

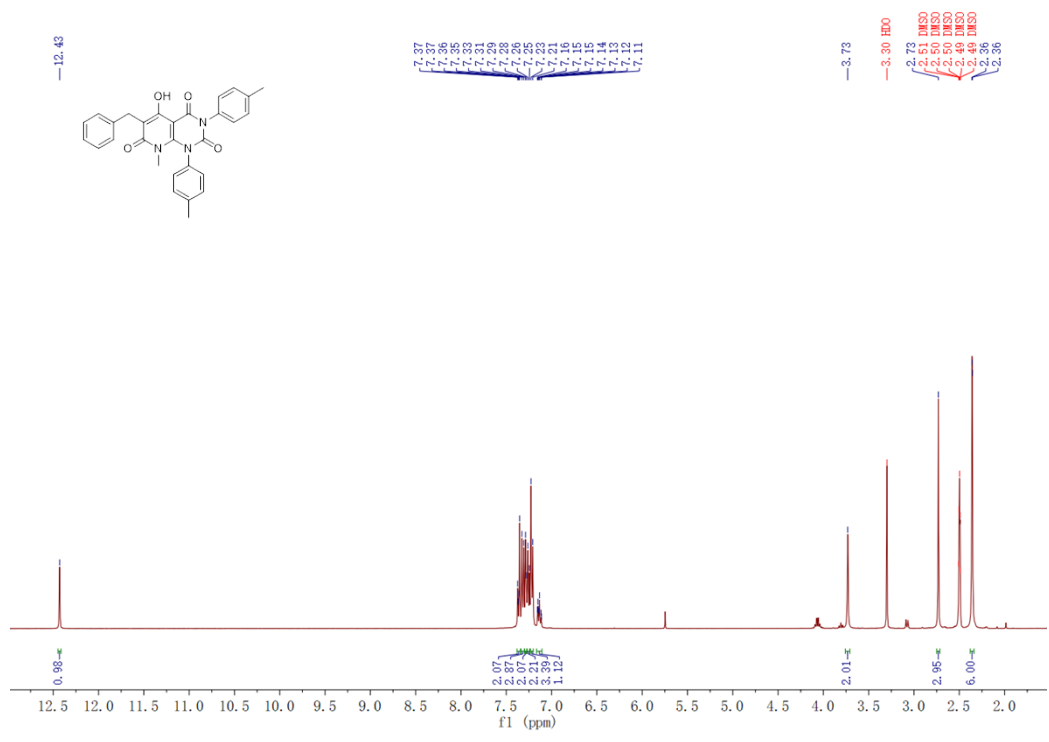
**Design and synthesis of 1,3-diphenylpyrimidine-2,4(1*H*,3*H*)-dione derivatives as
antitumor agents via elevating ROS production to induce apoptosis**

Qian Xie^a, Yanni Shen^a, Jianhui Liang^a, Chao Zhang^a, Xianwu Ling^a, Liangxiao Gu^a, Yiling Wang^a, Yan
Wang^b, Xiaoping Liu*^a and Chun Hu*^a

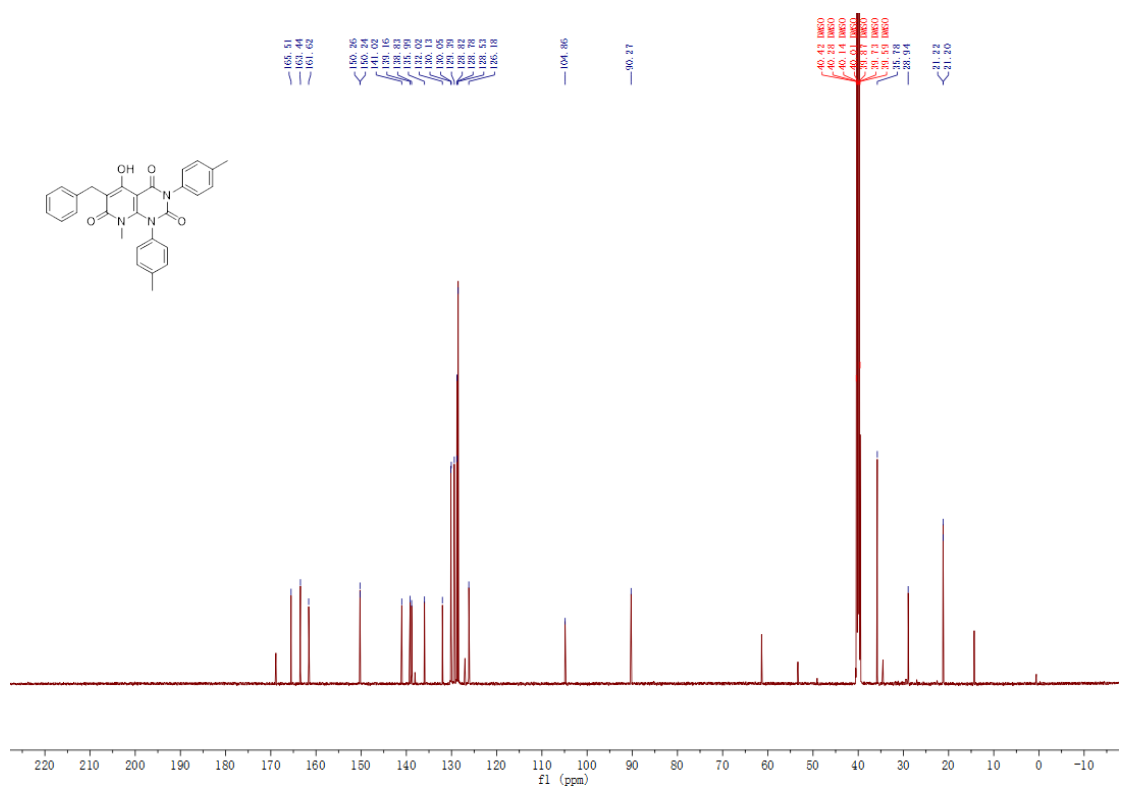
^a Key Laboratory of Structure-based Drug Design & Discovery, Ministry of Education, School of Pharmaceutical Engineering, Shenyang Pharmaceutical University, 110016, China.

^b Center for Translational Medicine Research and Development, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen 518055, China.

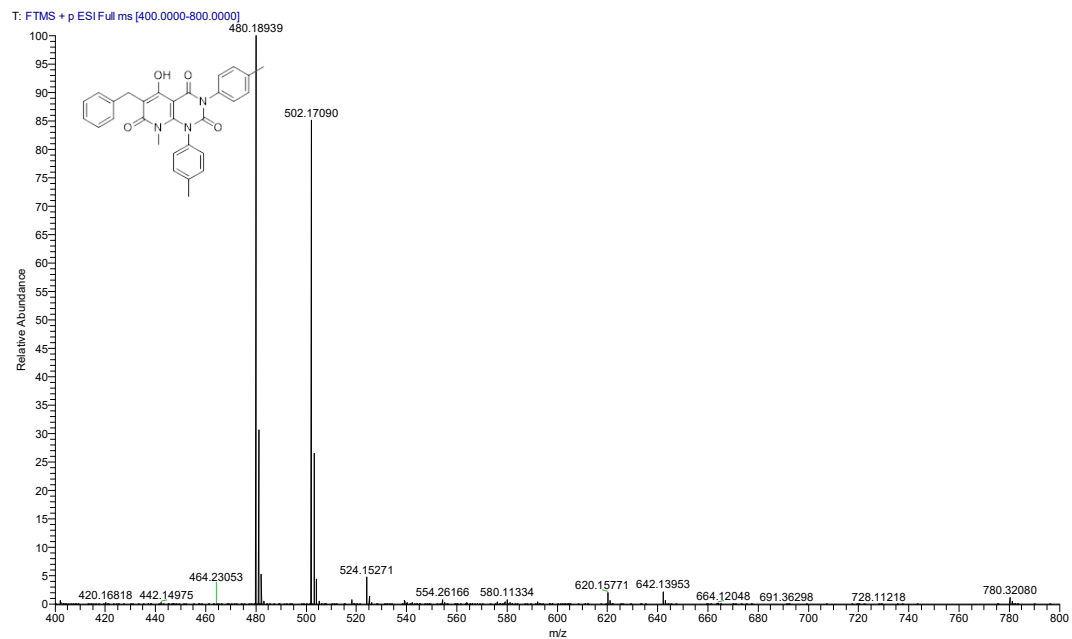
* Correspondences: Xiaoping Liu (lxp19730107@163.com) and Chun Hu (chunhu@syphu.edu.cn) Tel.: +86-24-43520246 (X. L. and C. H.).



