

# Synthesis of (Het)aryl 2-(2-Hydroxyaryl)Cyclopropyl Ketones

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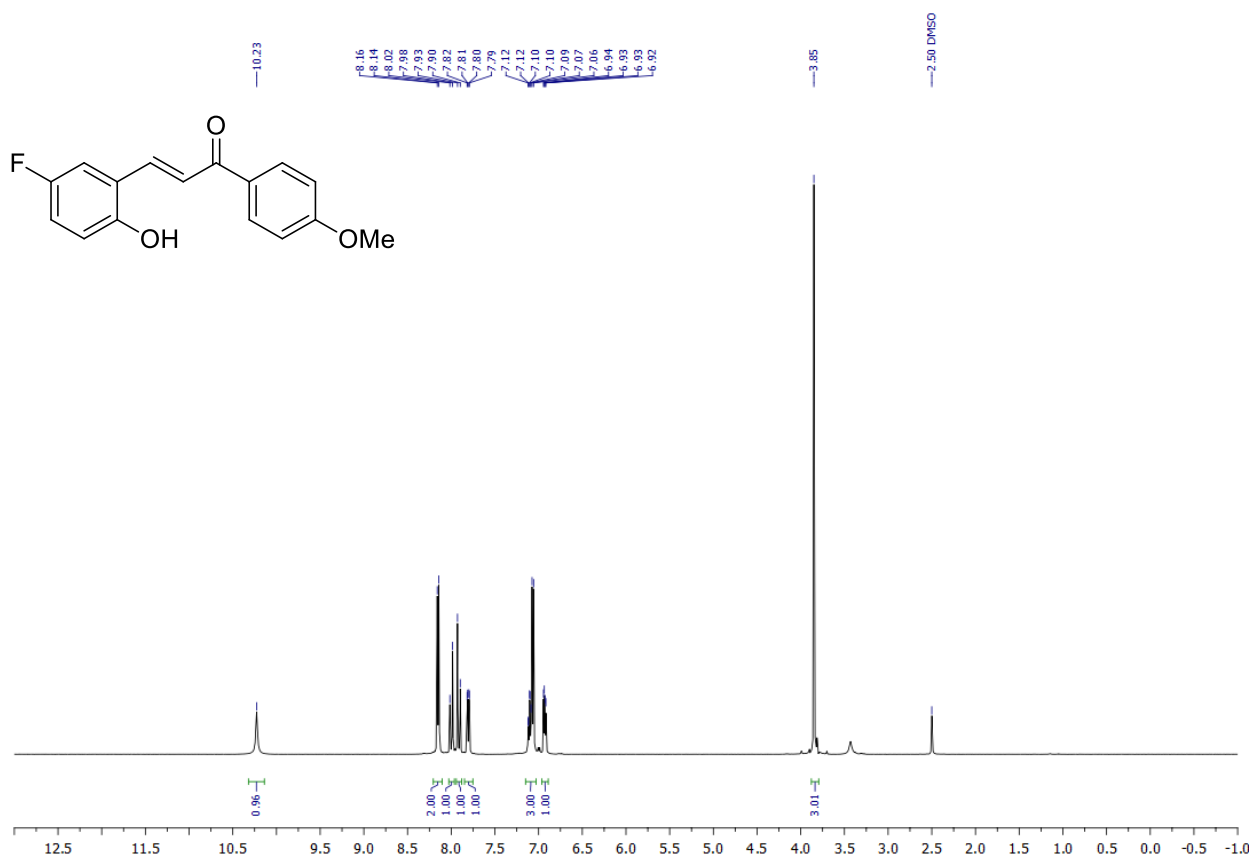
\* Correspondence: [mu@psu.ru](mailto:mu@psu.ru) (M.G.U.); [itrushkov@mail.ru](mailto:itrushkov@mail.ru) (I.V.T.); Tel.: +7-916-645-9951 (I.V.T.)

