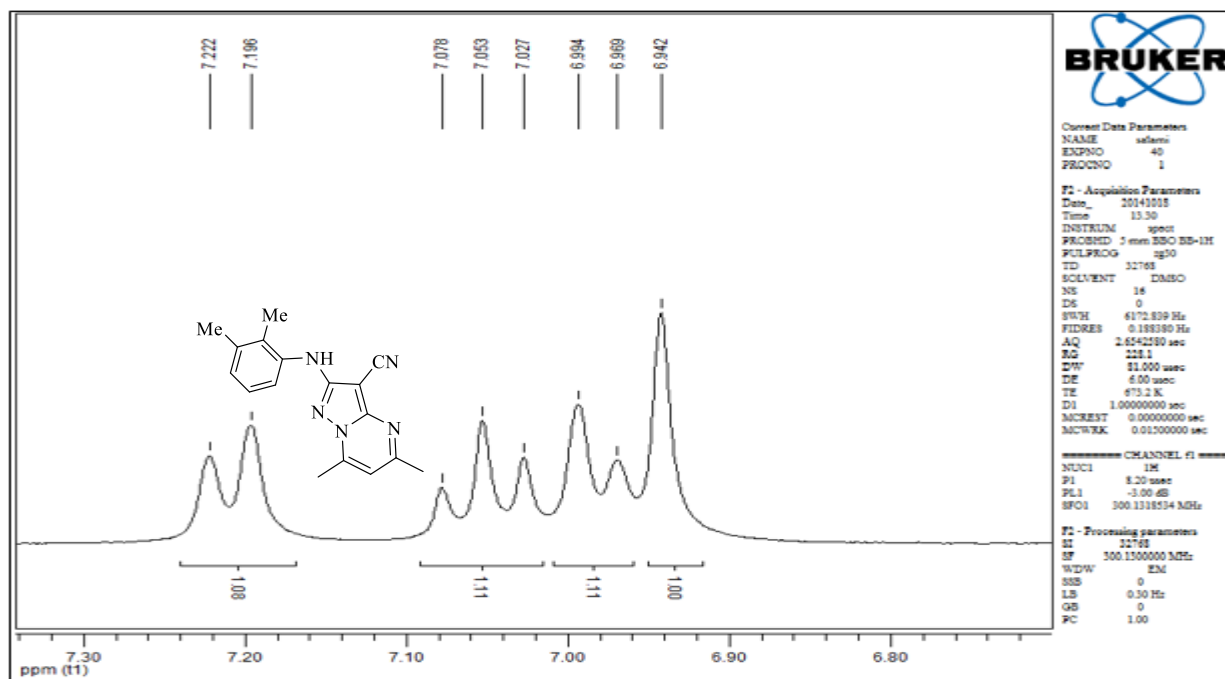
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FIDRES	0.188380 Hz
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RG	328.1
DW	81.000 nsec
DE	6.00 nsec
TE	473.2 K
D1	1.00000000 sec
ACCRET	0.00000000 sec
MCWRR	0.01000000 sec

===== CHANNEL f1 =====

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PL1	-3.00 dB
SFO1	300.1318514 MHz

F2 - Processing parameters:

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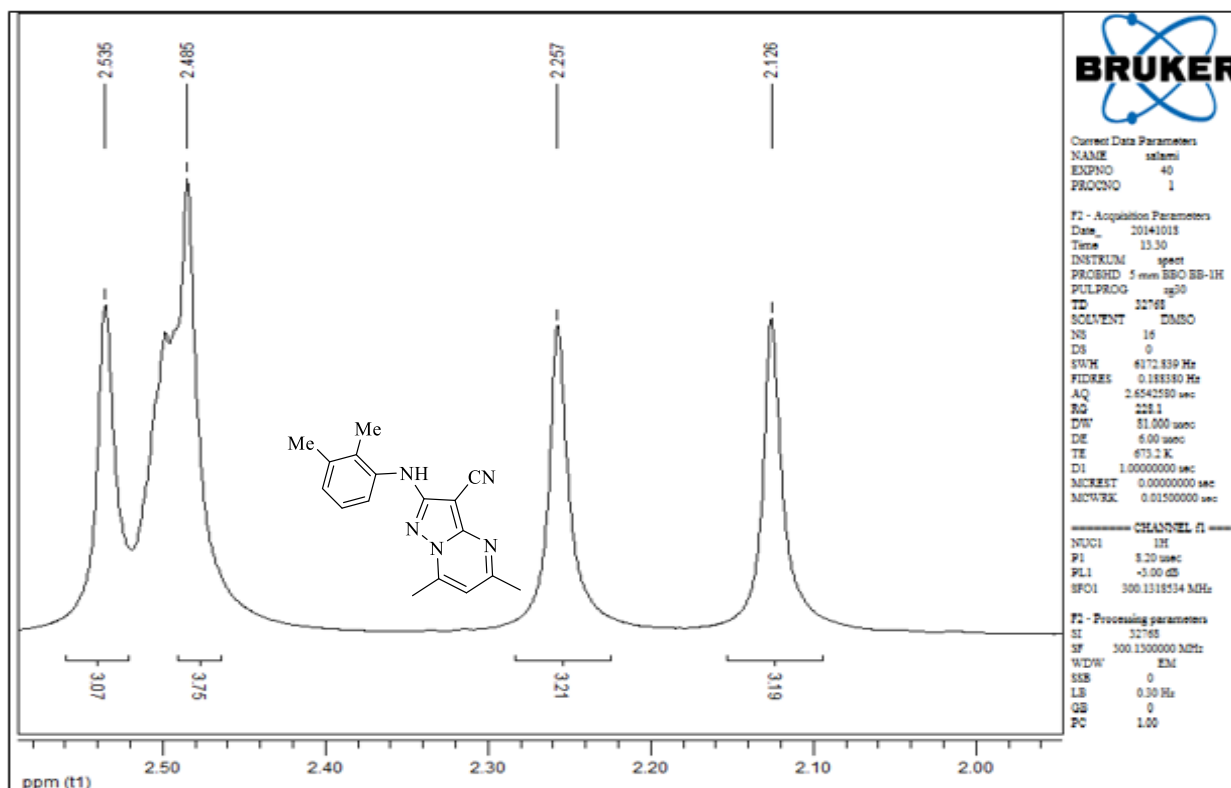


Figure S29. ¹³C NMR spectrum (300 MHz, DMSO-d₆) of compound **4j**.

