

Identification of novel non-toxic and anti-angiogenic α -fluorination chalcones as potent colchicine binding site inhibitors

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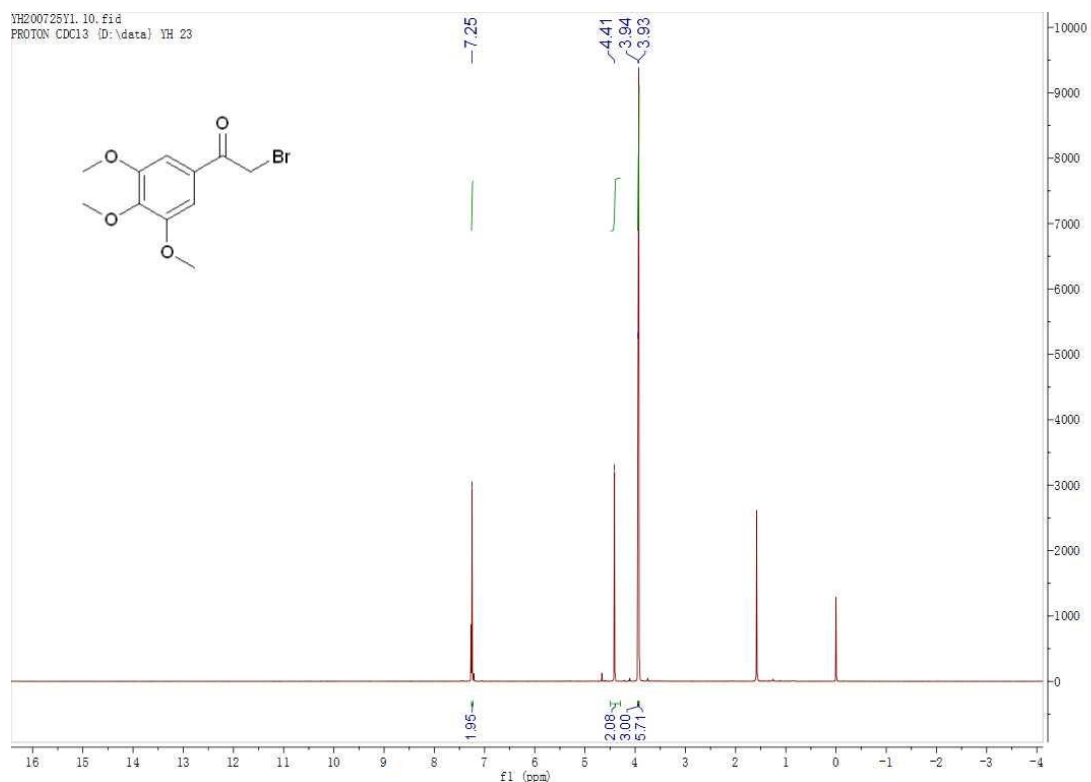
*Corresponding authors: yongfangyao@zzu.edu.cn (Yongfang Yao), dragonfly_wang@163.com (Longfei Wang)

Supplementary Material

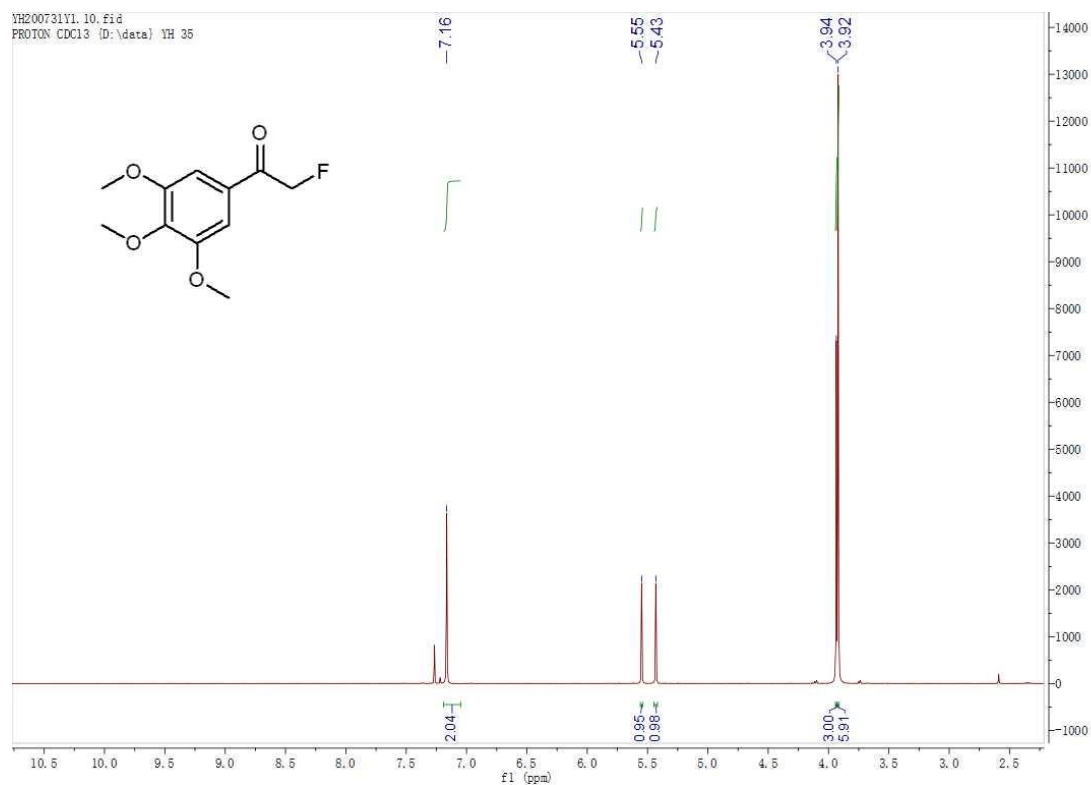
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1. ¹H, ¹³C NMR and HRMS spectra of synthesized products

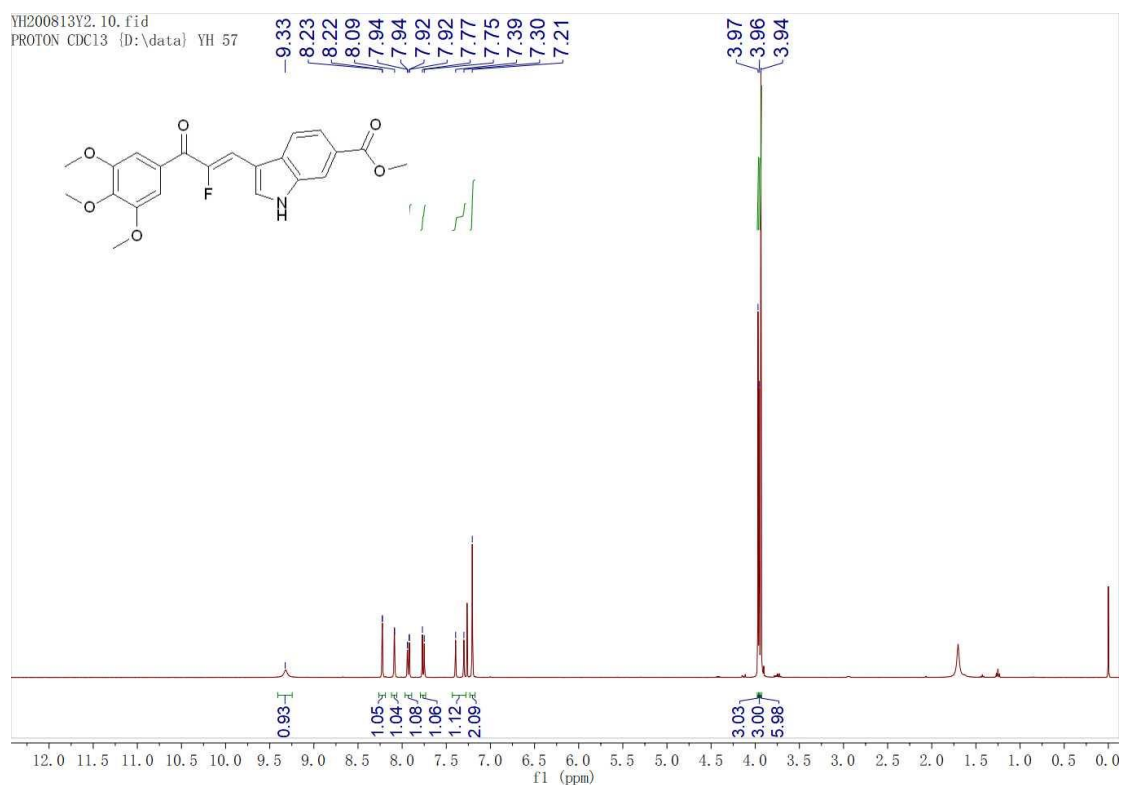


¹H NMR of 2

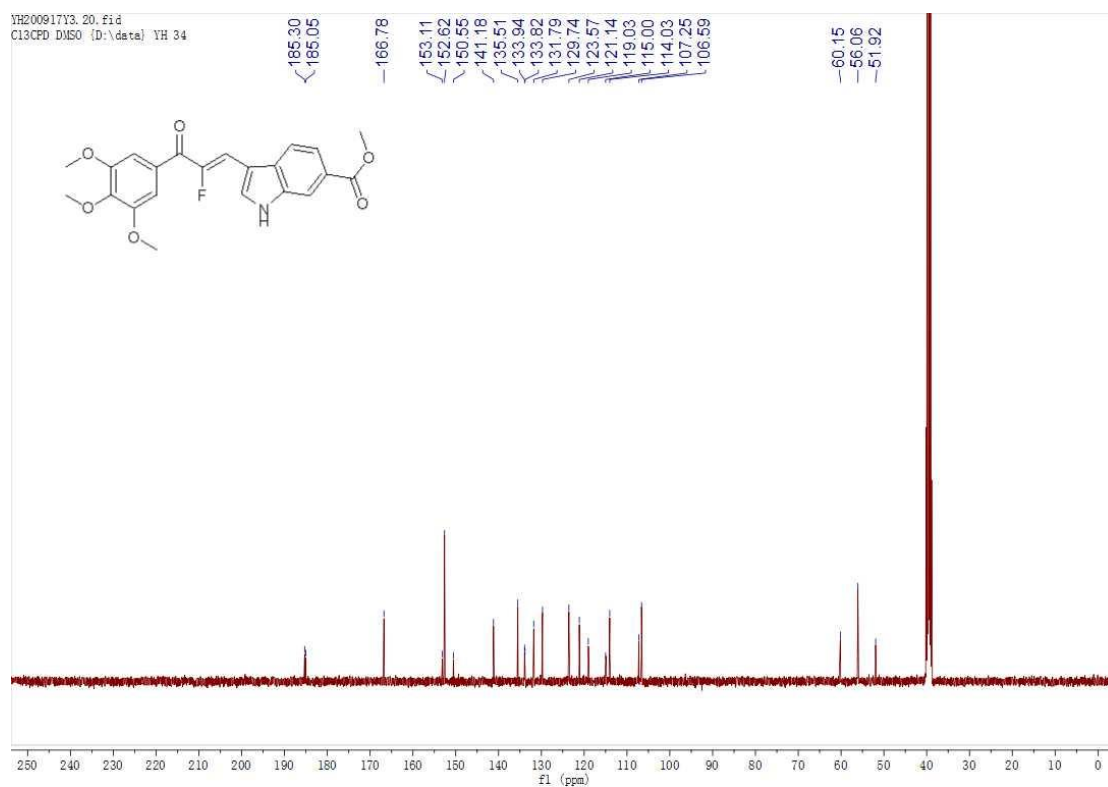


^1H NMR of 3

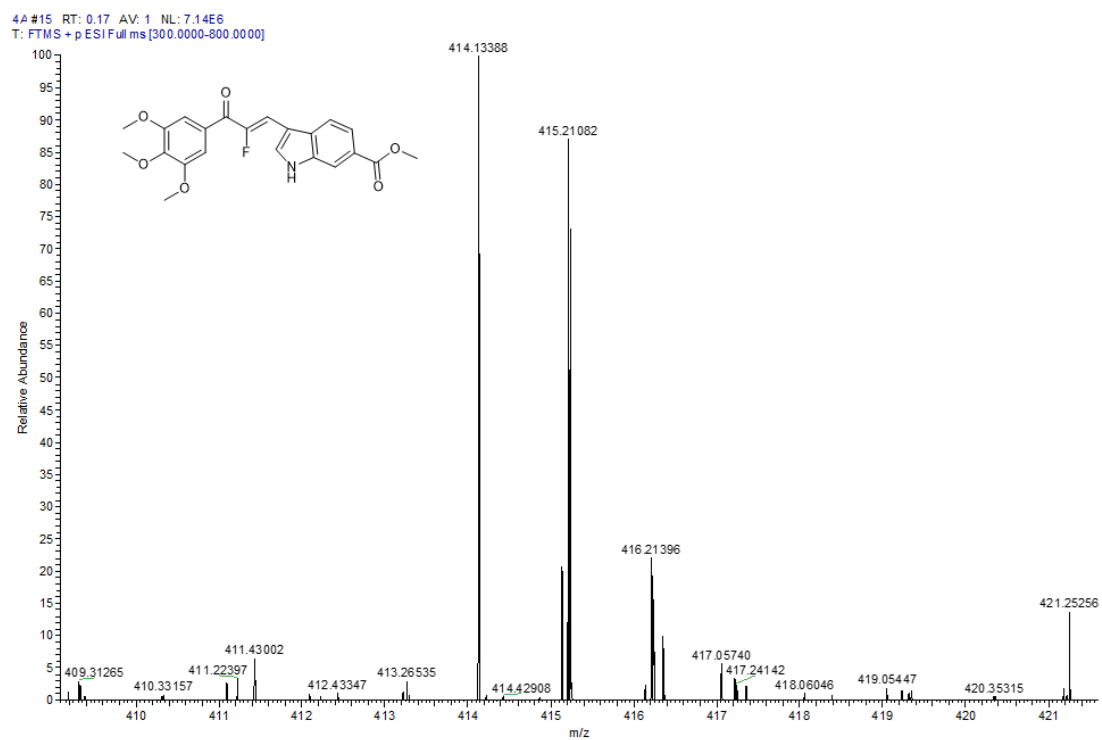
(1) ^1H , ^{13}C NMR and HRMS spectra of 4a



^1H NMR of 4a

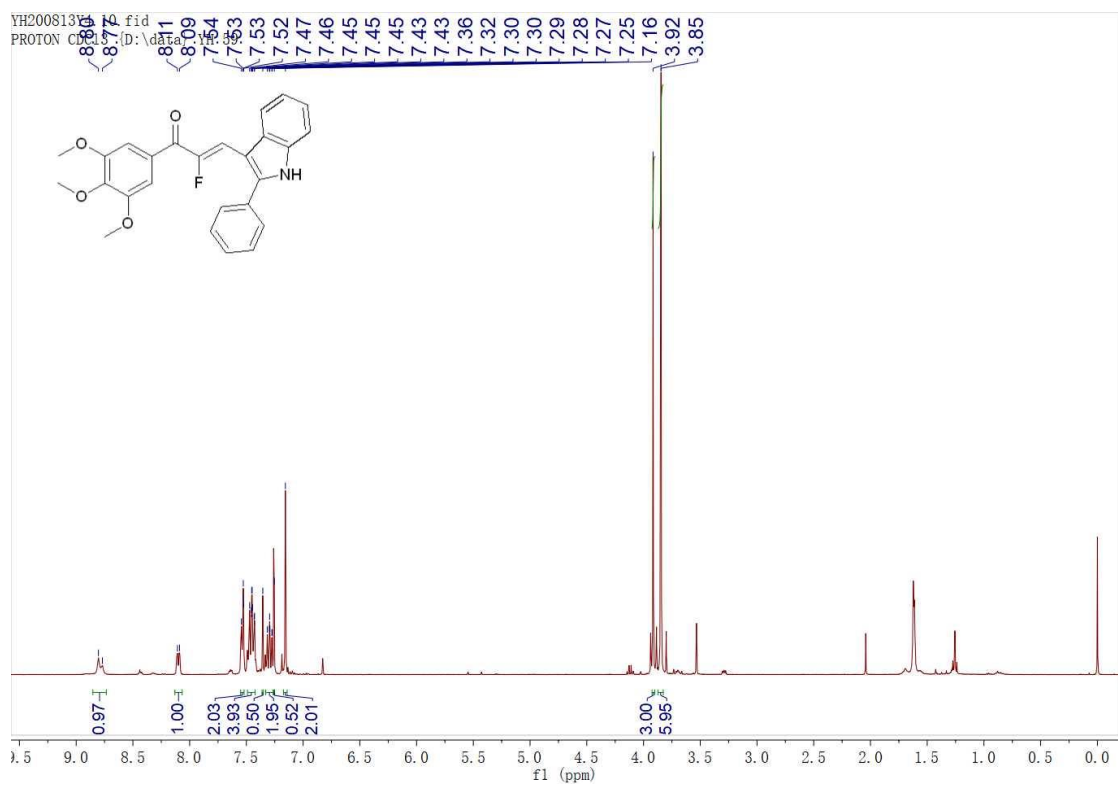


^{13}C NMR of 4a

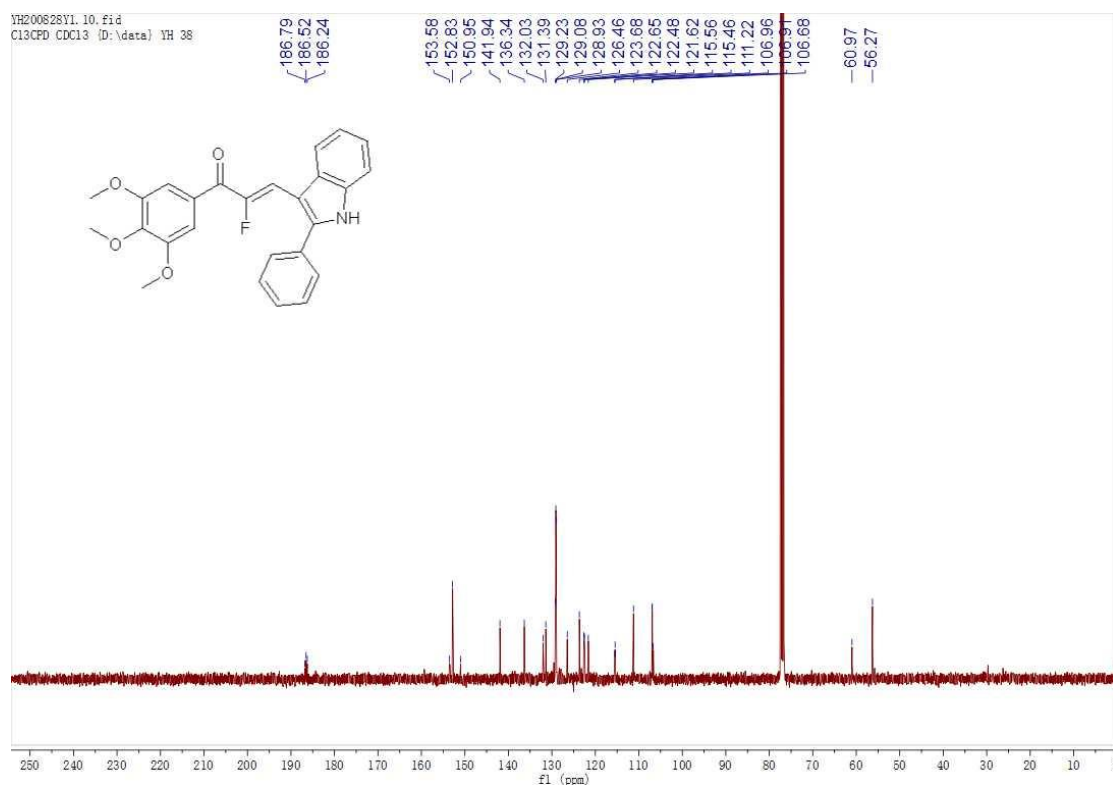


HRMS of 4a

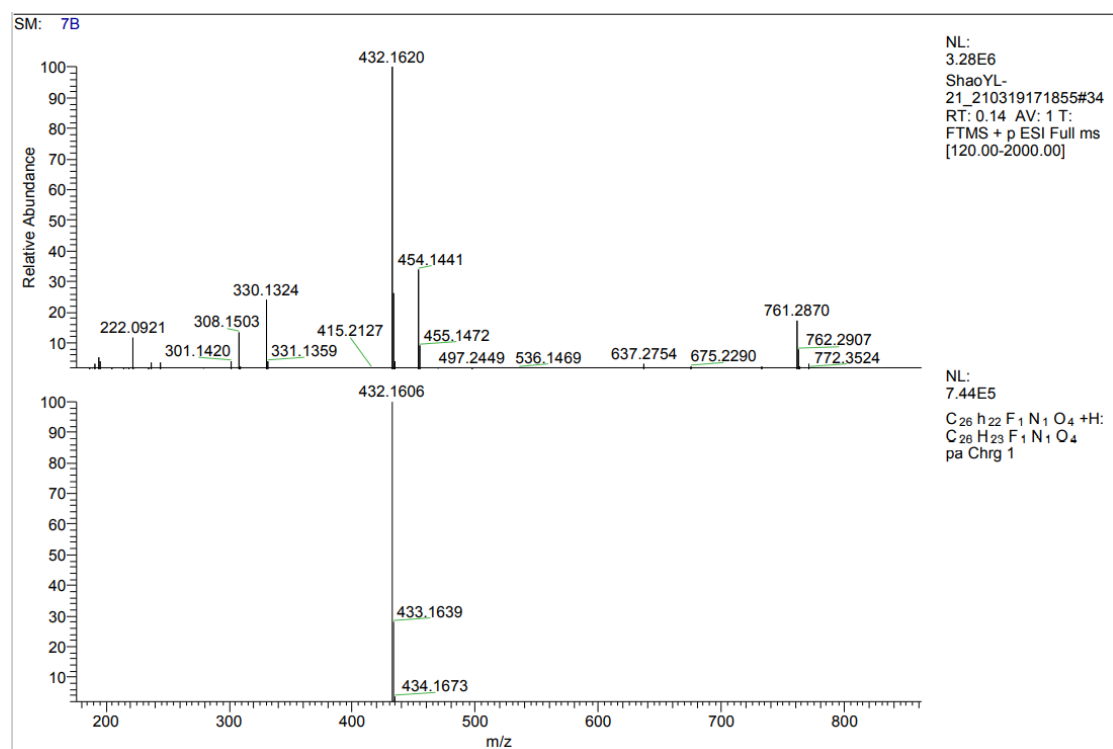
(2) ^1H , ^{13}C NMR and HRMS spectra of 4b