## SUPPORTING INFORMATION

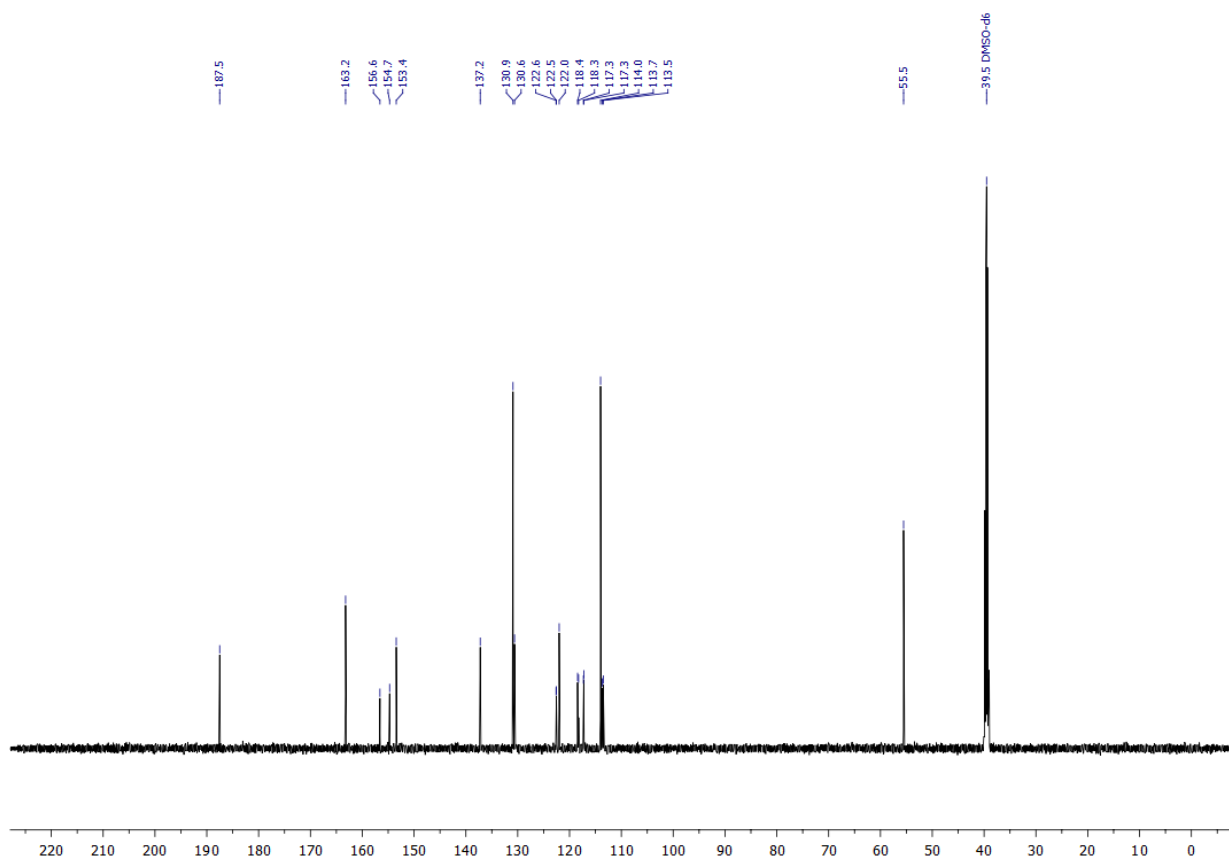
### Copies of NMR spectra

**(E)-3-(5-Fluoro-2-hydroxyphenyl)-1-(4-methoxyphenyl)prop-2-en-1-one (1d)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