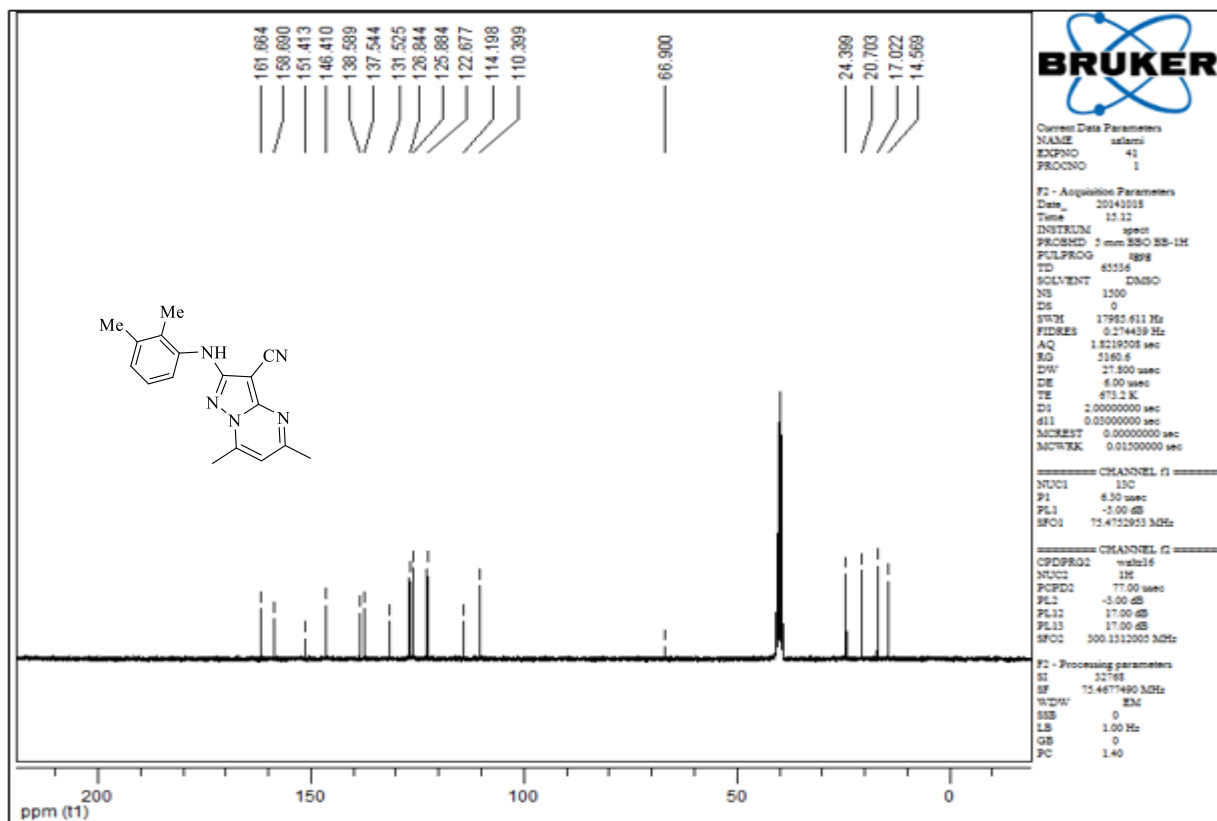
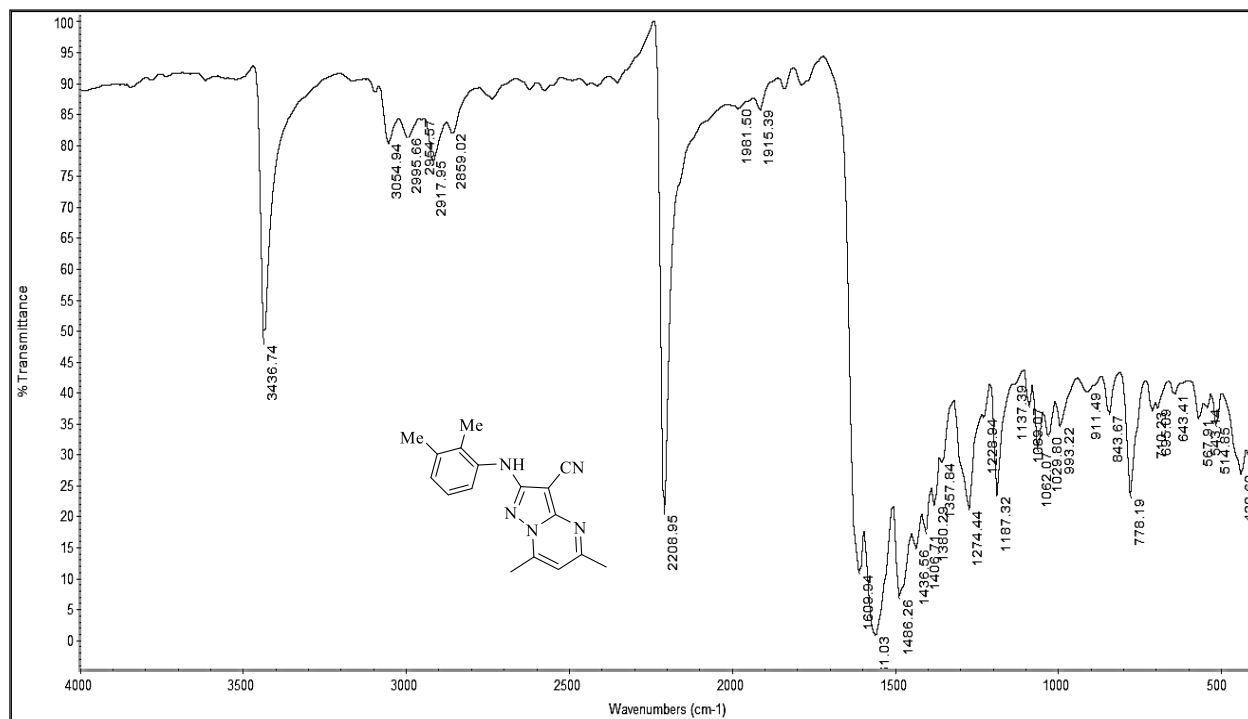
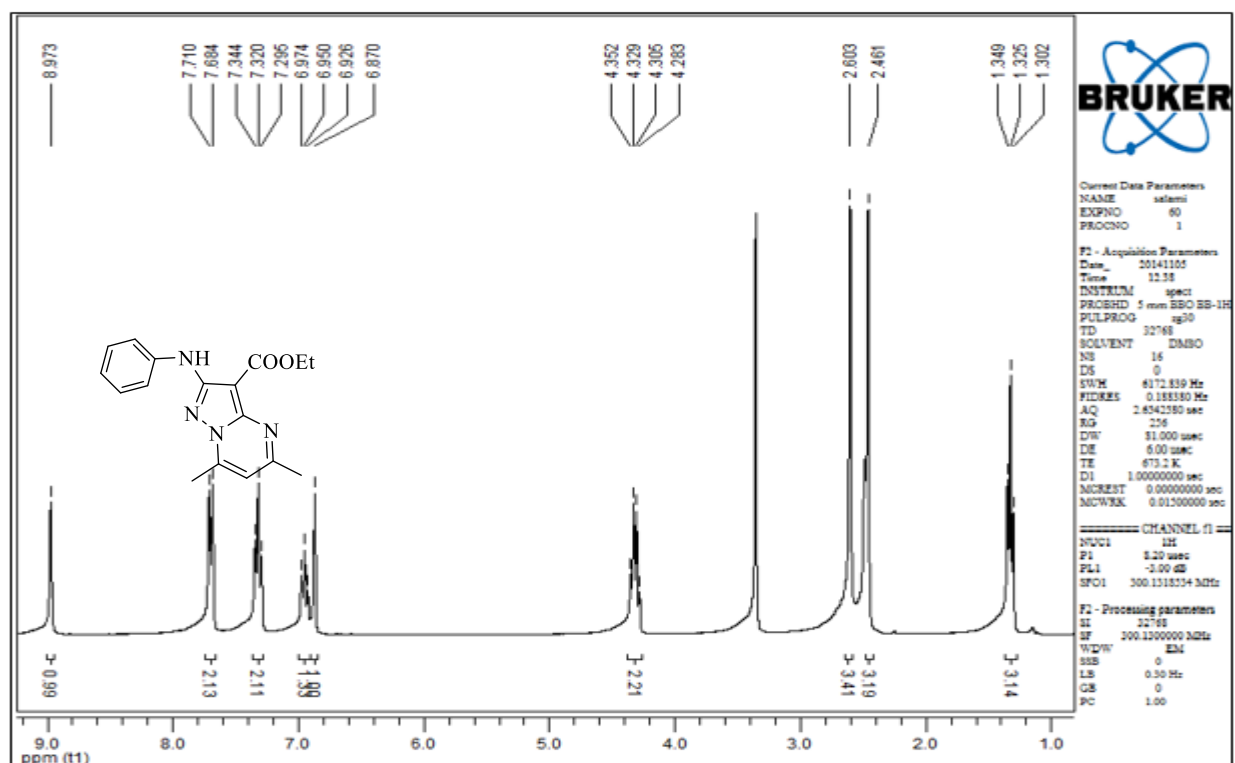


Figure S30. IR spectrum (KBr) of compound **4j**.**Figure S31.** ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4k**.