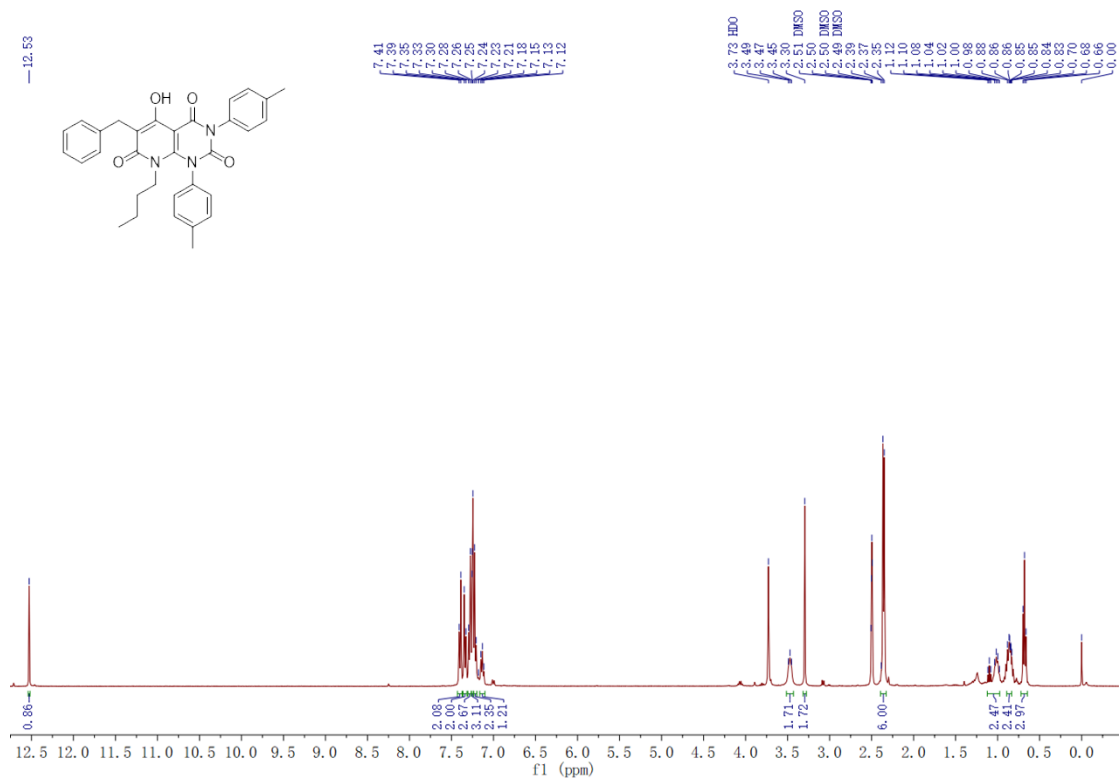
¹H NMR spectra of compound XS01



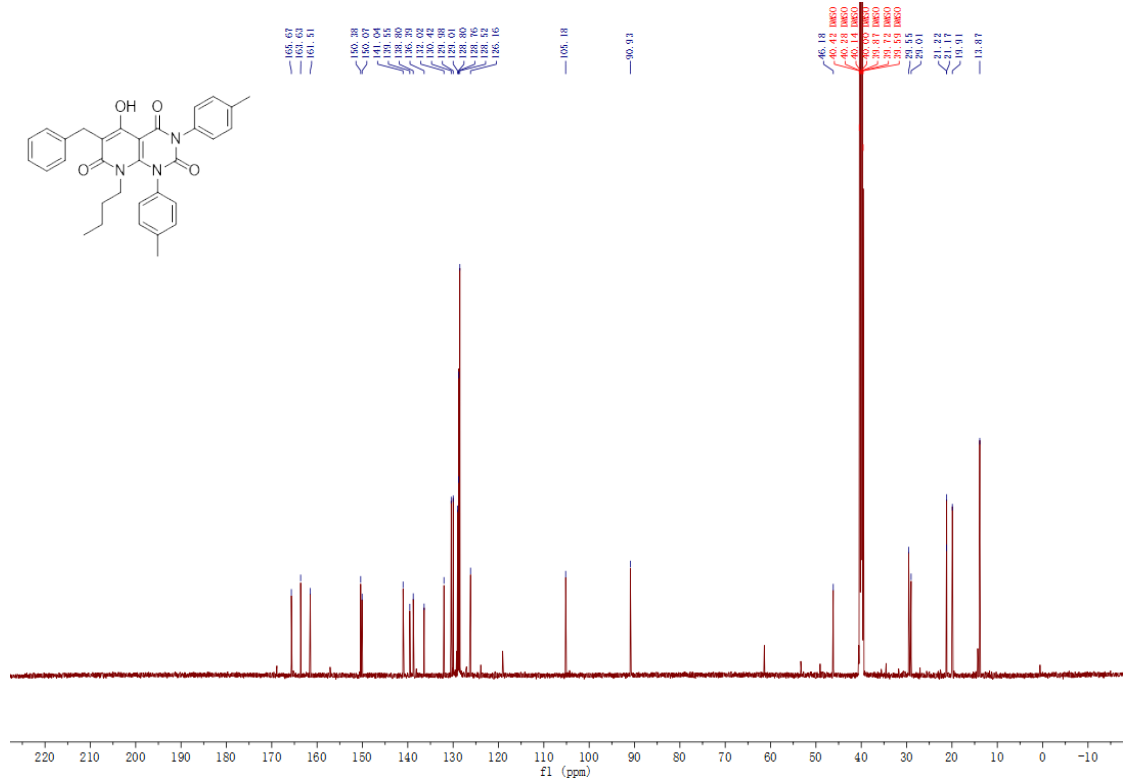
¹³C NMR spectra of compound XS01



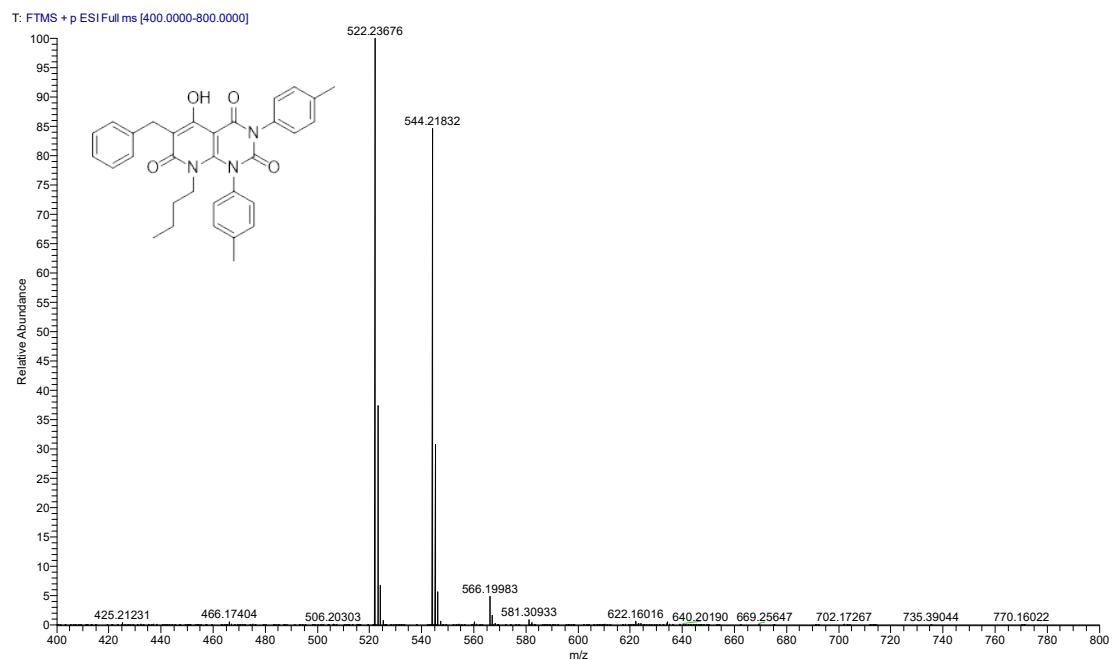
ESI-HRMS spectra of compound **XS01**



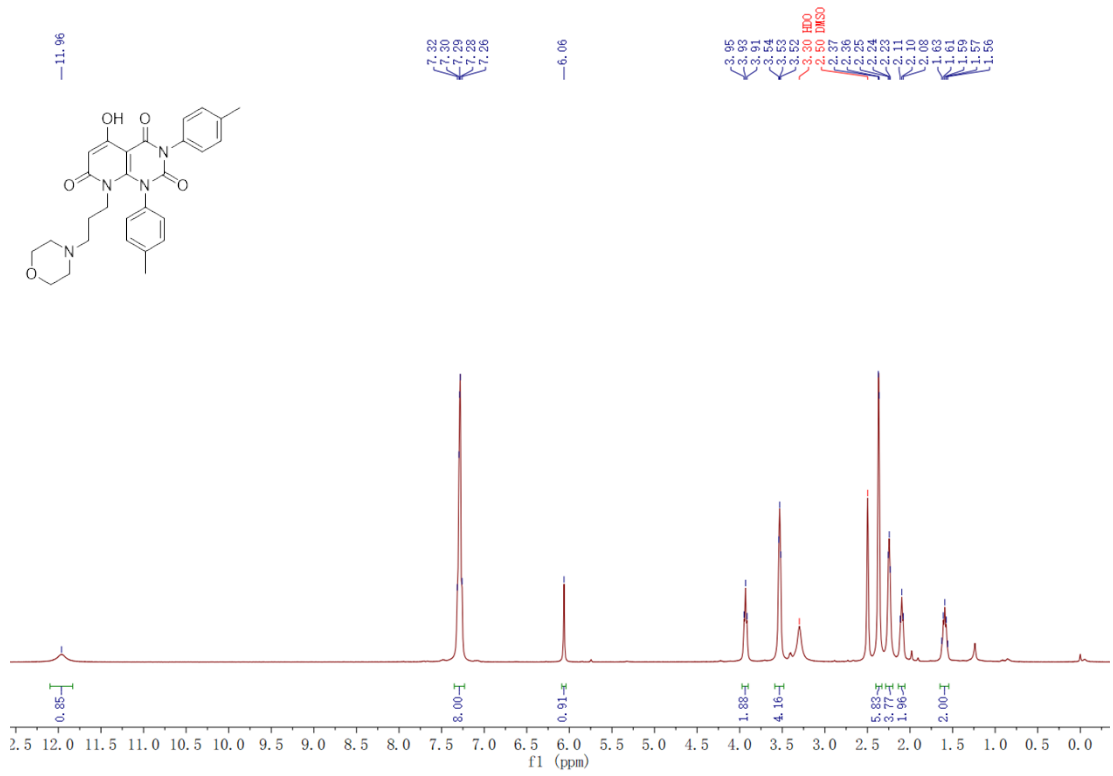
¹H NMR spectra of compound **XS02**



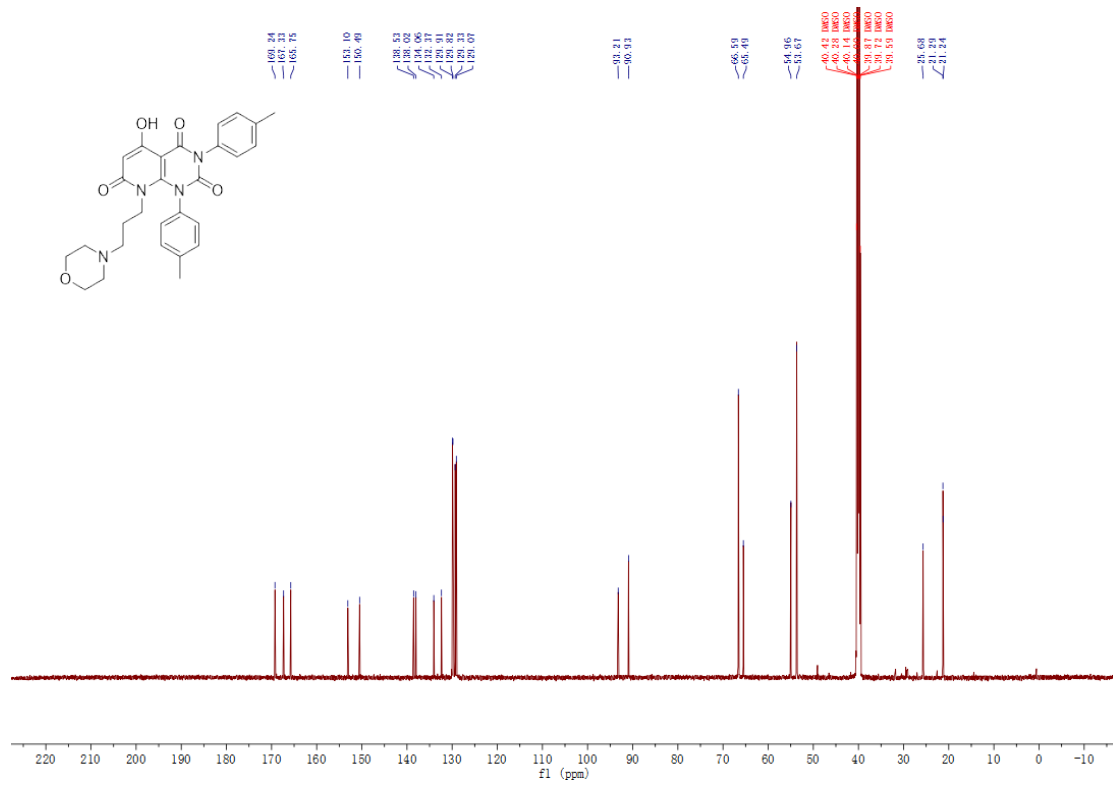
^{13}C NMR spectra of compound XS02



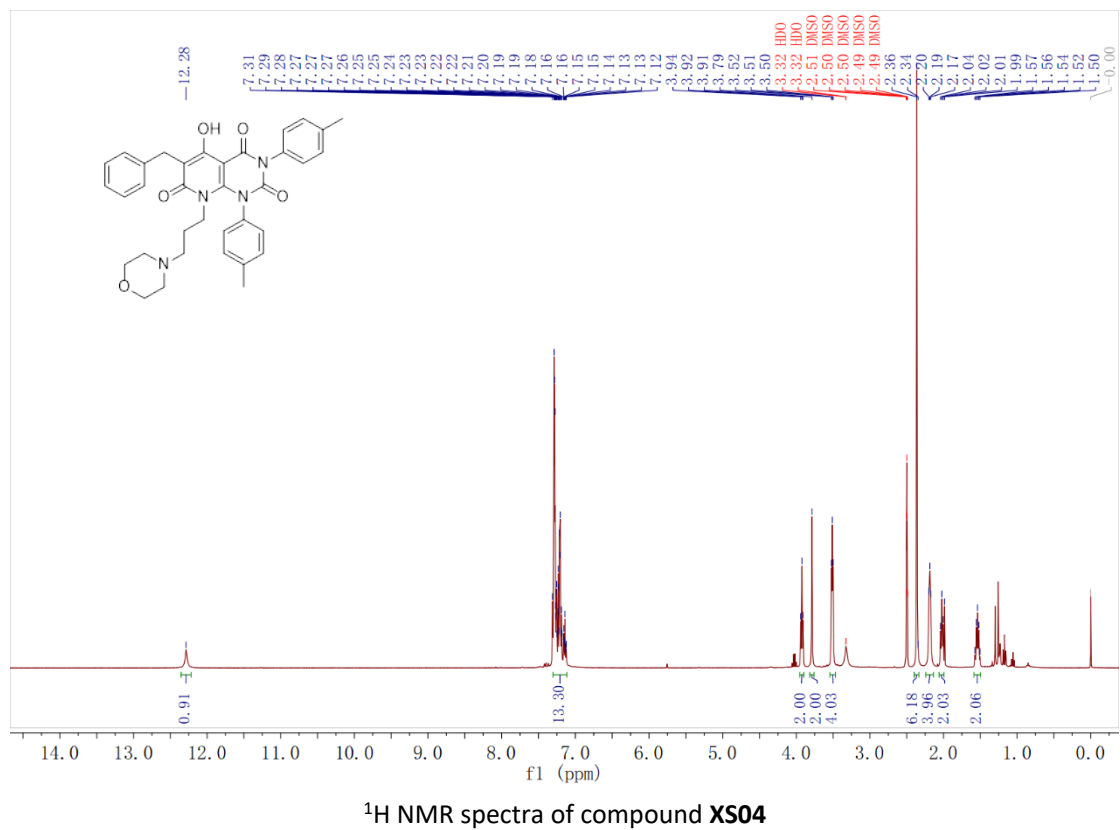
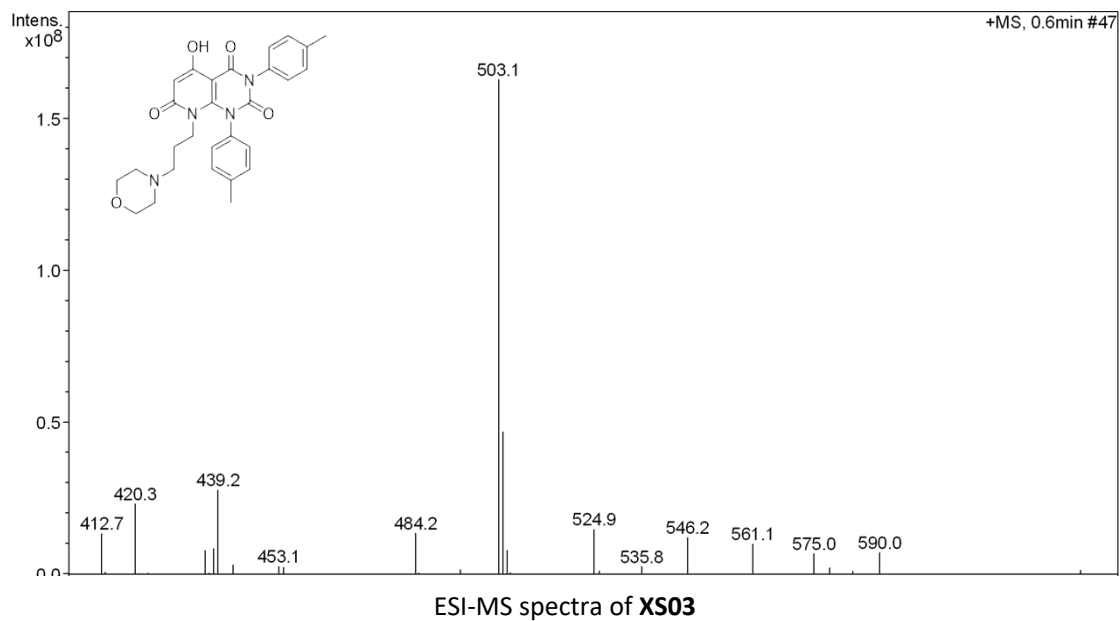
ESI-HRMS spectra of compound XS02