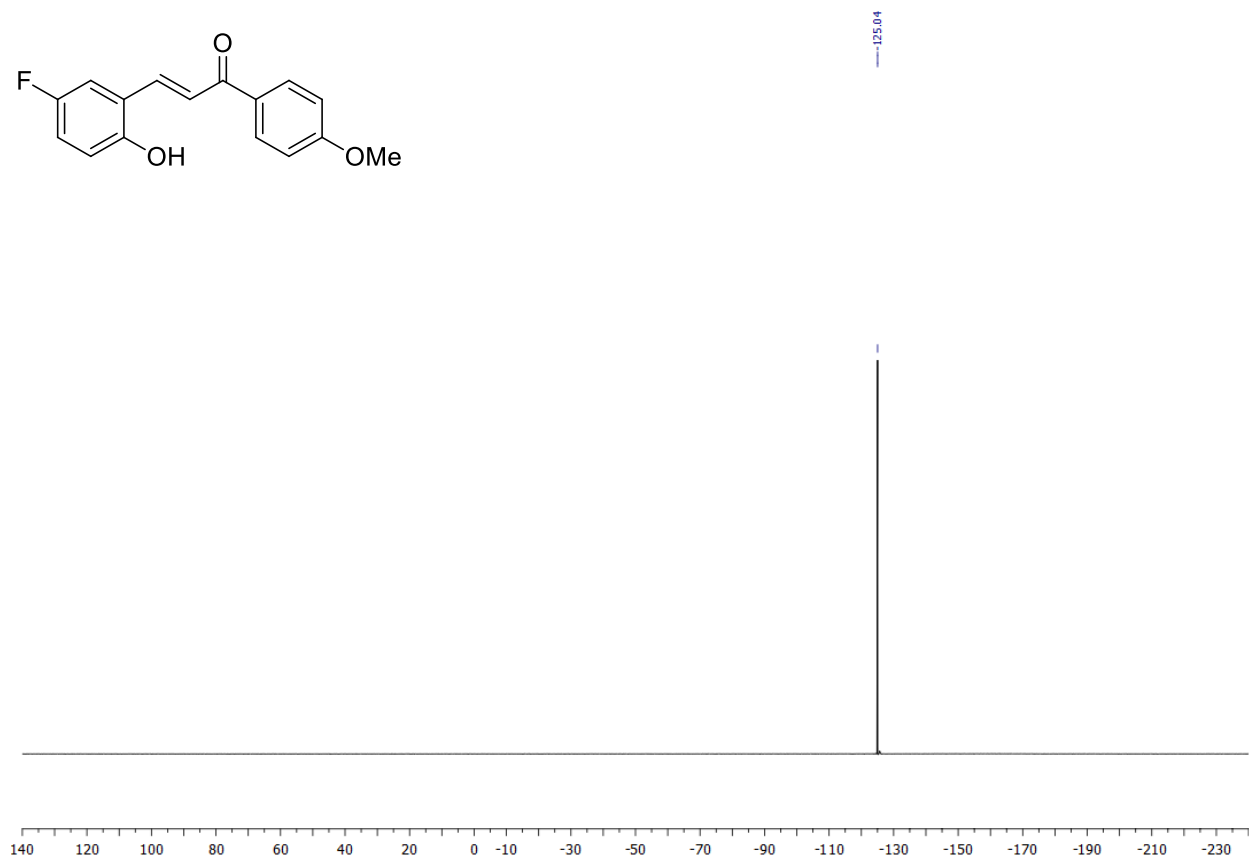


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)