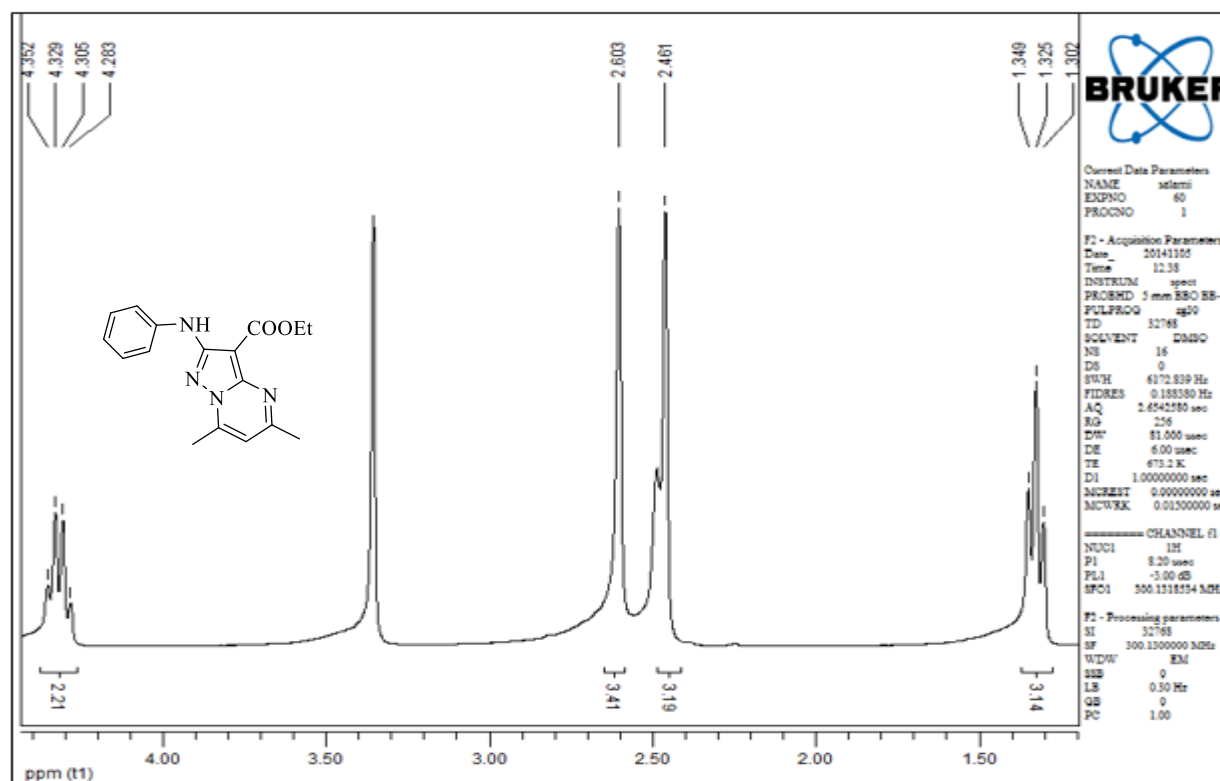
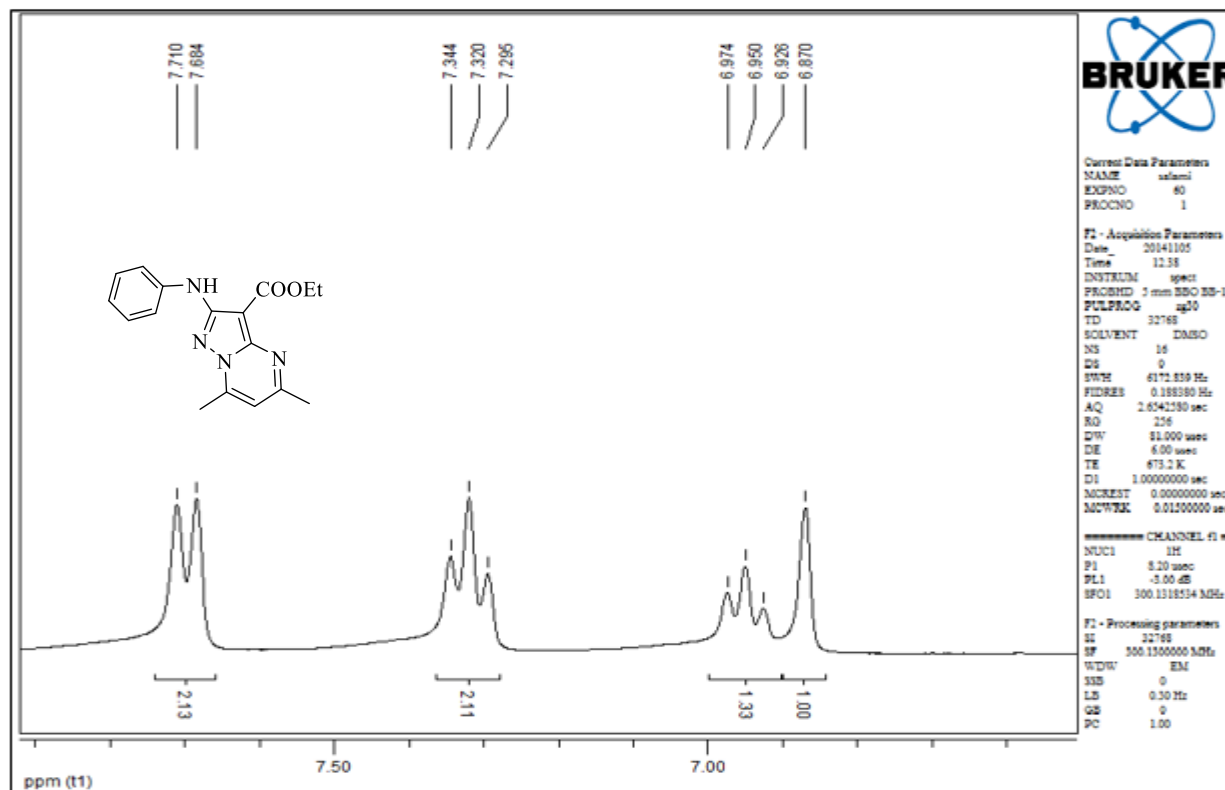