¹H NMR of 4b

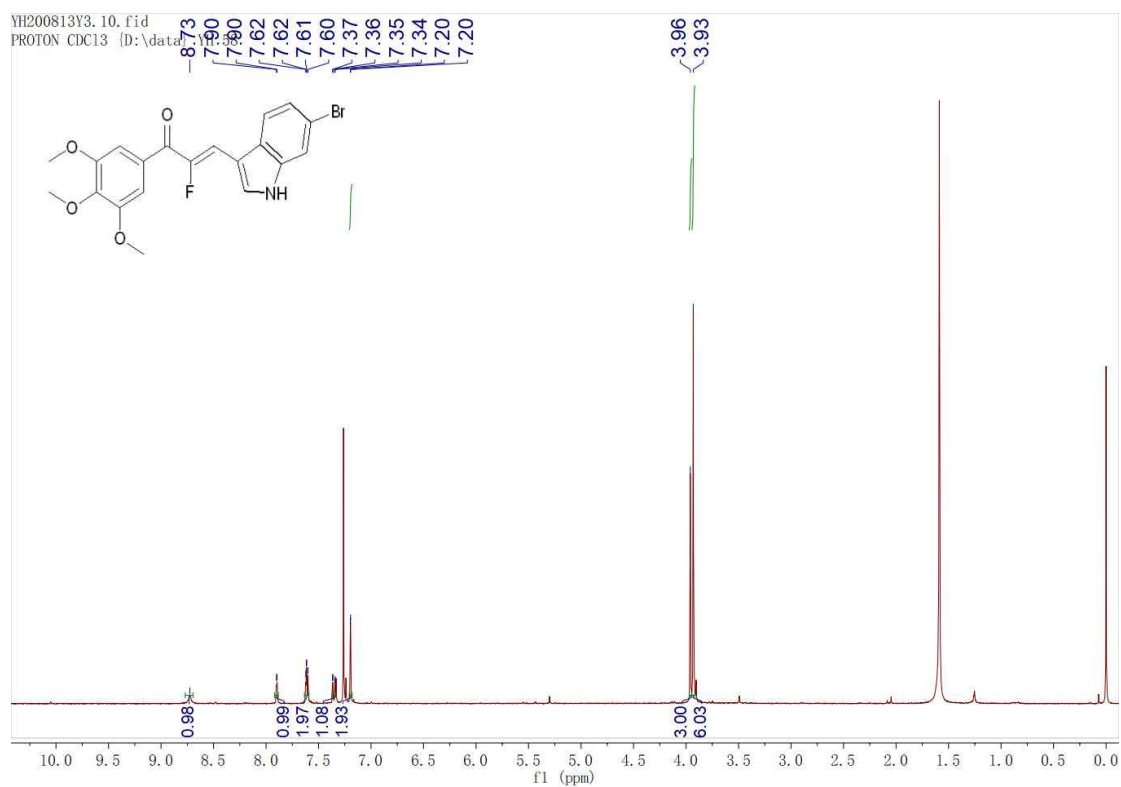


¹³C NMR of 4b

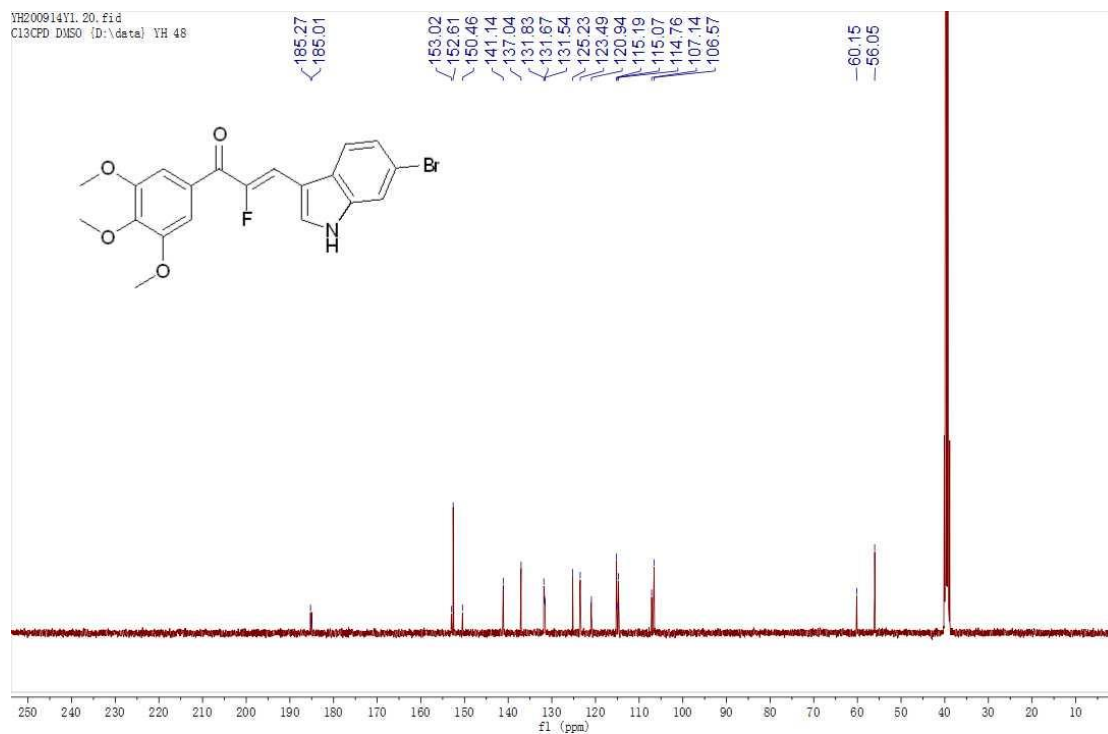


HRMS of 4b

(3) ^1H , ^{13}C NMR and HRMS spectra of 4c



^1H NMR of 4c

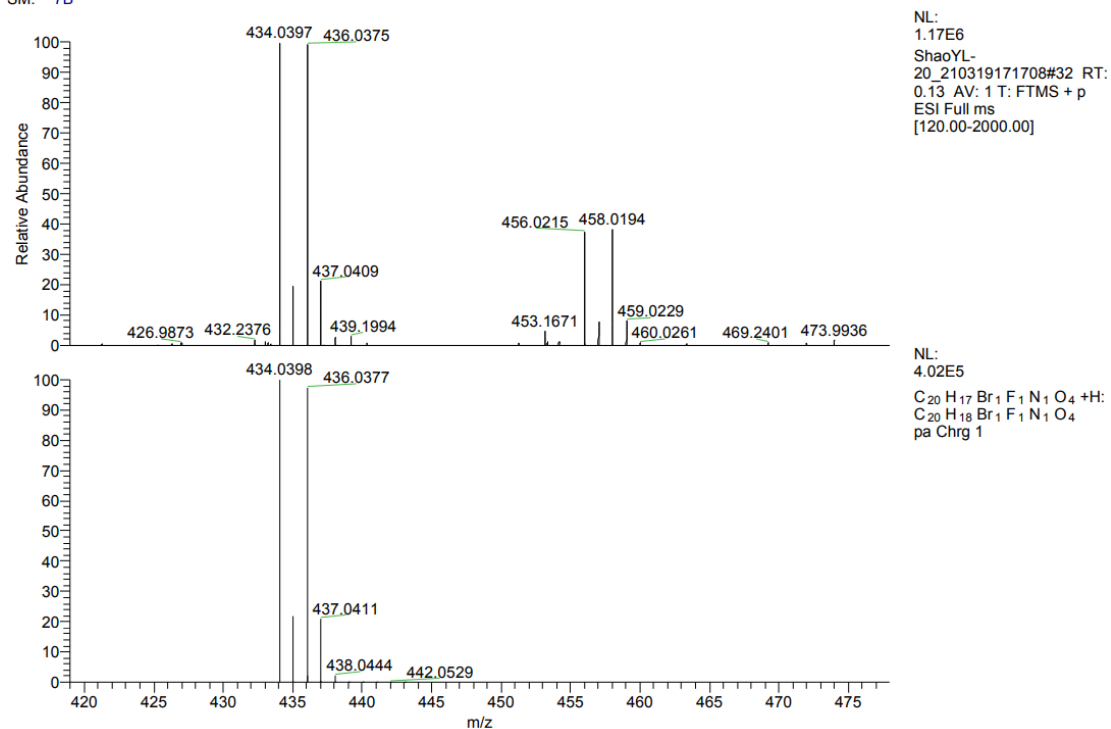


^{13}C NMR of **4c**

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3/19/2021 5:17:08 PM

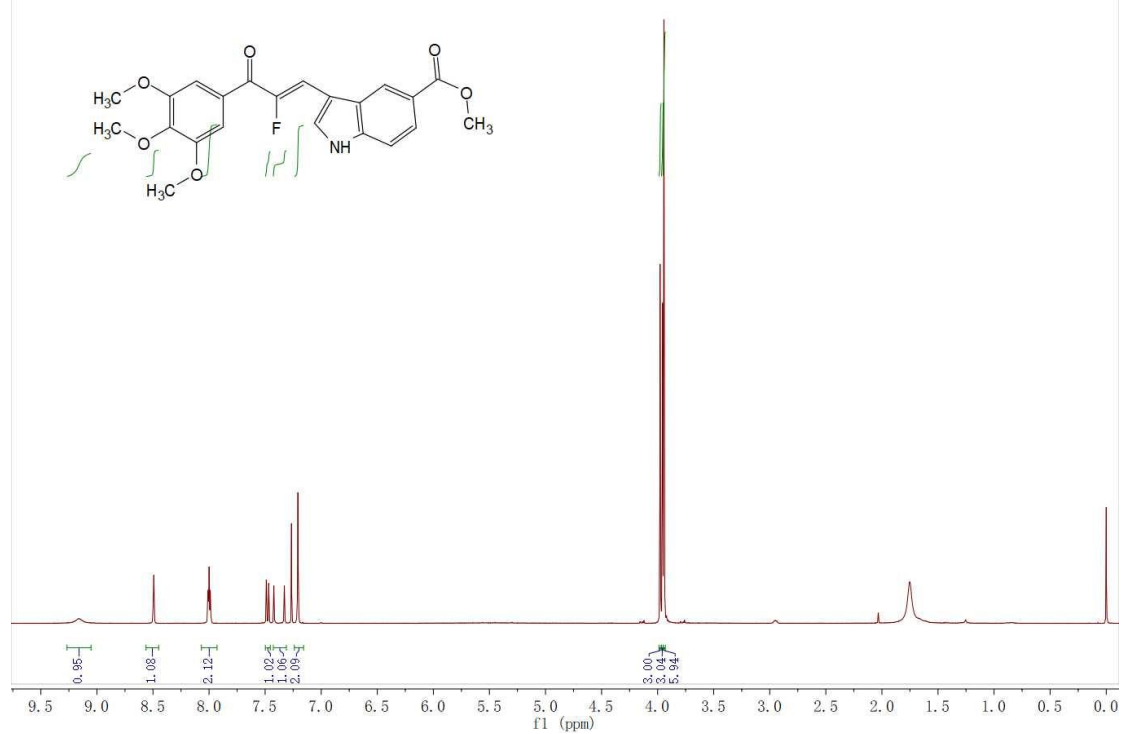
SM: 7B



HRMS of **4c**

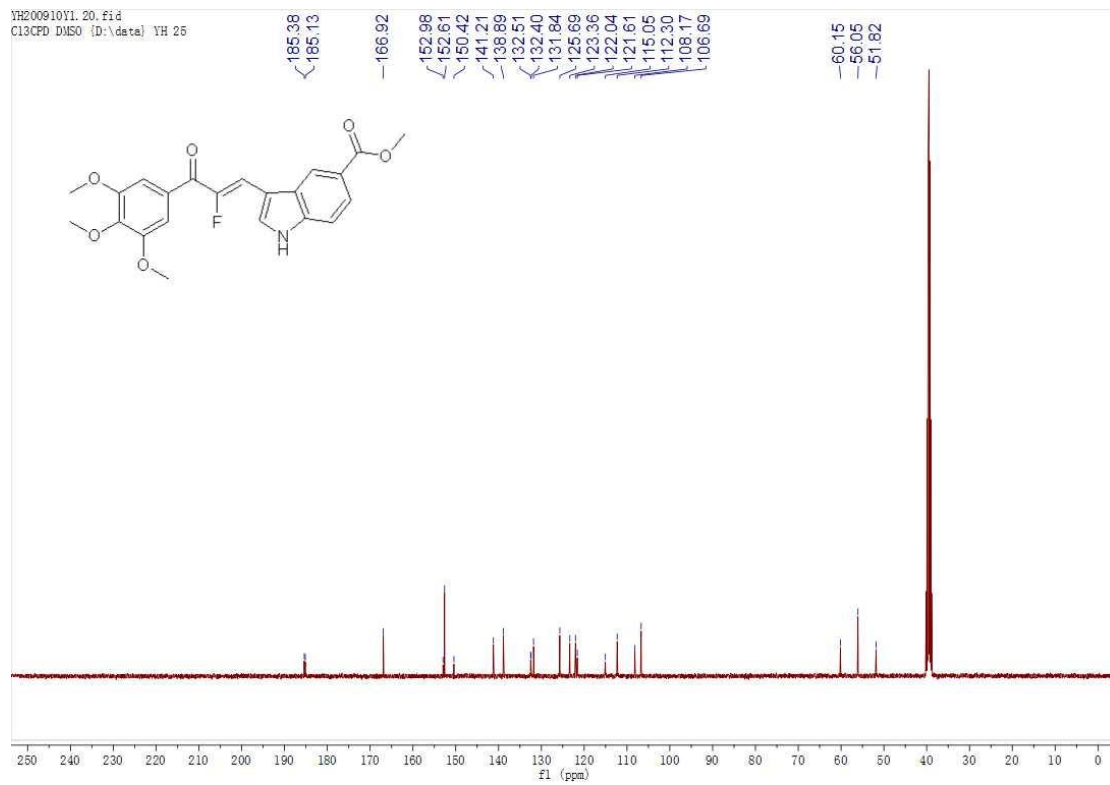
(4) ^1H , ^{13}C NMR and HRMS spectra of **4d**

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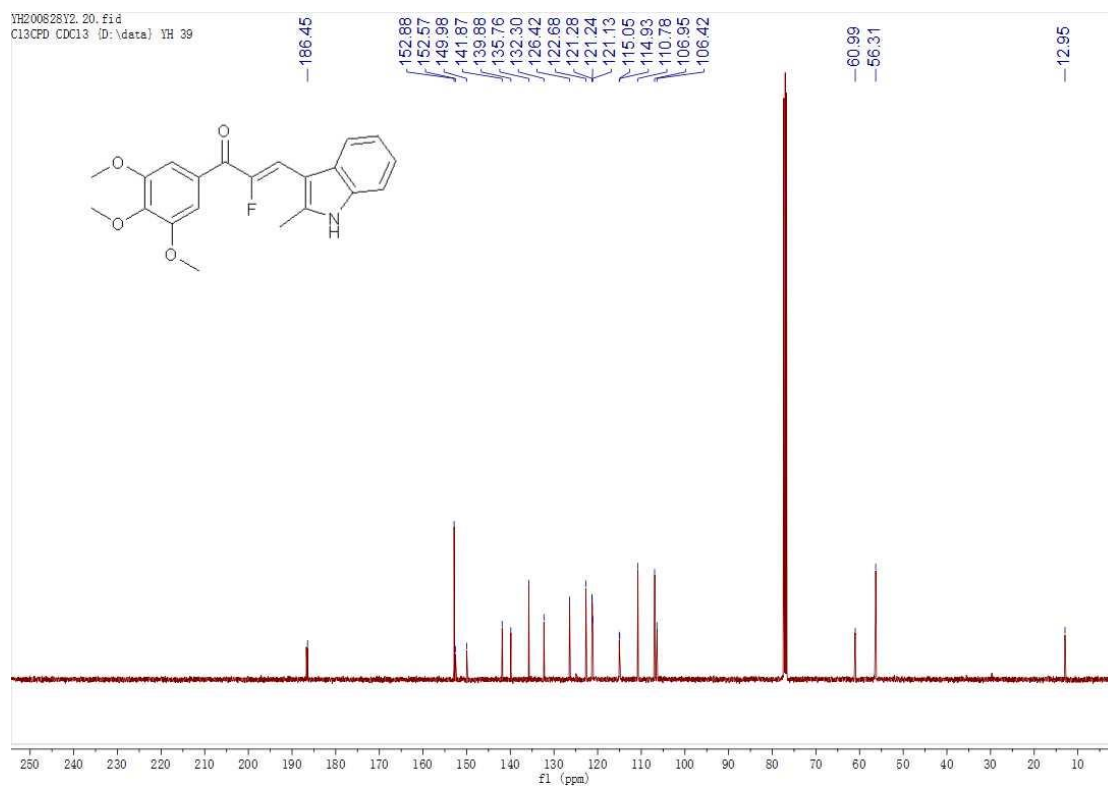
¹H NMR of 4d

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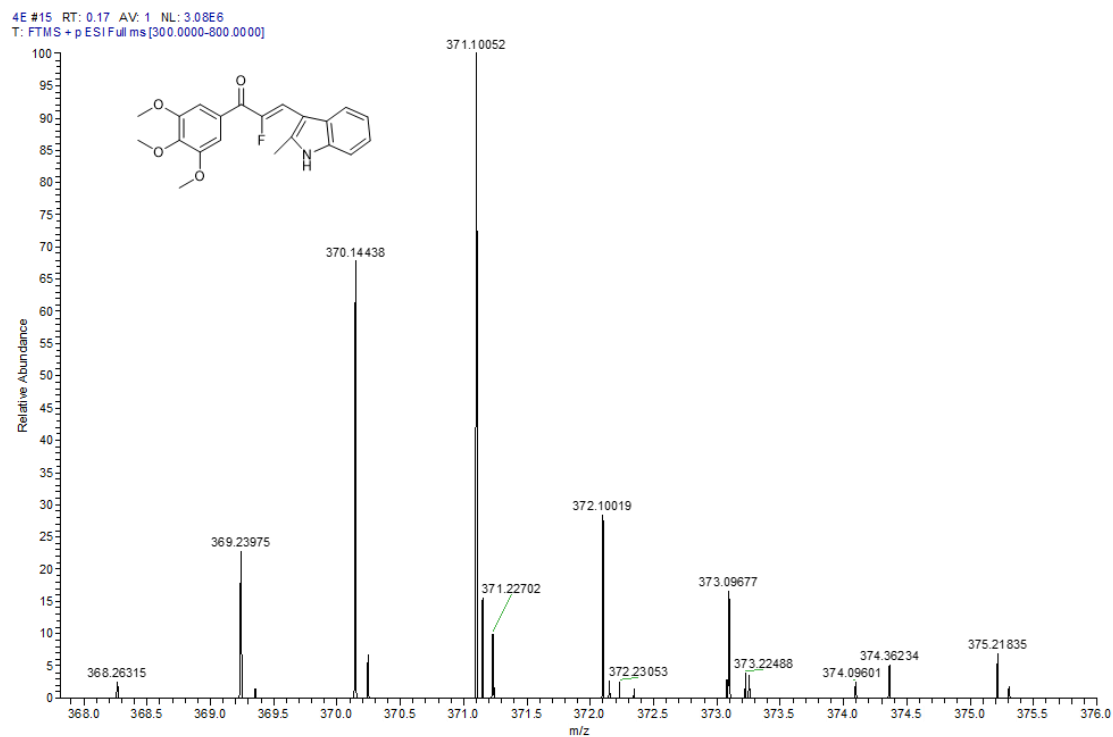