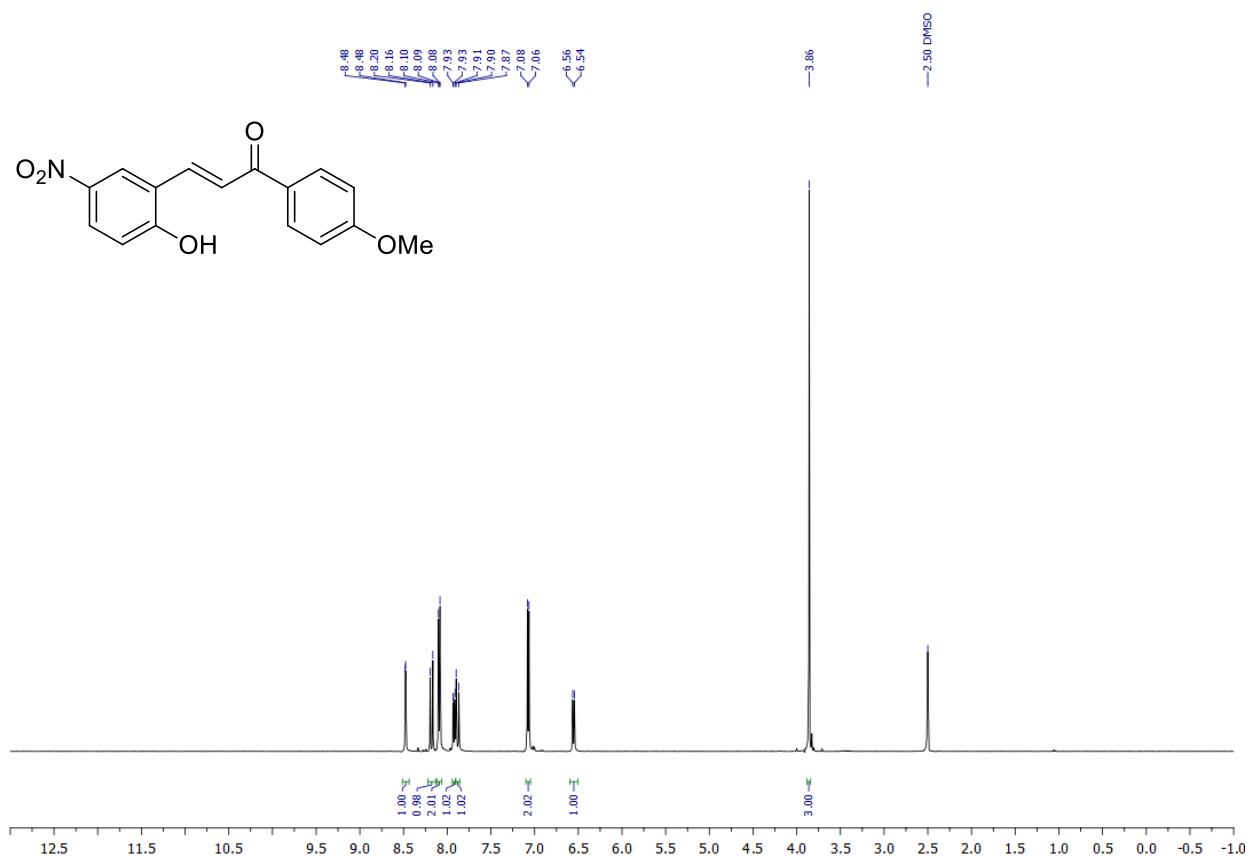
**(E)-3-(5-Fluoro-2-hydroxyphenyl)-1-(4-methoxyphenyl)prop-2-en-1-one (1d)**

<sup>19</sup>F NMR (471 MHz, DMSO-*d*<sub>6</sub>)