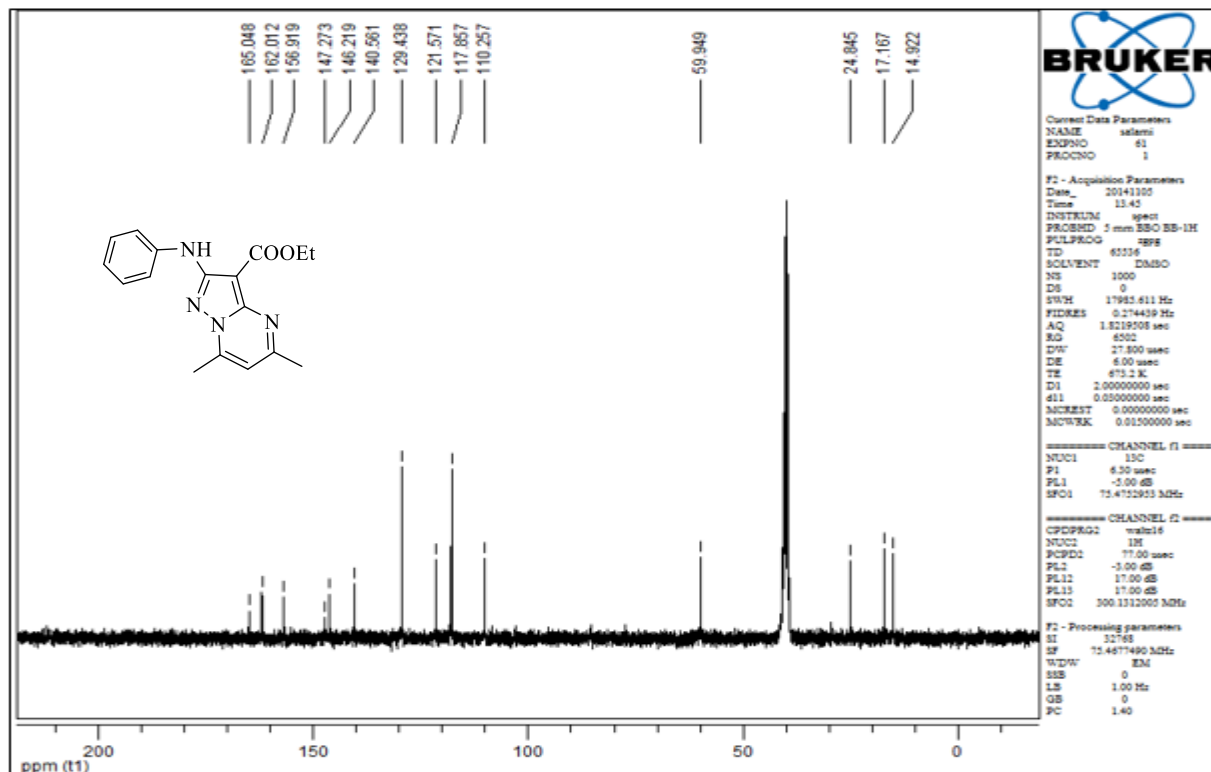
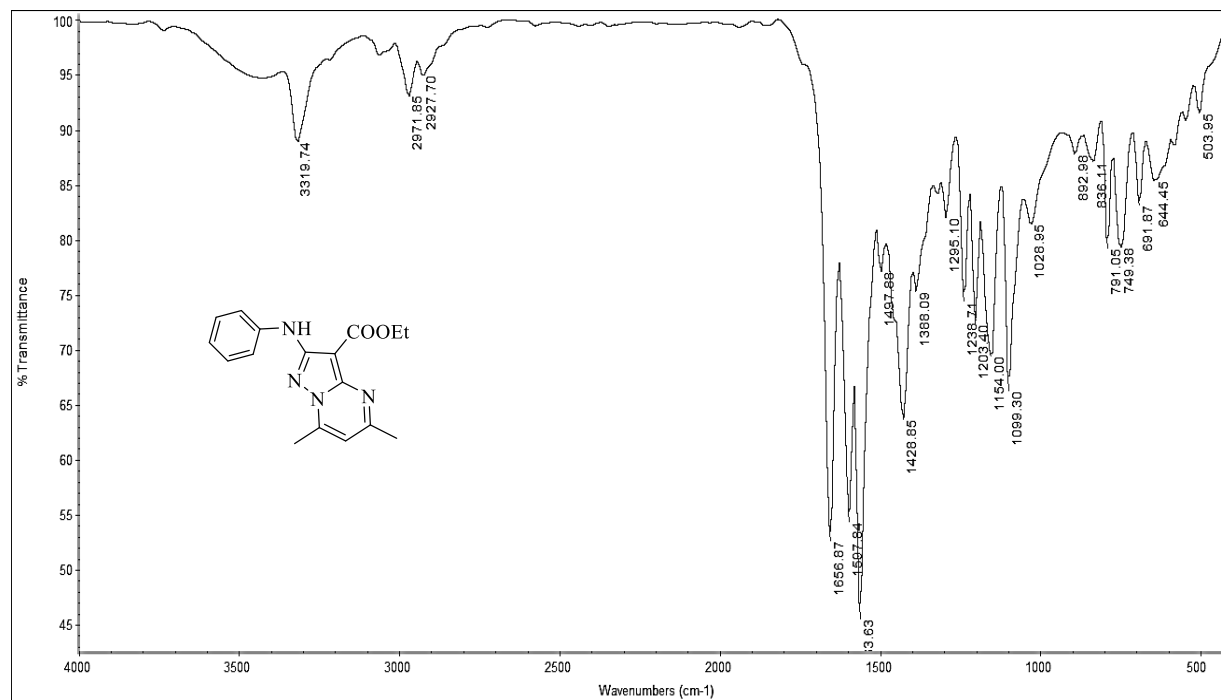
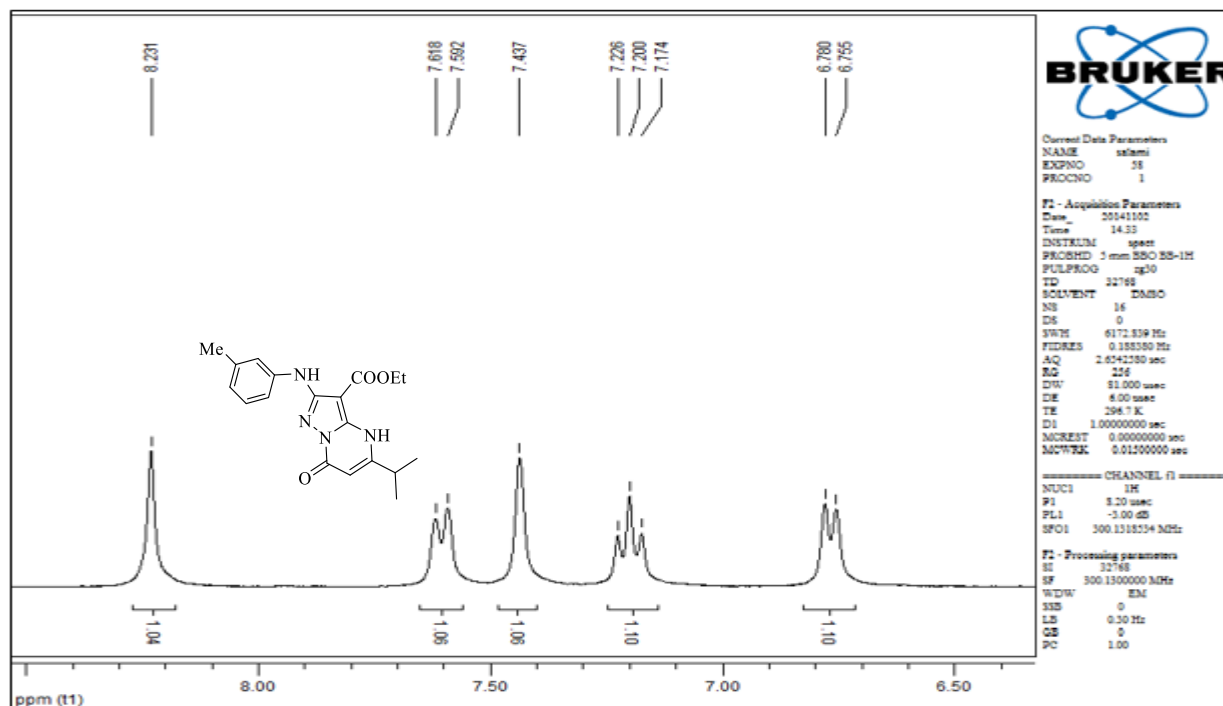
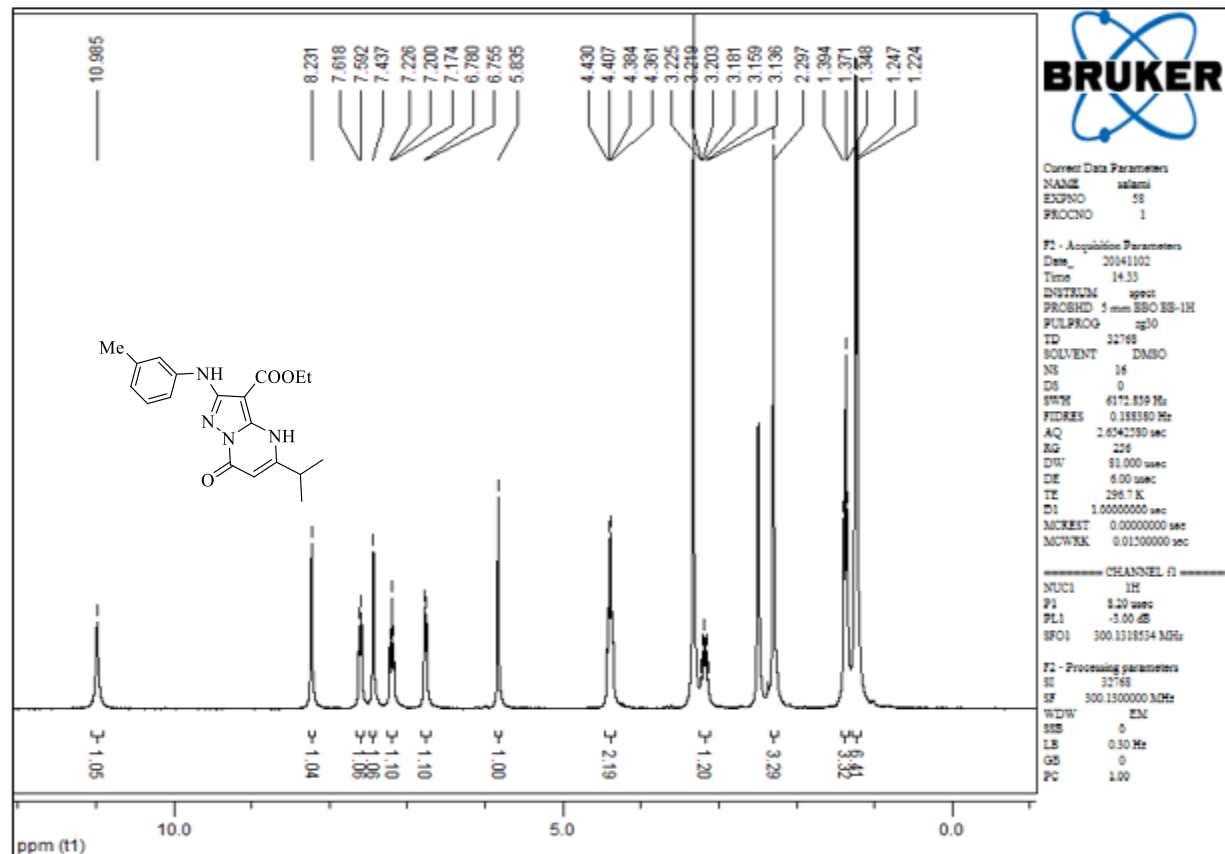
Figure S32. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4k**.**Figure S33.** IR spectrum (KBr) of compound **4k**.