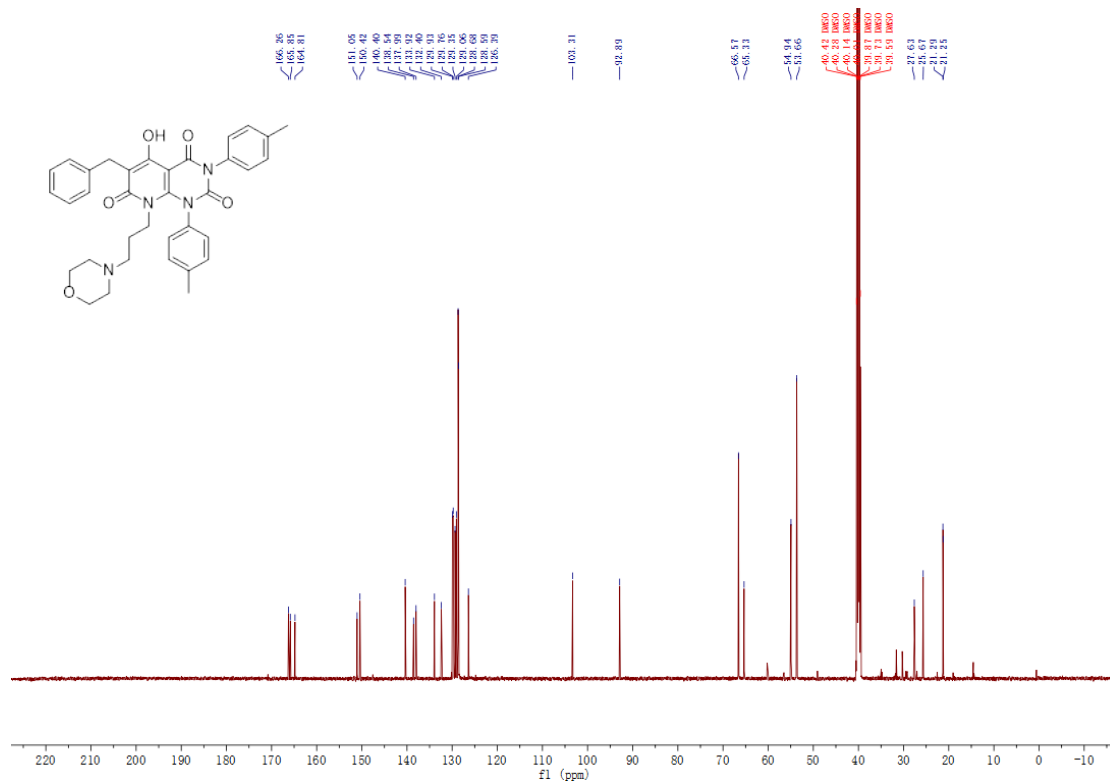


¹H NMR spectra of compound XS03

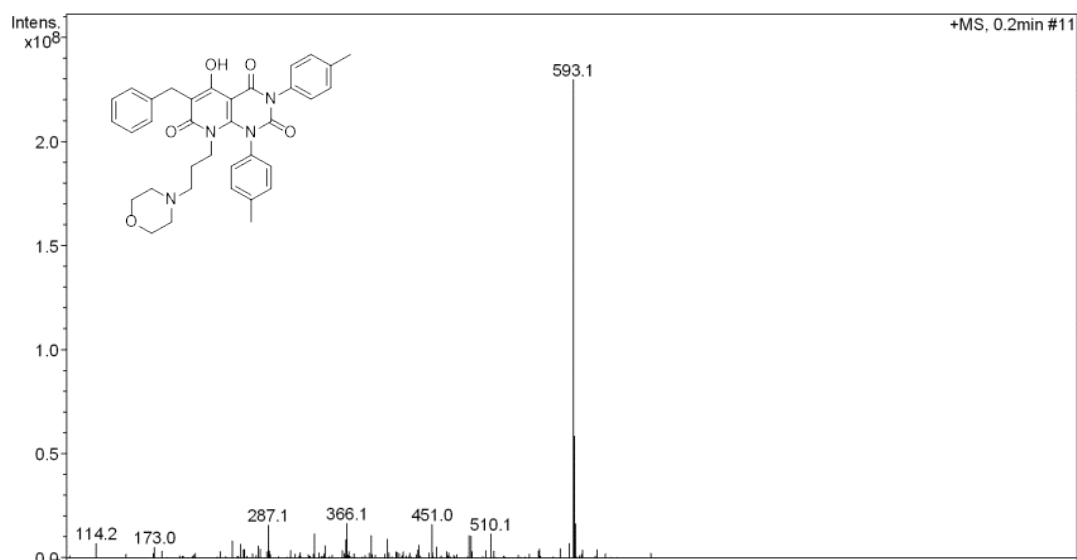


¹³C NMR spectra of compound XS03

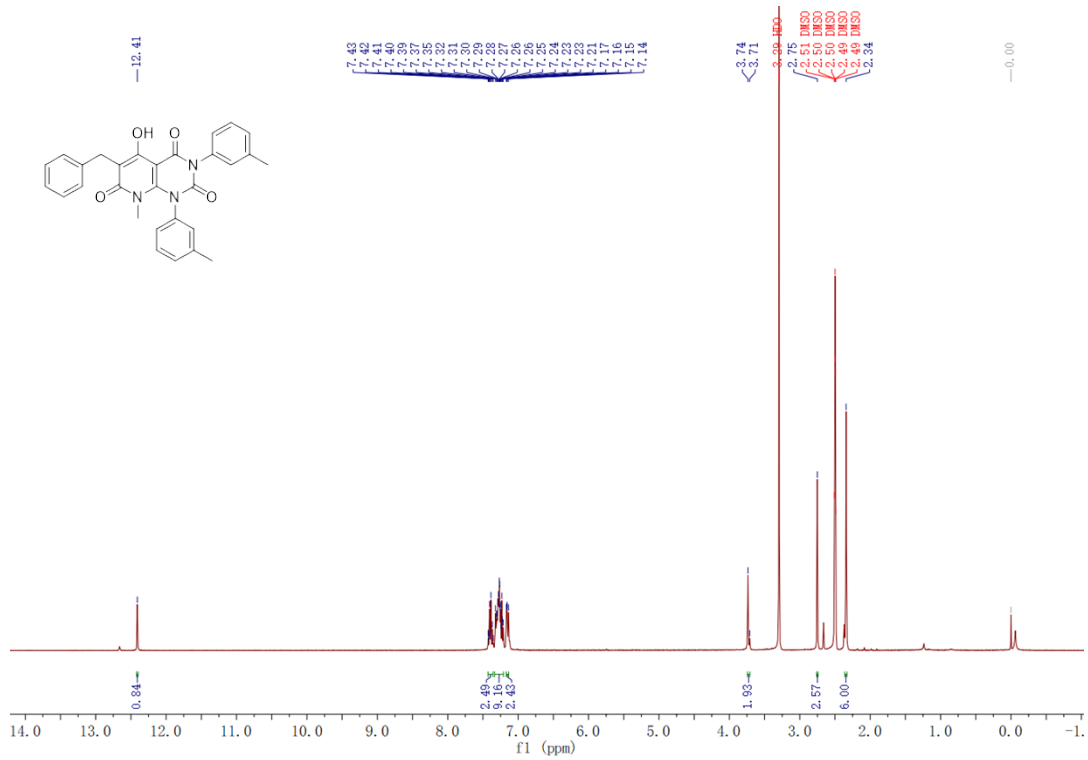




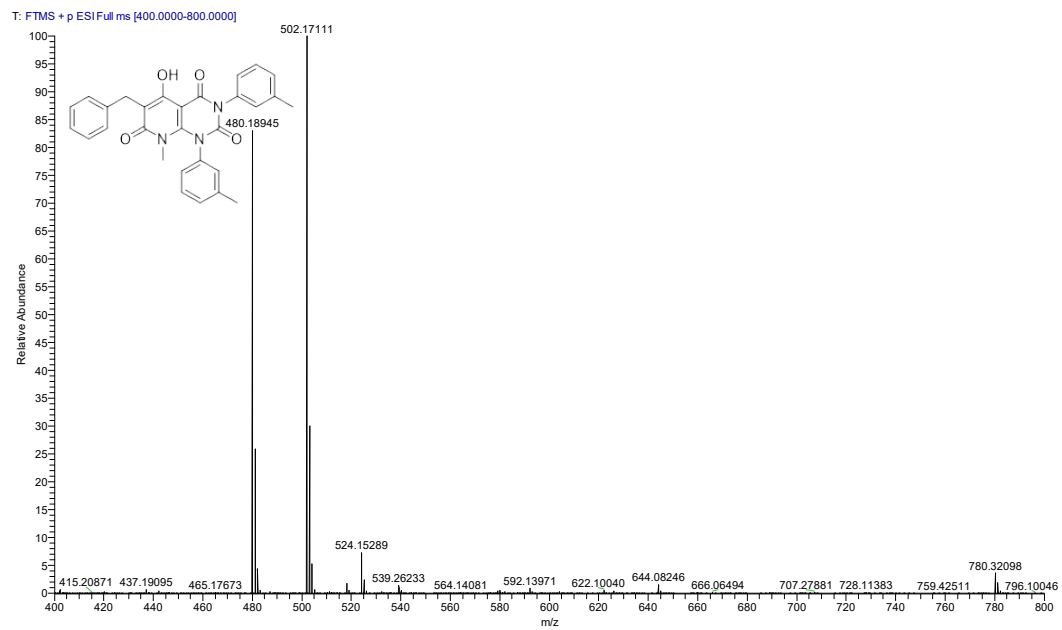
¹³C NMR spectra of compound XS04



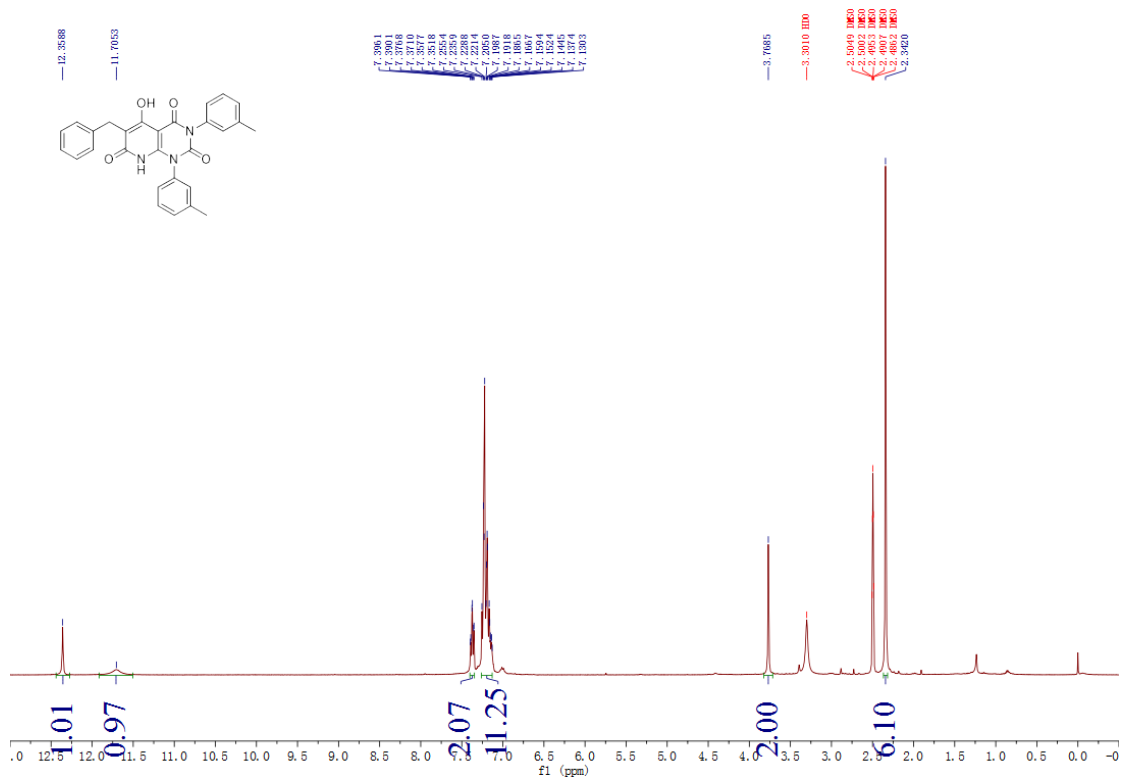
ESI-MS spectra of compound XS04



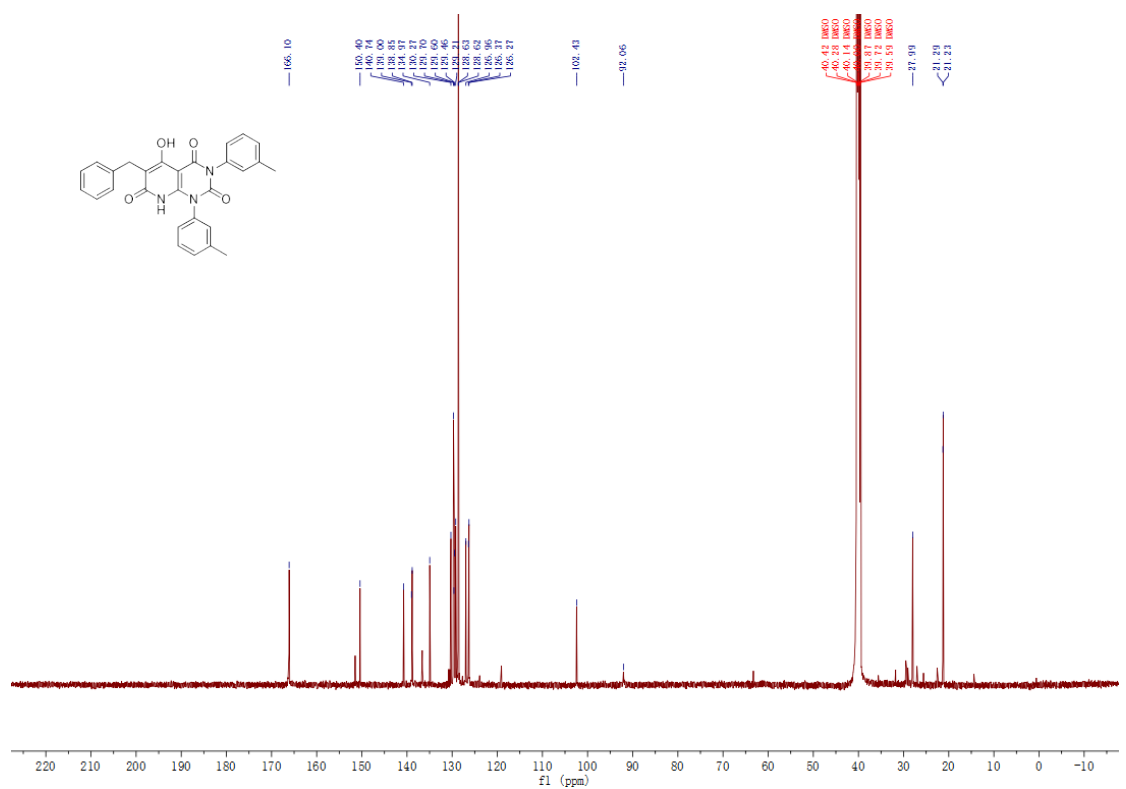
¹H NMR spectra of compound XS05



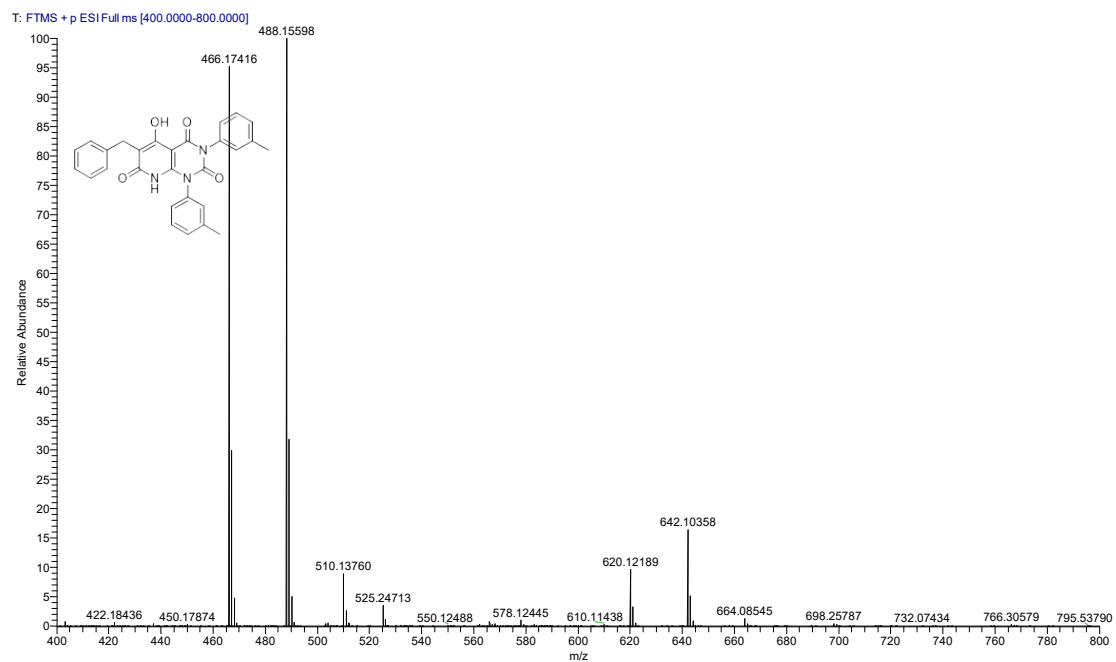
ESI-HRMS spectra of compound XS05



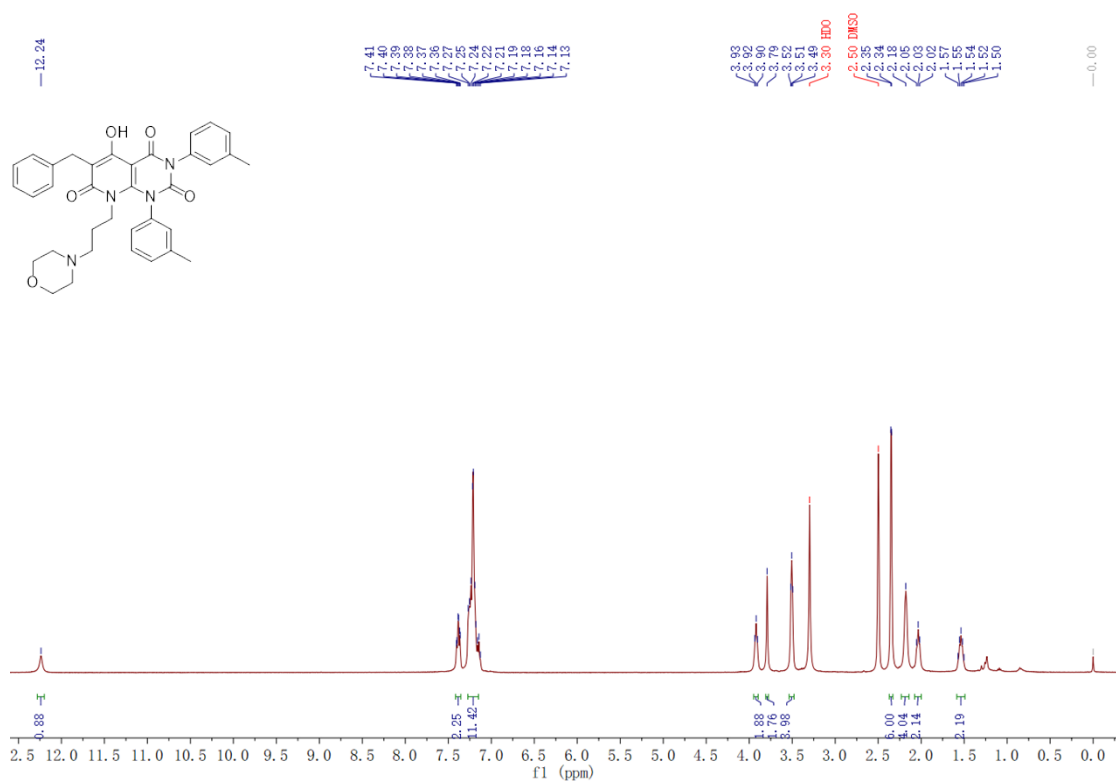
¹H NMR spectra of compound XS06



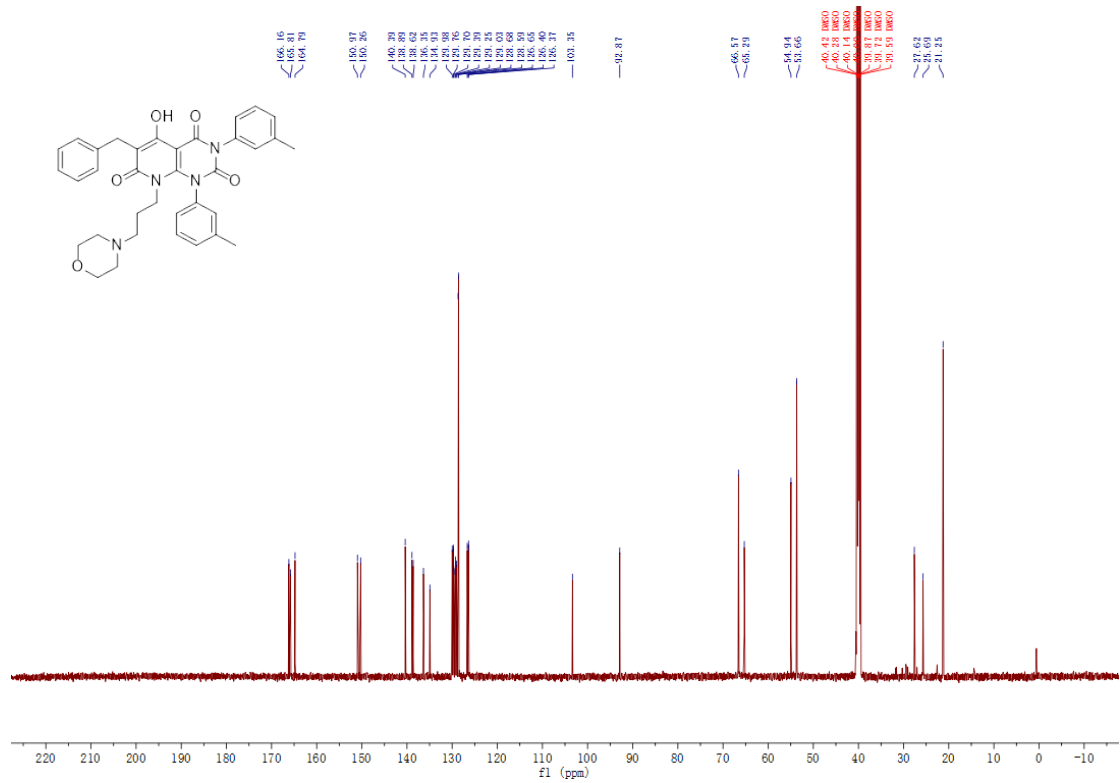
¹³C NMR spectra of compound XS06



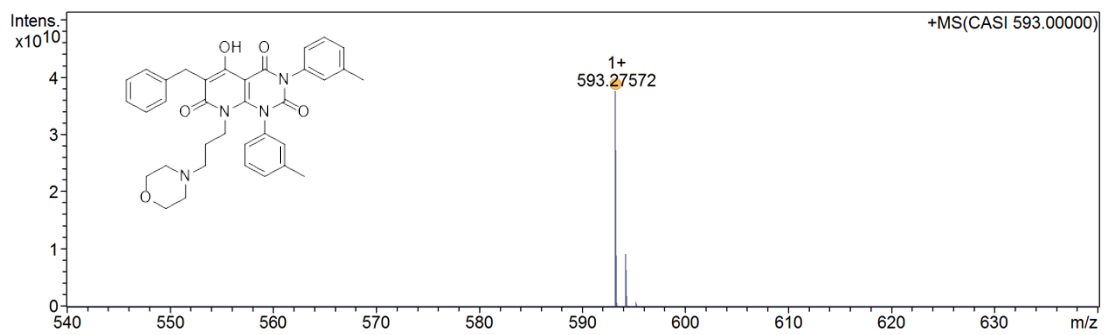
ESI-HRMS spectra of compound **XS06**



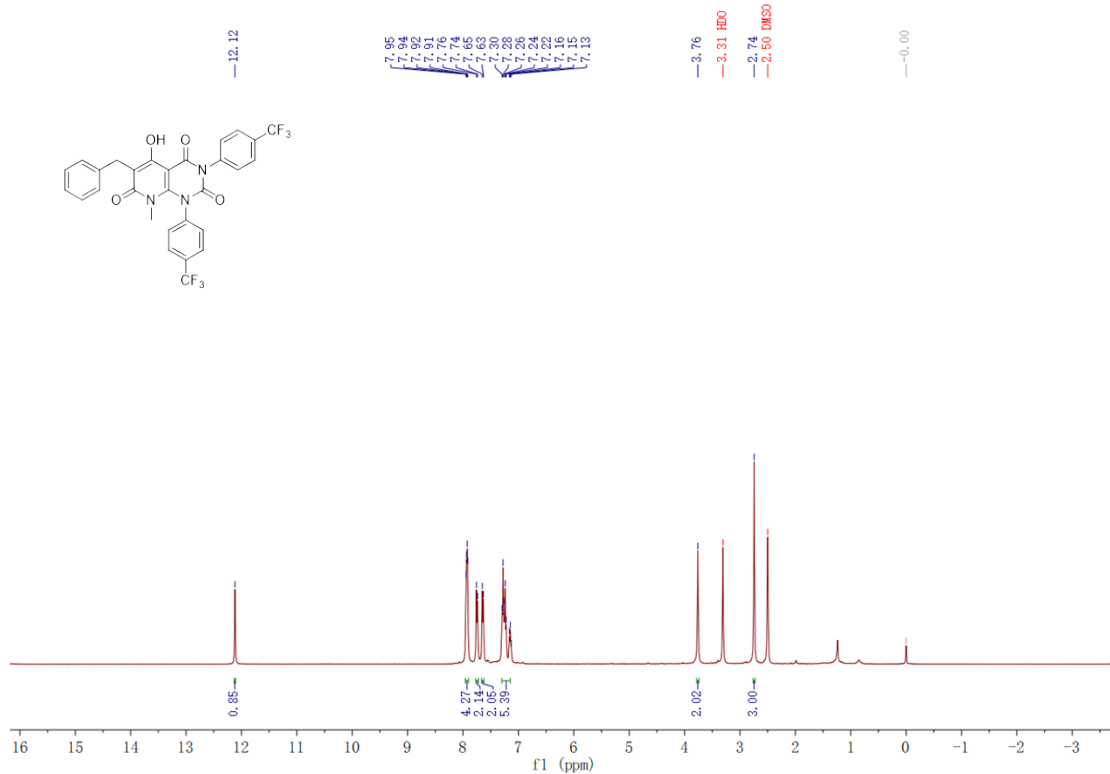
¹H NMR spectra of compound **XS07**



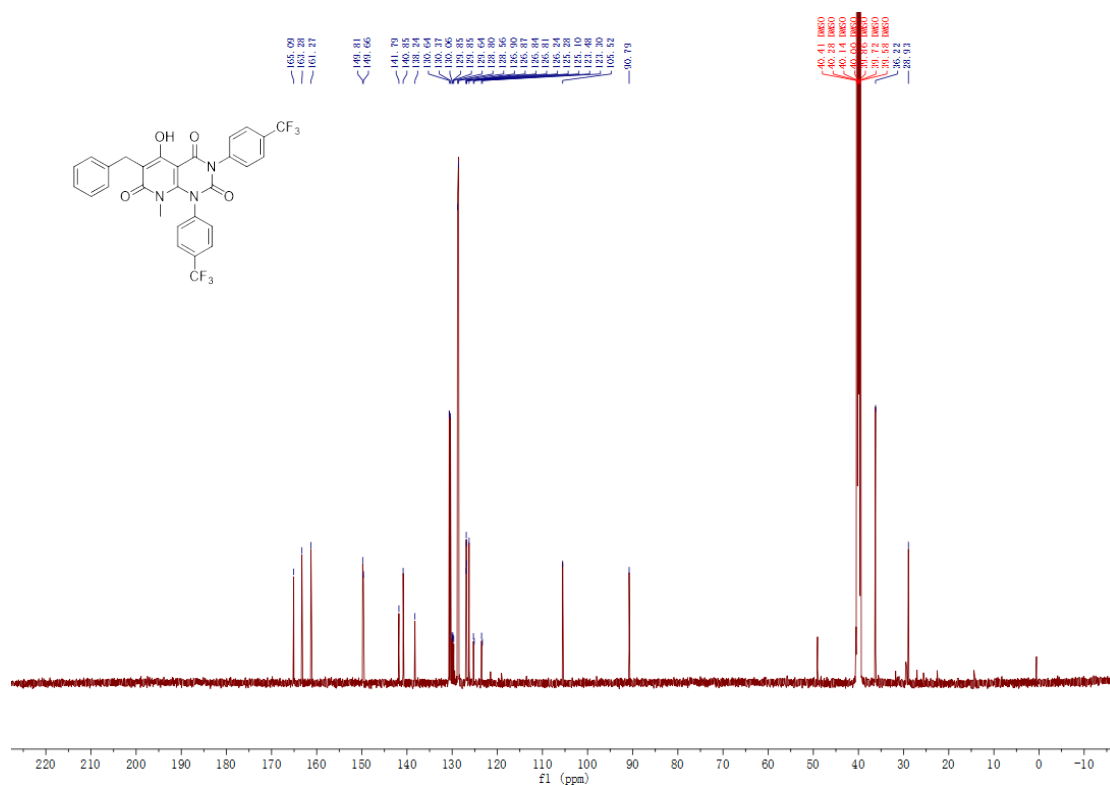
¹³C NMR spectra of compound XS07



ESI-HRMS spectra of compound XS07

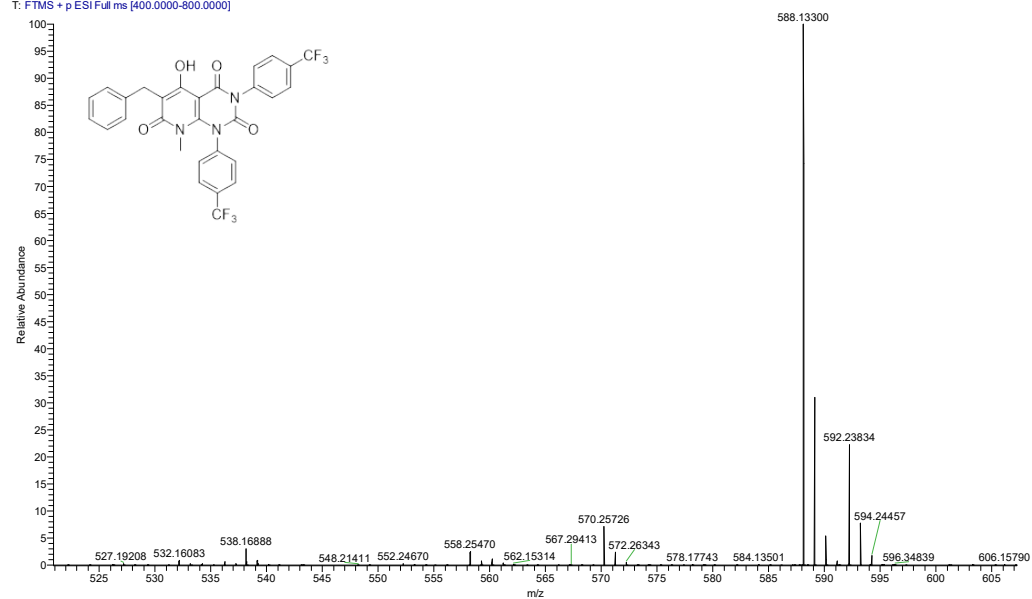


¹H NMR spectra of compound XS08

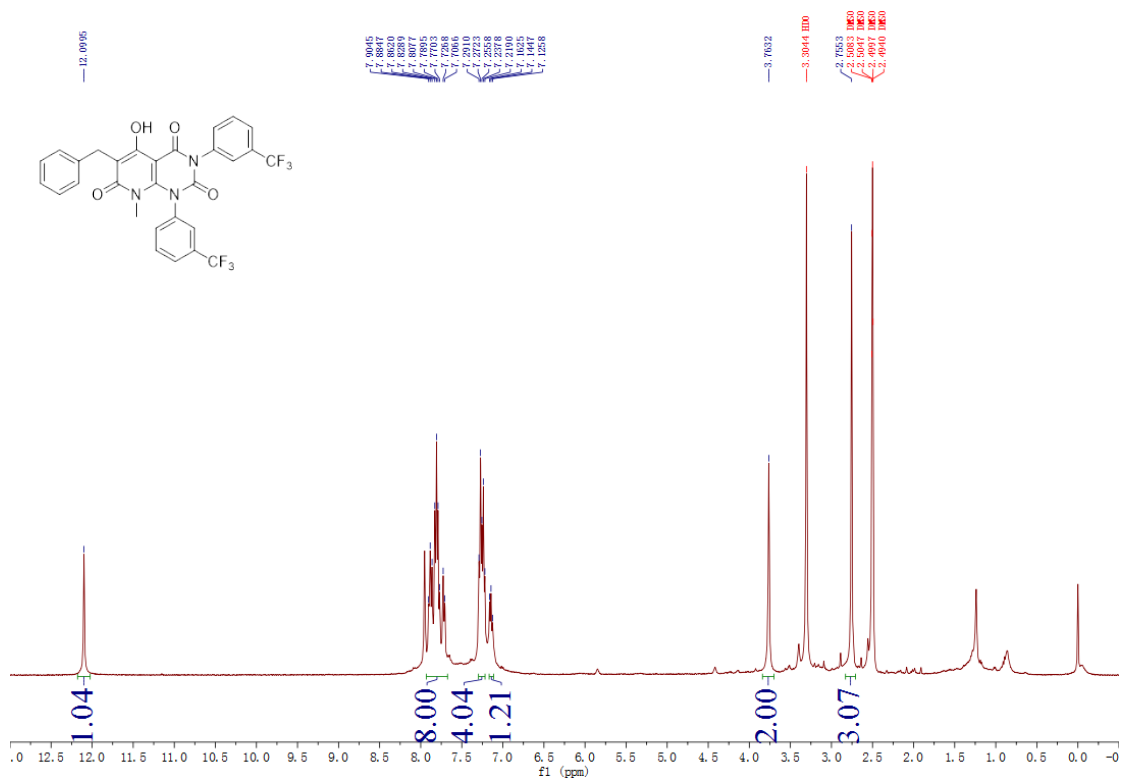


¹³C NMR spectra of compound XS08

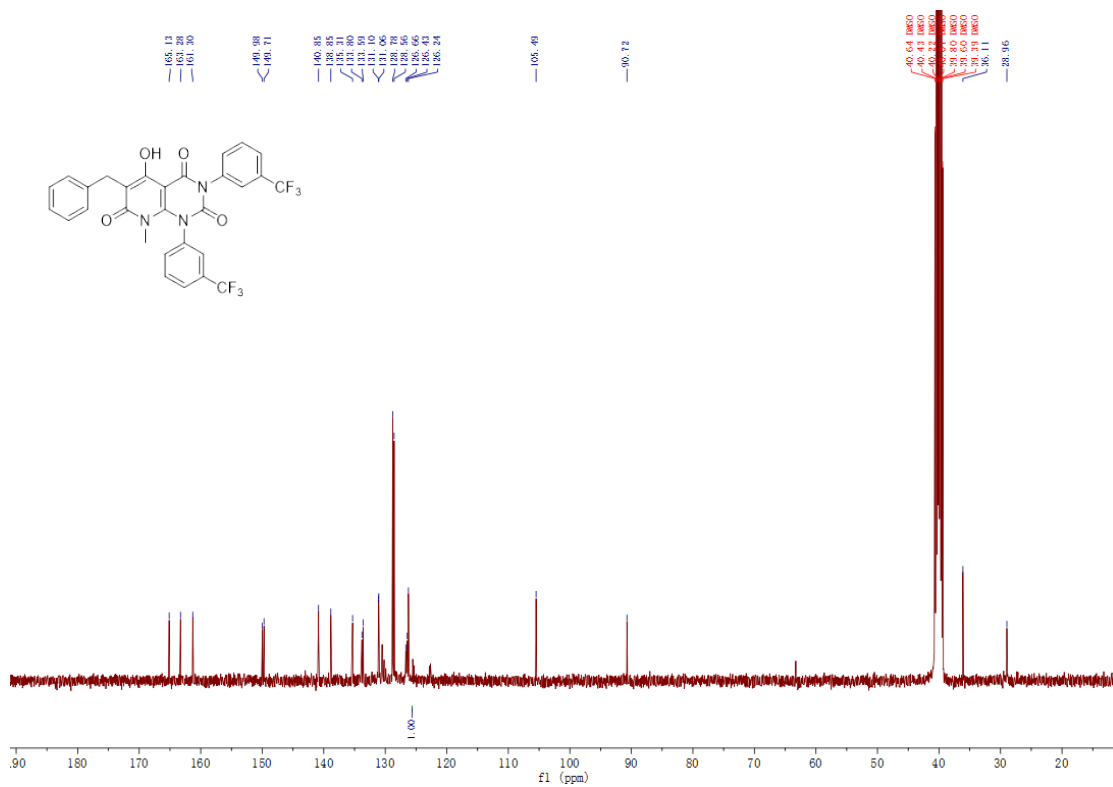
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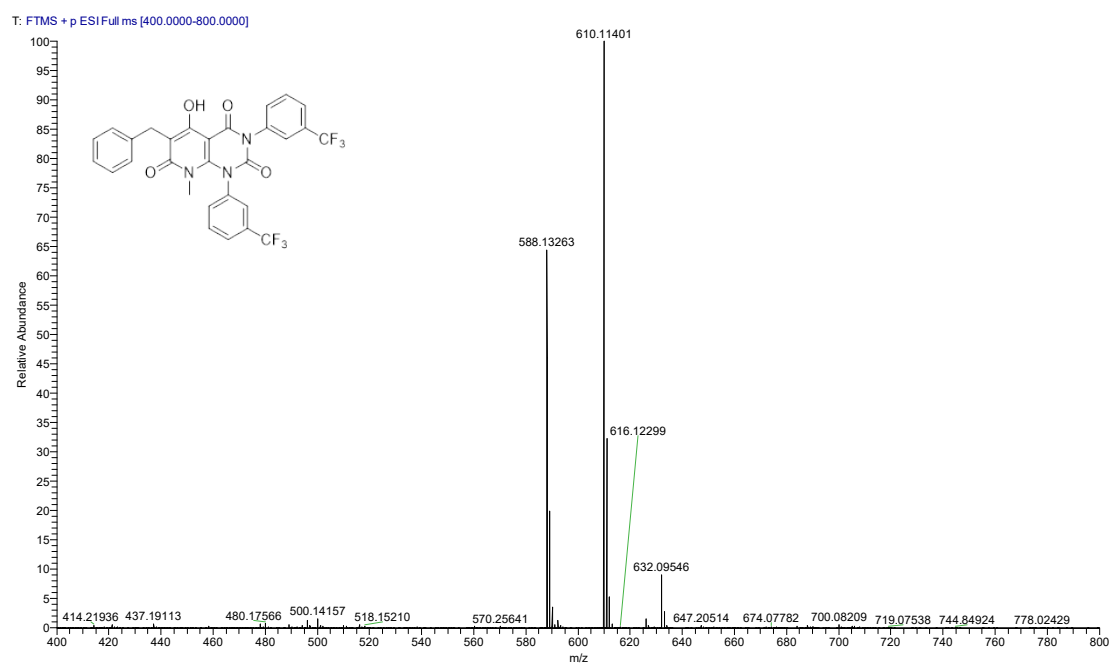
ESI-HRMS spectra of compound XS08