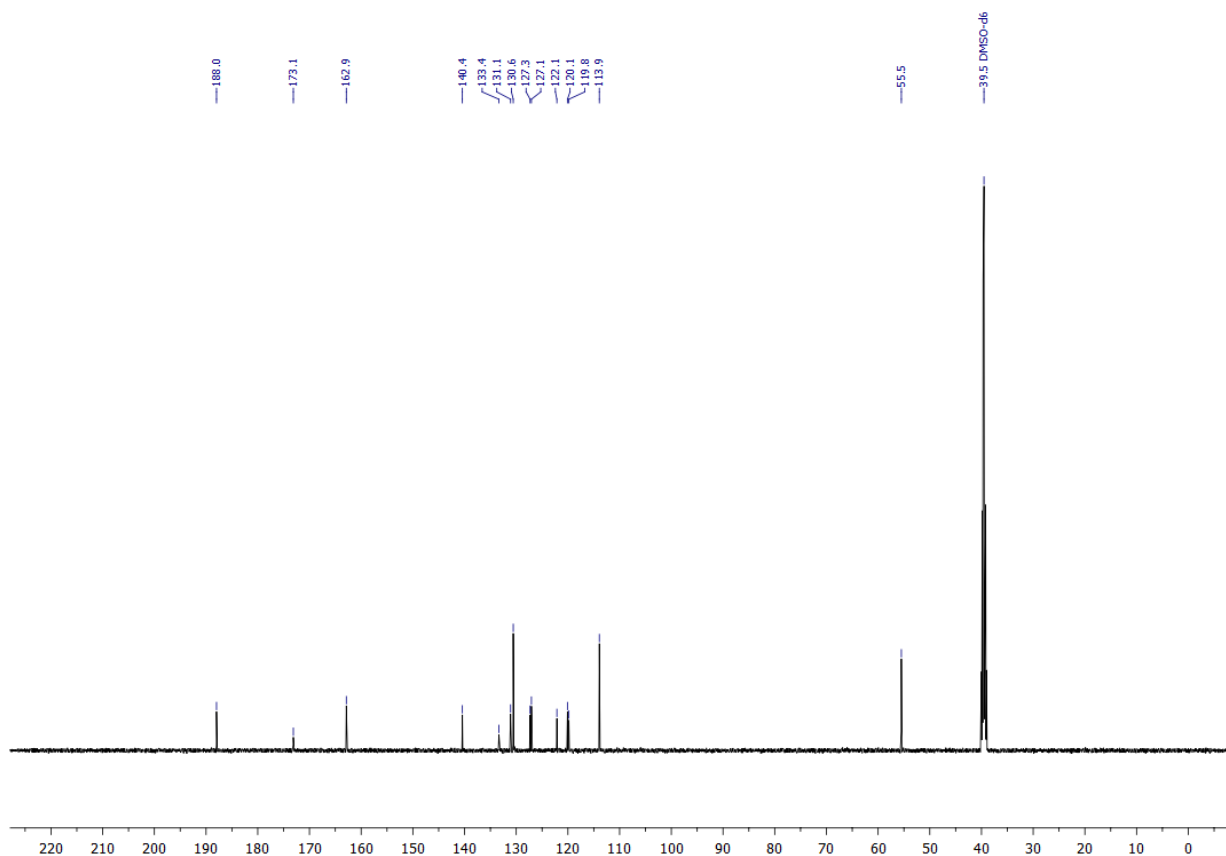


**(E)-3-(2-Hydroxy-5-nitrophenyl)-1-(4-methoxyphenyl)prop-2-en-1-one (1f)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