Figure S34. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4l**.

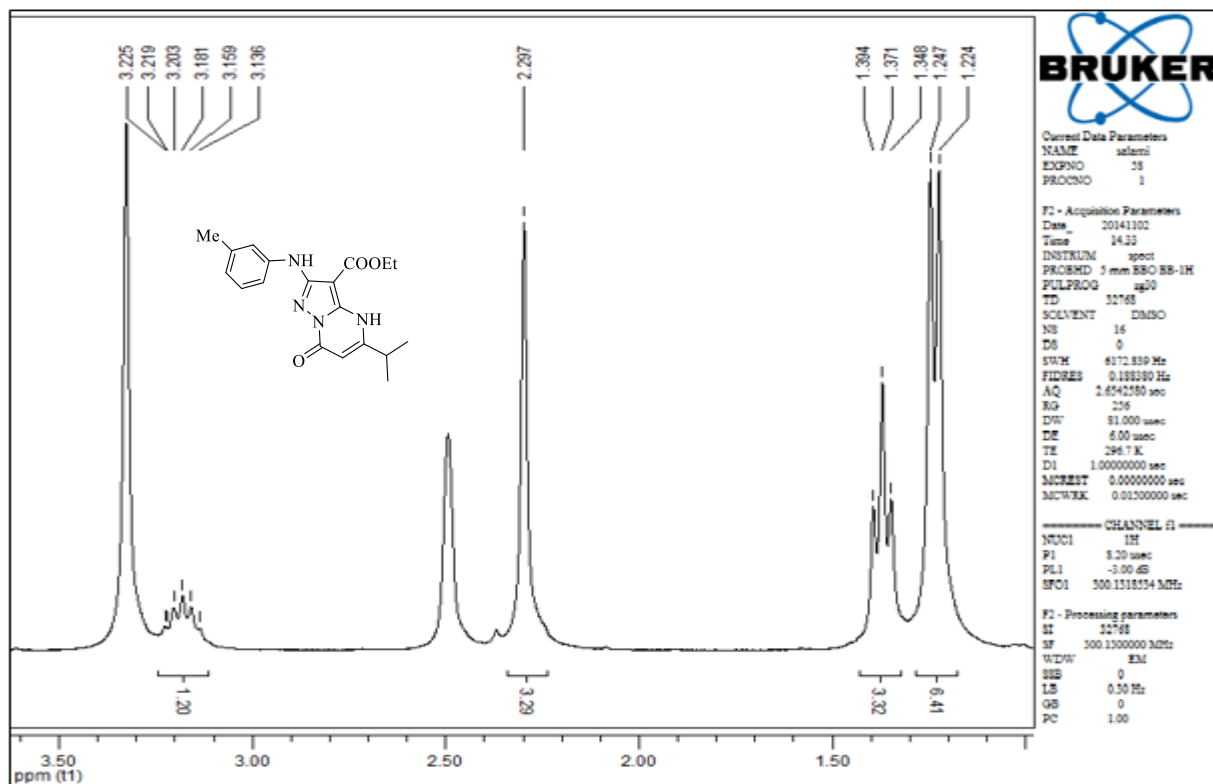
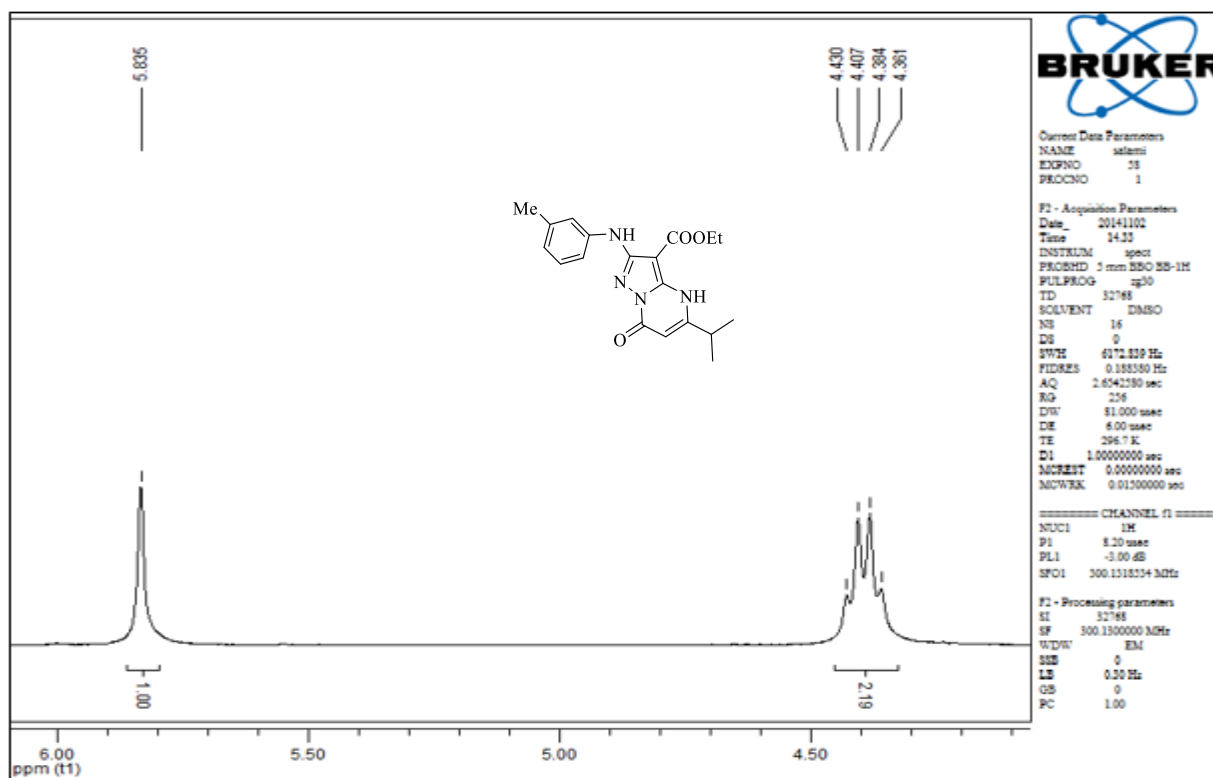