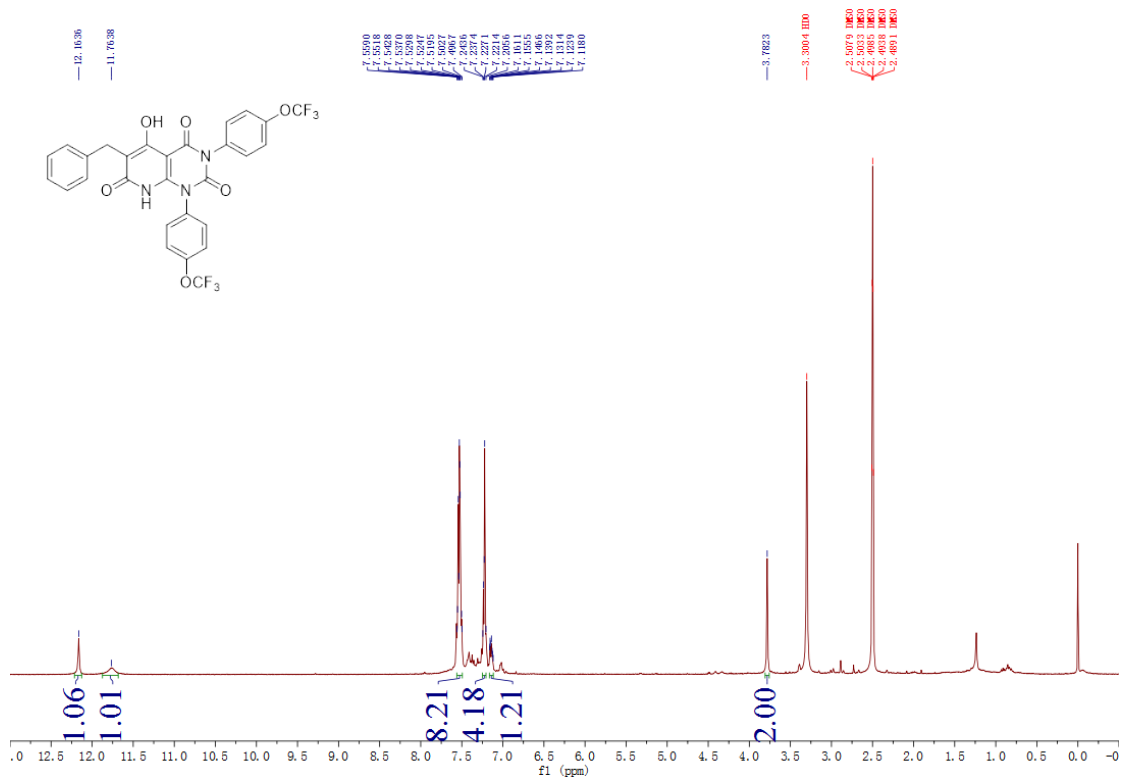
¹H NMR spectra of compound XS09



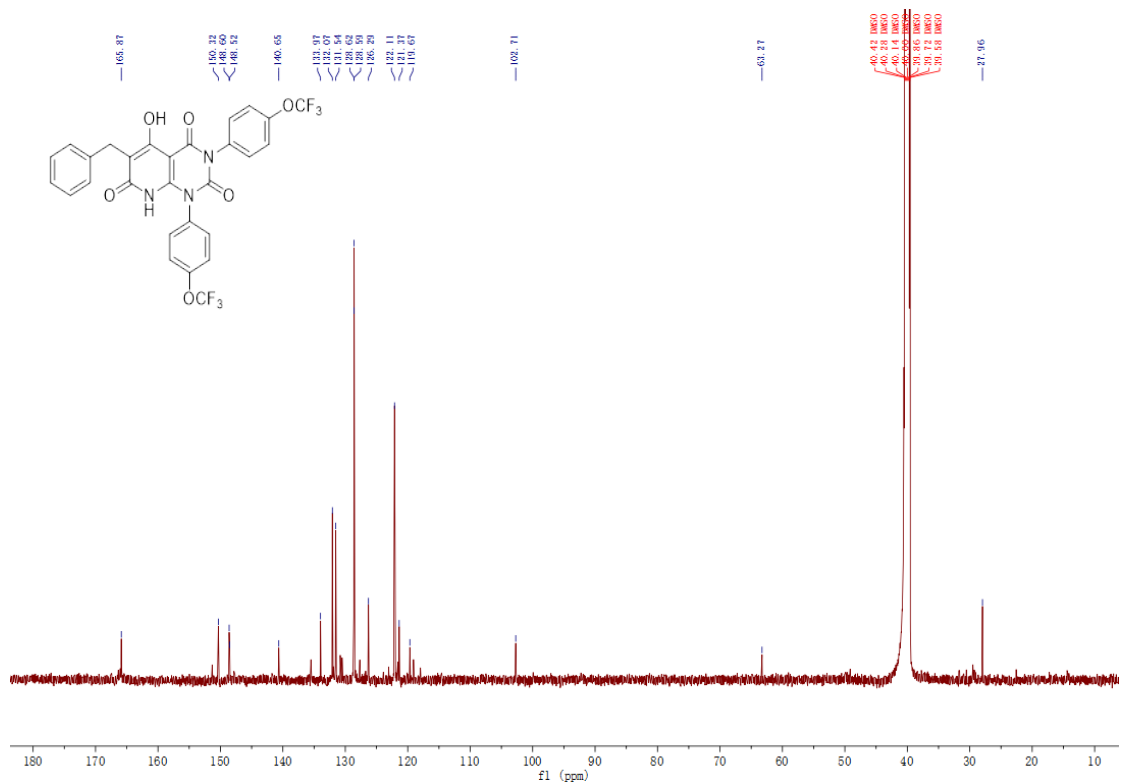
¹³C NMR spectra of compound XS09



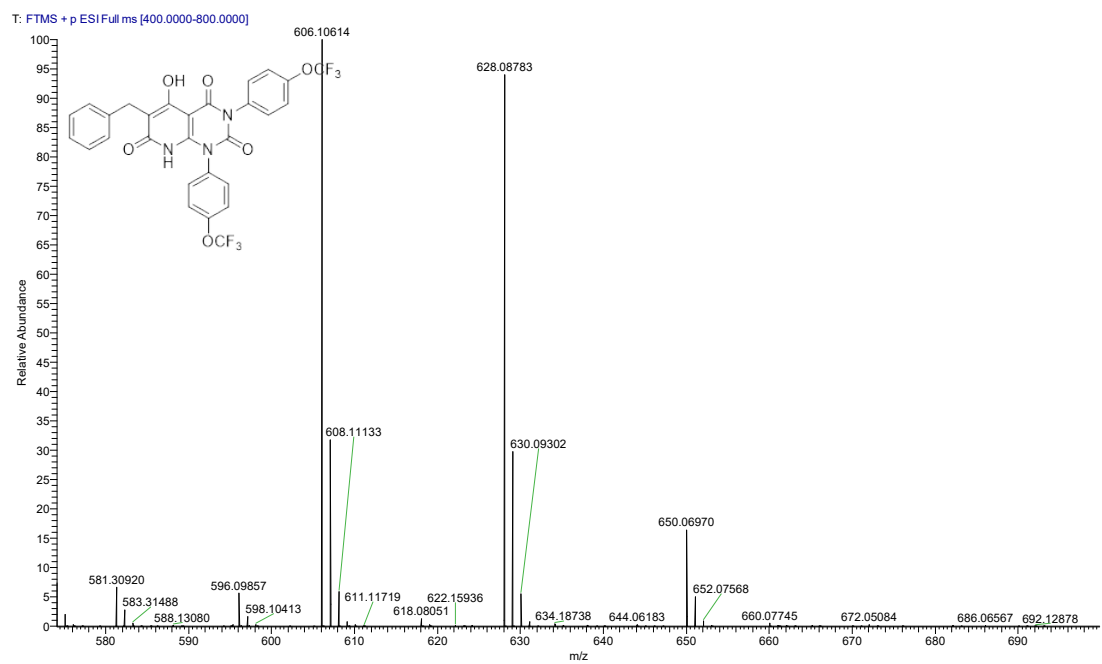
ESI-HRMS spectra of compound XS09



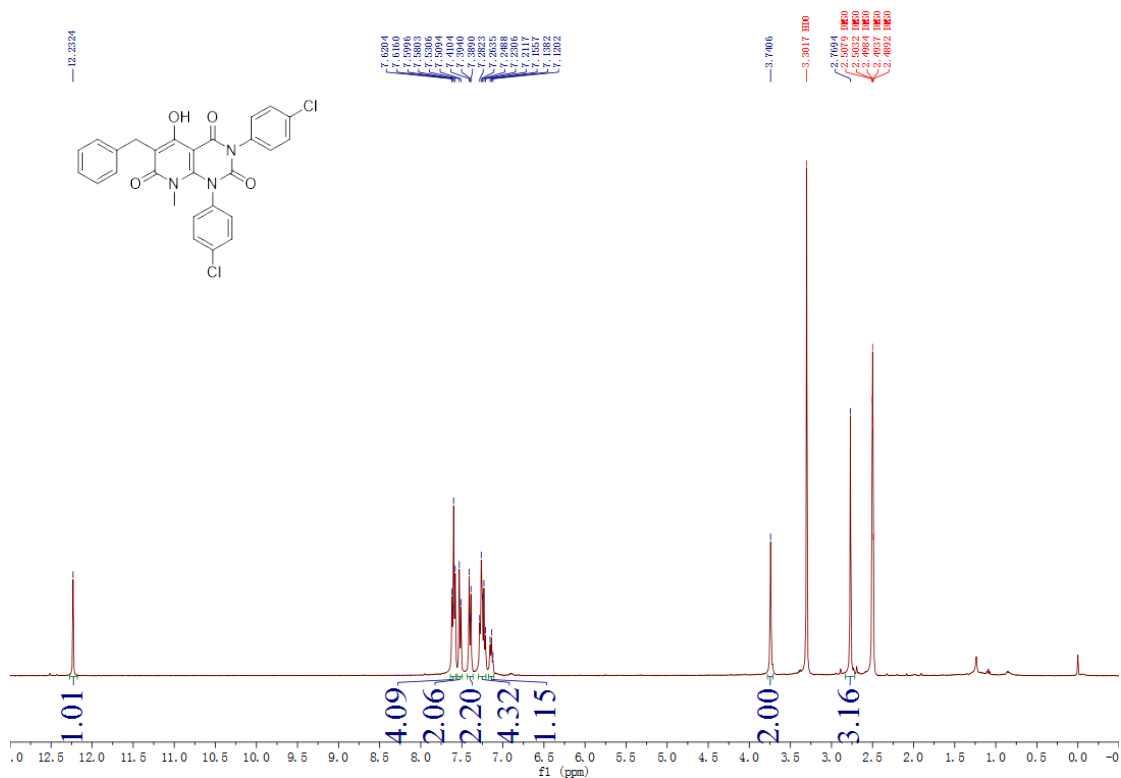
¹H NMR spectra of compound XS10



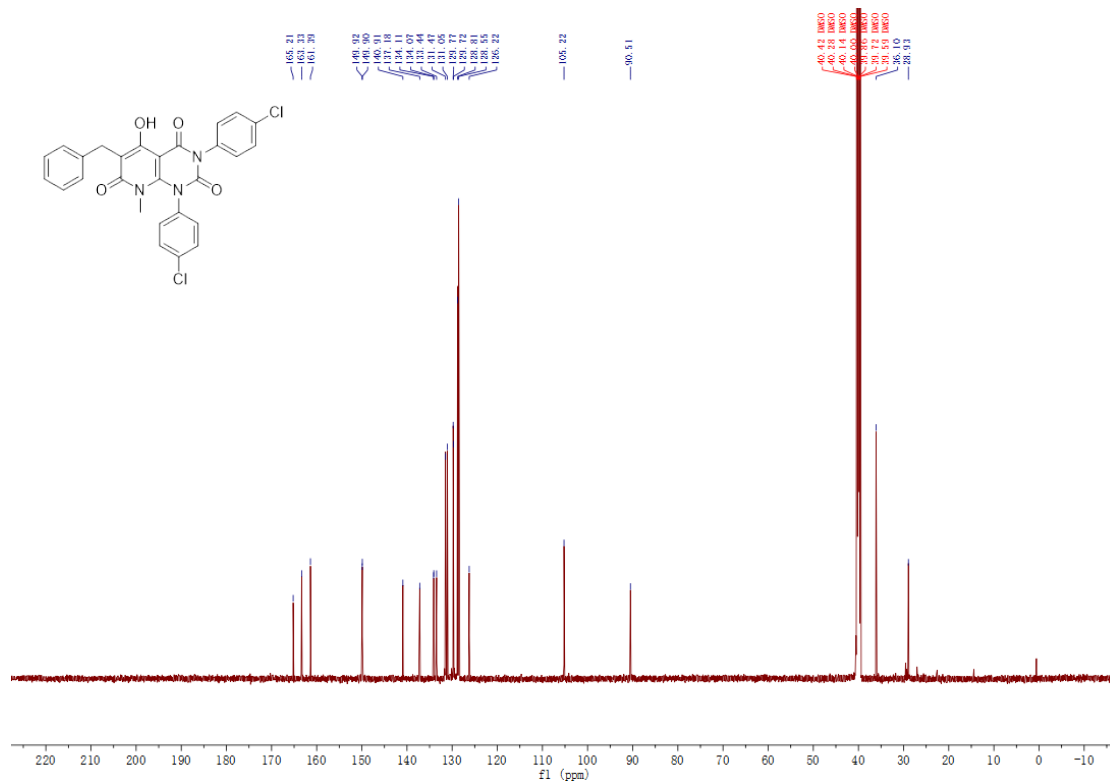
¹³C NMR spectra of compound XS10



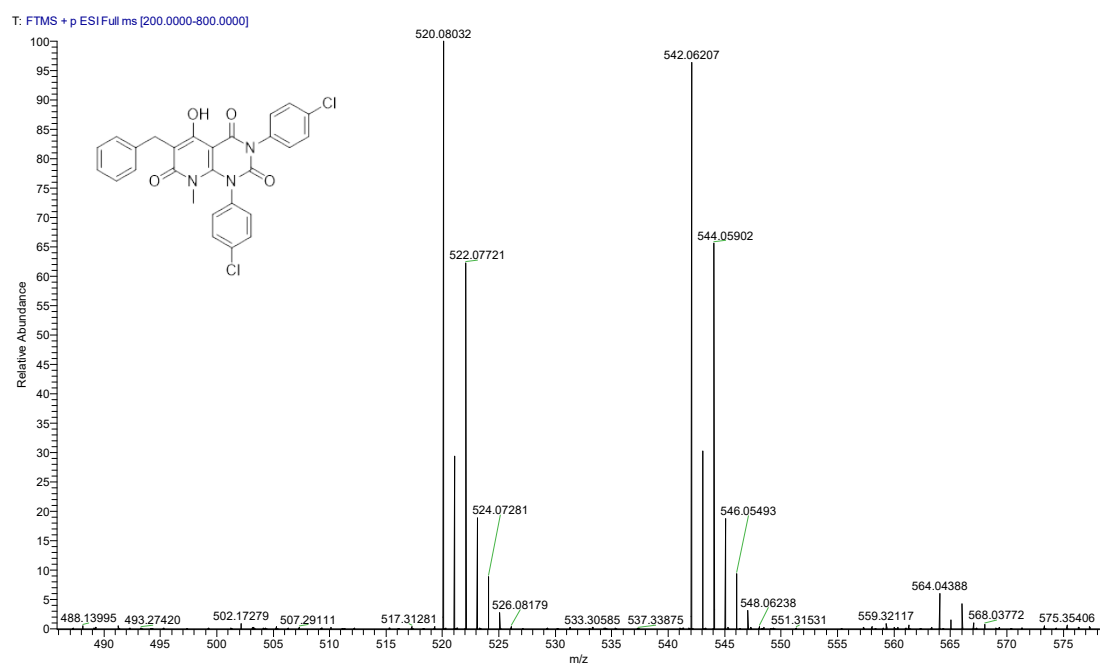
ESI-HRMS spectra of compound **XS10**



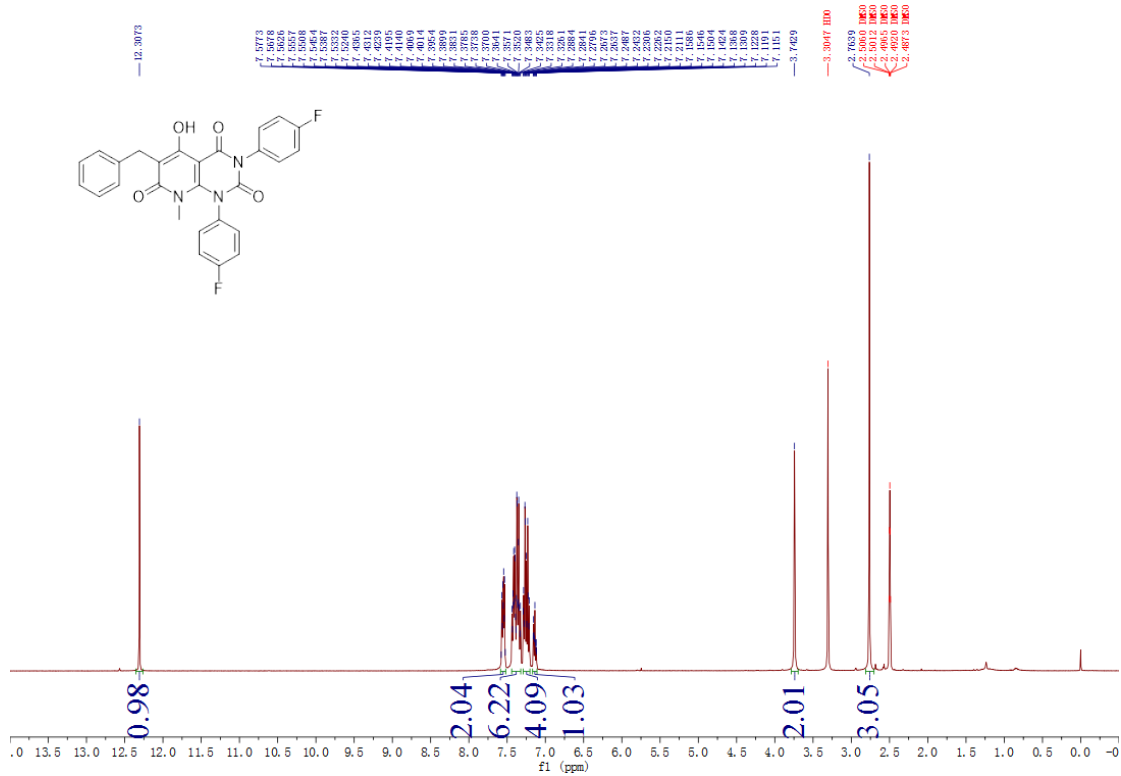
¹H NMR spectra of compound **XS11**



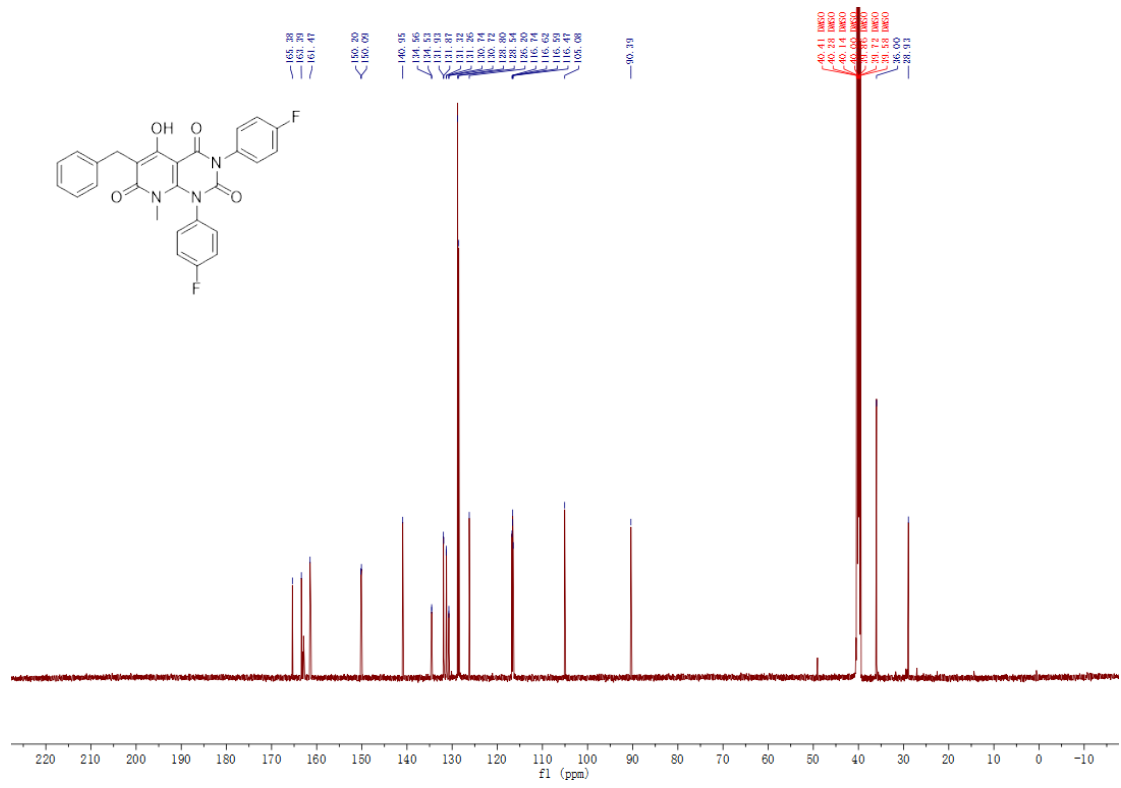
¹³C NMR spectra of compound XS11



ESI-HRMS spectra of compound XS11

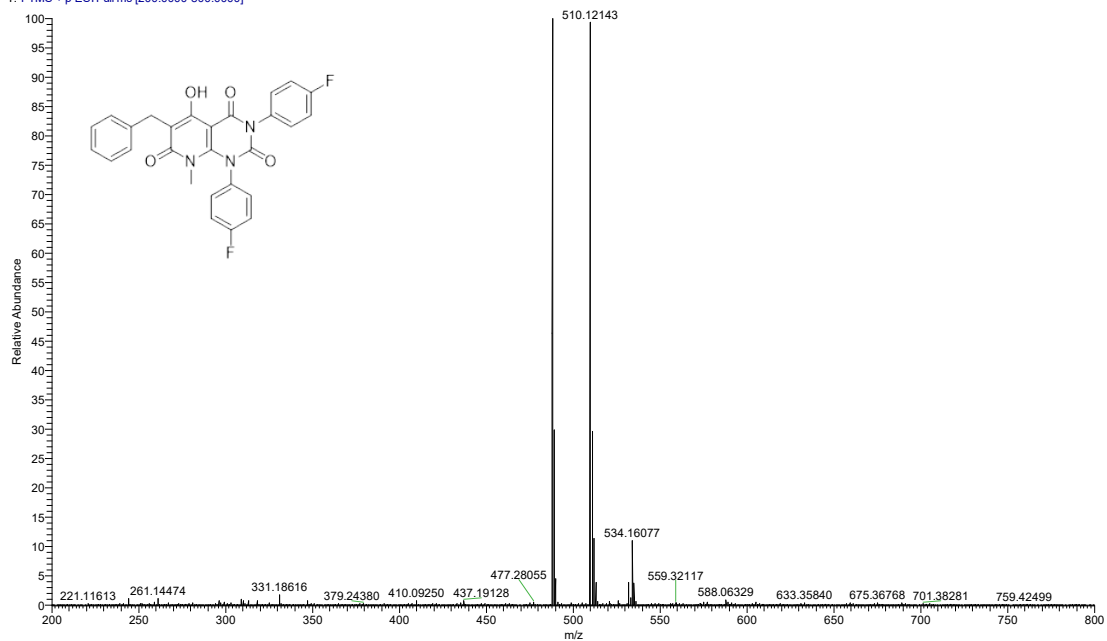


¹H NMR spectra of compound XS12