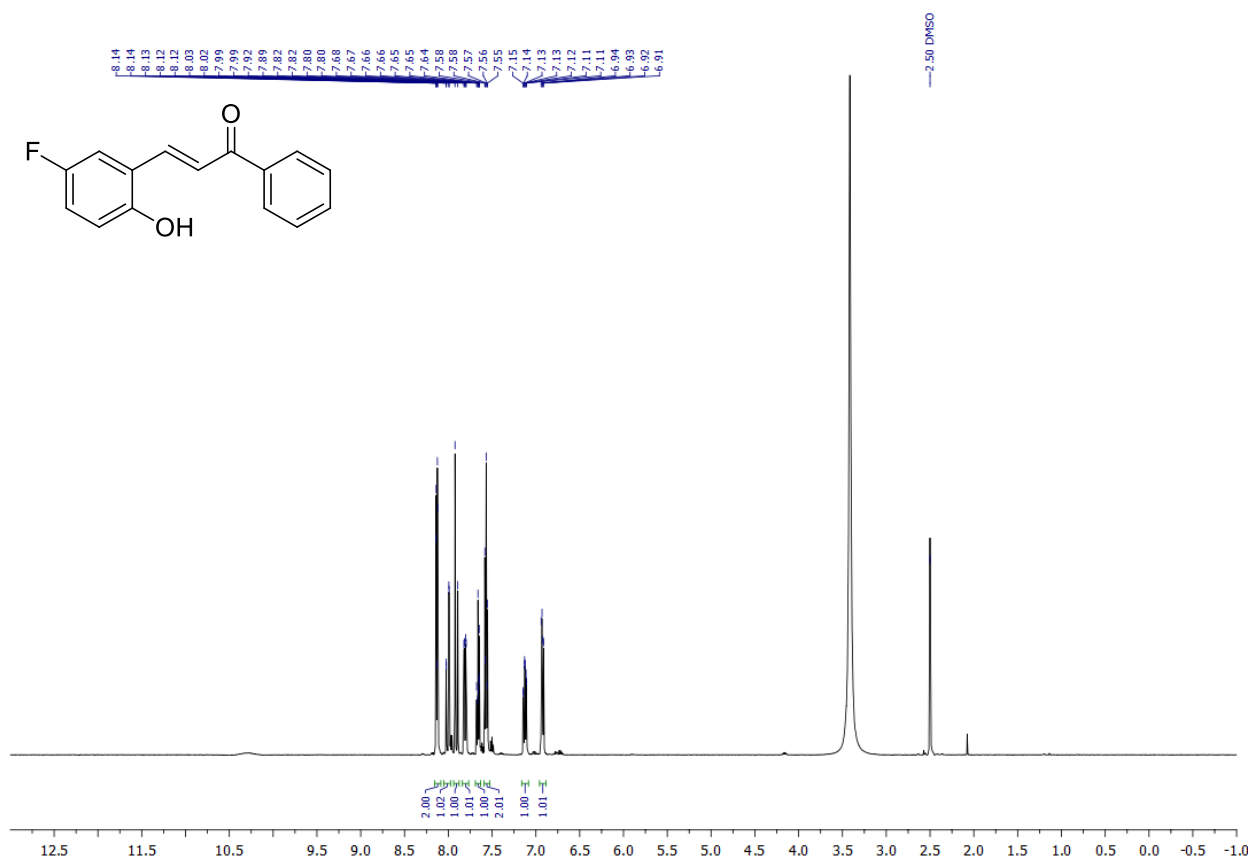


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

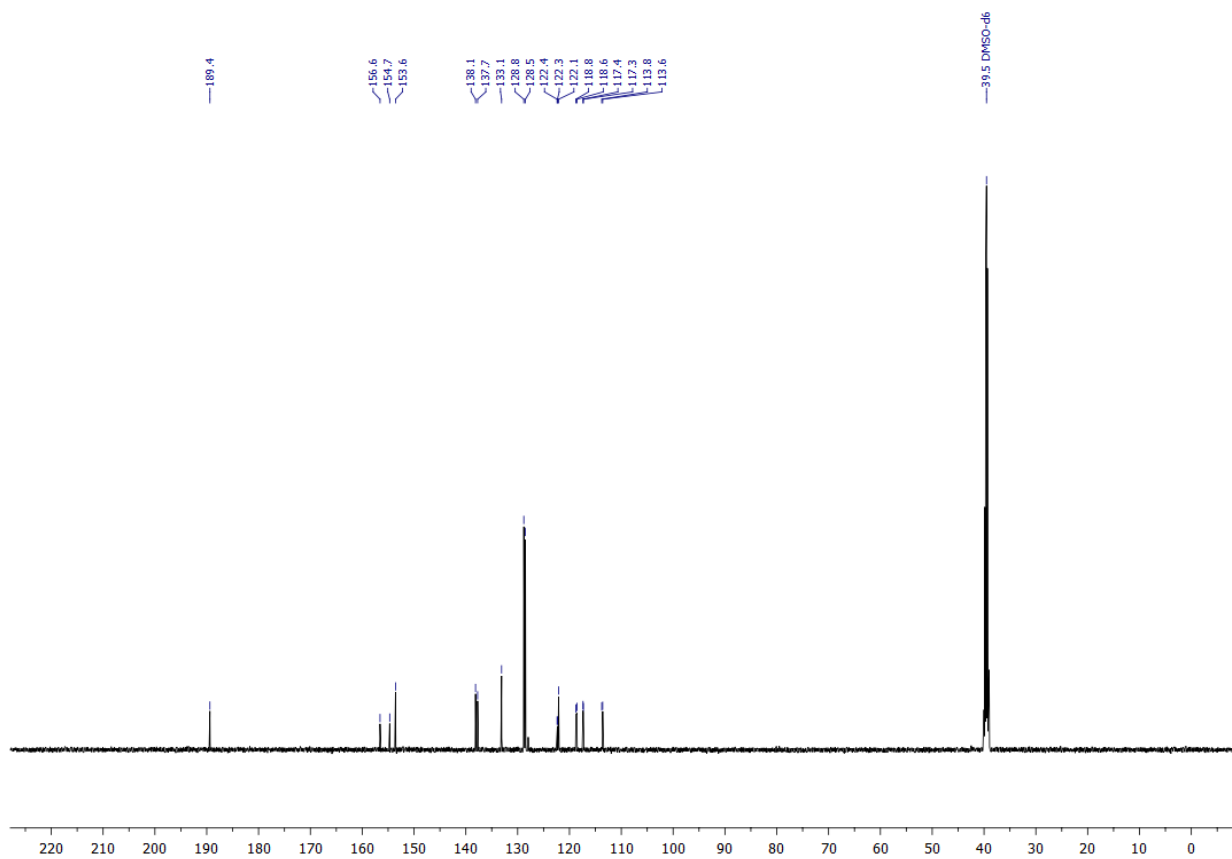


**(E)-3-(5-Fluoro-2-hydroxyphenyl)-1-phenylprop-2-en-1-one (1g)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

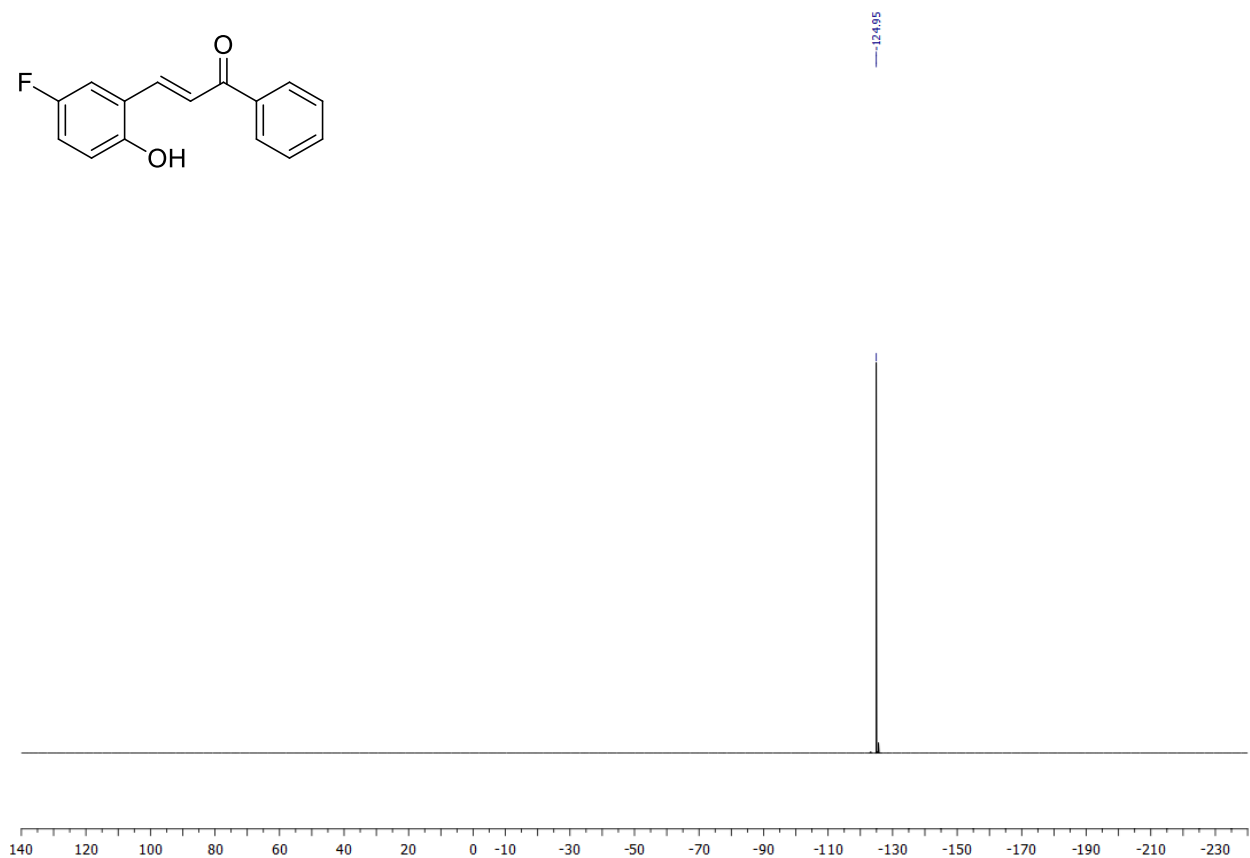


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)