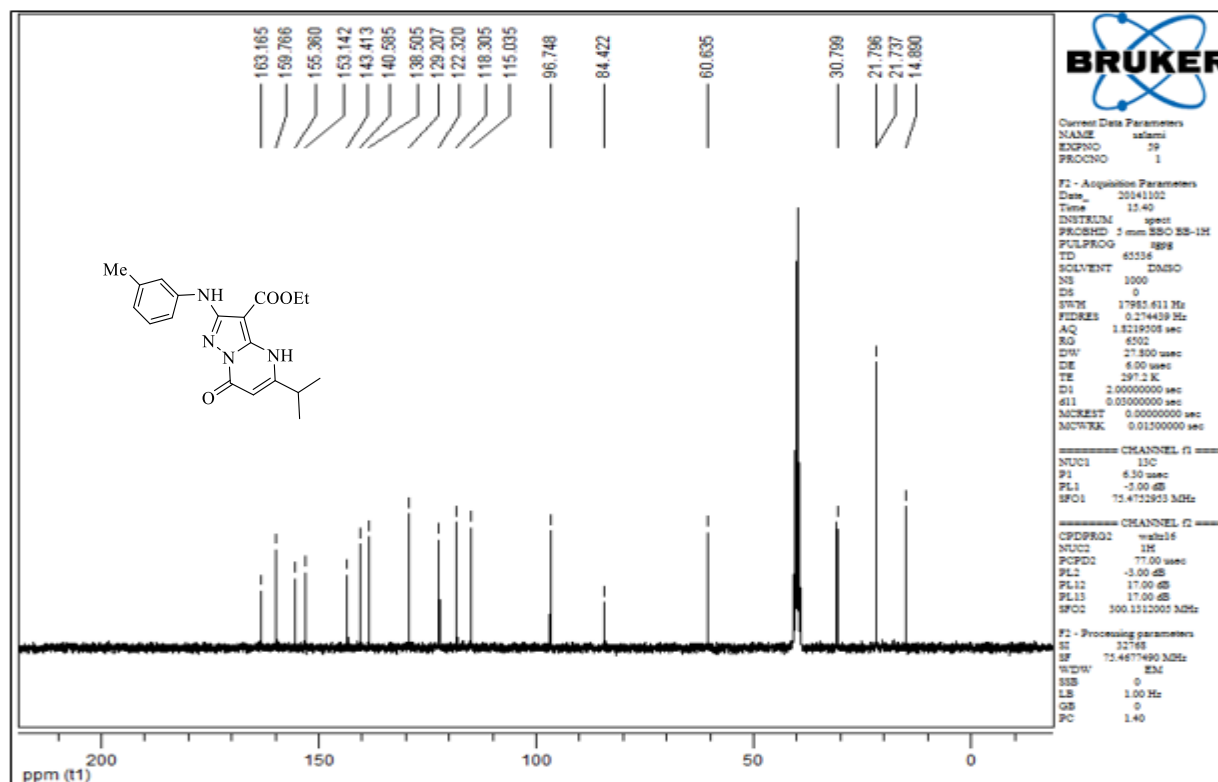
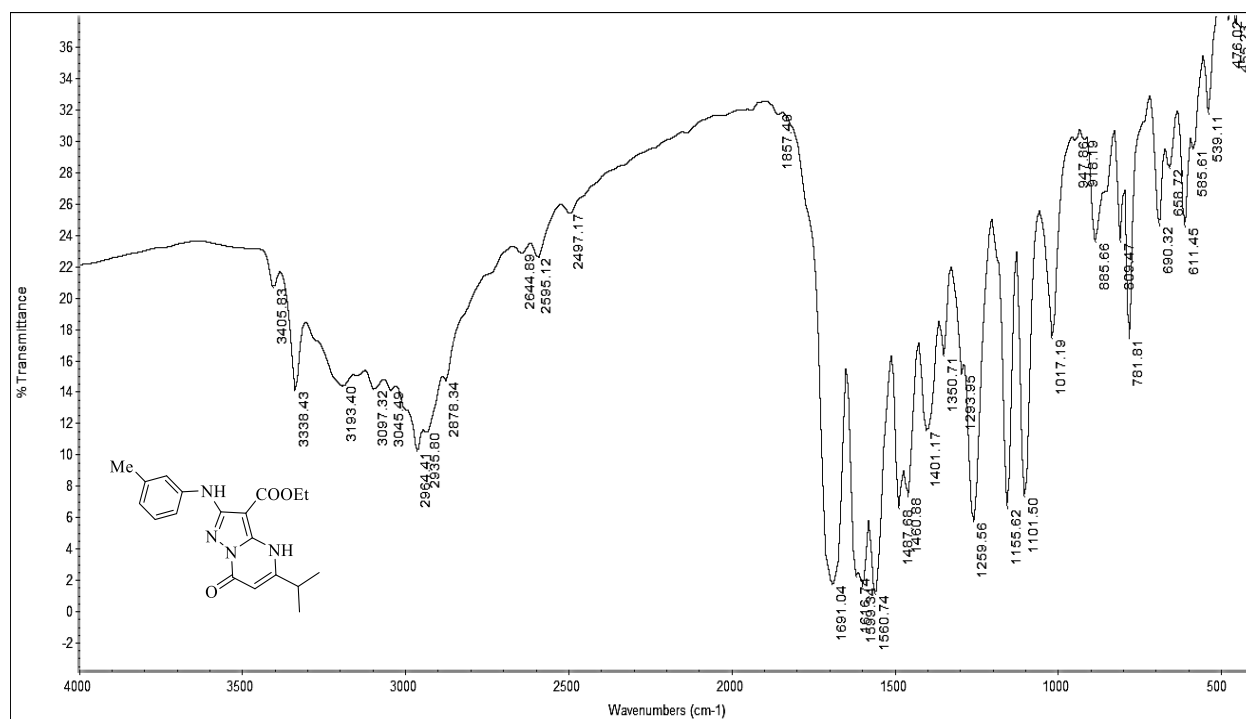
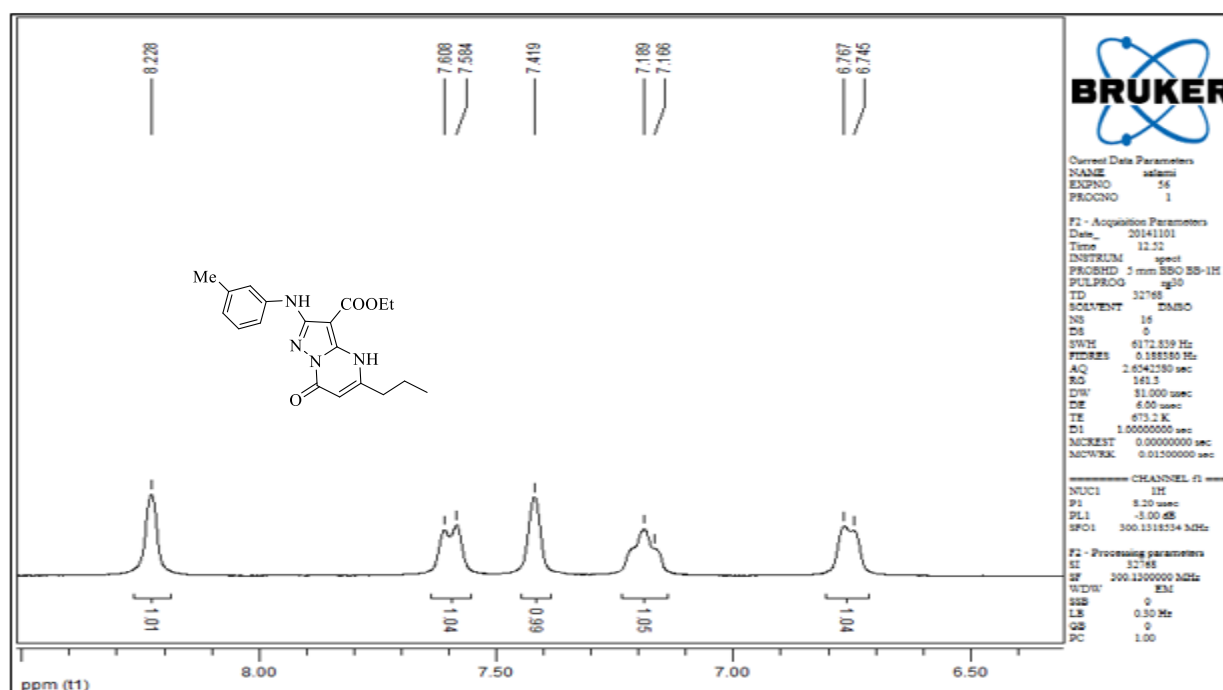
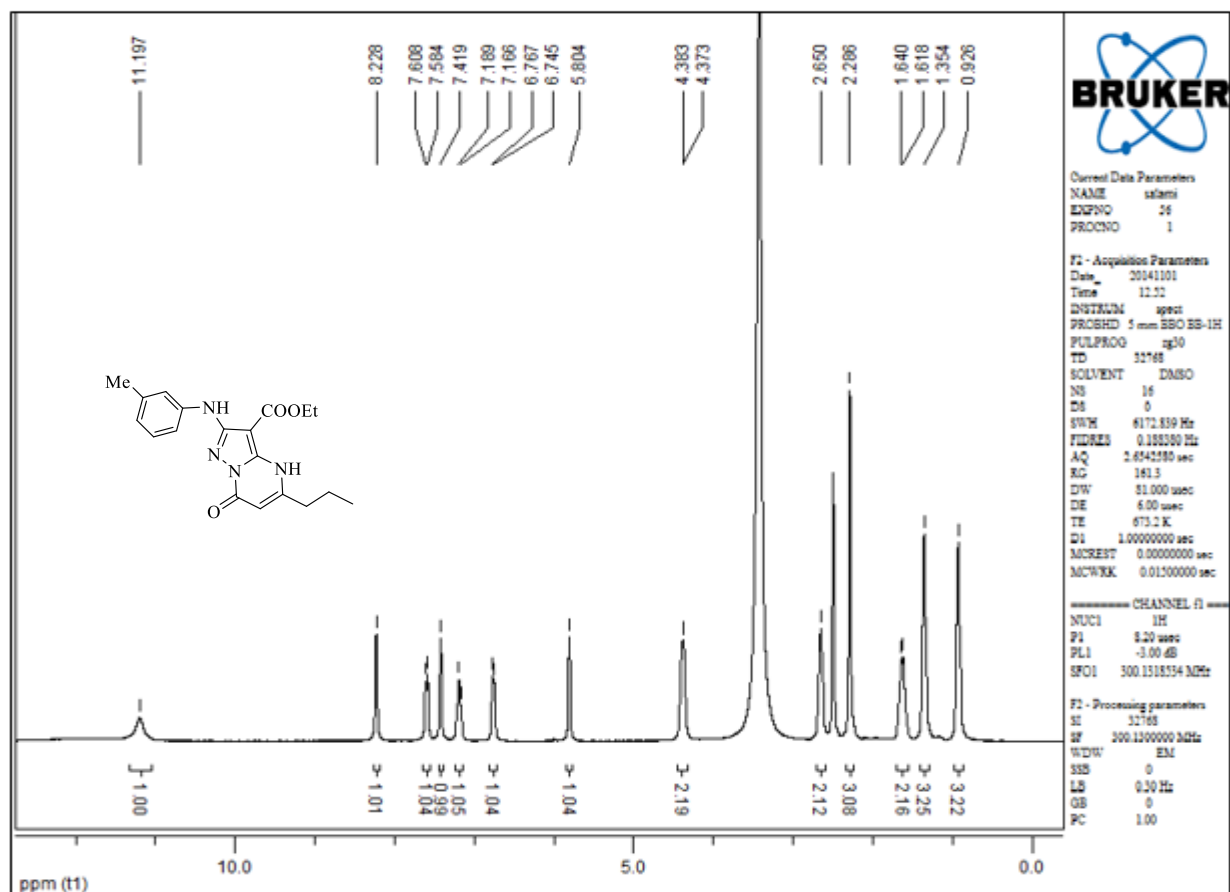
Figure S35. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4l**.**Figure S36.** IR spectrum (KBr) of compound **4l**.