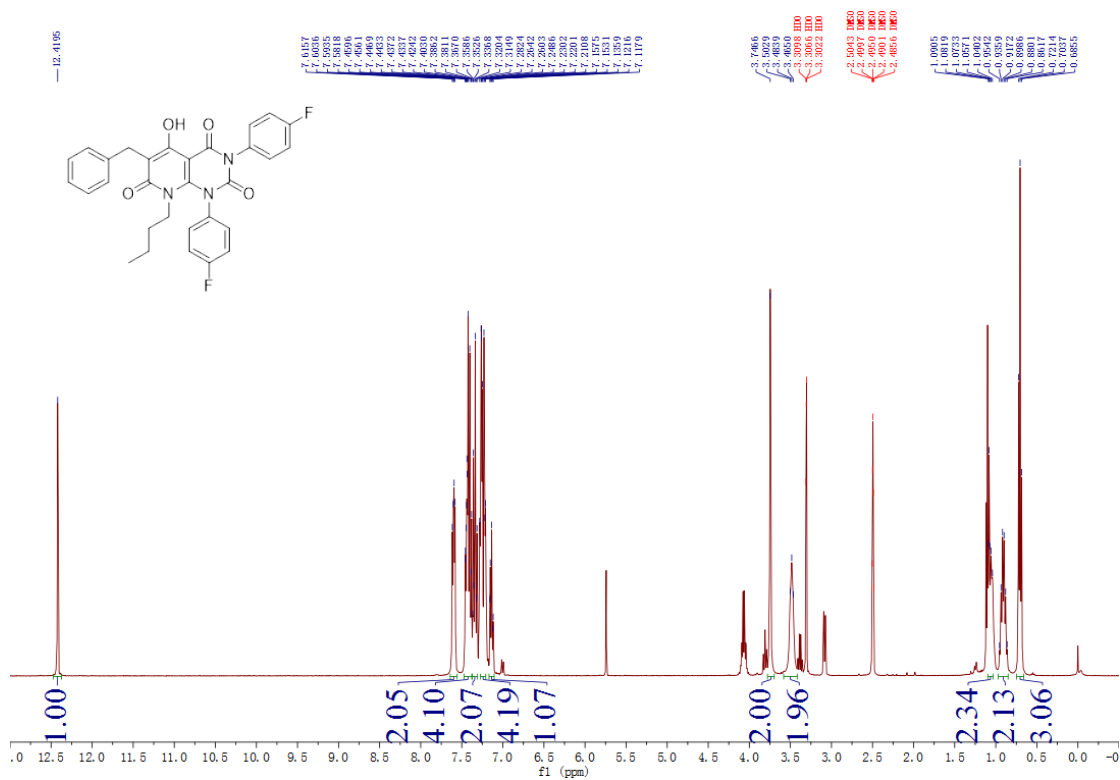


¹³C NMR spectra of compound XS12

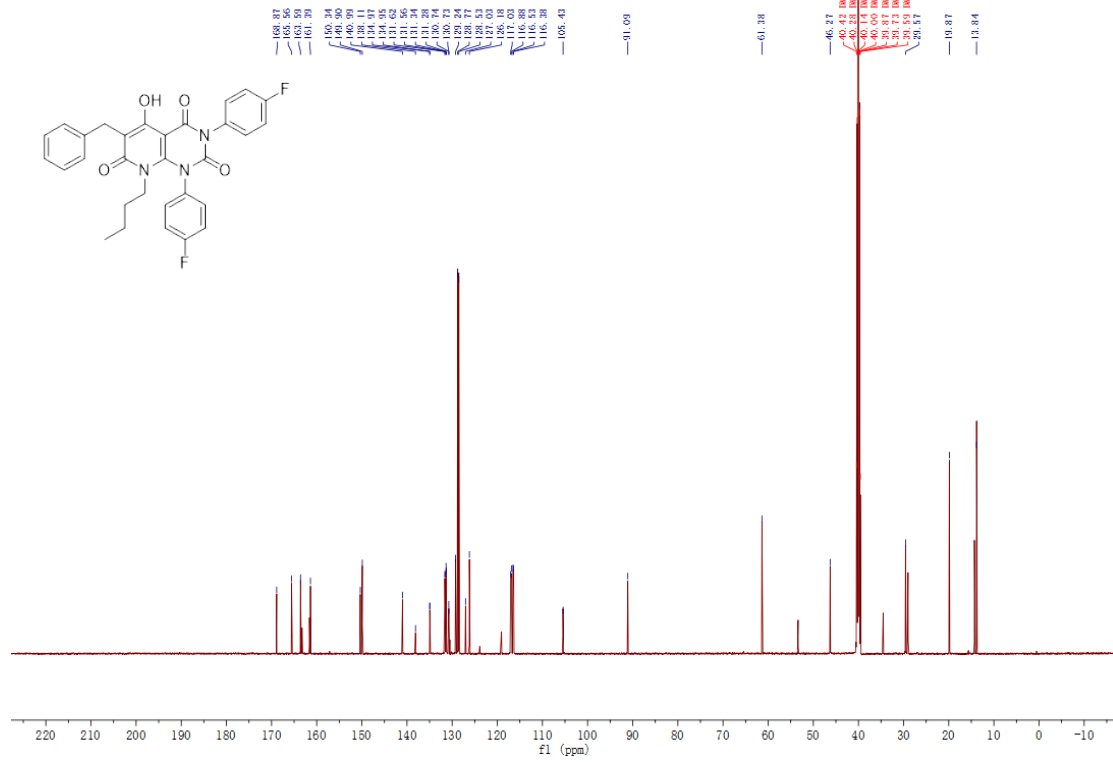
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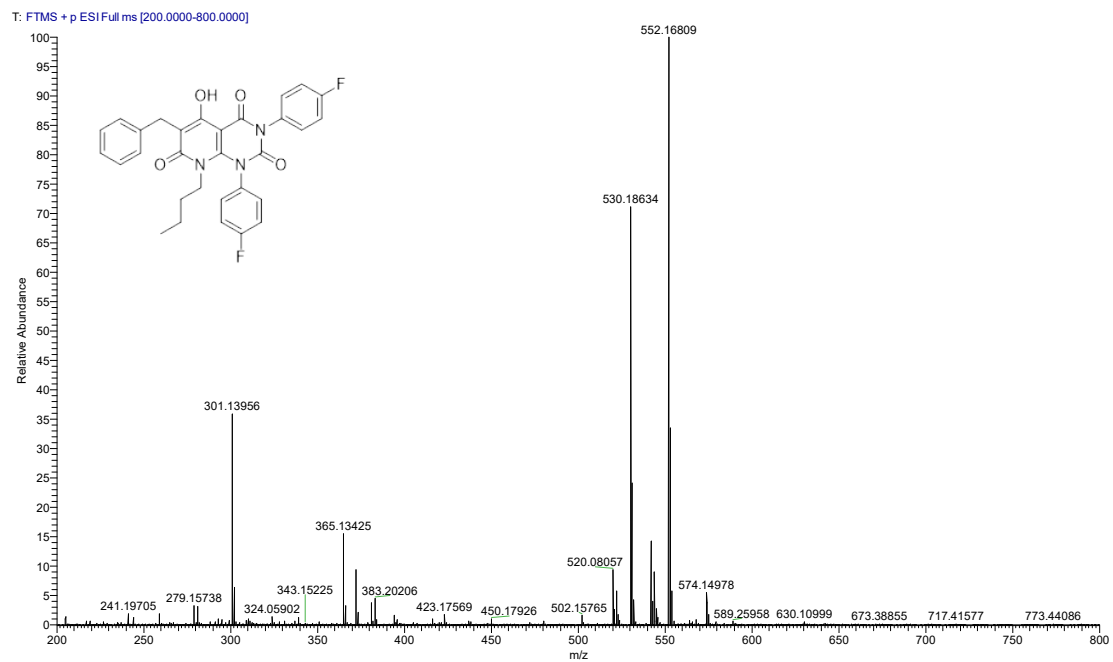
ESI-HRMS spectra of compound XS12



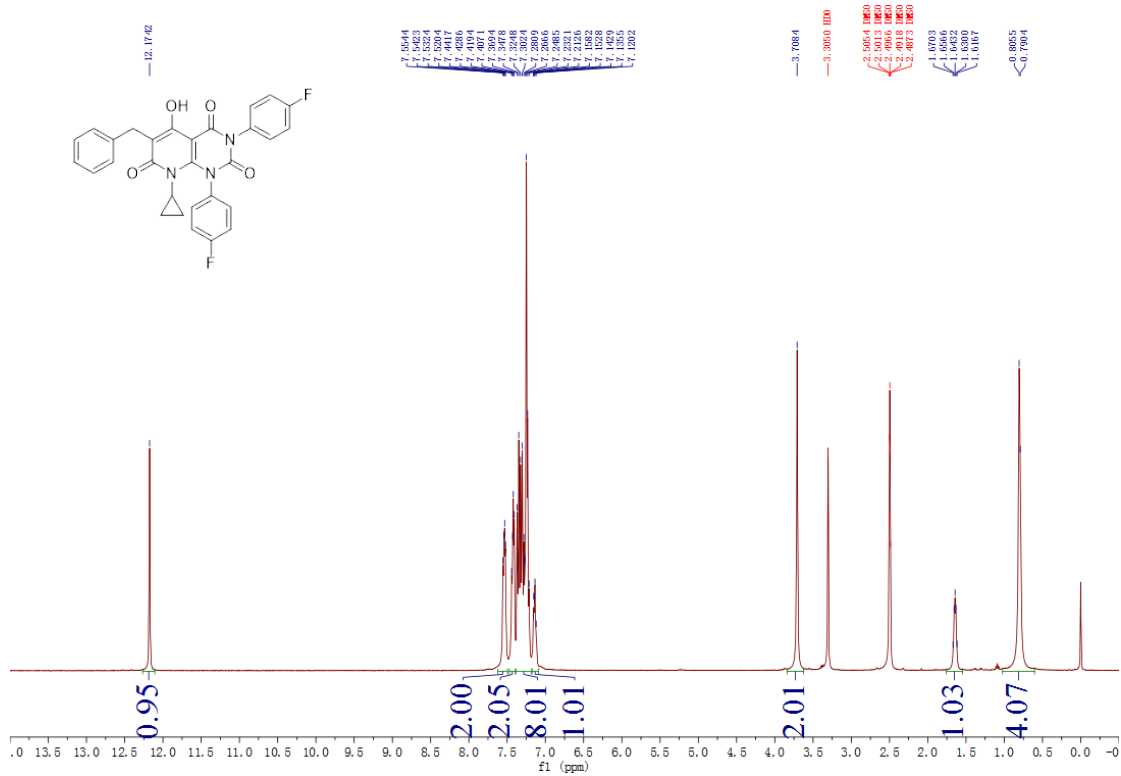
¹H NMR spectra of compound XS13



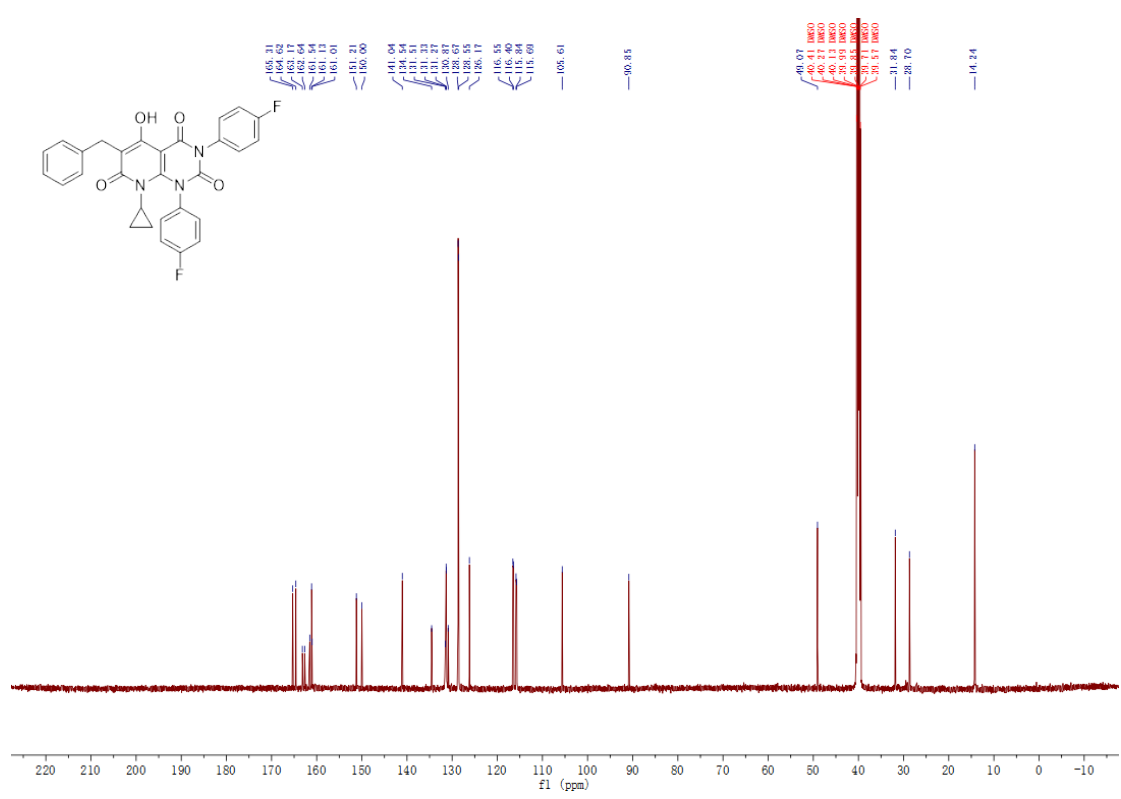
^{13}C NMR spectra of compound XS13



ESI-HRMS spectra of compound XS13

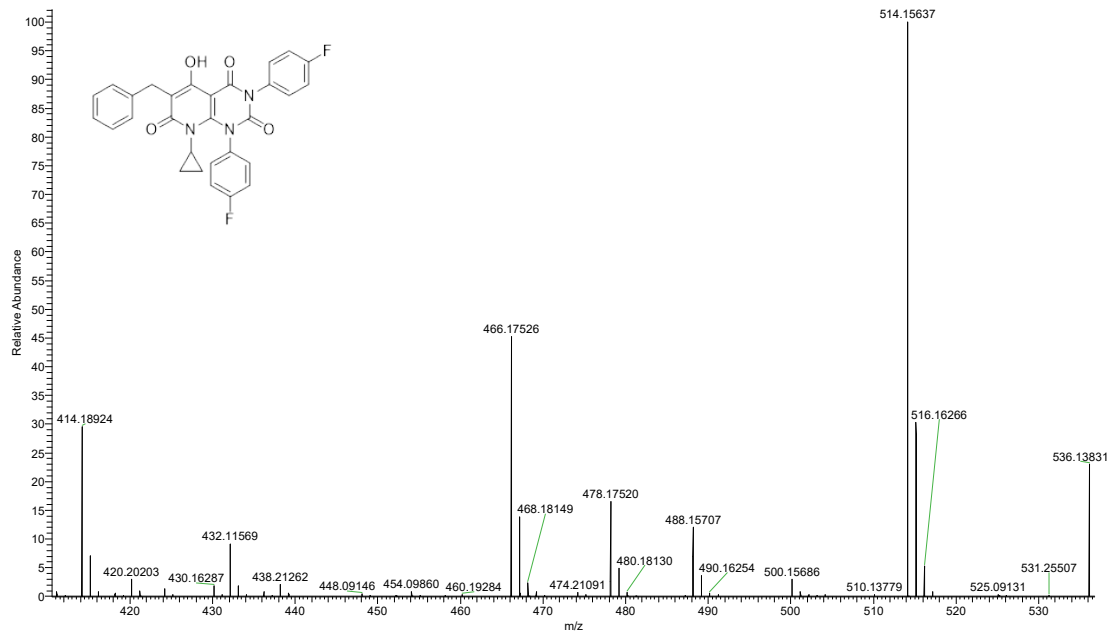


¹H NMR spectra of compound XS14

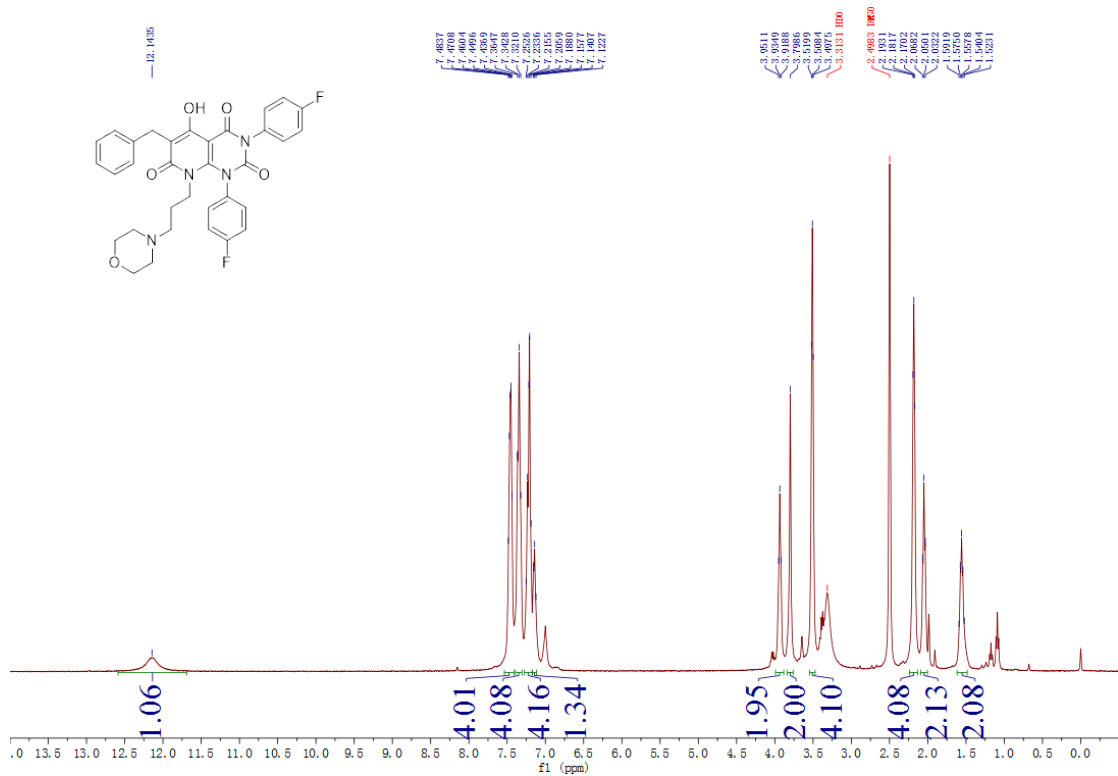


¹³C NMR spectra of compound XS14

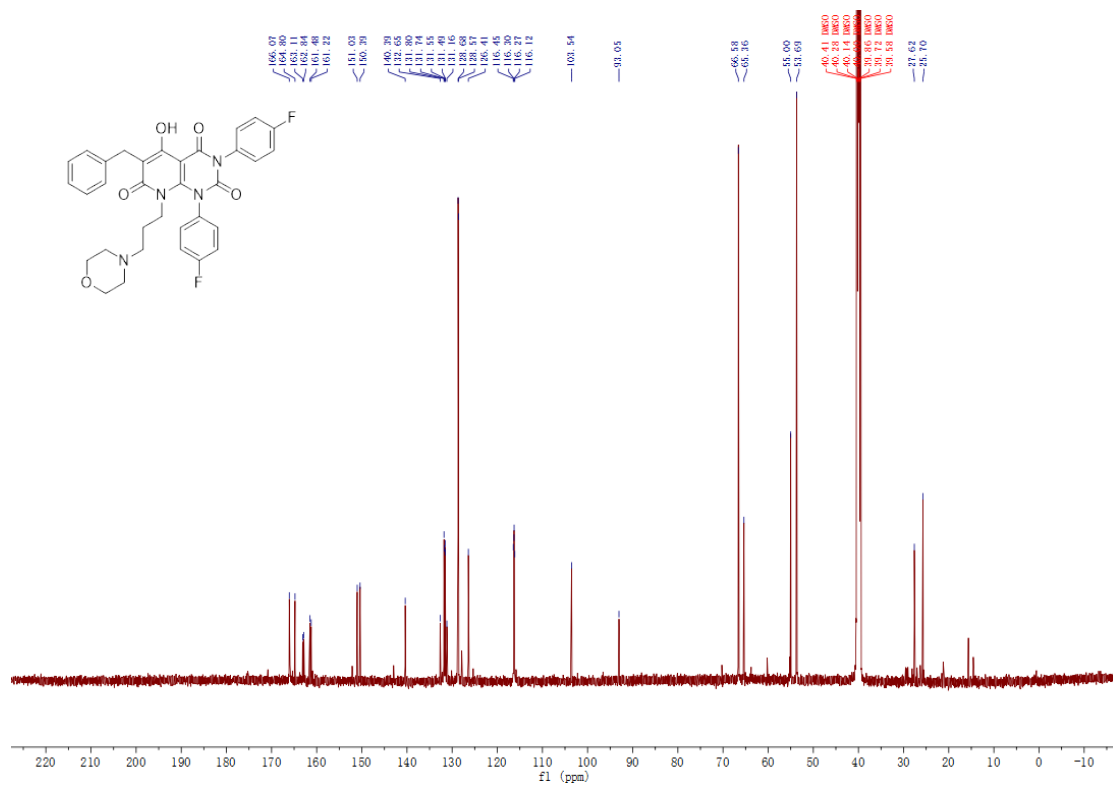
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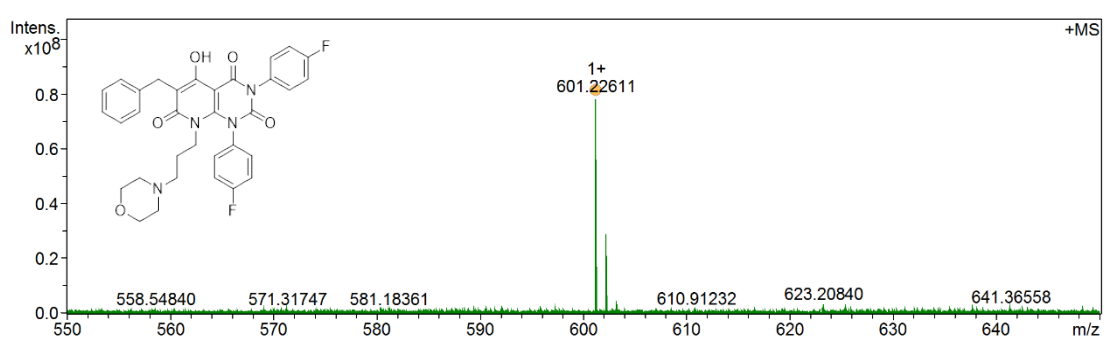
ESI-HRMS spectra of compound XS14