¹³C NMR of 4d

¹H NMR of 4e

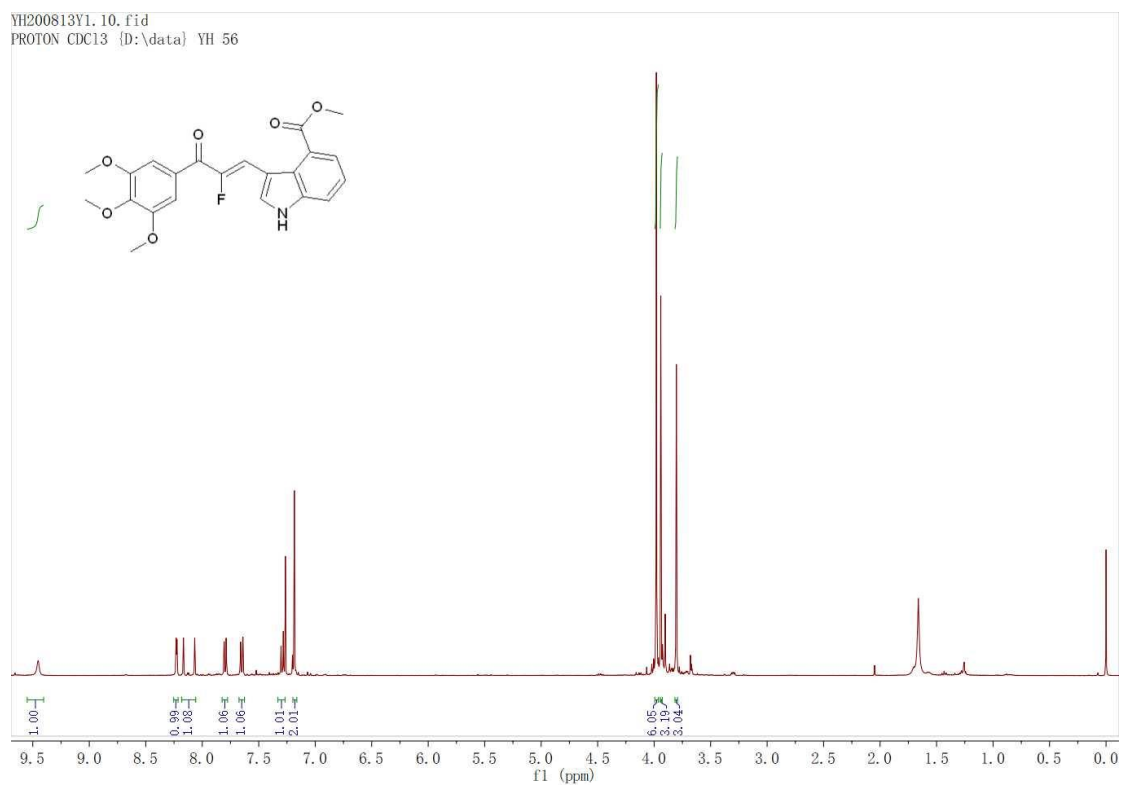


¹³C NMR of 4e

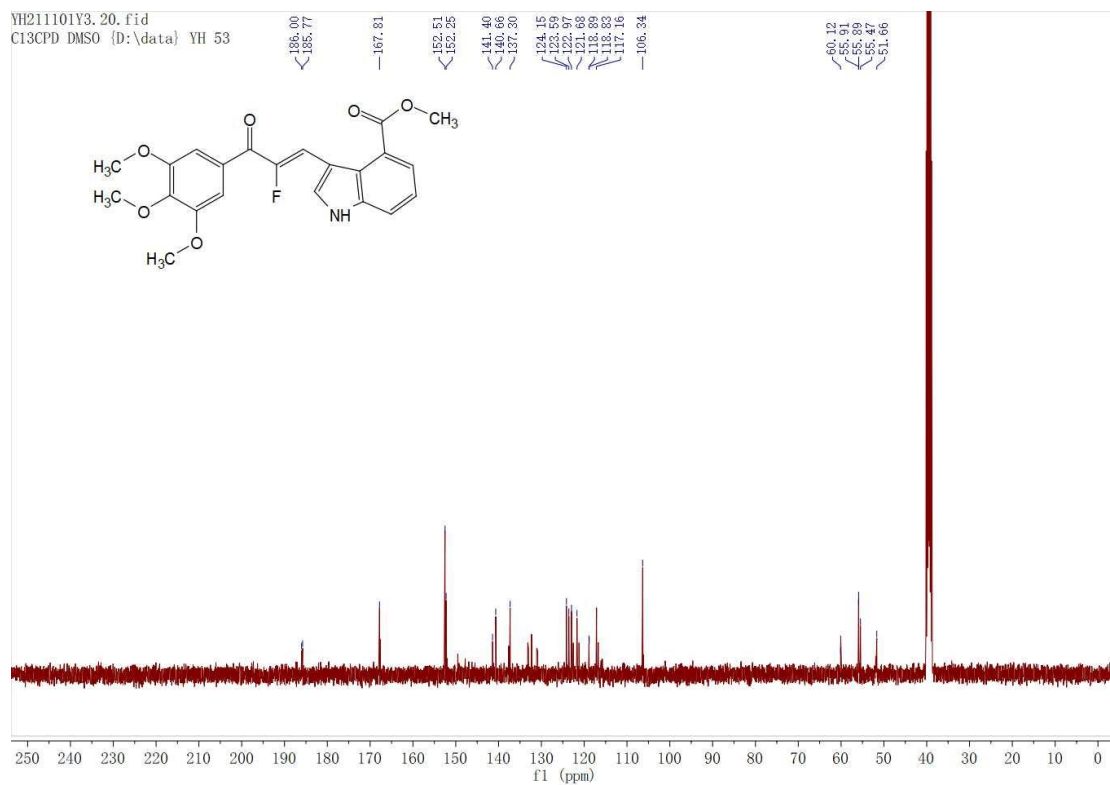


HRMS of 4e

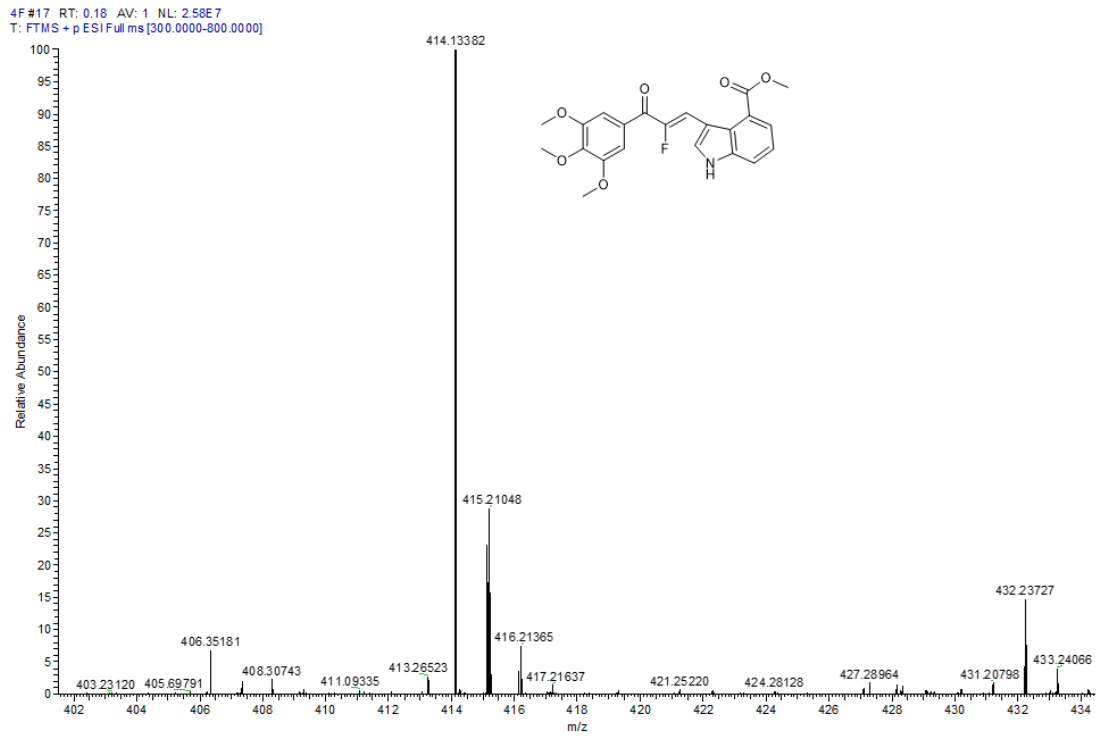
(6) ^1H , ^{13}C NMR and HRMS spectra of **4f**



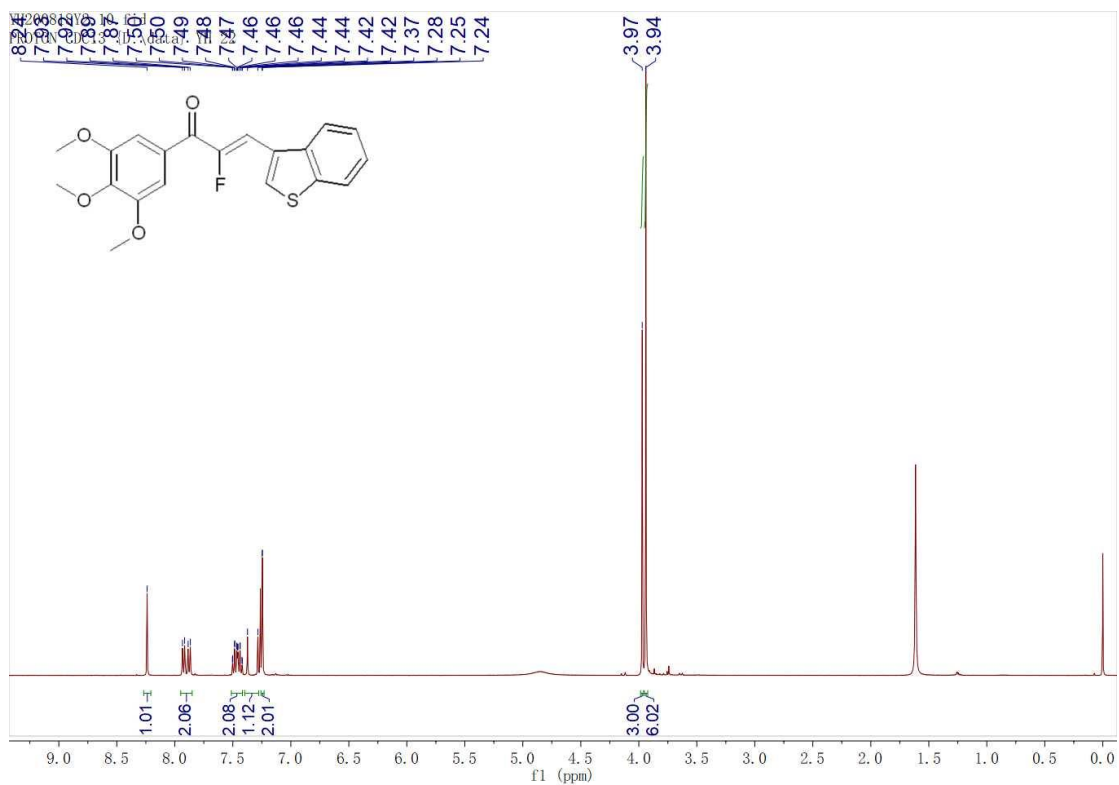
^1H NMR of **4f**



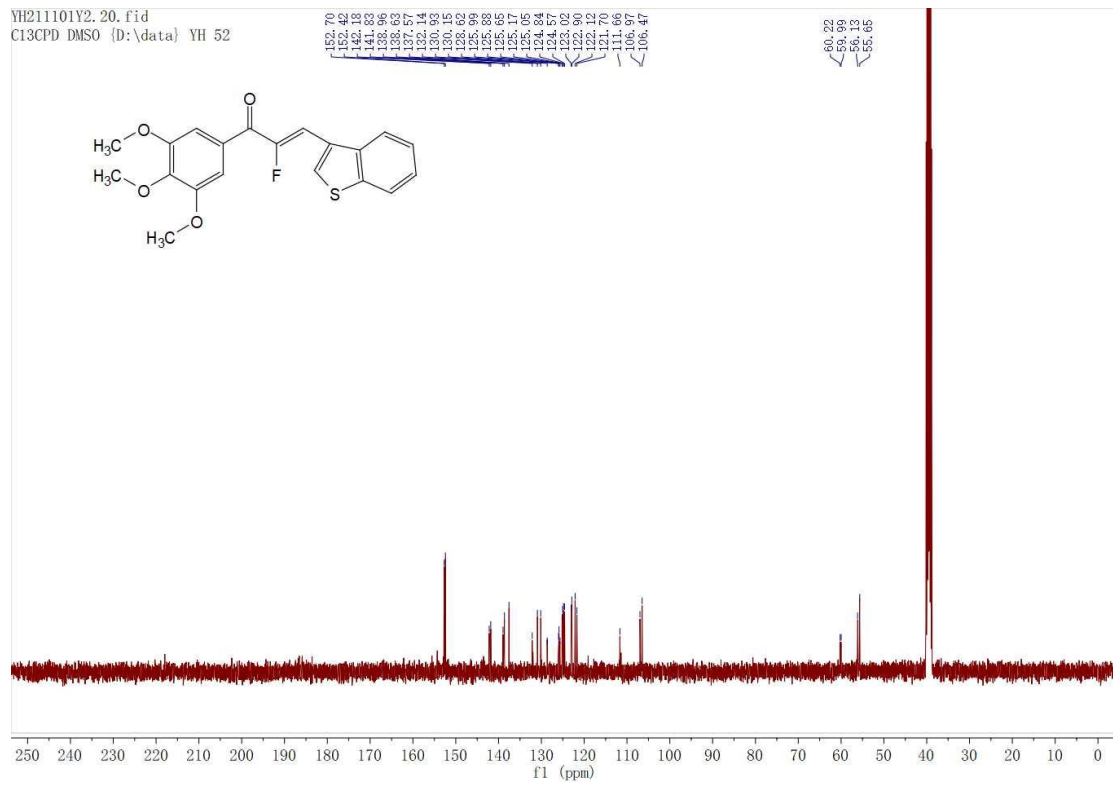
^{13}C NMR of **4f**



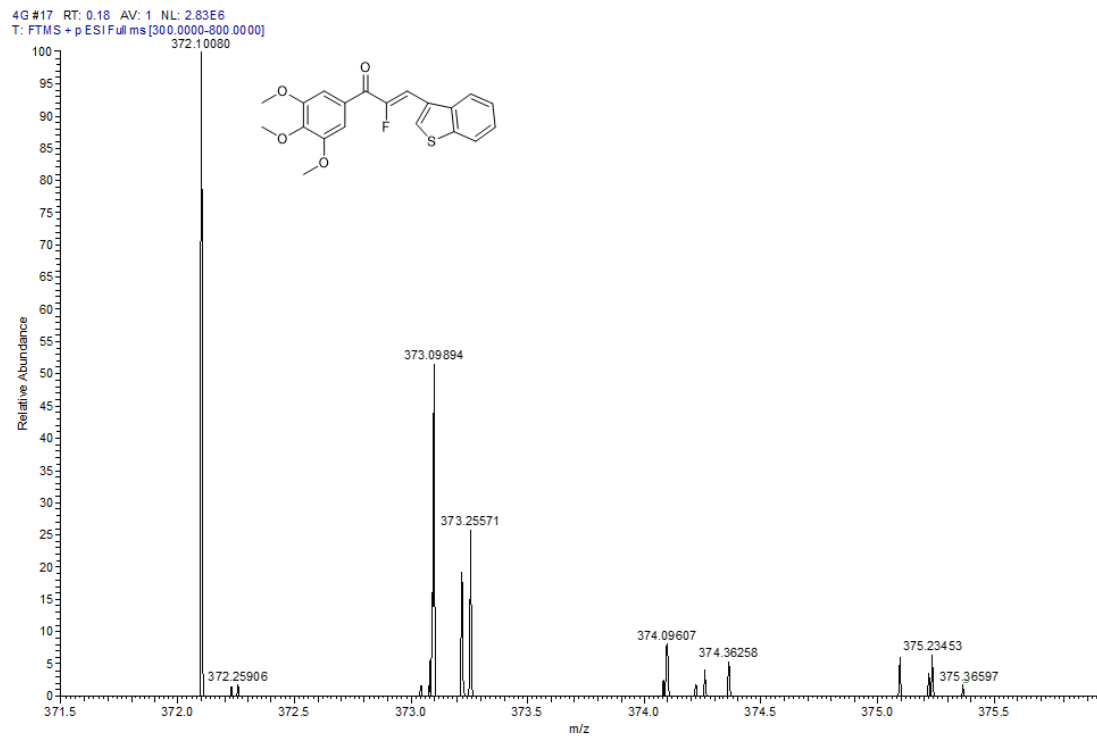
(7) ^1H , ^{13}C NMR and HRMS spectra of **4g**