Figure S37. ^1H NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4m**.

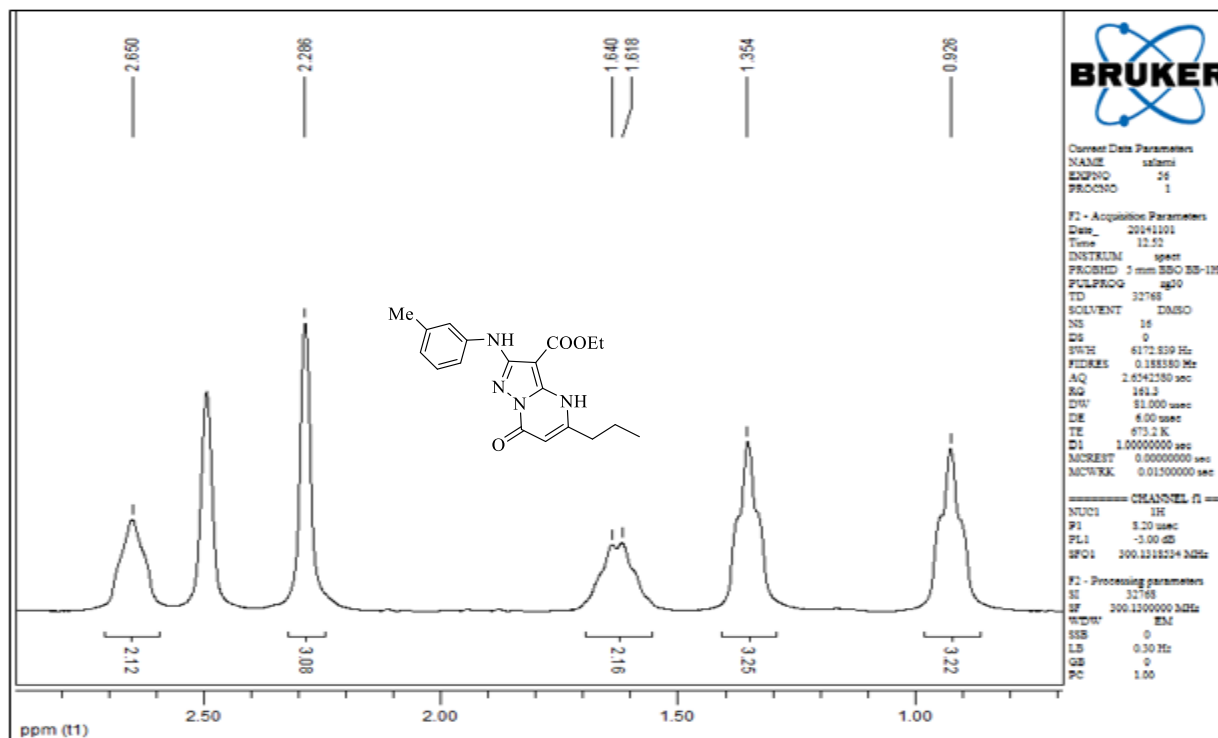
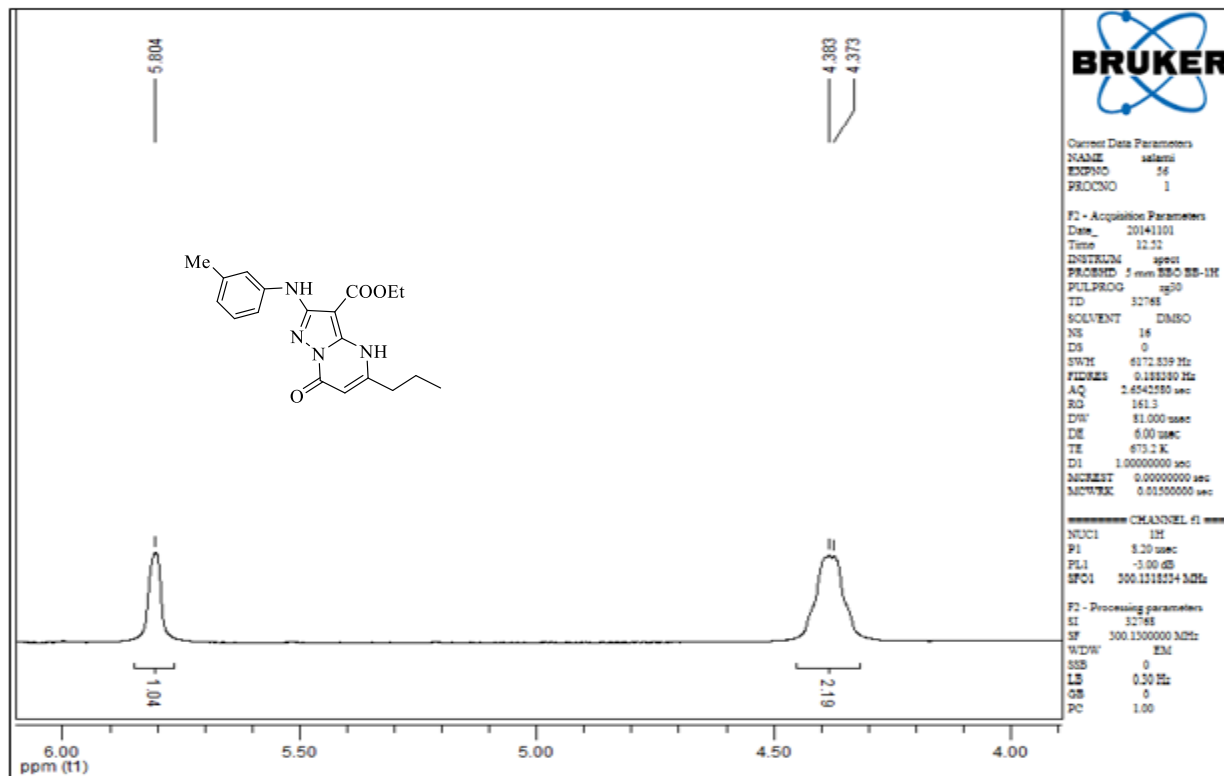
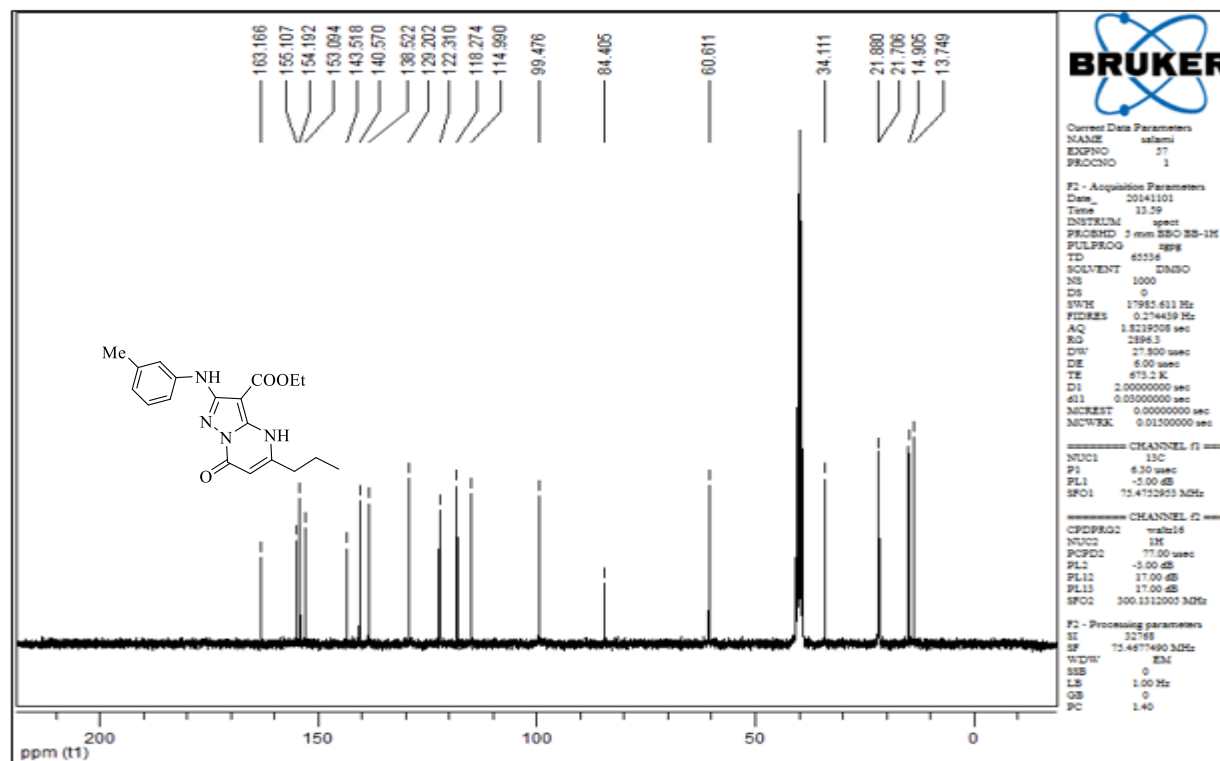


Figure S38. ^{13}C NMR spectrum (300 MHz, $\text{DMSO}-d_6$) of compound **4m**.**Figure S39.** IR spectrum (KBr) of compound **4m**.