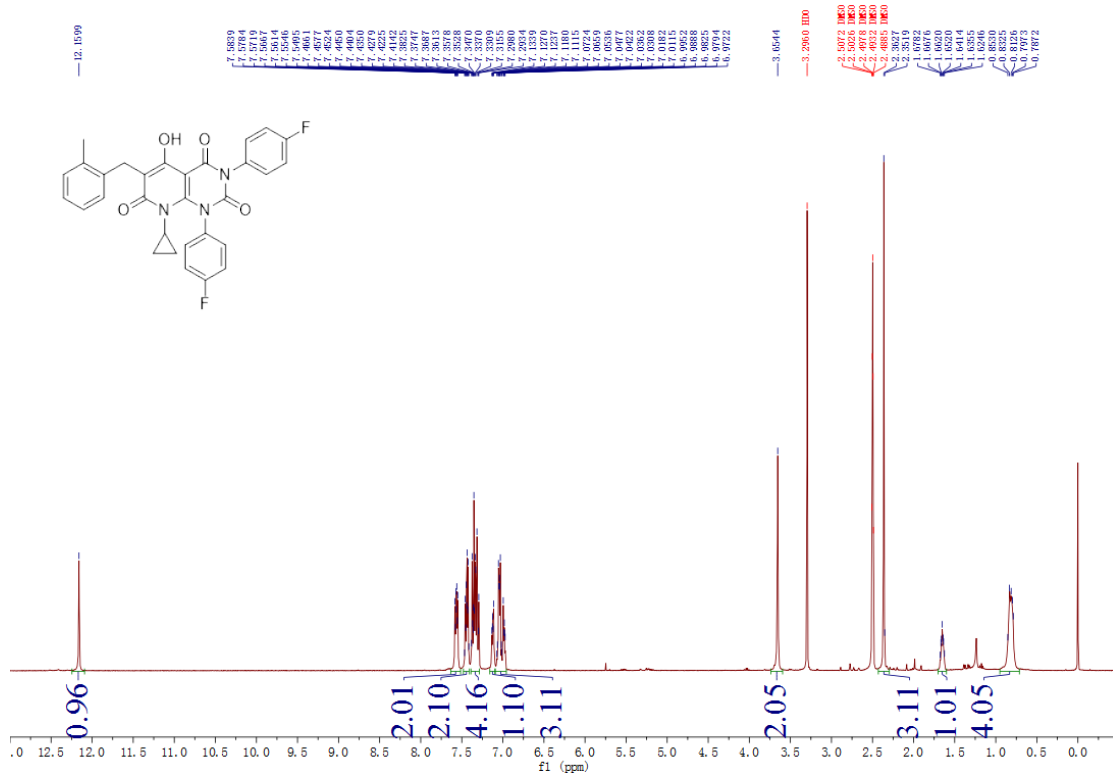
¹H NMR spectra of compound XS15



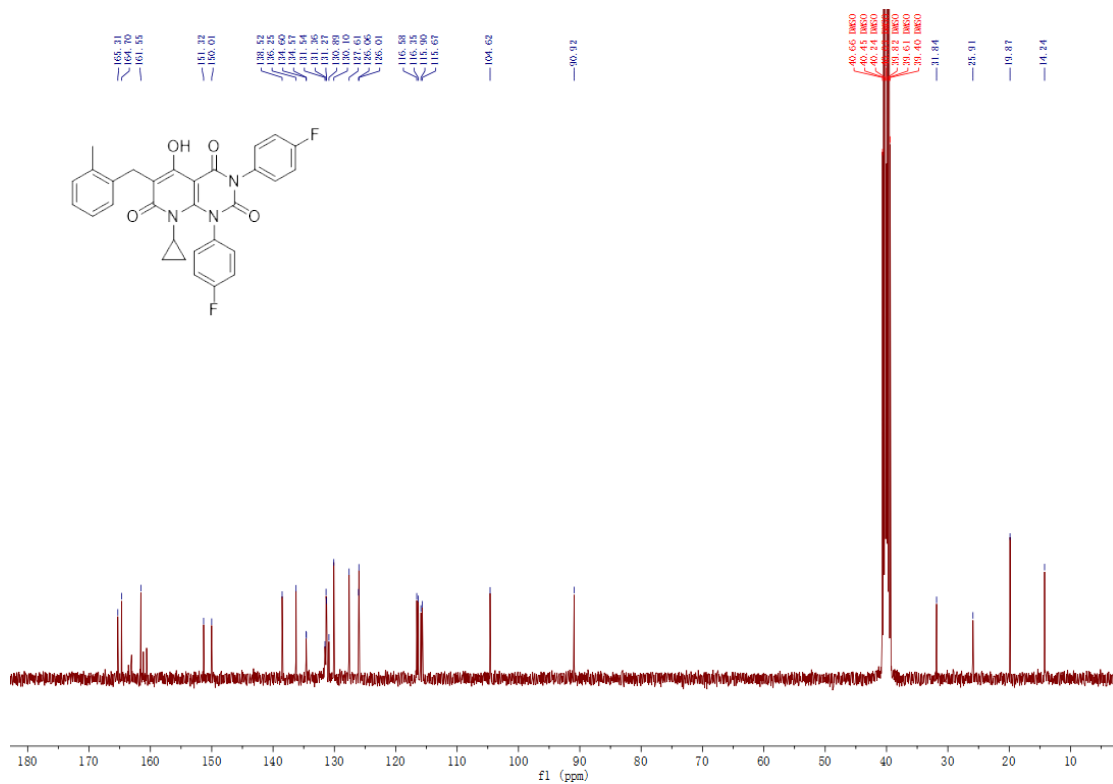
¹³C NMR spectra of compound XS15



ESI-HRMS spectra of compound XS15

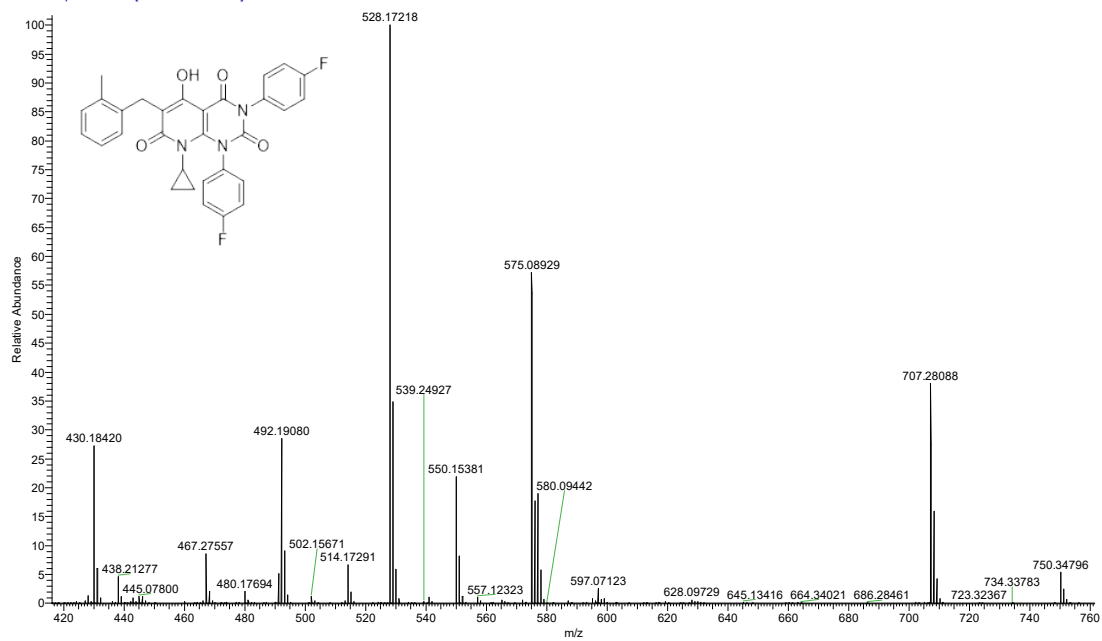


¹H NMR spectra of compound XS16

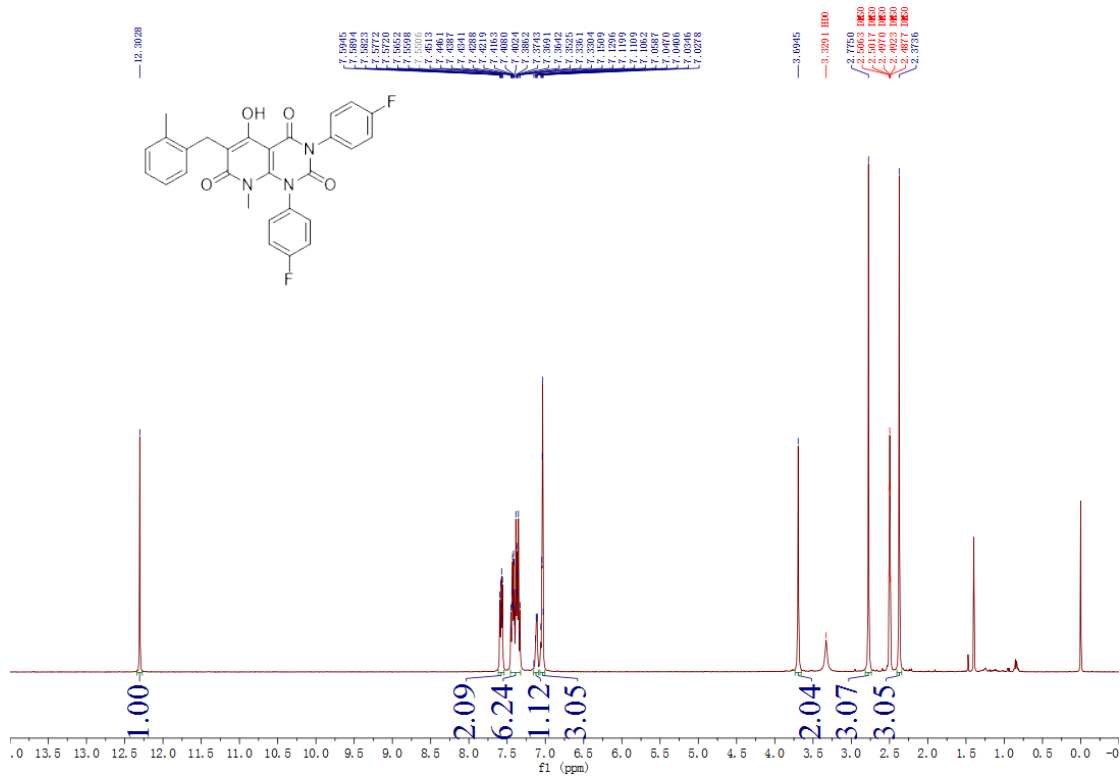


¹³C NMR spectra of compound XS16

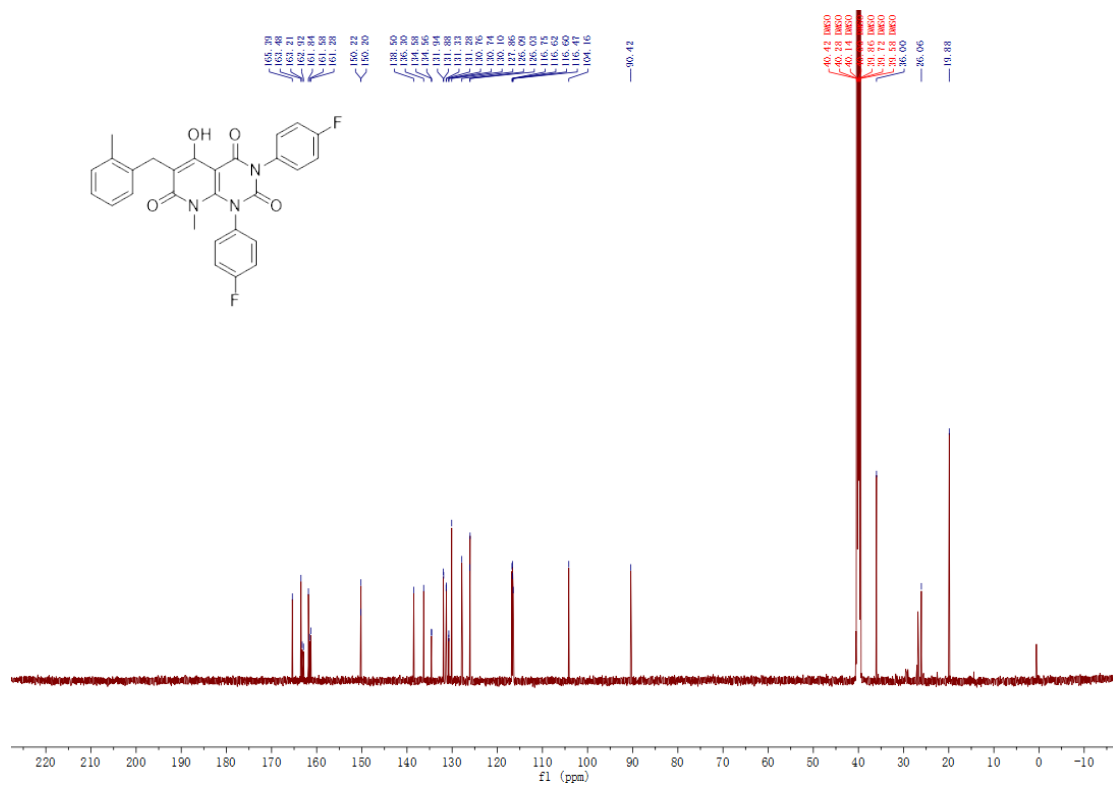
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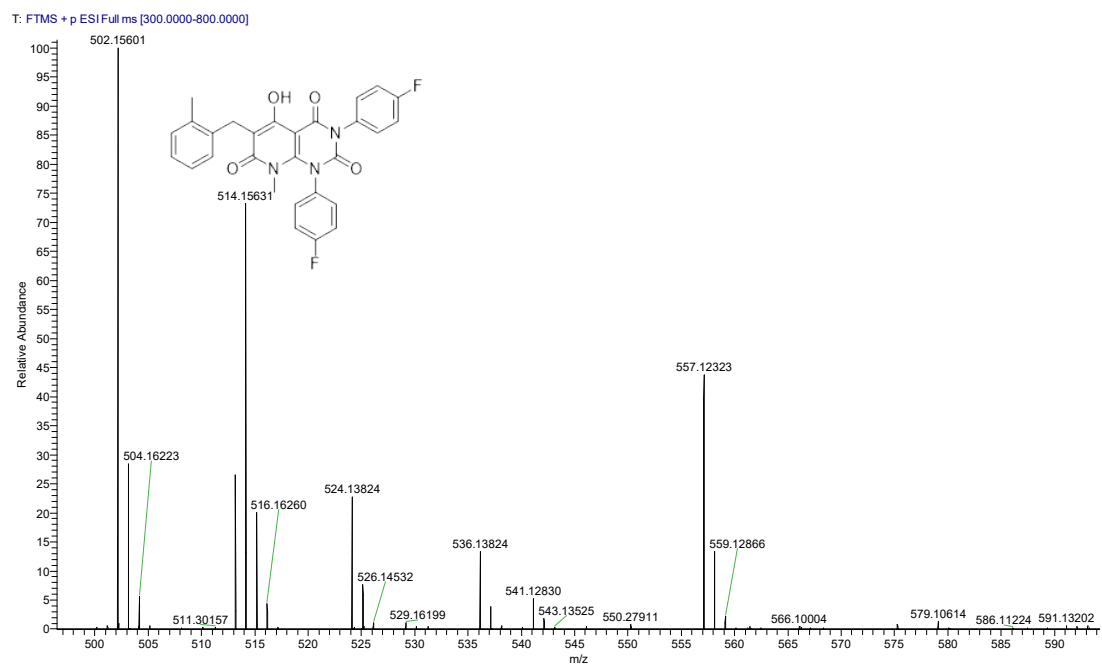
ESI-HRMS spectra of compound XS16