¹H NMR of 4g

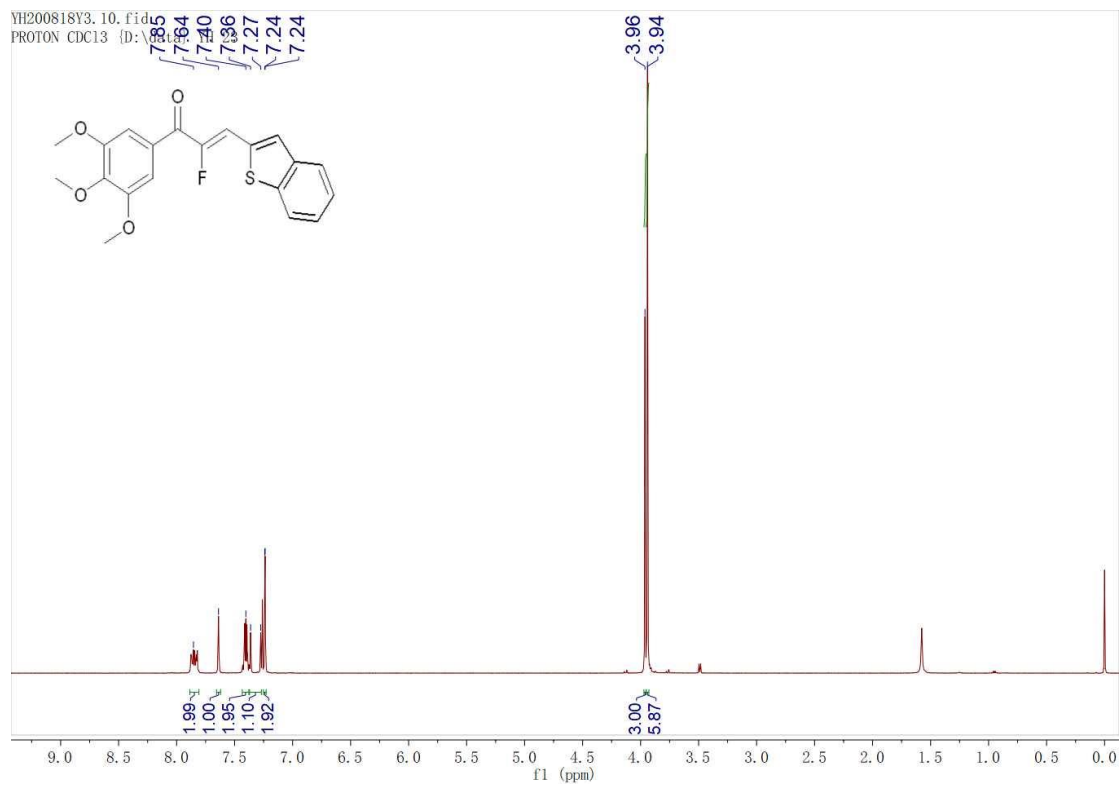


¹³C NMR of 4g

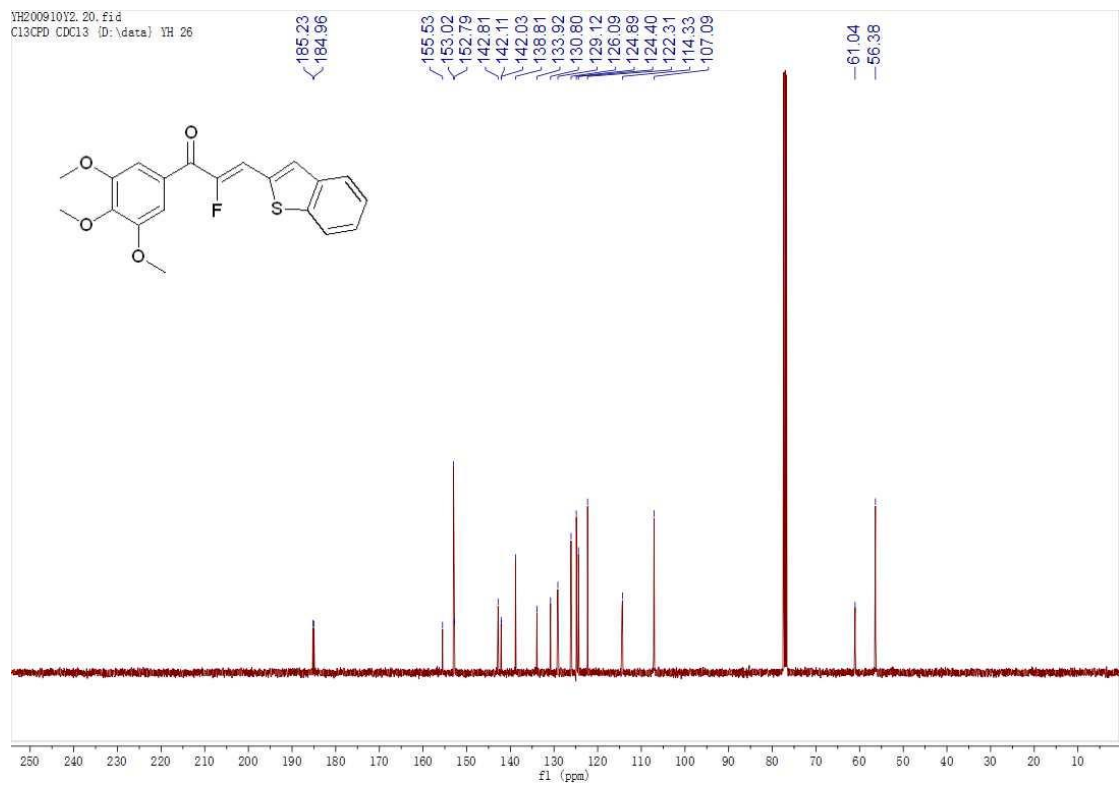


HRMS of 4g

(8) ^1H , ^{13}C NMR and HRMS spectra of **4h**

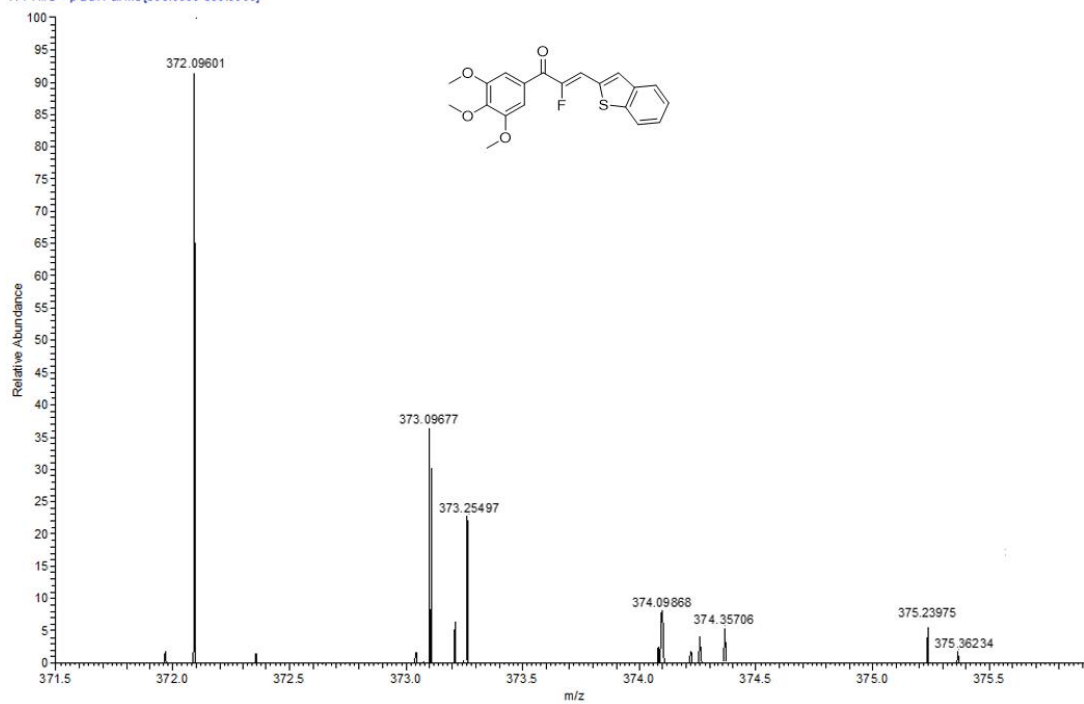


^1H NMR of **4h**



^{13}C NMR of **4h**

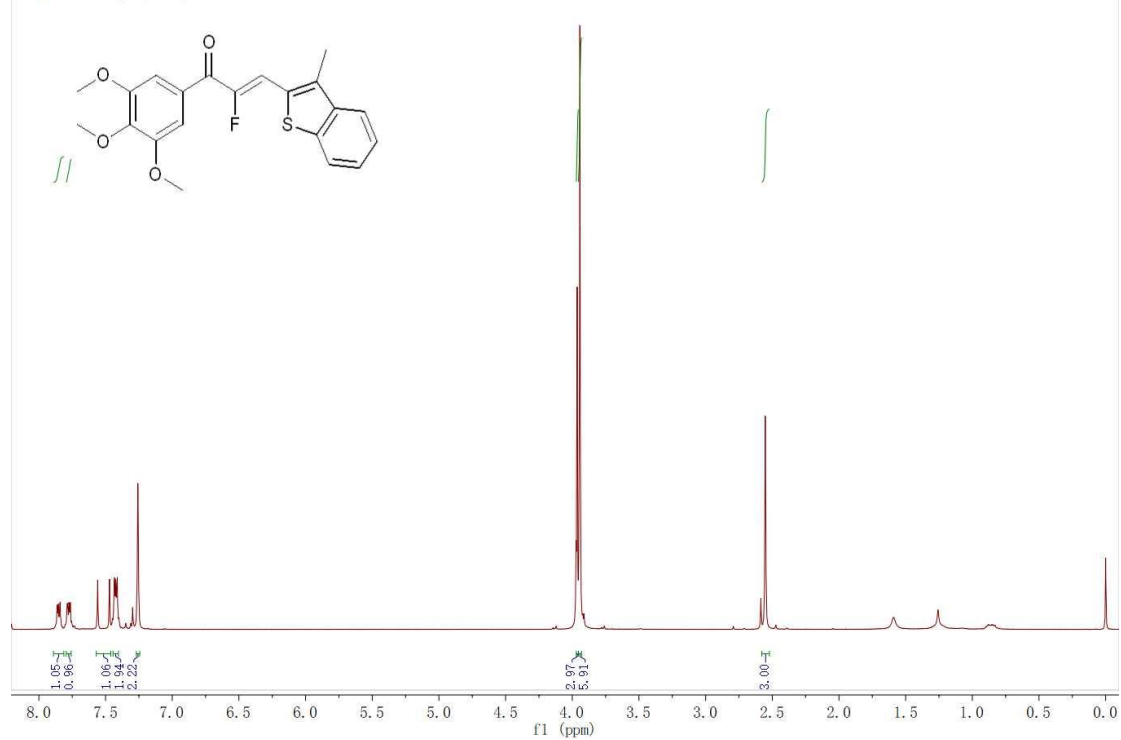
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HRMS of **4h**

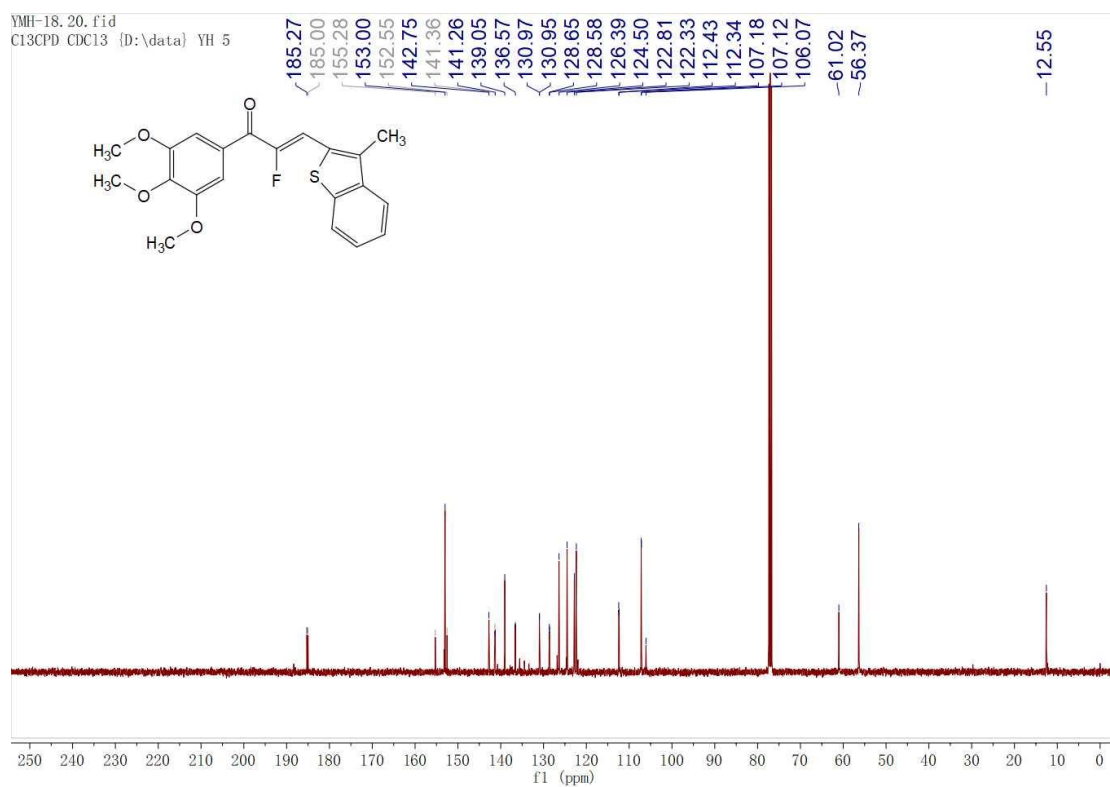
(9) ^1H , ^{13}C NMR and HRMS spectra of **4i**

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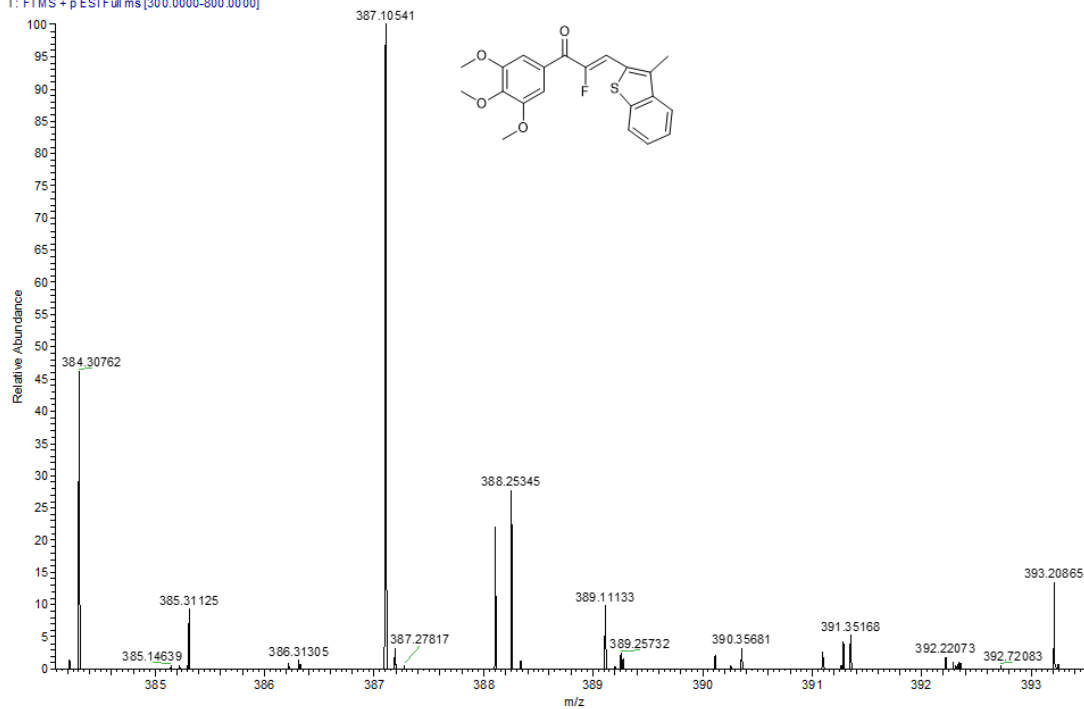
¹H NMR of 4i

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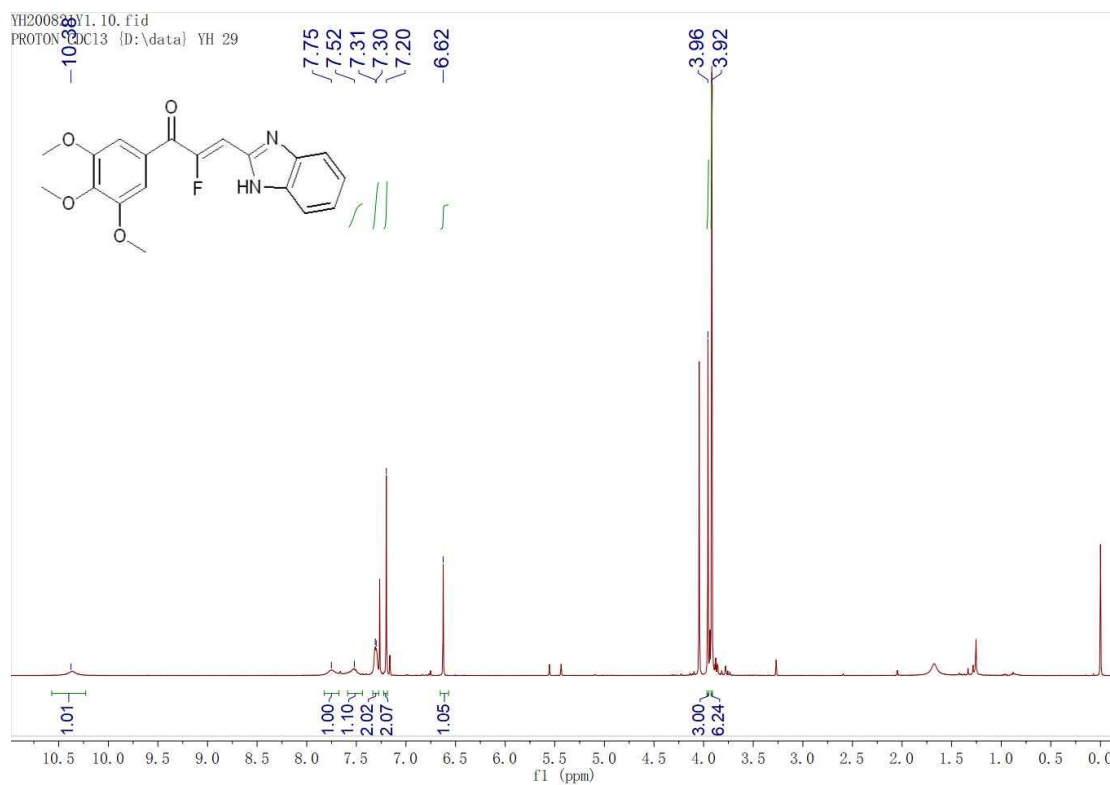


¹³C NMR of 4i

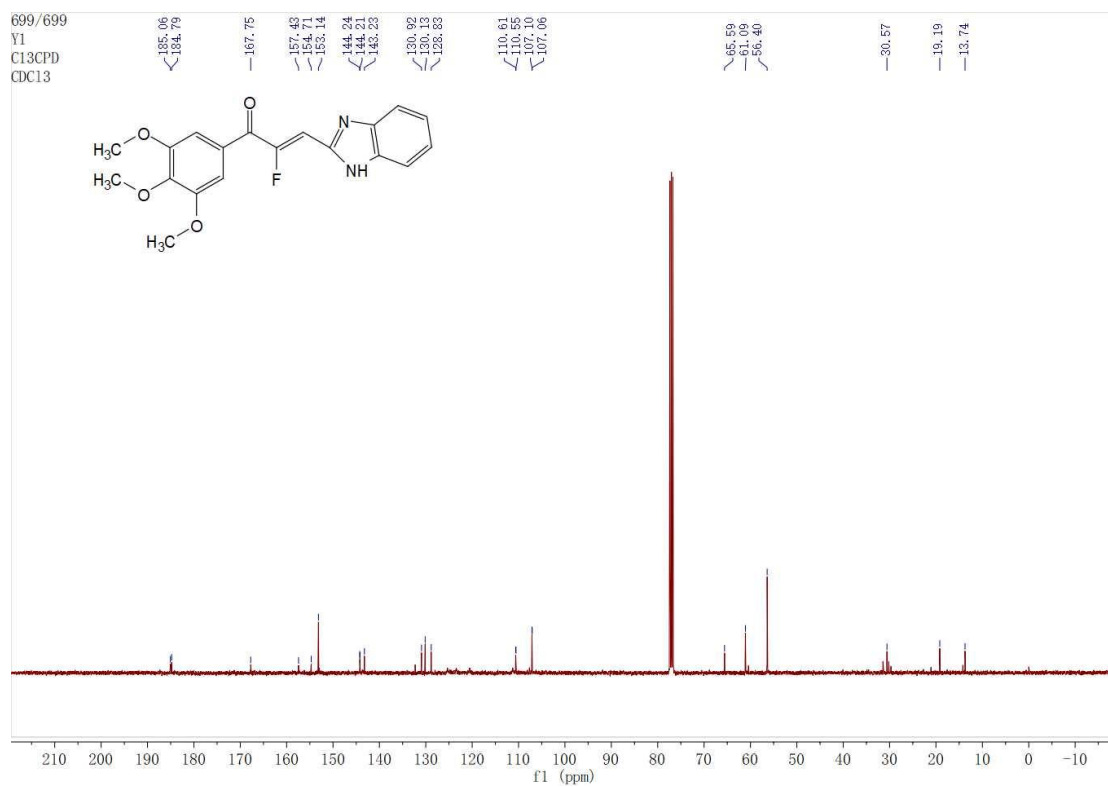
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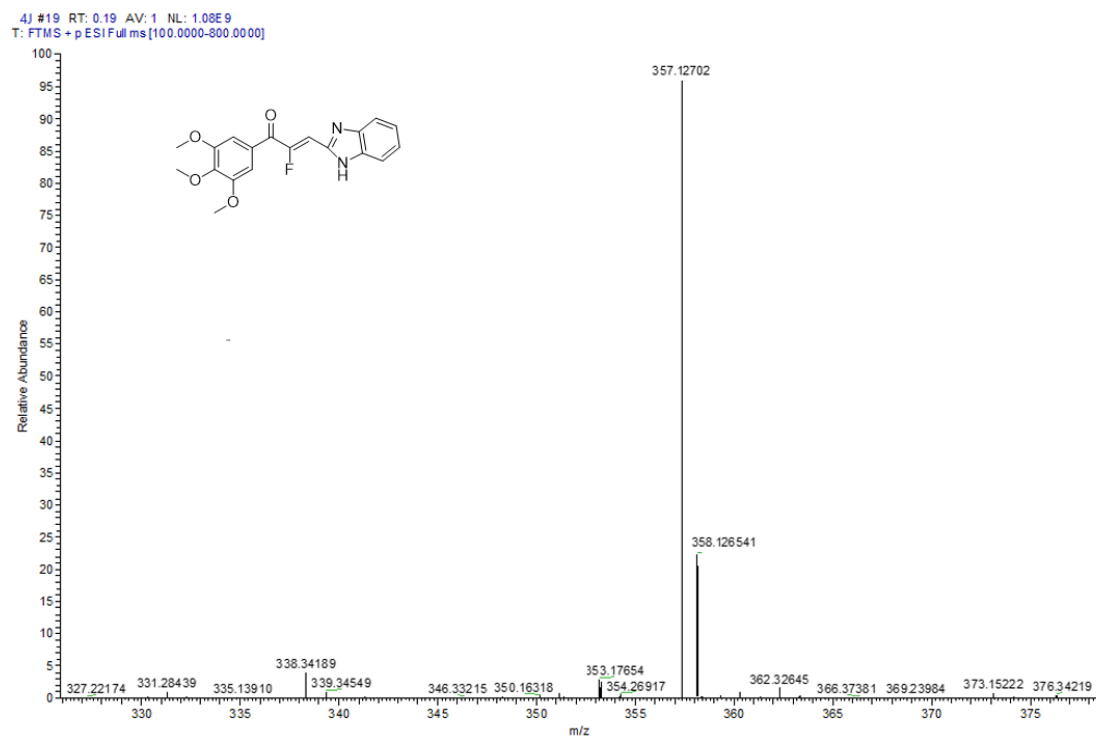
(10) ^1H , ^{13}C NMR and HRMS spectra of **4j**