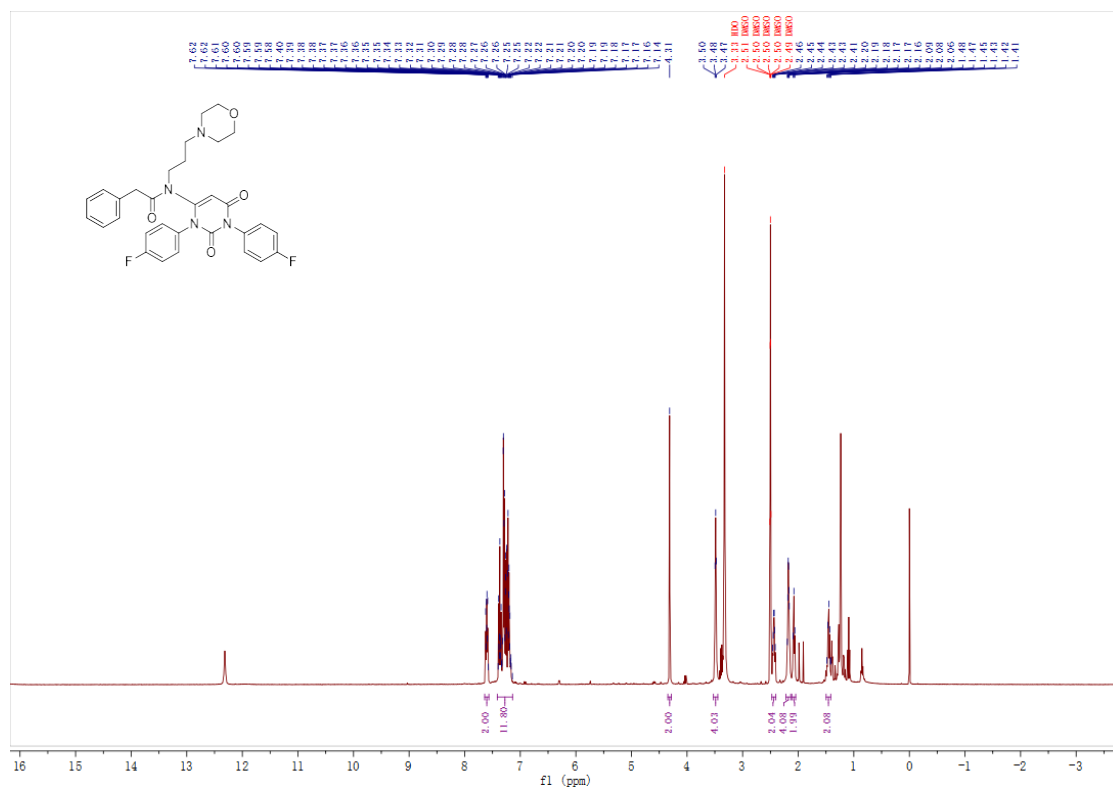
¹H NMR spectra of compound XS17



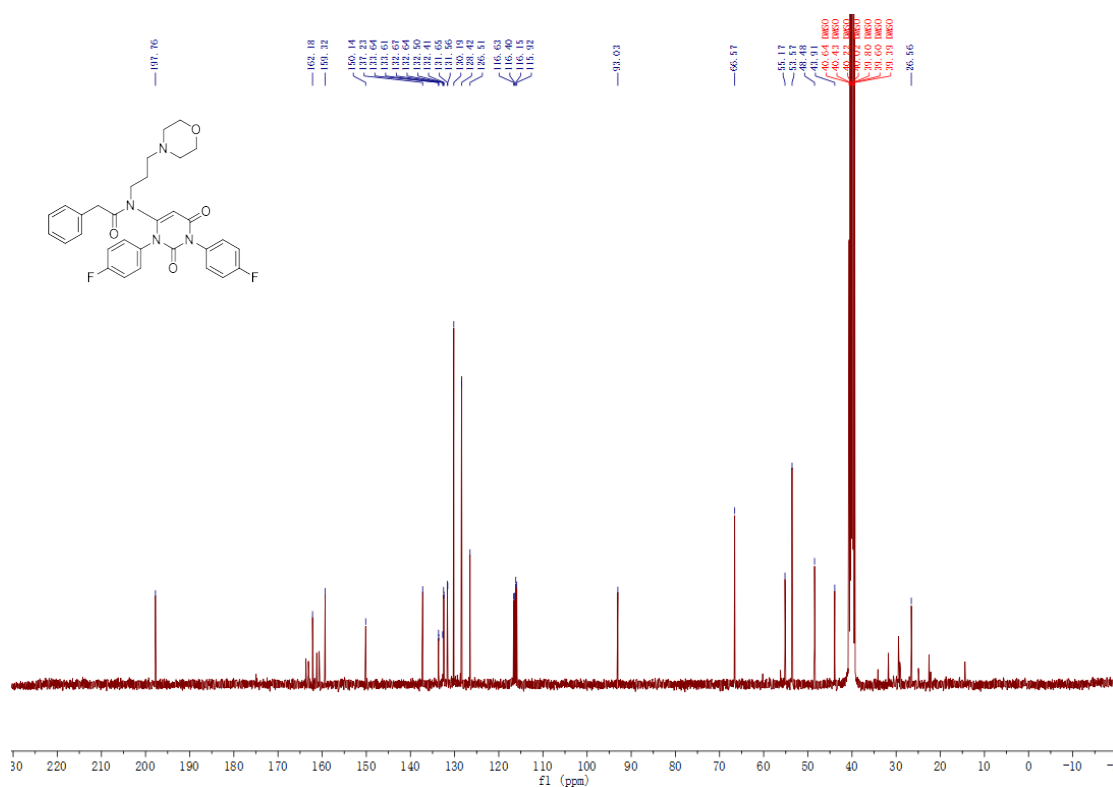
¹³C NMR spectra of compound XS17



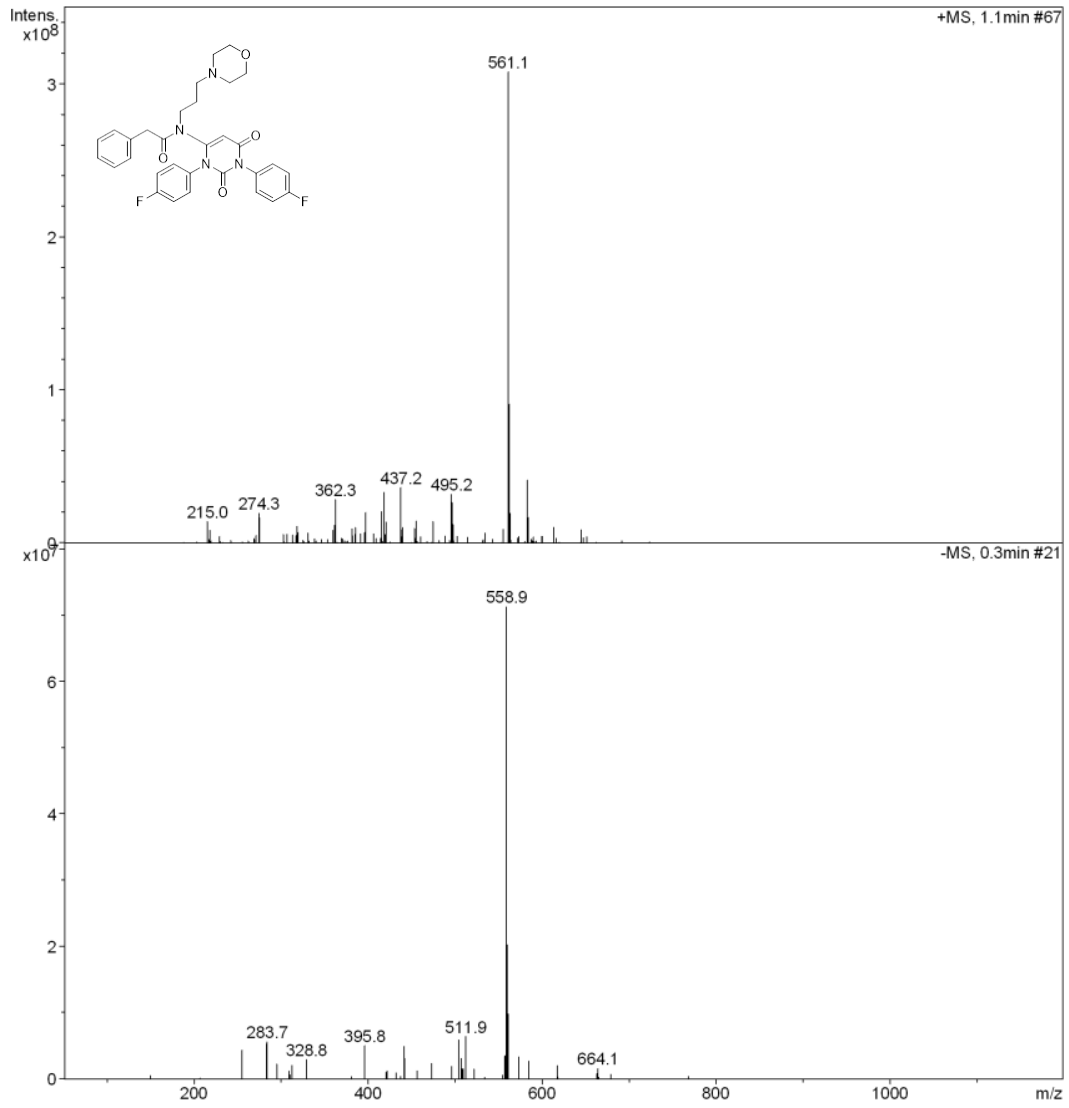
ESI-HRMS spectra of compound XS17



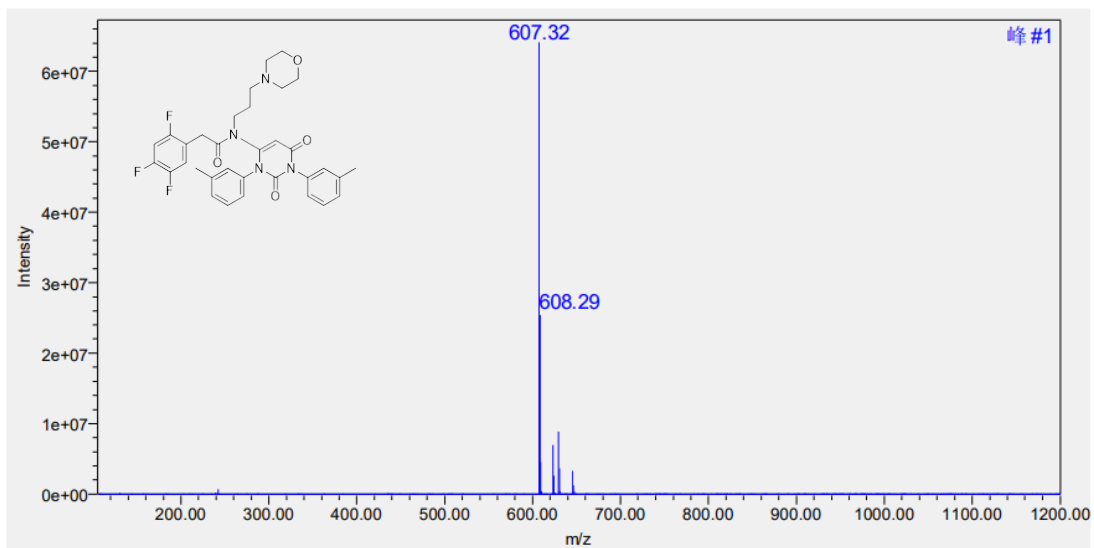
¹H NMR spectra of compound XS18



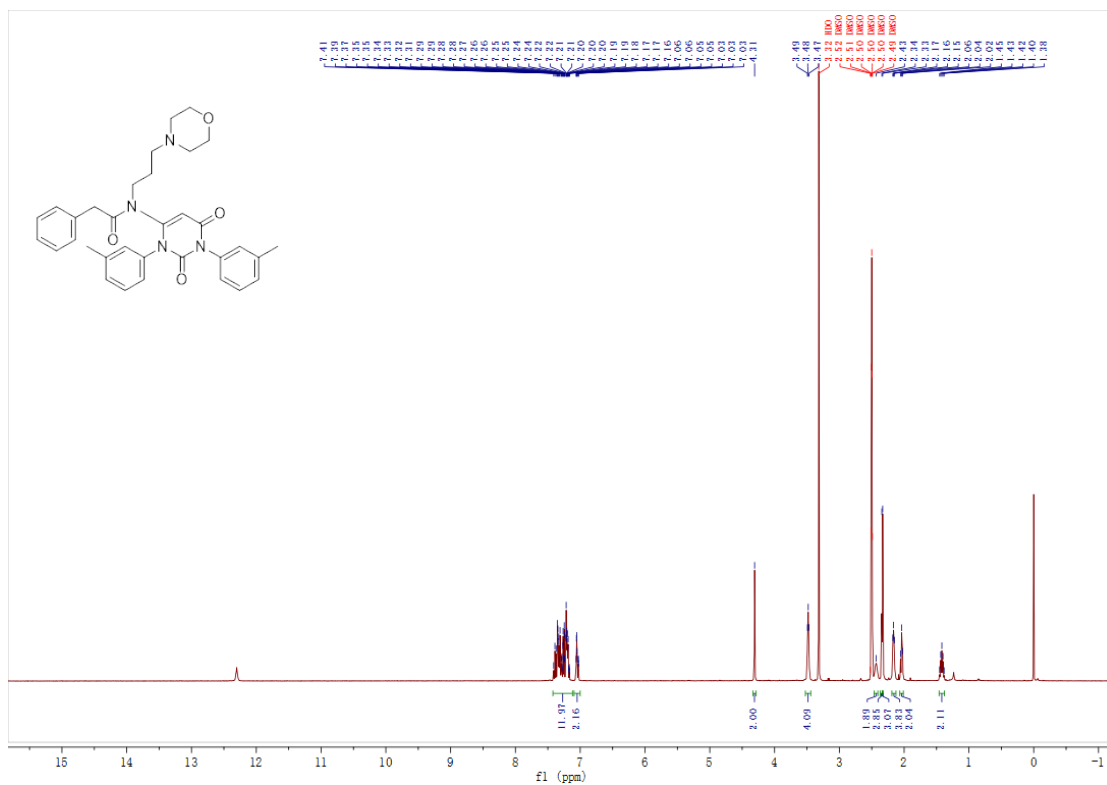
¹³C NMR spectra of compound XS18



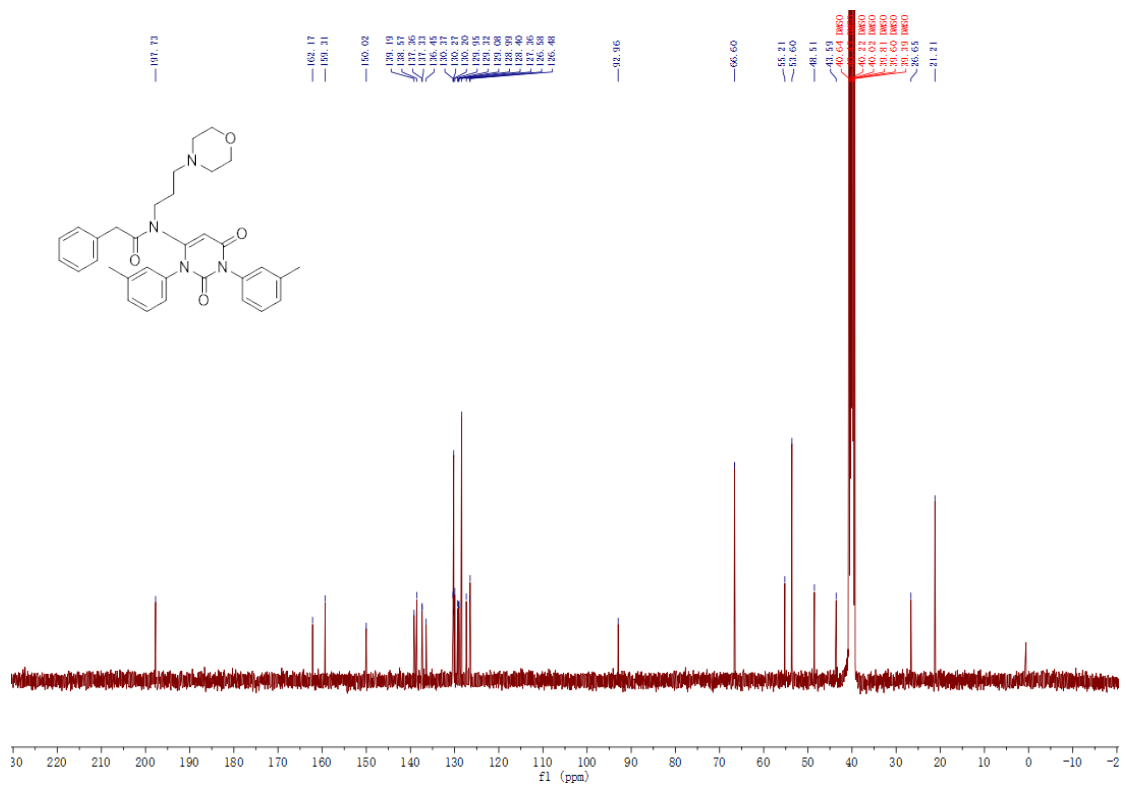
ESI-HRMS spectra of compound **XS18**



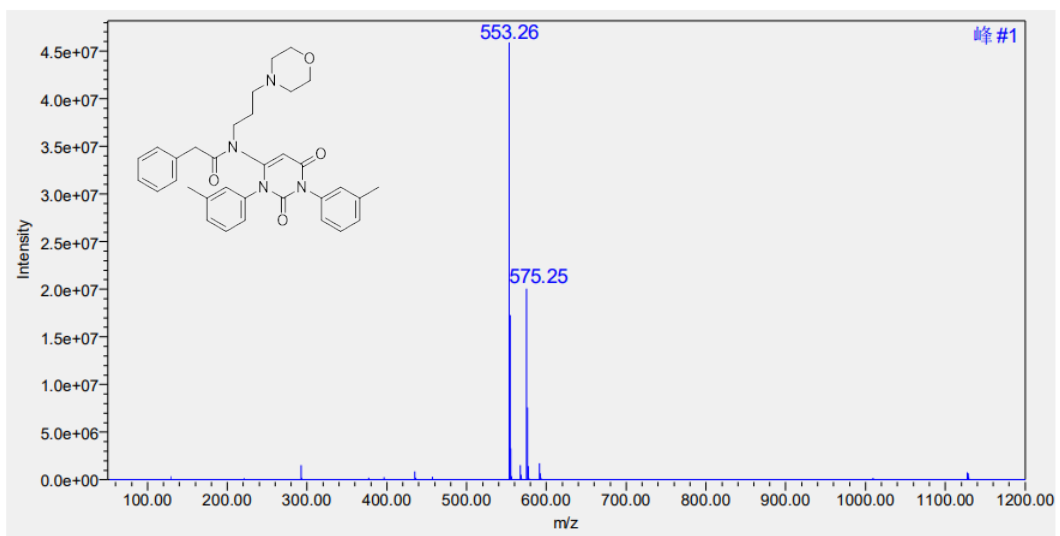
ESI-HRMS spectra of compound XS19



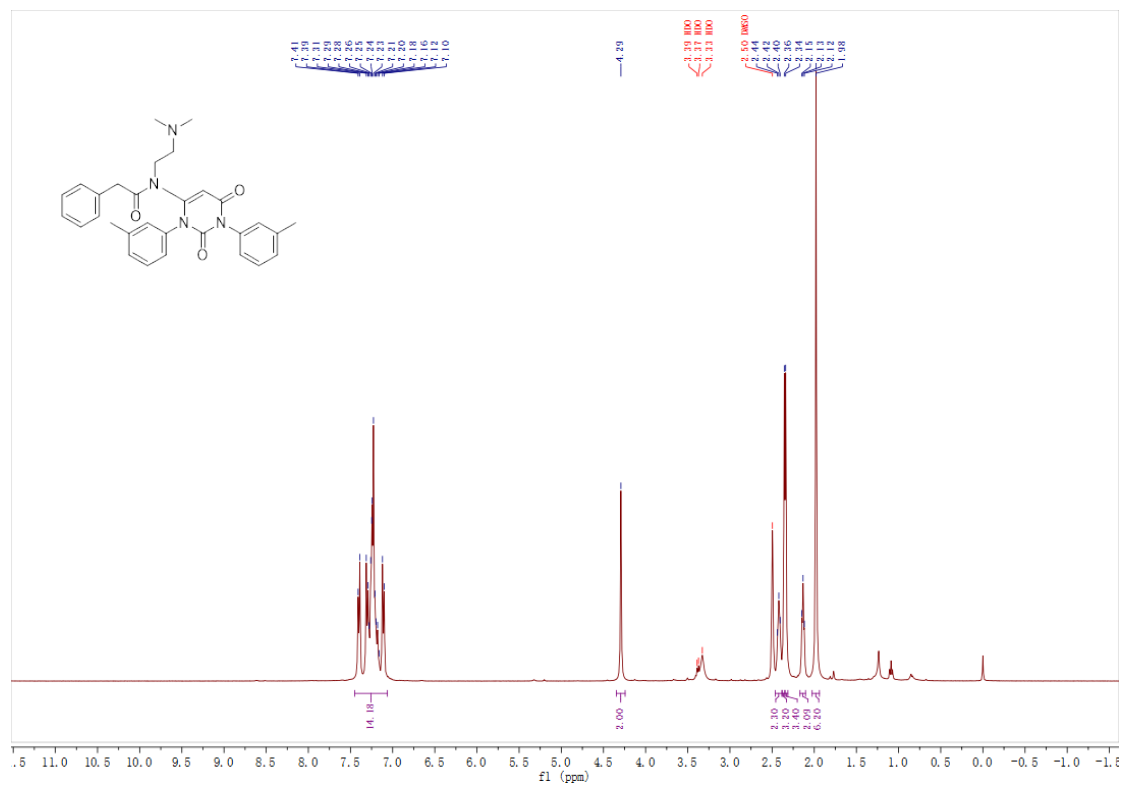
¹H NMR spectra of compound XS20



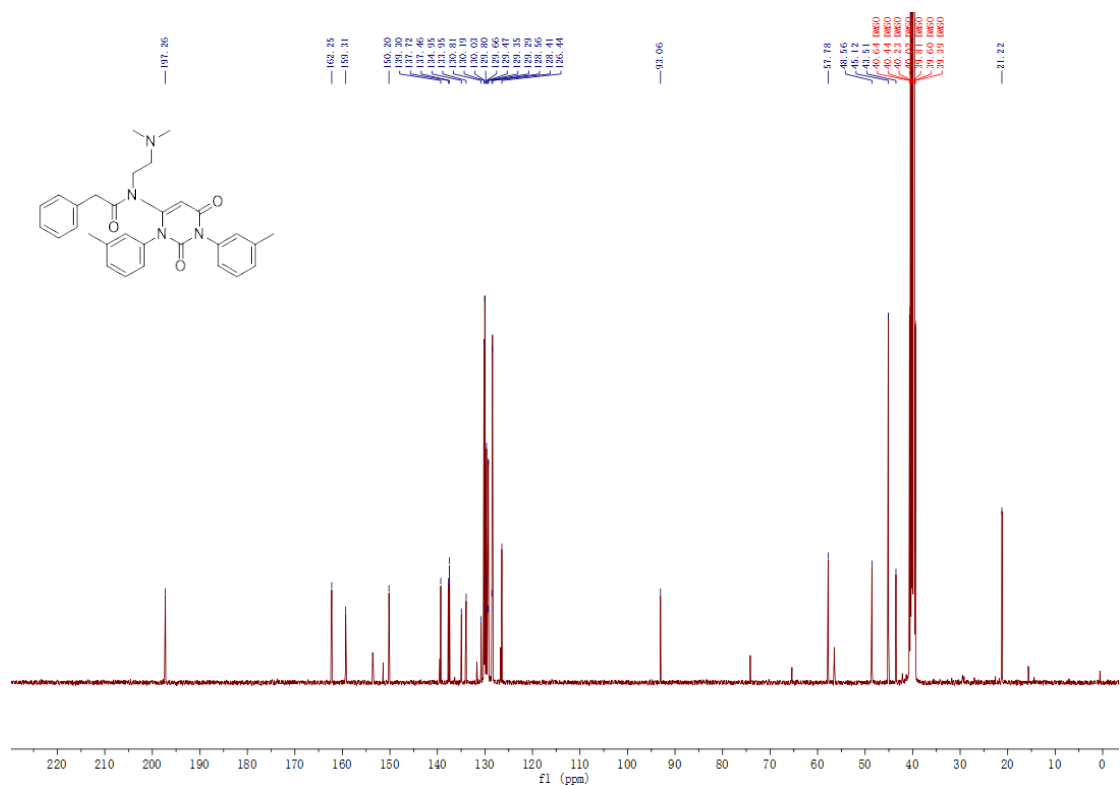
¹³C NMR spectra of compound XS20



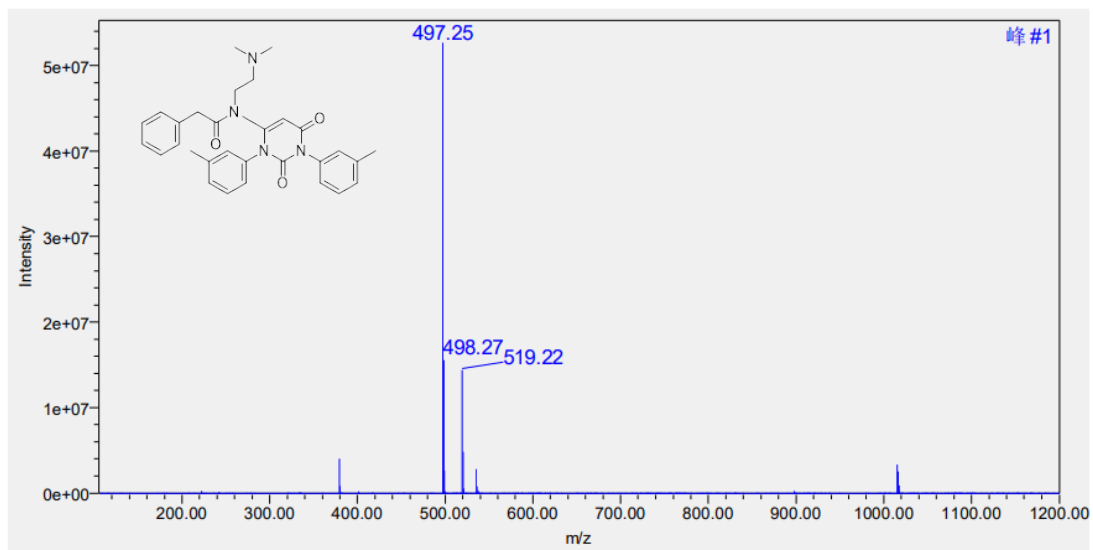
ESI-HRMS spectra of compound XS20



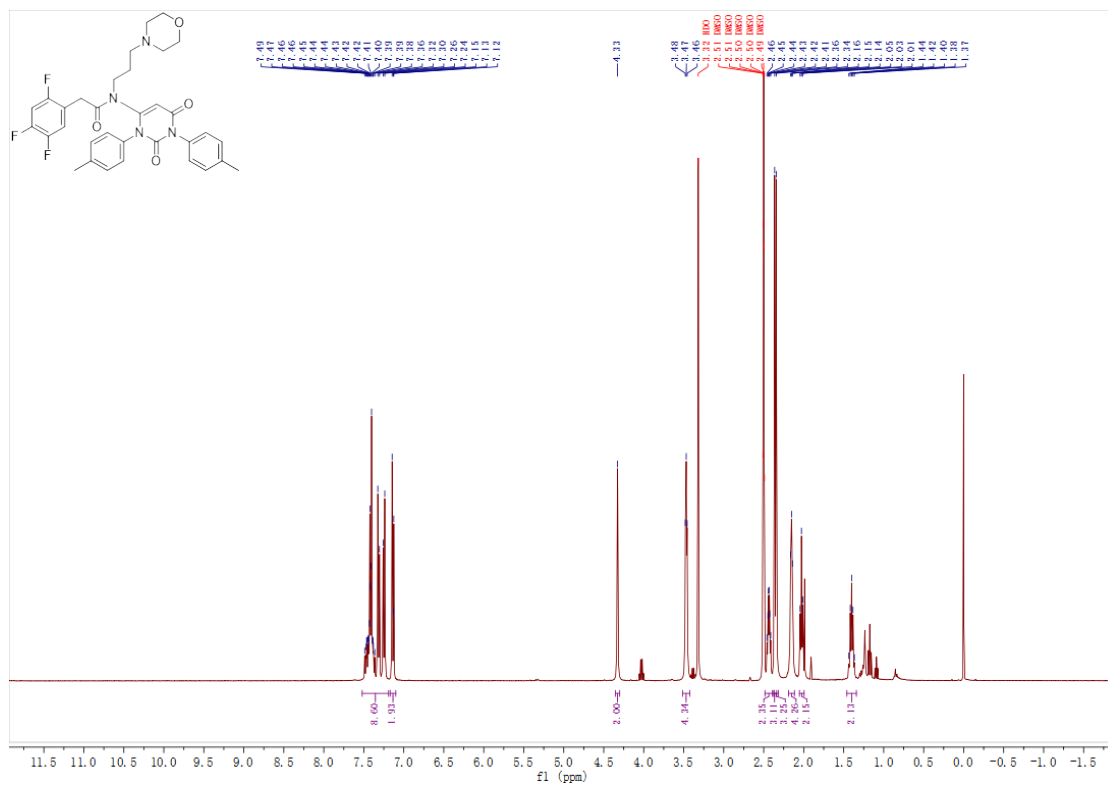
¹H NMR spectra of compound XS21



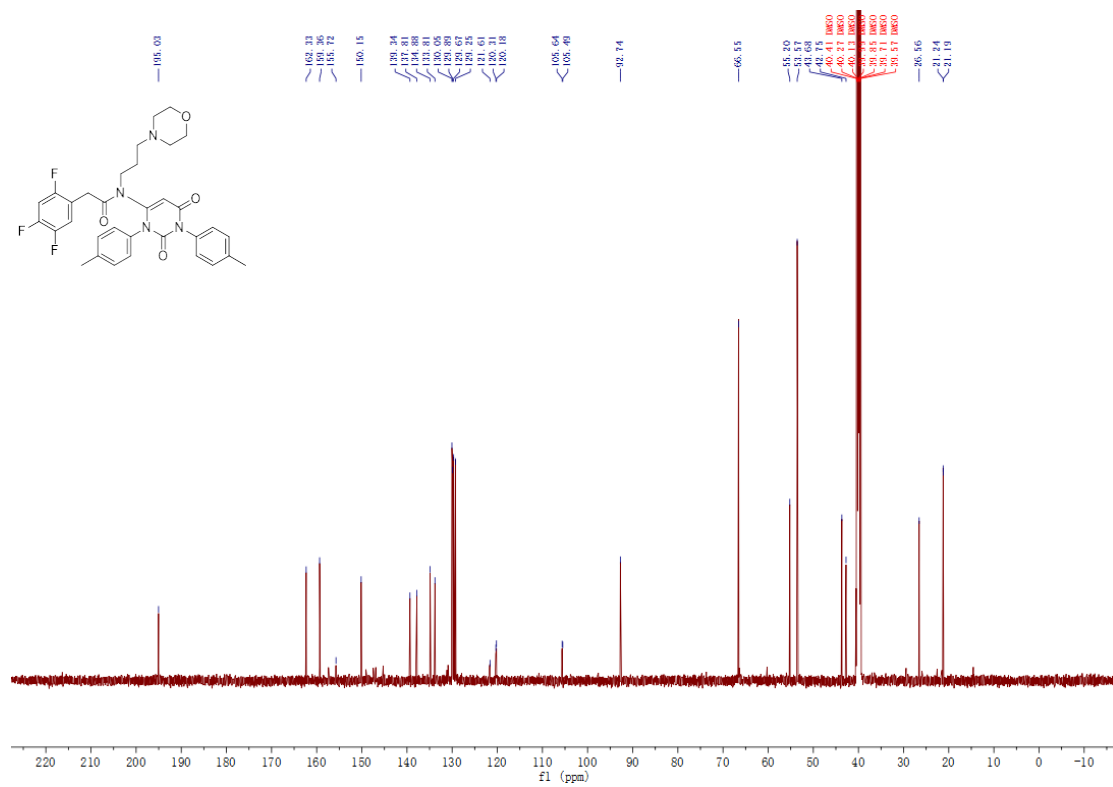
¹³C NMR spectra of compound XS21



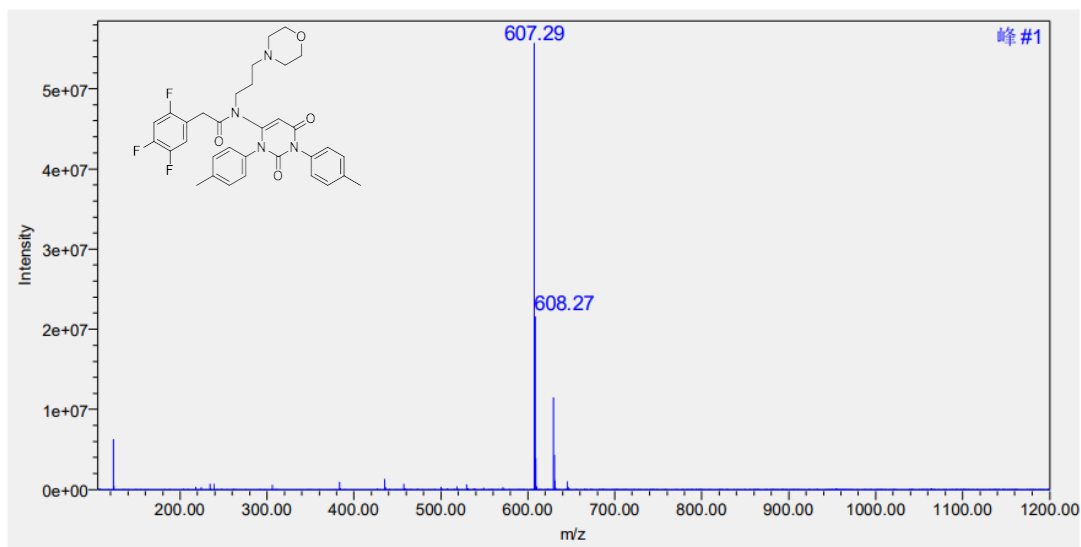
ESI-HRMS spectra of compound XS21



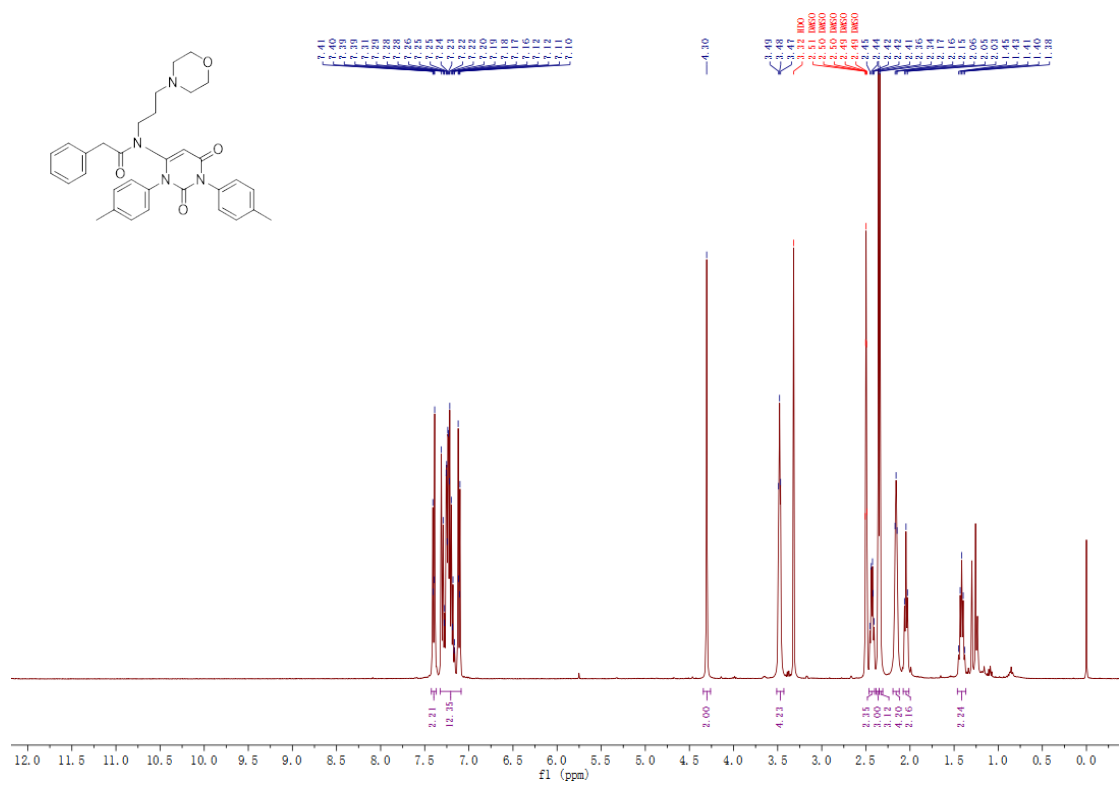
¹H NMR spectra of compound XS22



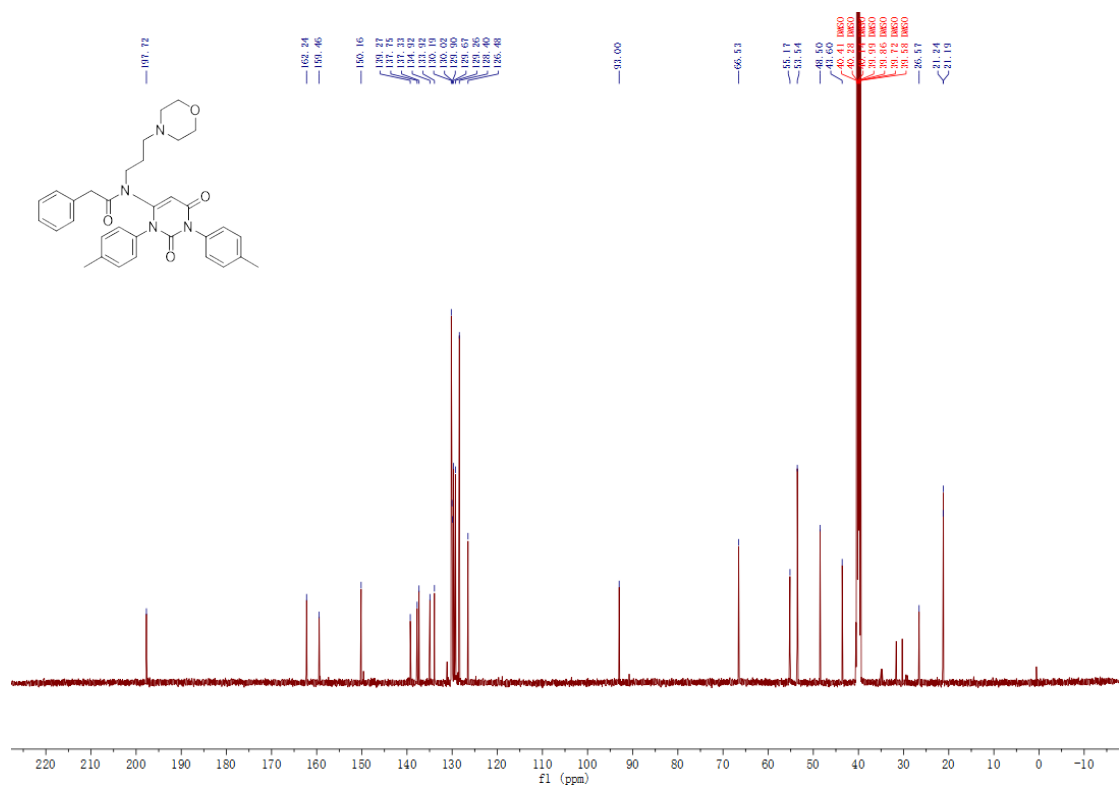
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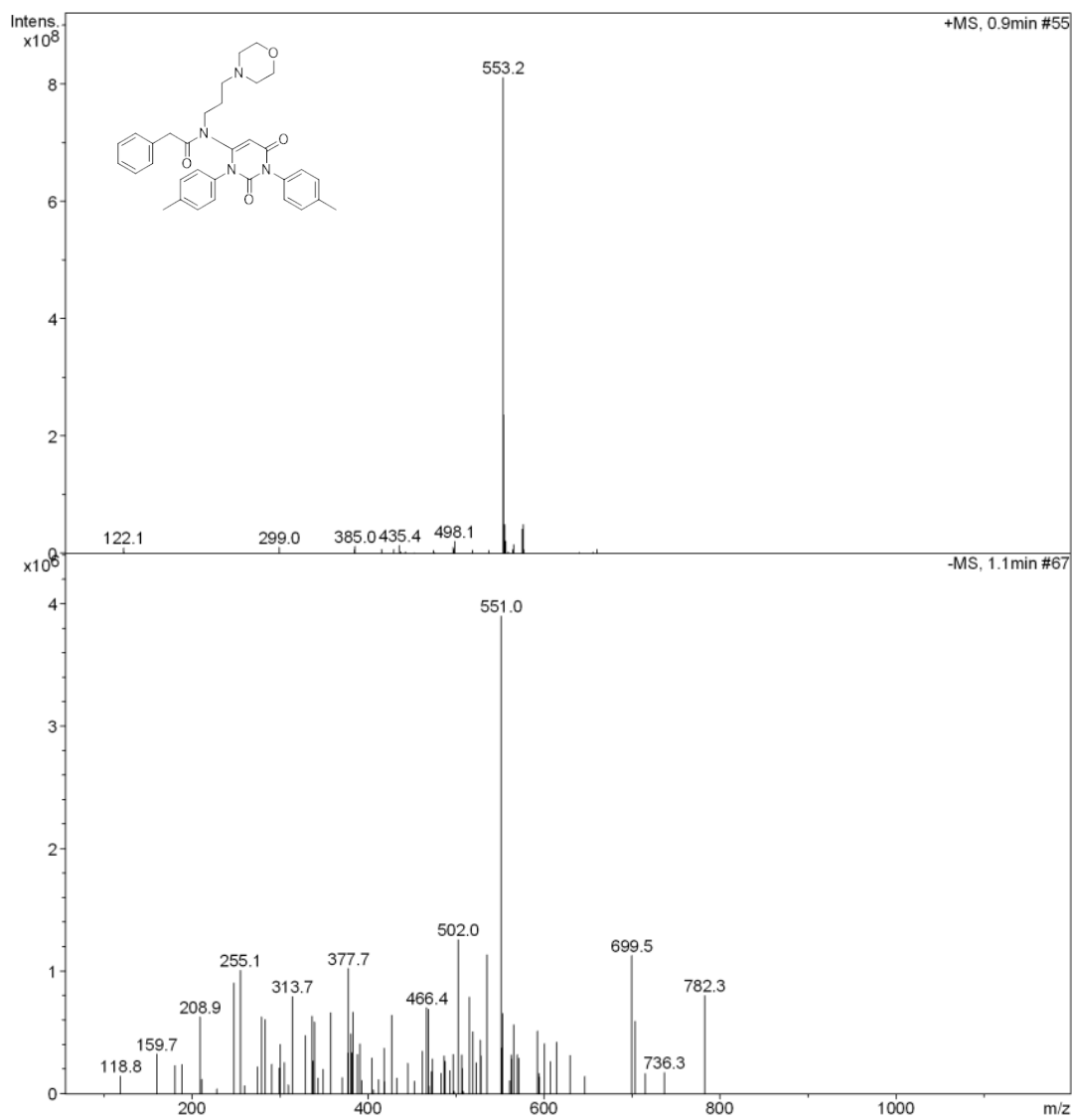
ESI-HRMS spectra of compound XS22



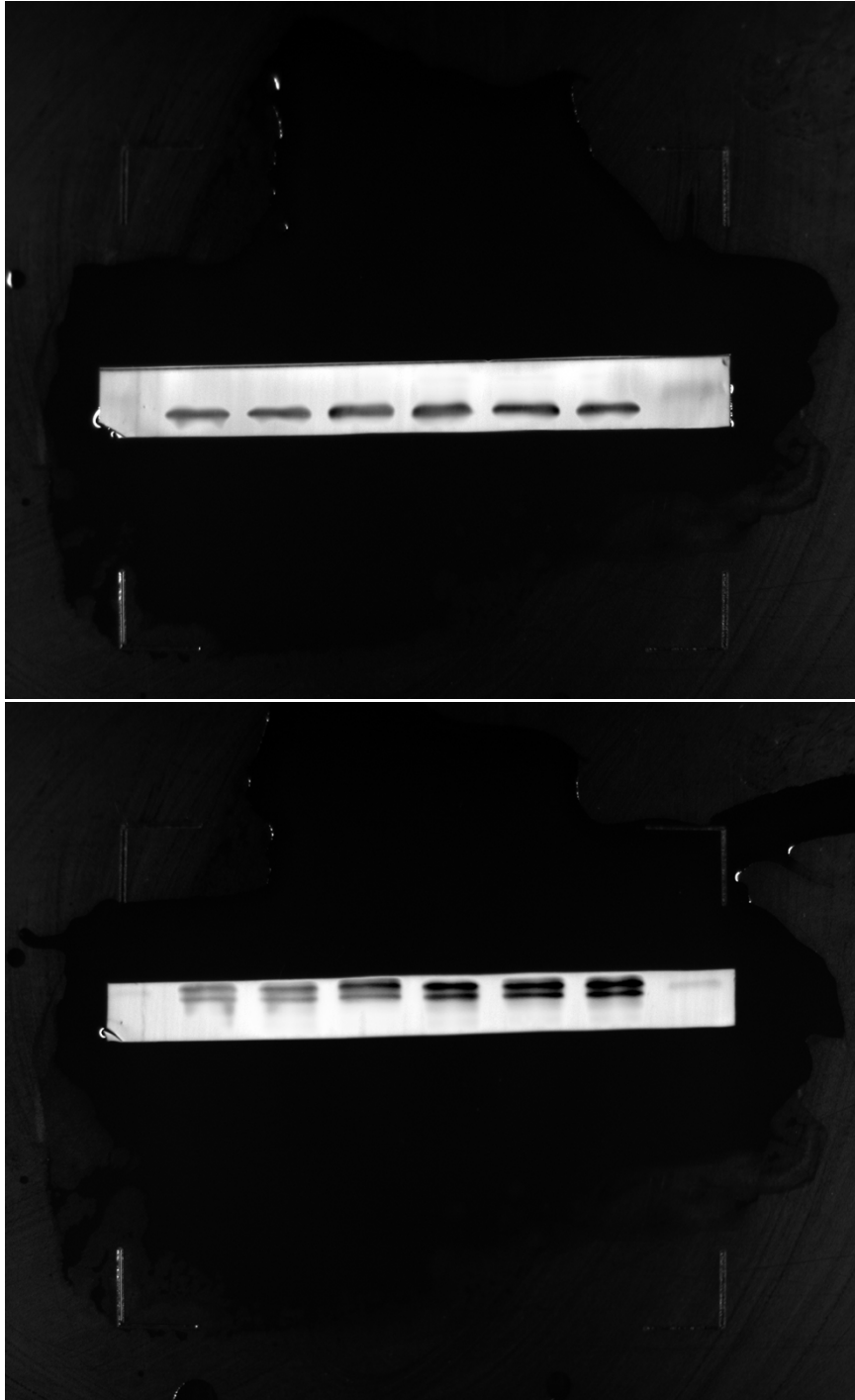
¹H NMR spectra of compound XS23



¹³C NMR spectra of compound XS23



ESI-HRMS spectra of compound **XS23**



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