¹H NMR of 4j

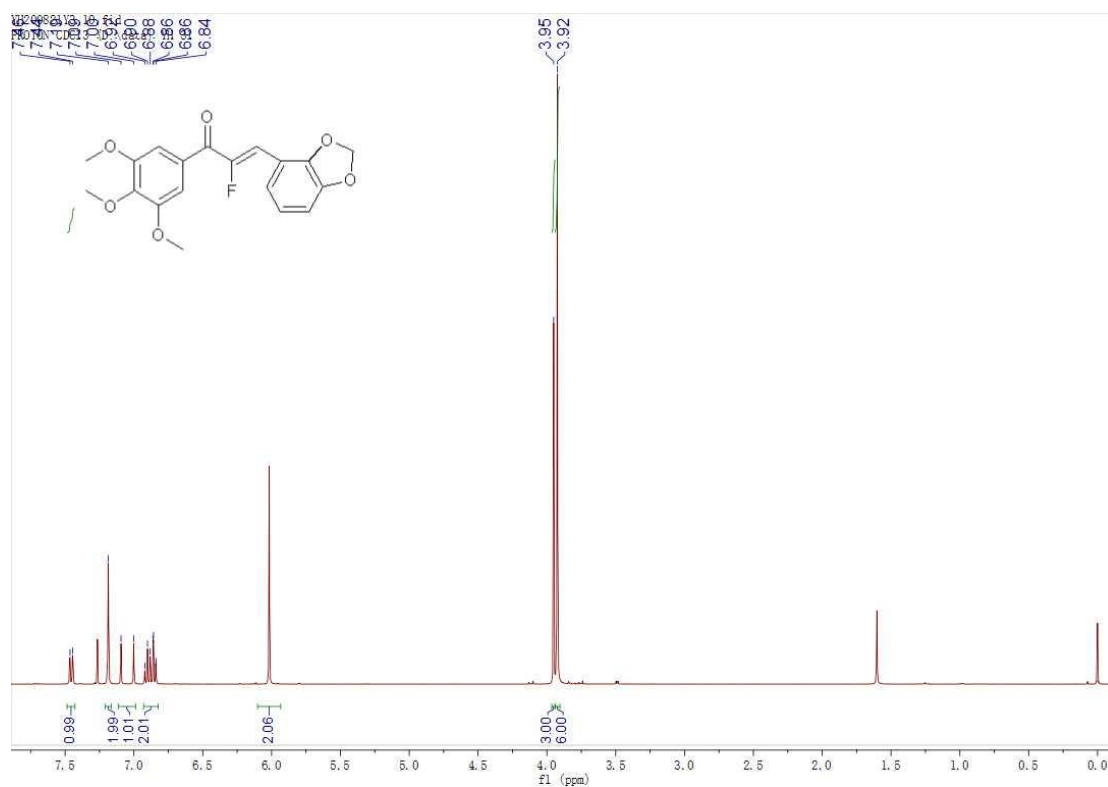


¹³C NMR of 4j

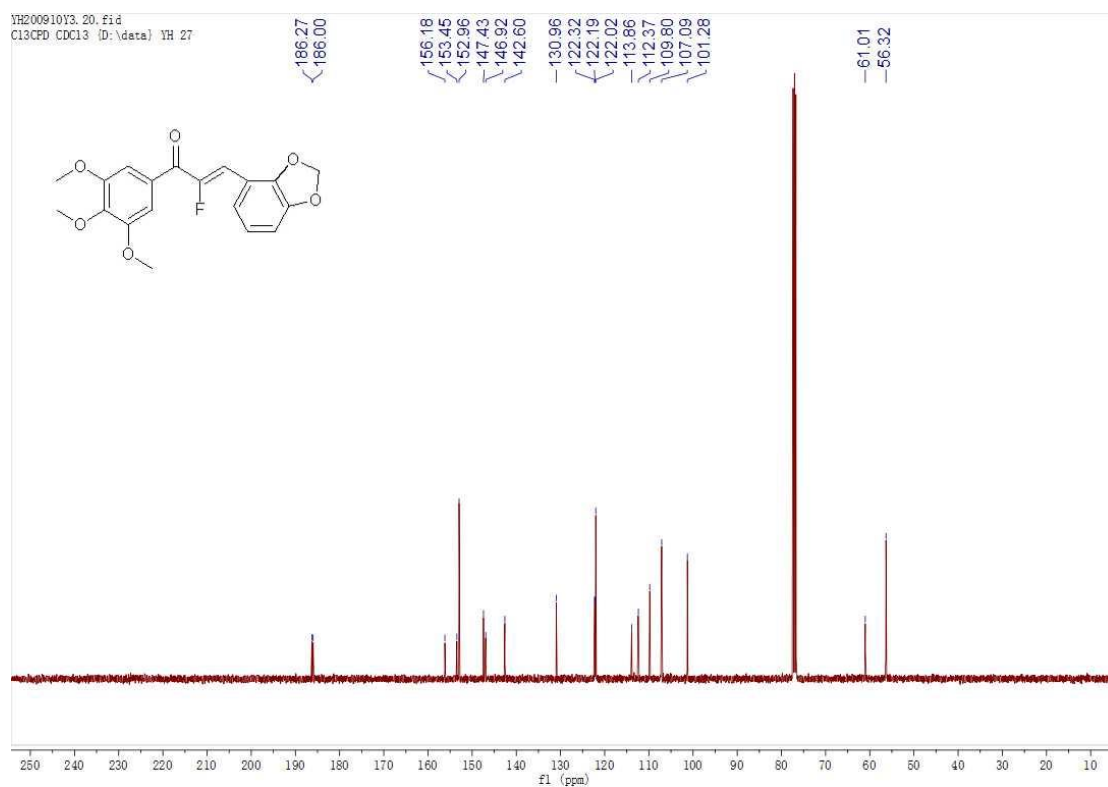


HRMS of 4j

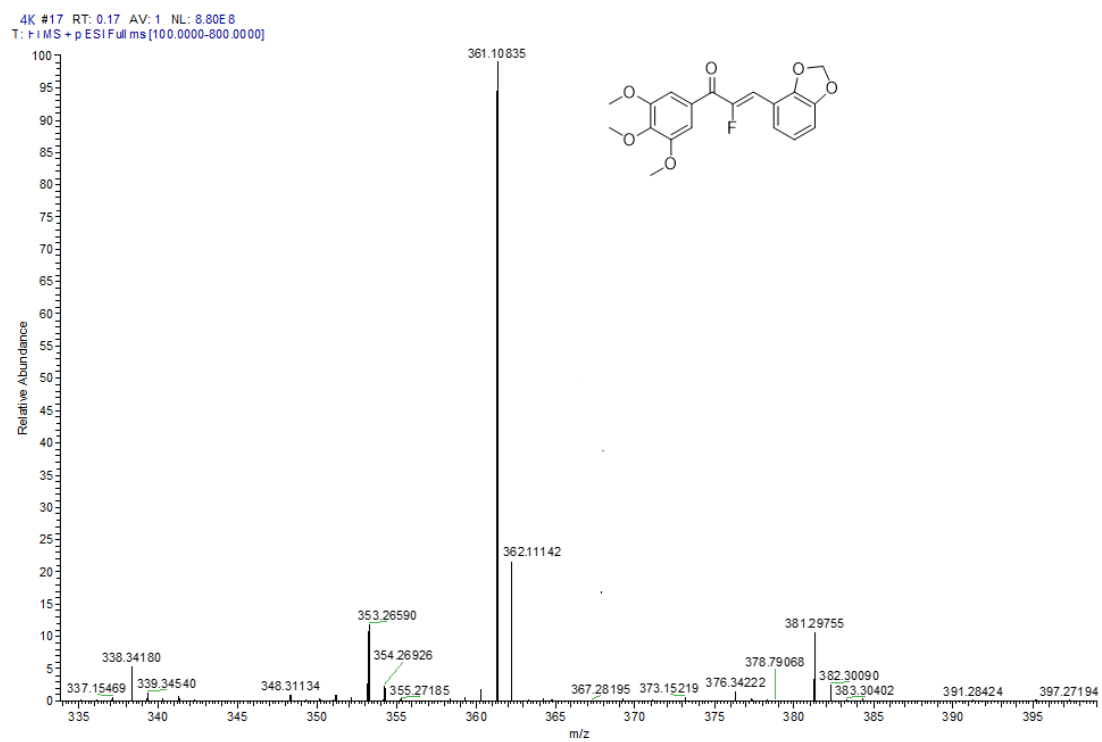
(11) ^1H -, ^{13}C NMR and HRMS spectra of **4k**



^1H NMR of **4k**

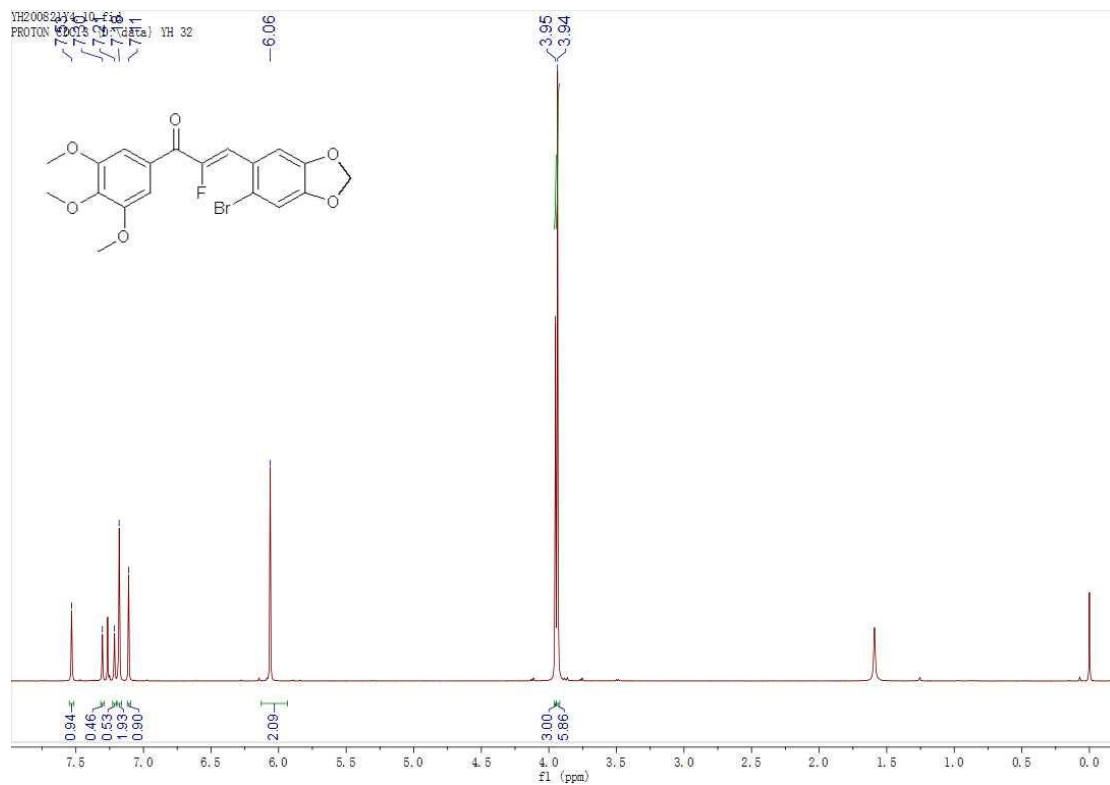


^{13}C NMR of **4k**

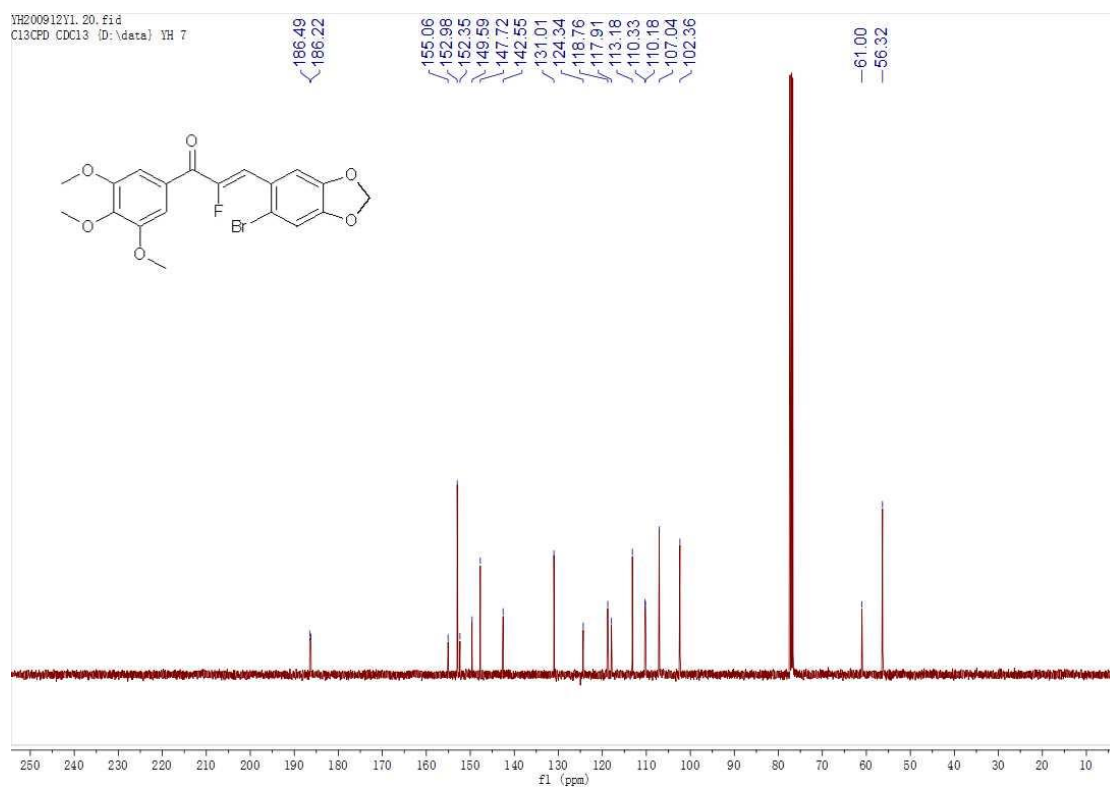


HRMS of **4k**

(**12**) ^1H , ^{13}C NMR and HRMS spectra of **4l**

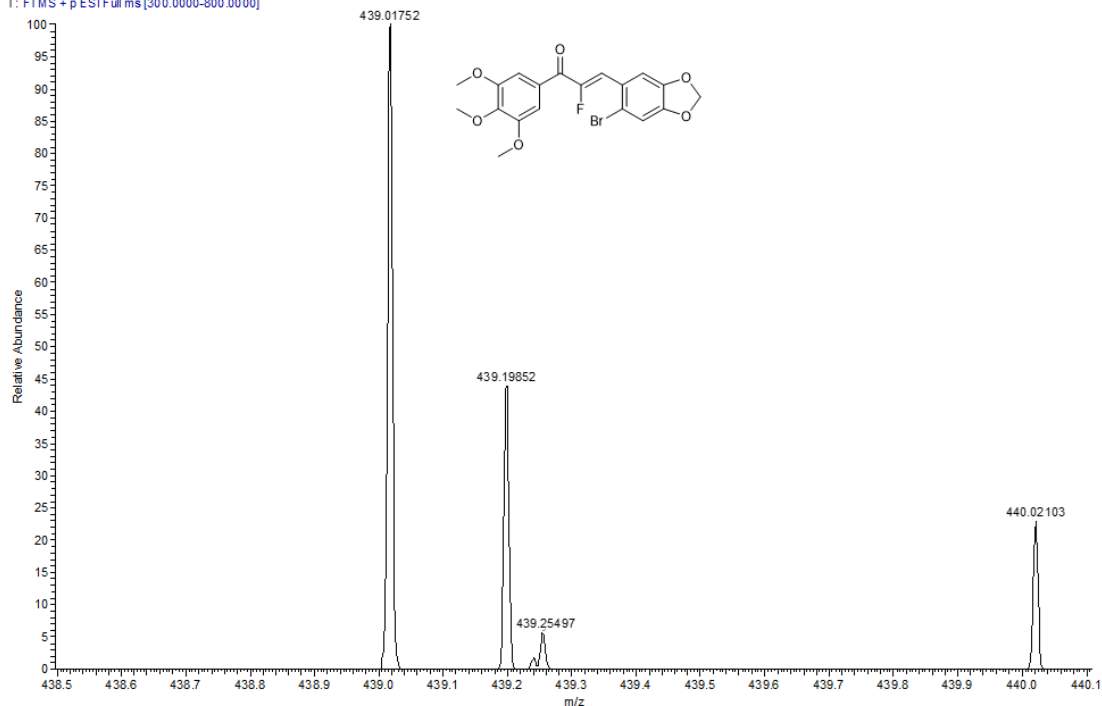


¹H NMR of 41



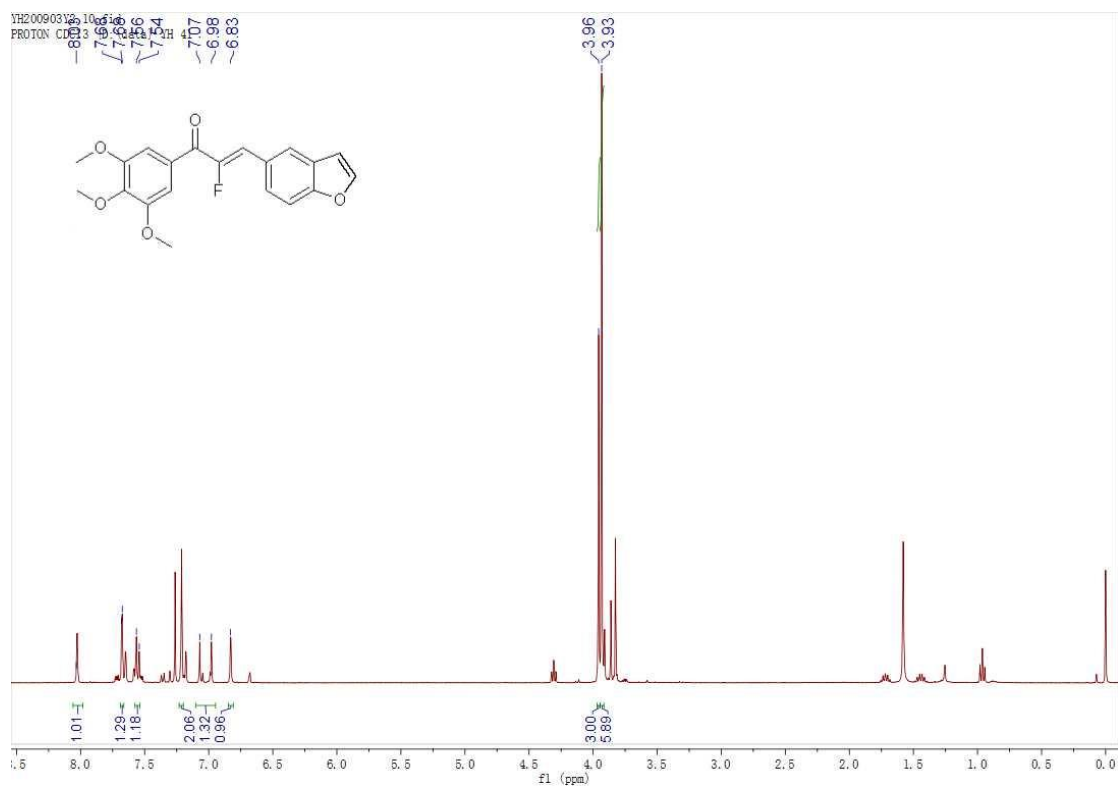
¹³C NMR of 41

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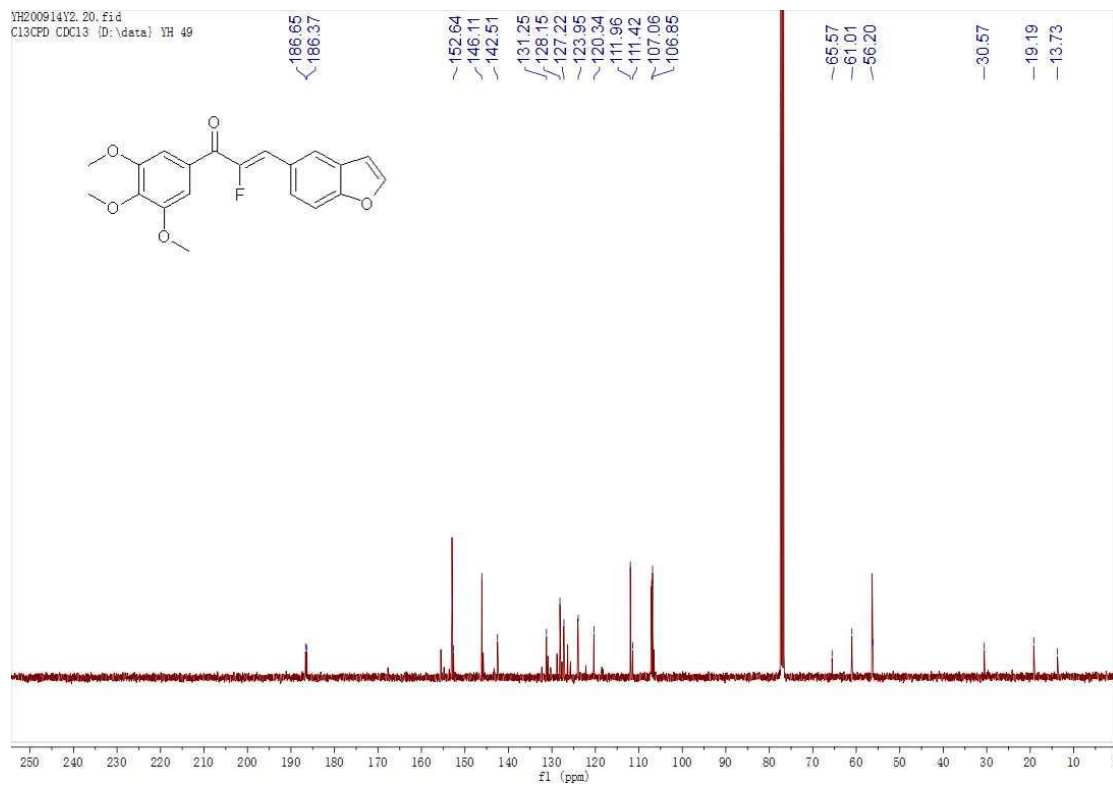


HRMS of 4l

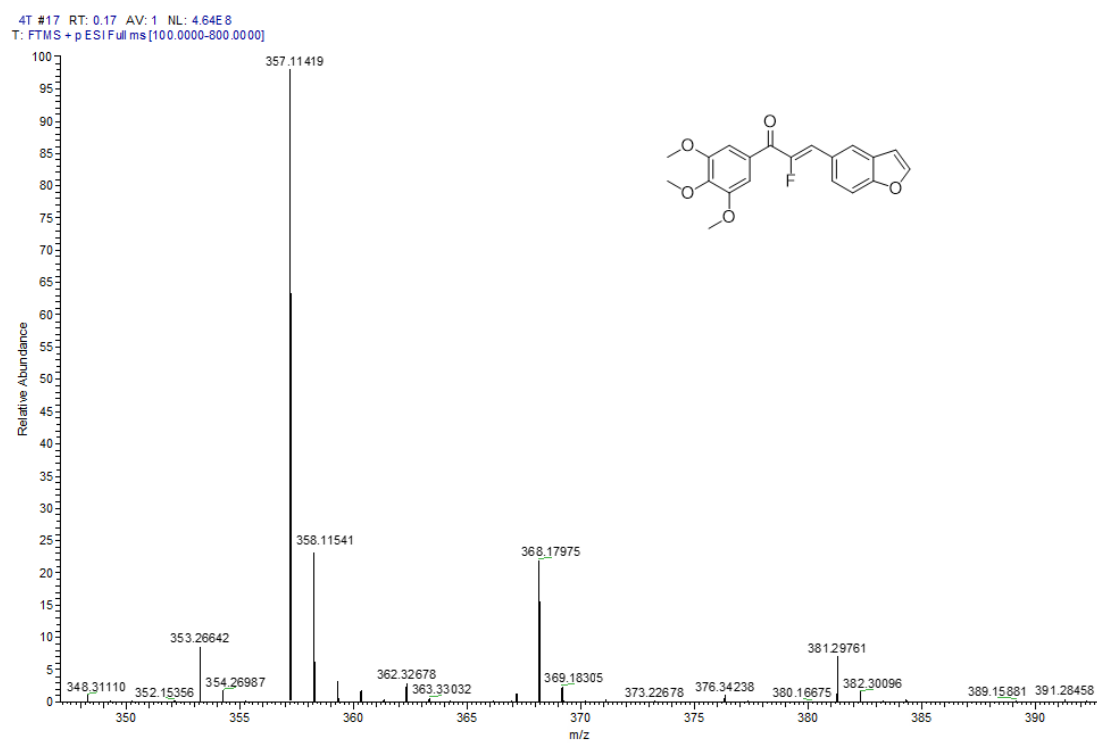
(13)¹H, ¹³C NMR and HRMS spectra of 4m



¹H NMR of 4m

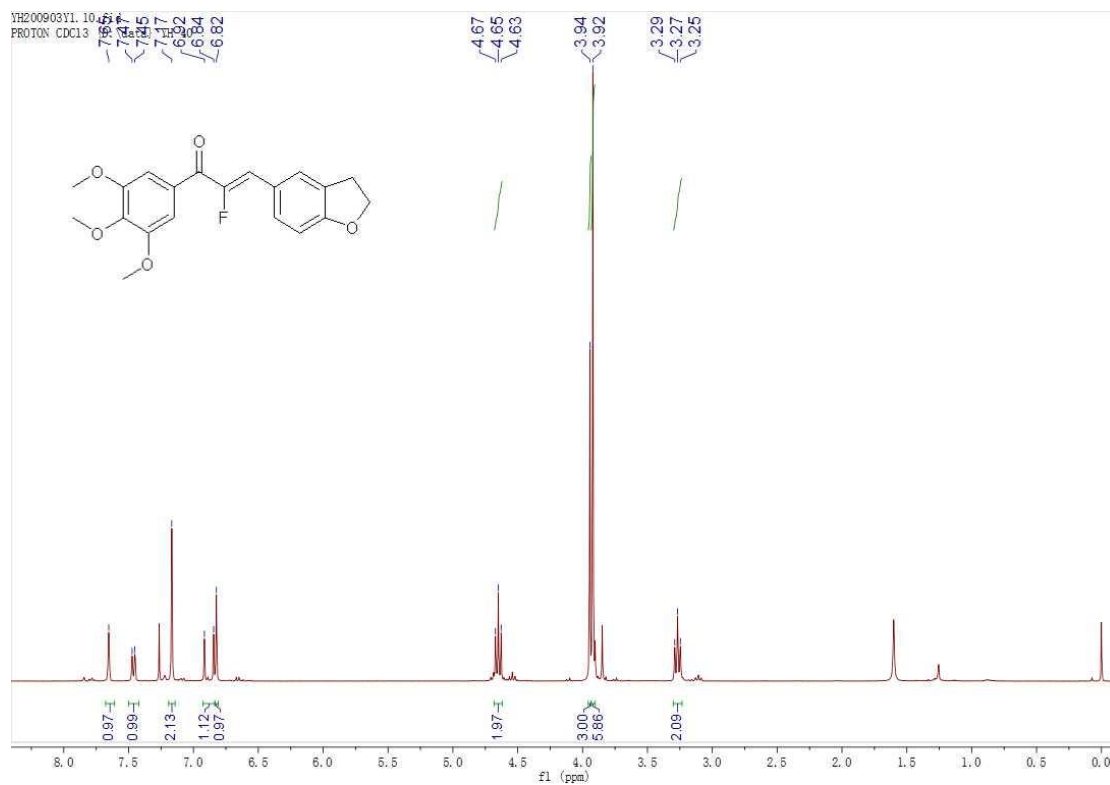


¹³C NMR of 4m

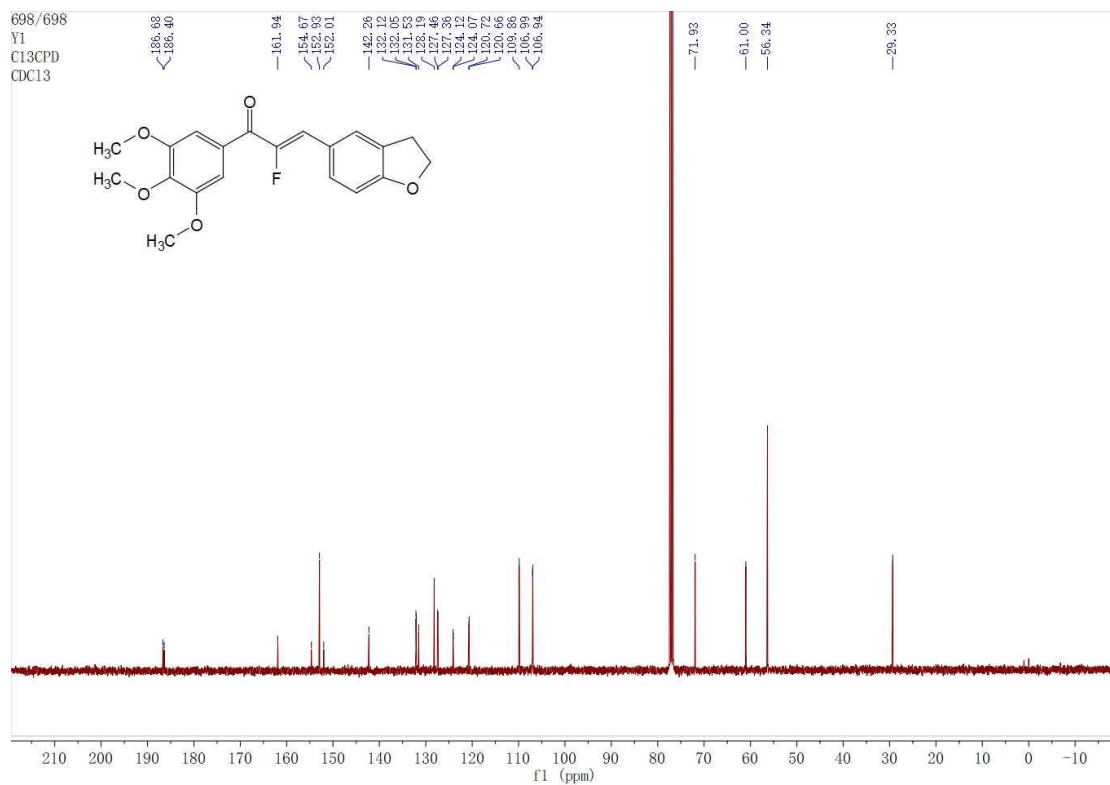


HRMS of 4m

(14) ^1H , ^{13}C NMR and HRMS spectra of **4n**



^1H NMR of **4n**

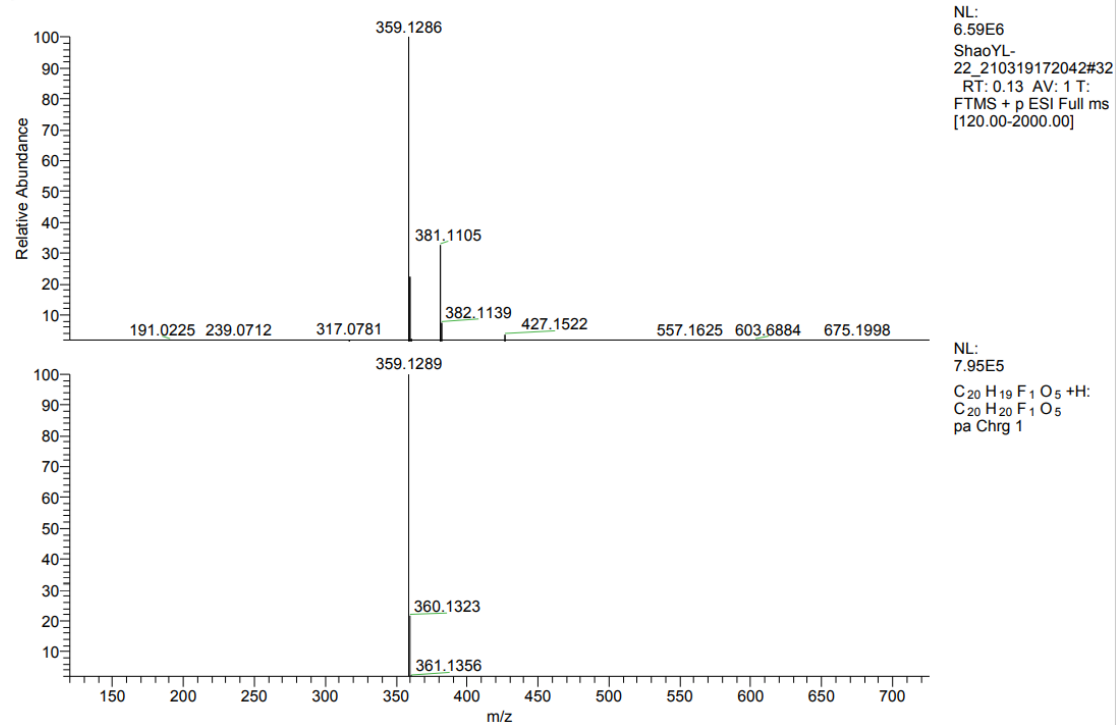


^{13}C NMR of **4n**

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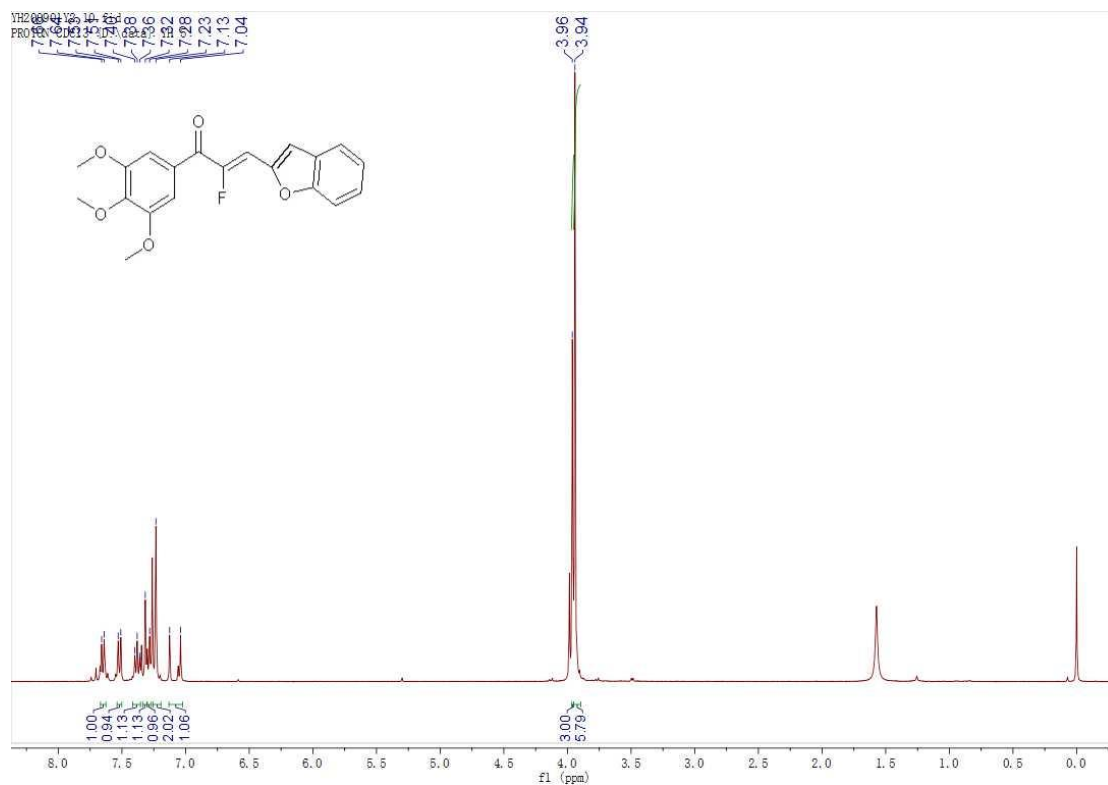
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SM: 7B

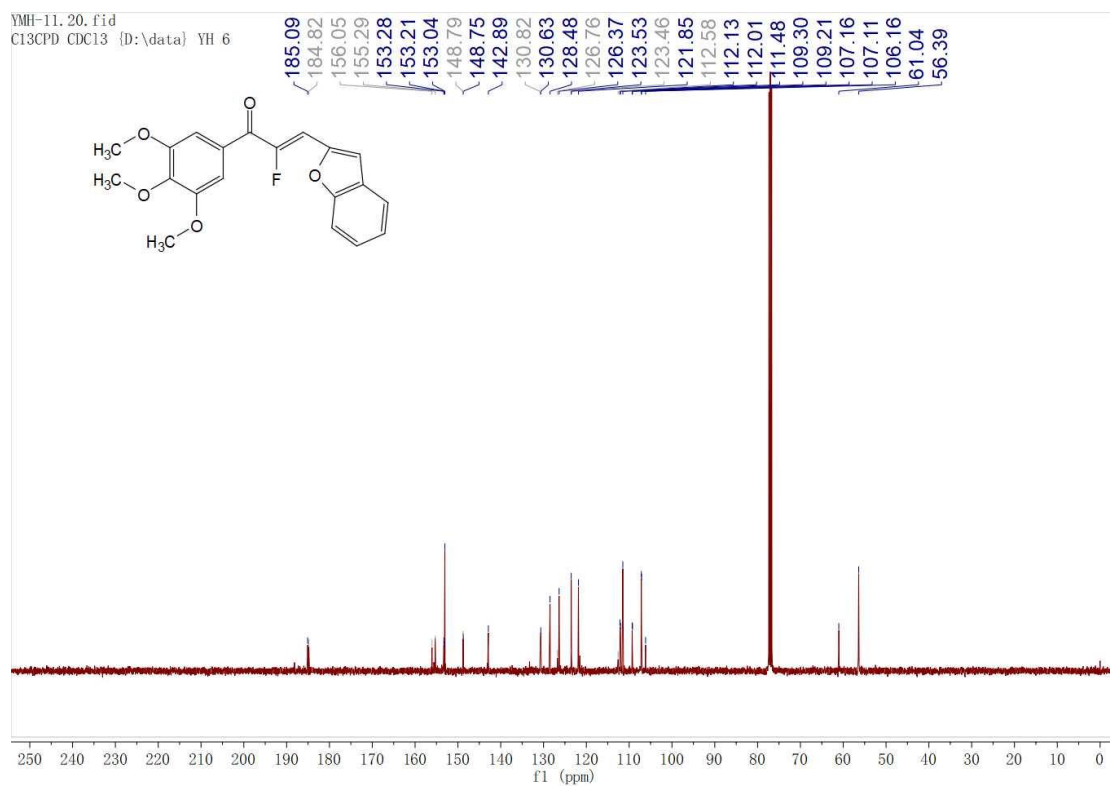


HRMS of **4n**

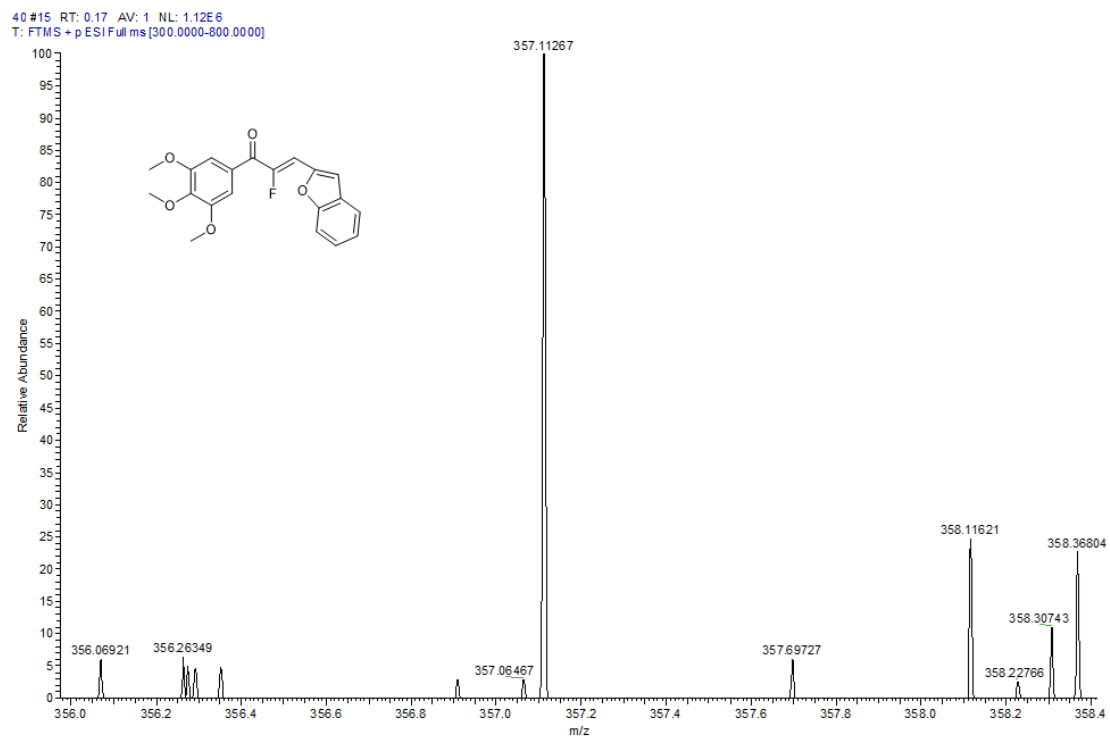
(15) ^1H , ^{13}C NMR and HRMS spectra of **4o**



¹H NMR of 4o

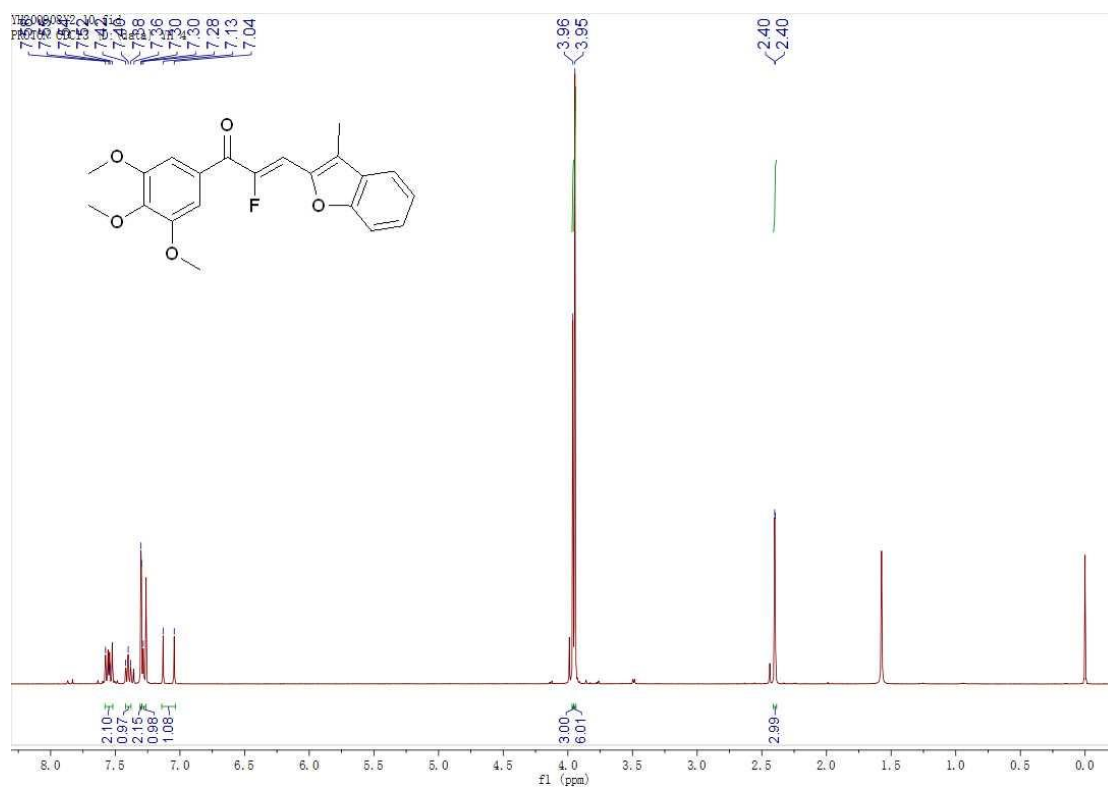


¹³C NMR of 4o

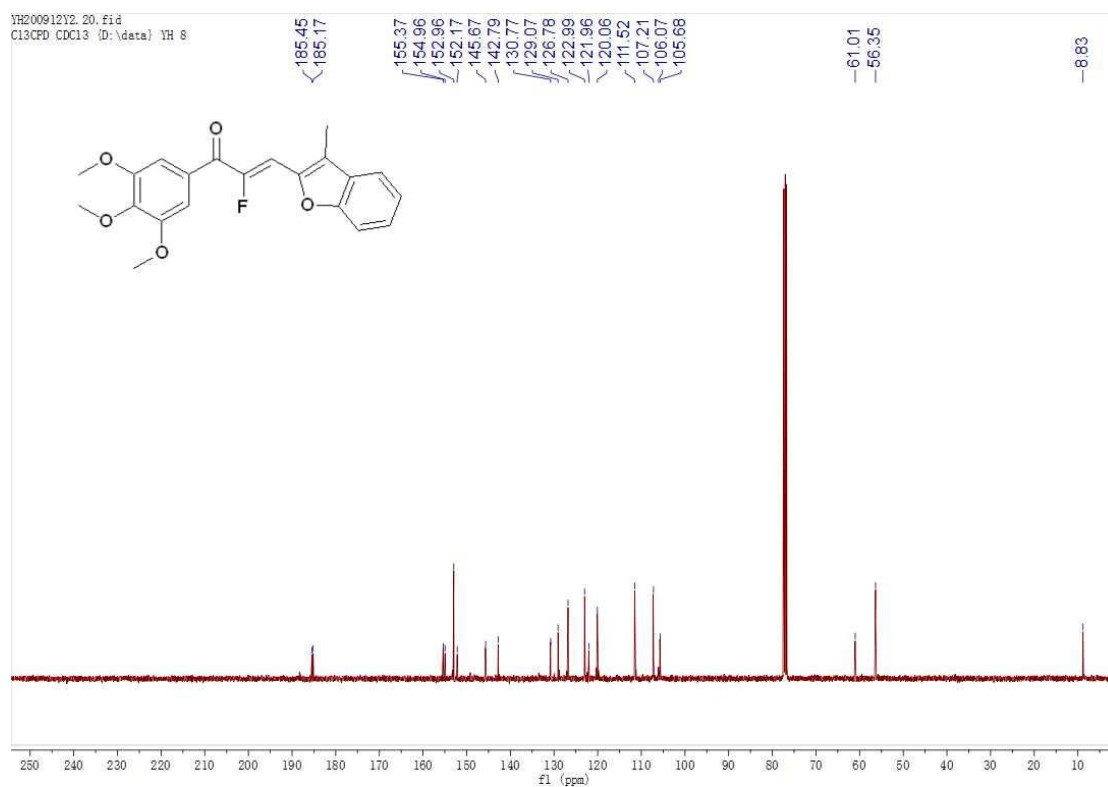


HRMS of 4o

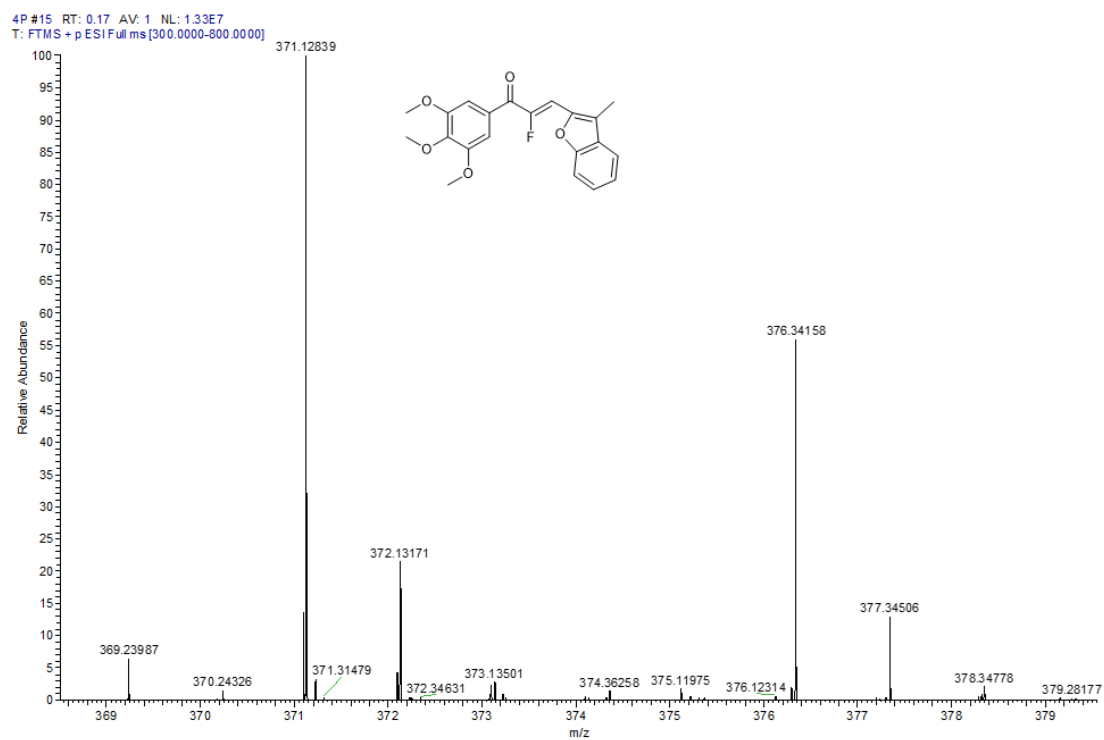
(16) ^1H , ^{13}C NMR and HRMS spectra of **4p**



^1H NMR of **4p**

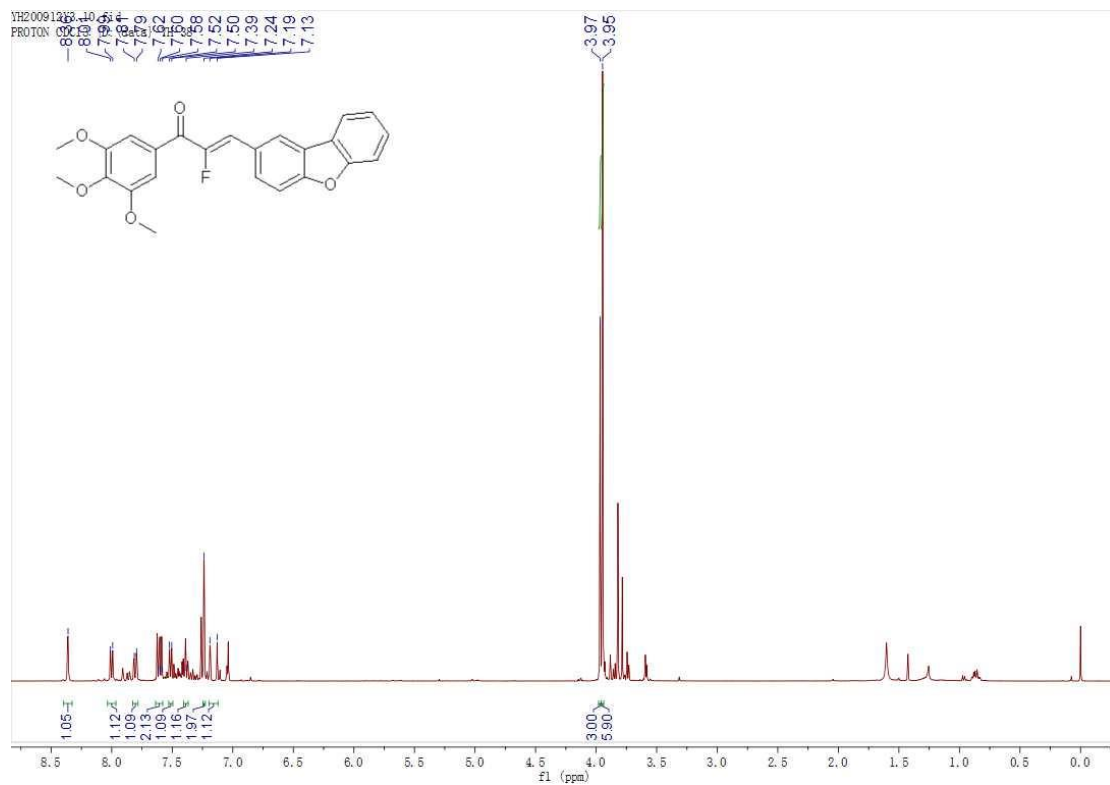


^{13}C NMR of **4p**

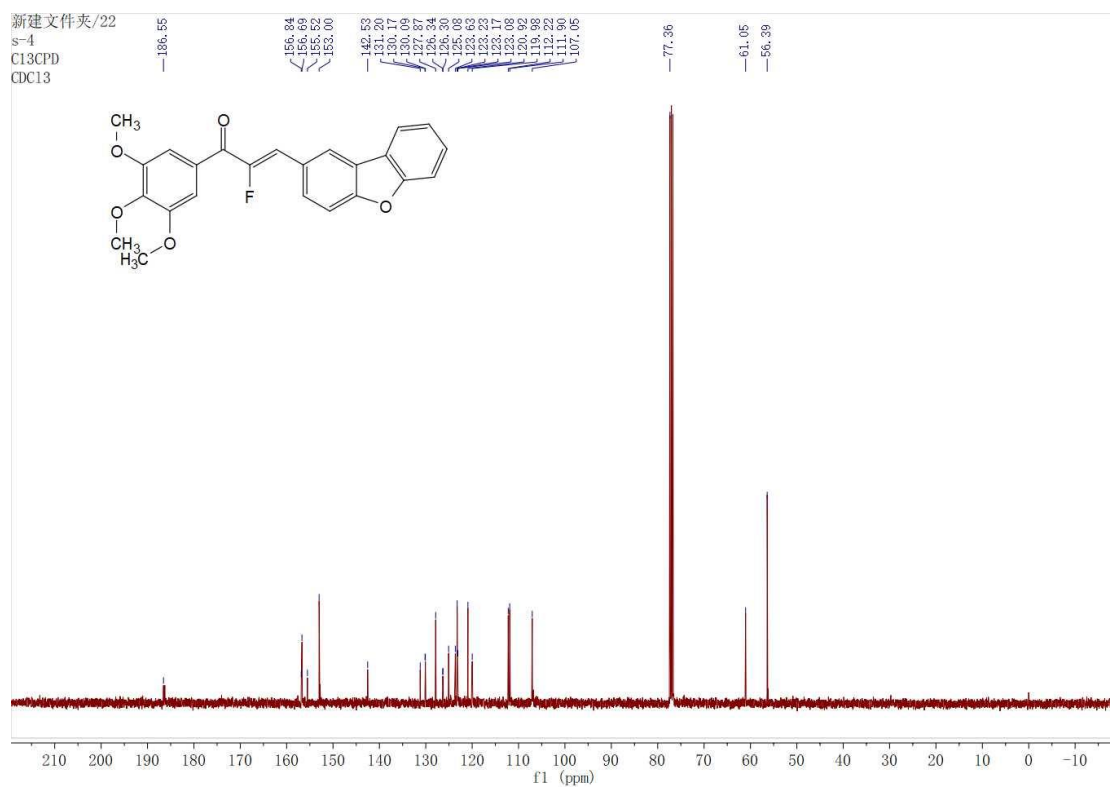


HRMS of **4p**

(**17**) ^1H , ^{13}C NMR and HRMS spectra of **4q**

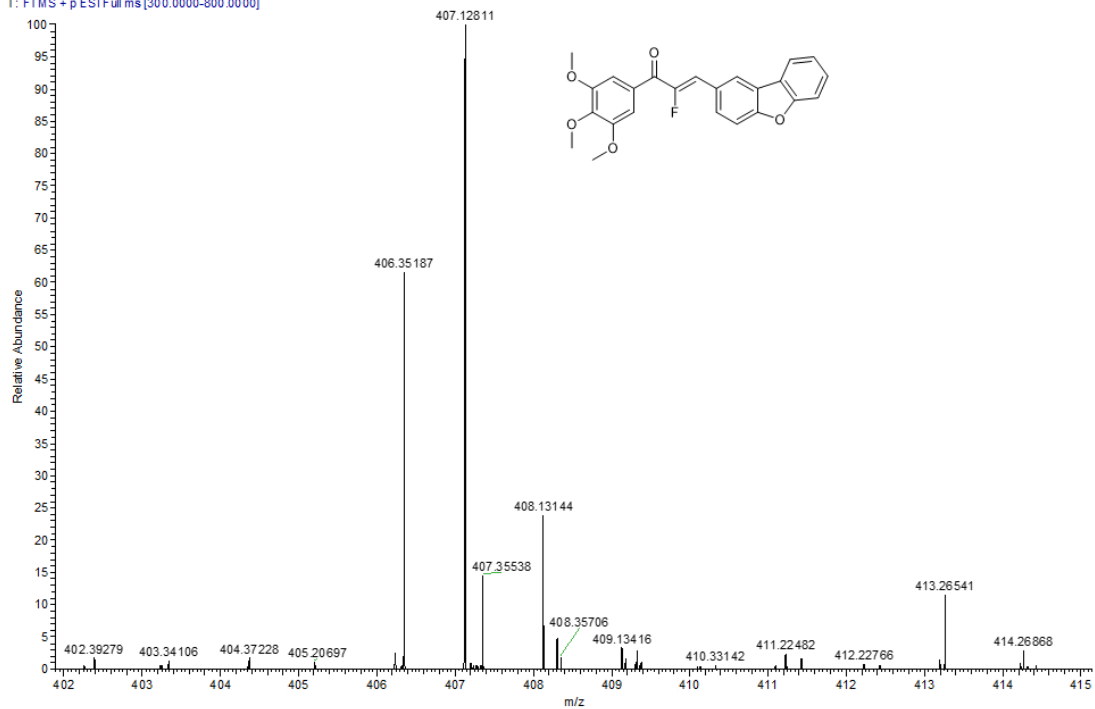


^1H NMR of **4q**



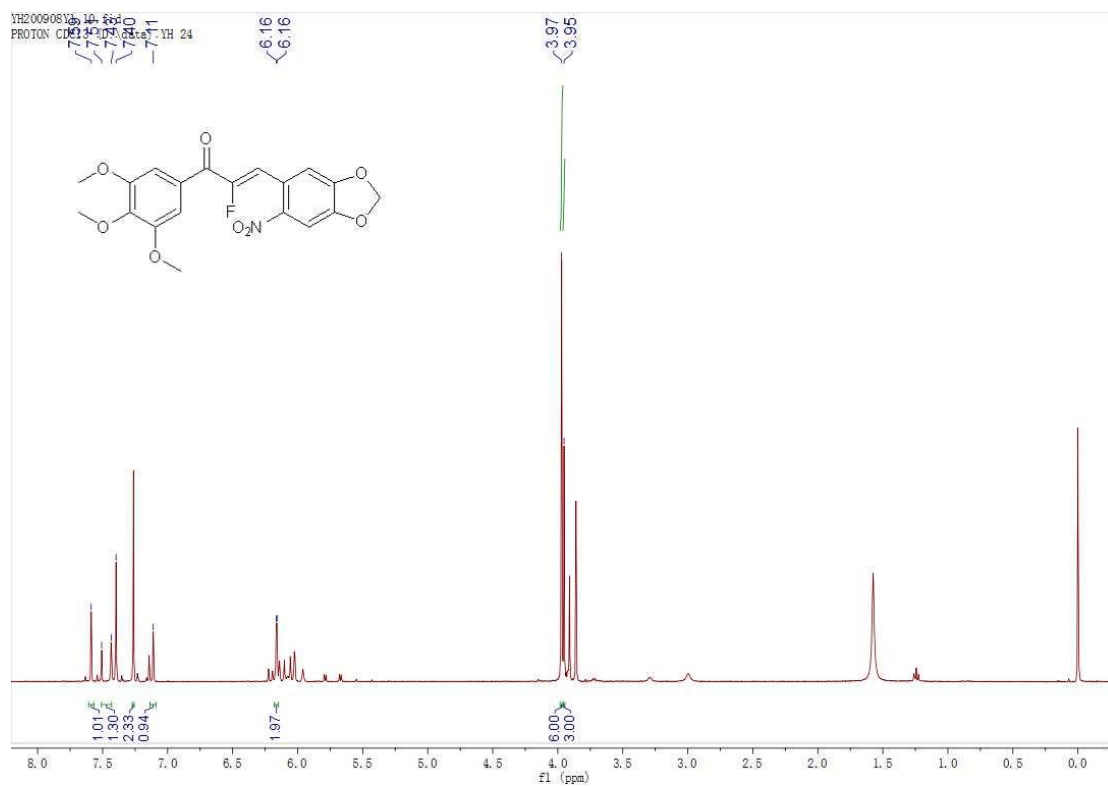
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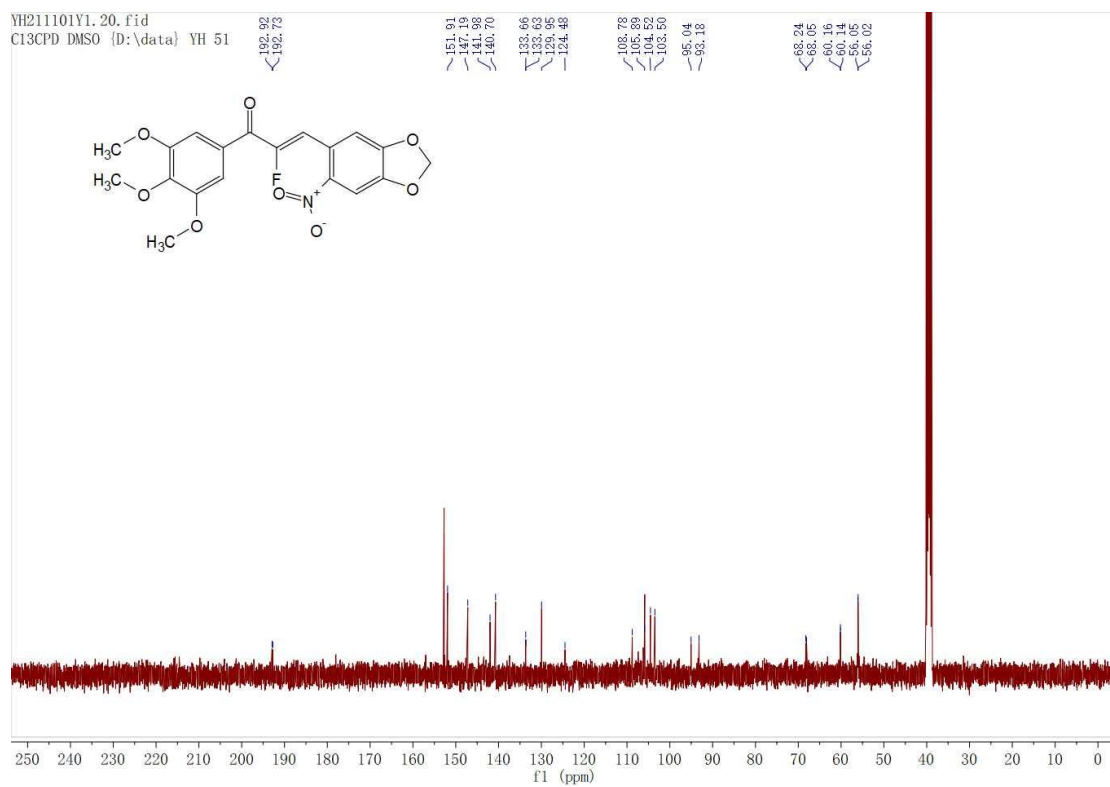


HRMS of **4q**

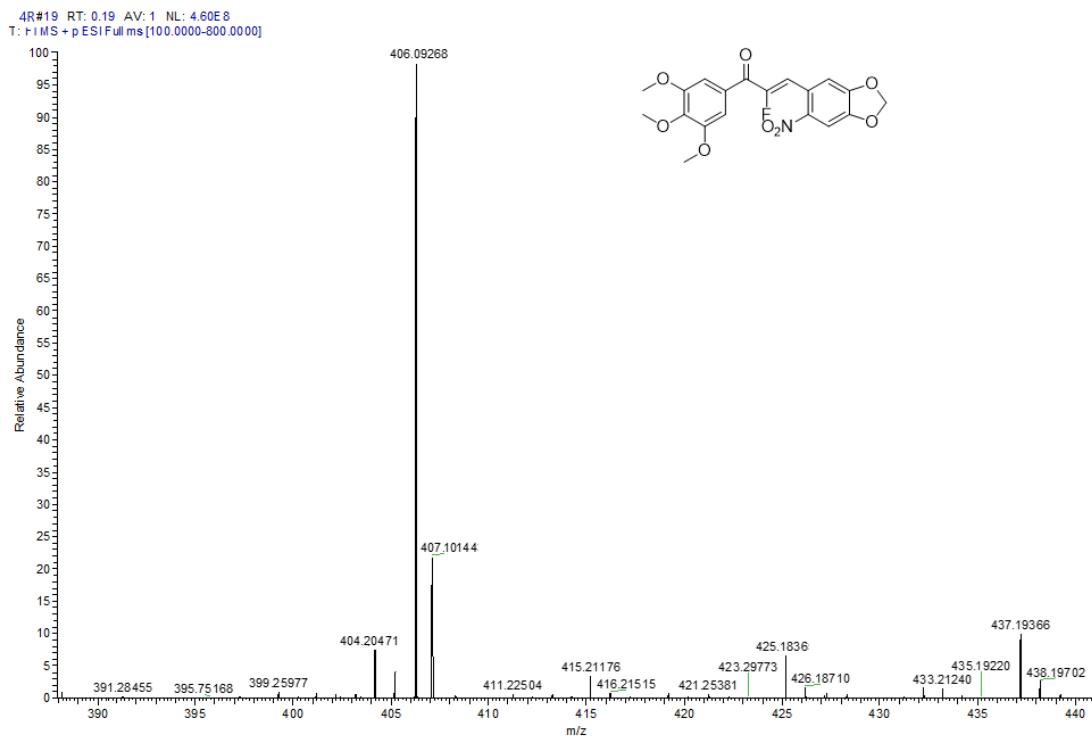
(**18**) ^1H , ^{13}C NMR and HRMS spectra of **4r**



¹H NMR of 4r

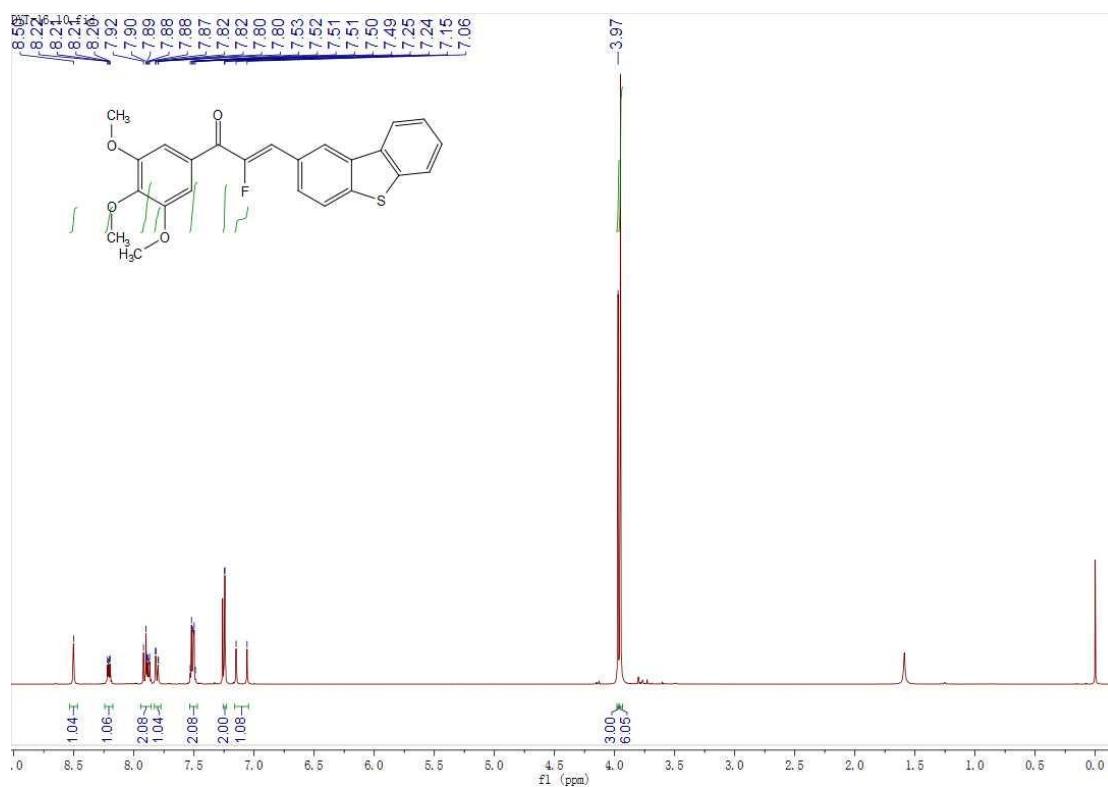


¹³C NMR of 4r

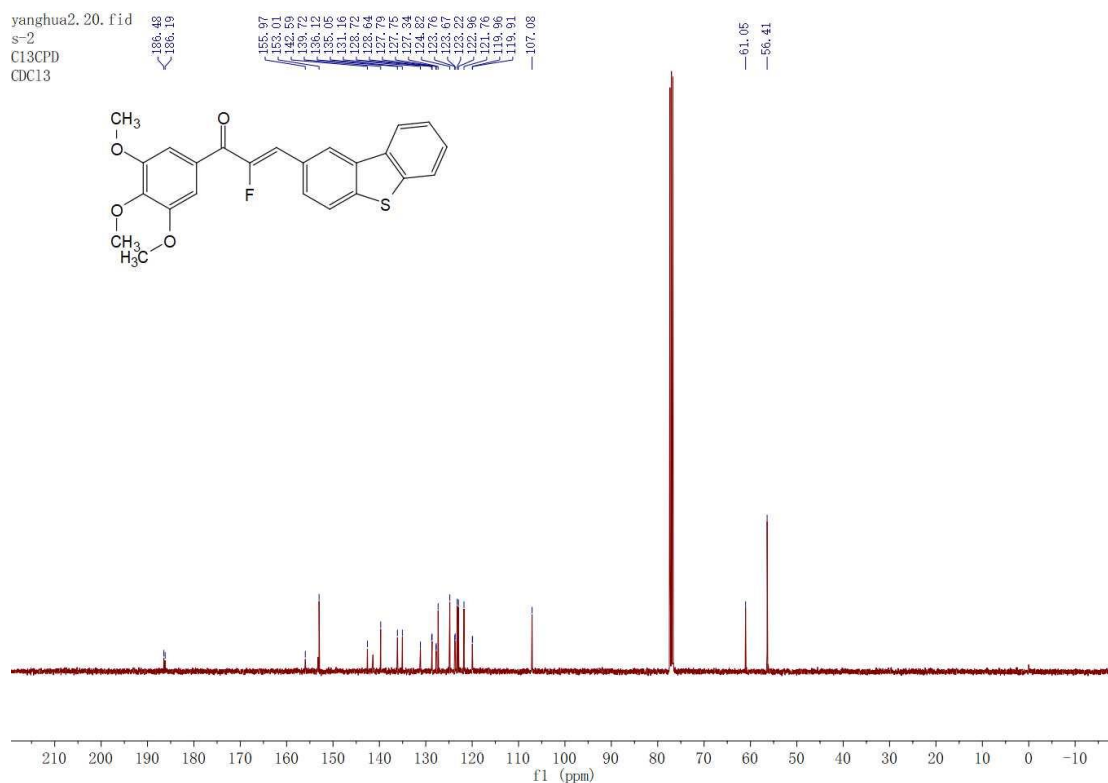


HRMS of 4r

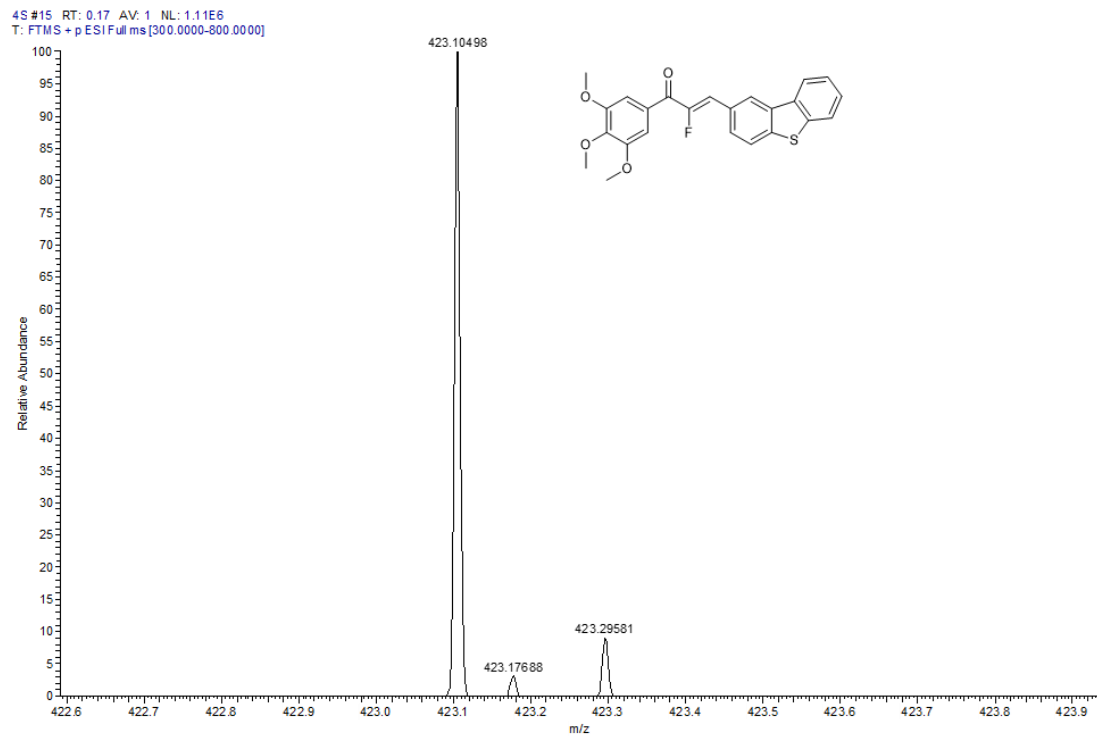
(19) ^1H , ^{13}C NMR and HRMS spectra of 4s



^1H NMR of 4s

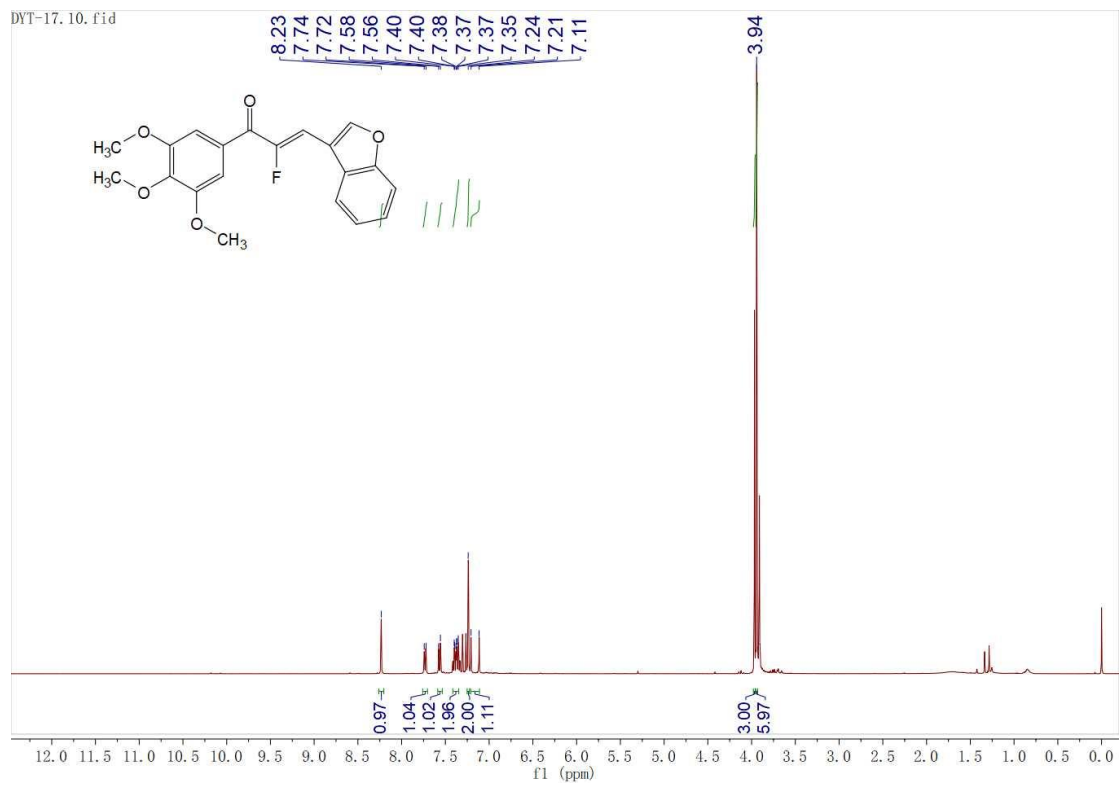


^{13}C NMR of **4s**

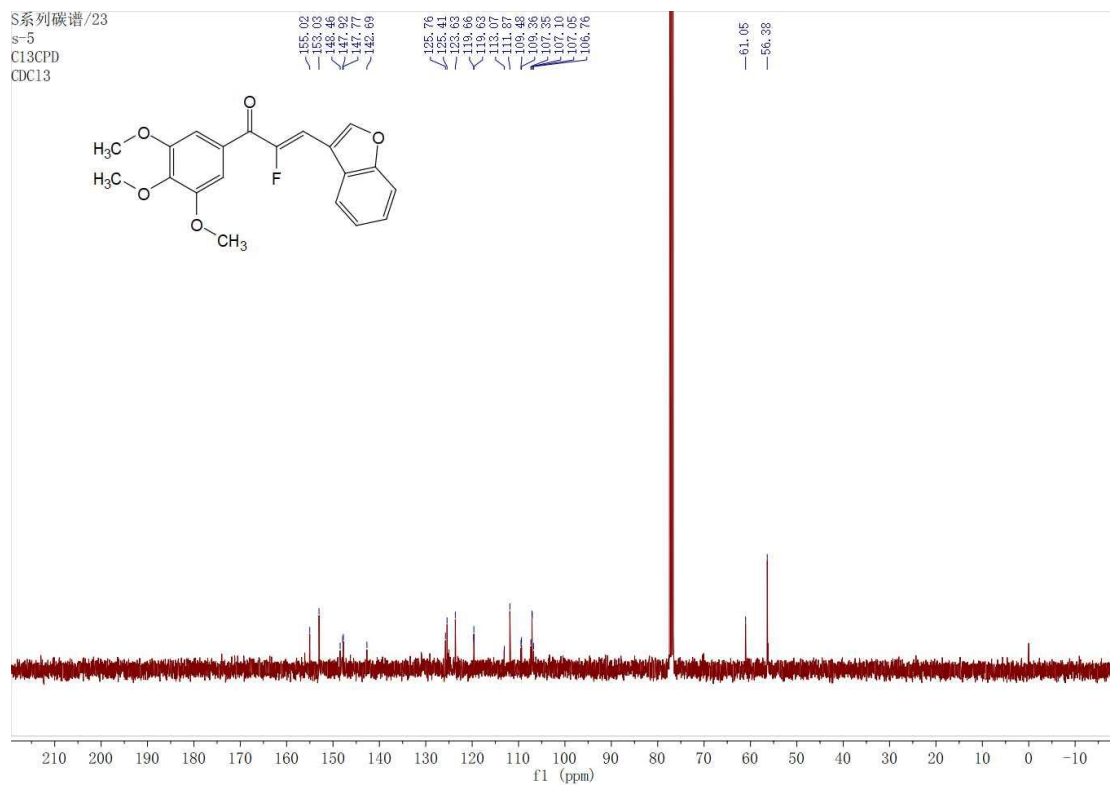


HRMS of **4s**

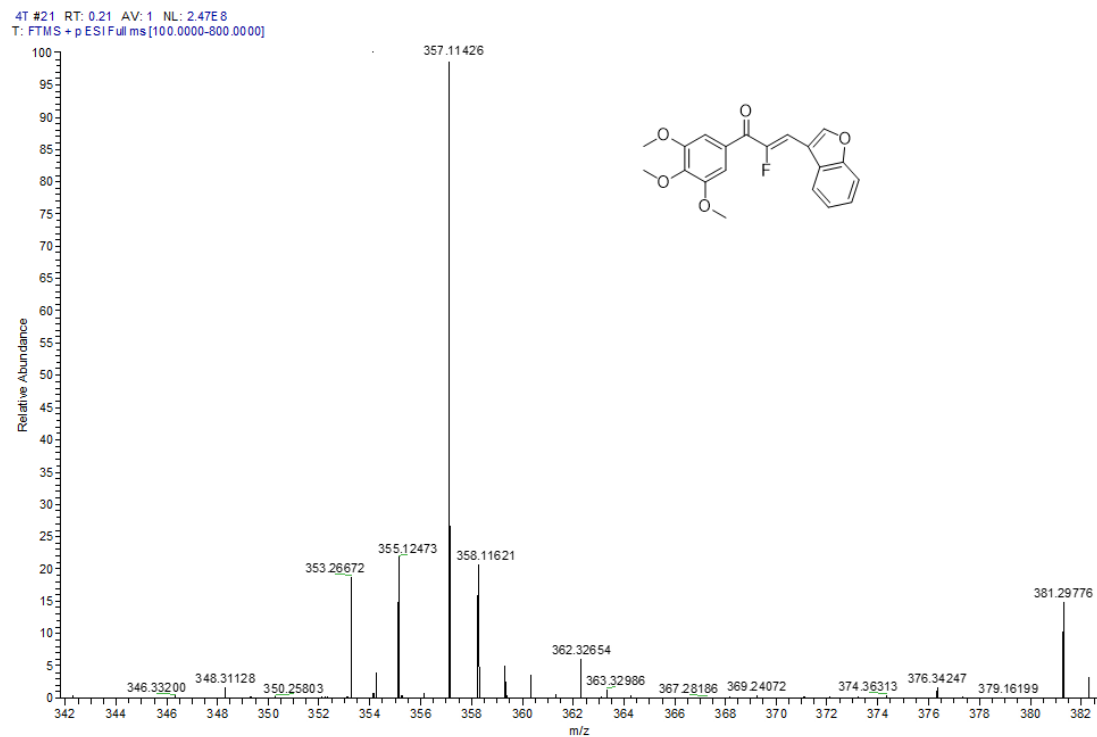
(^{20}H , ^{13}C NMR and HRMS spectra of **4t**



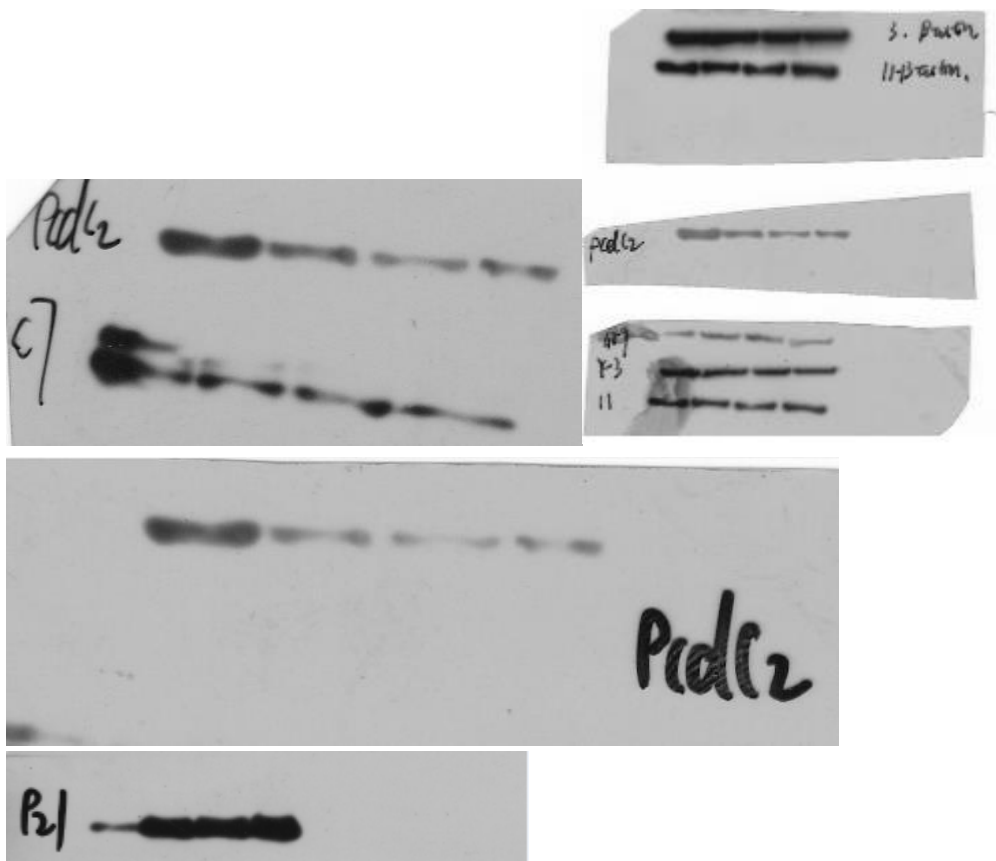
¹H NMR of 4t



¹³C NMR of 4t



2. Cell arrest western blot assays films of compound 4c(48h)



3. Cell apoptosis western blot assays films of compound 7m