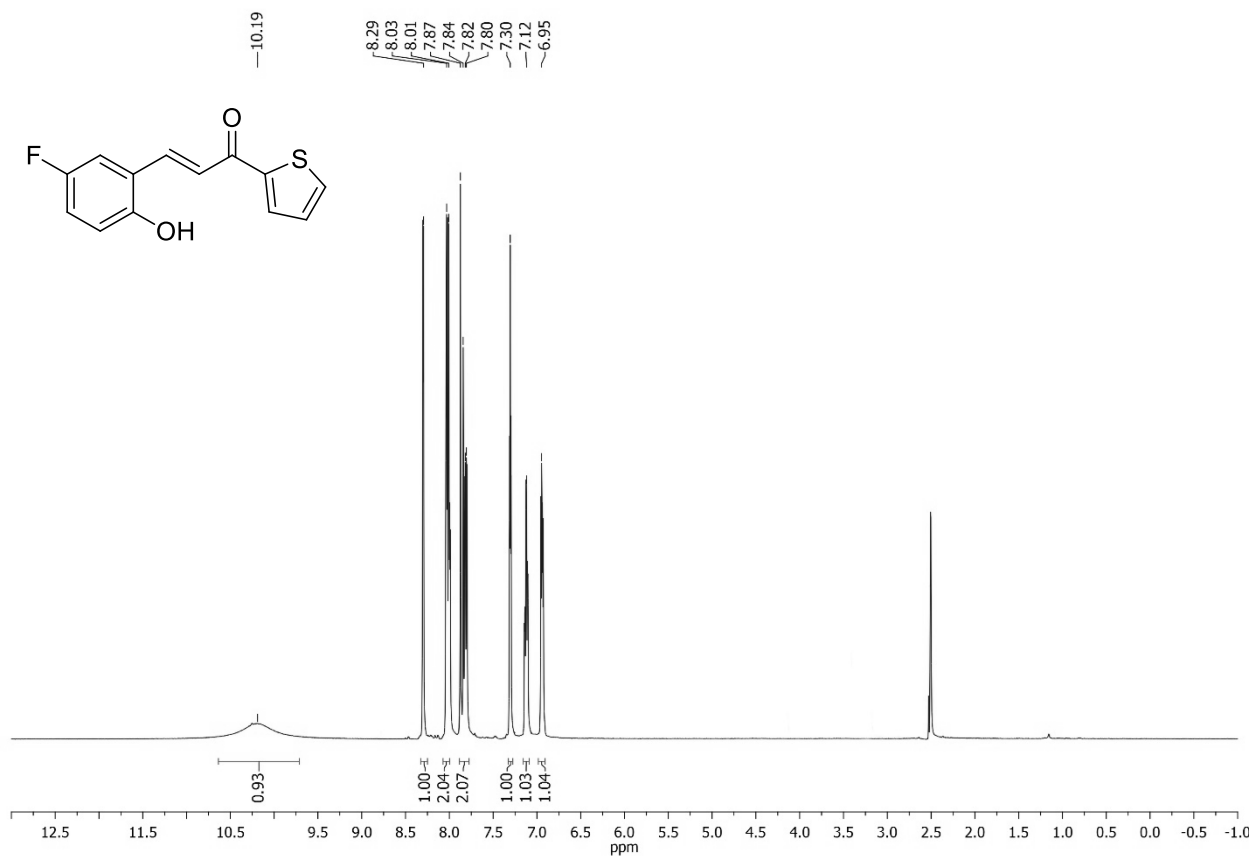
**(E)-3-(5-Fluoro-2-hydroxyphenyl)-1-phenylprop-2-en-1-one (1g)**

<sup>19</sup>F NMR (471 MHz, DMSO-*d*<sub>6</sub>)

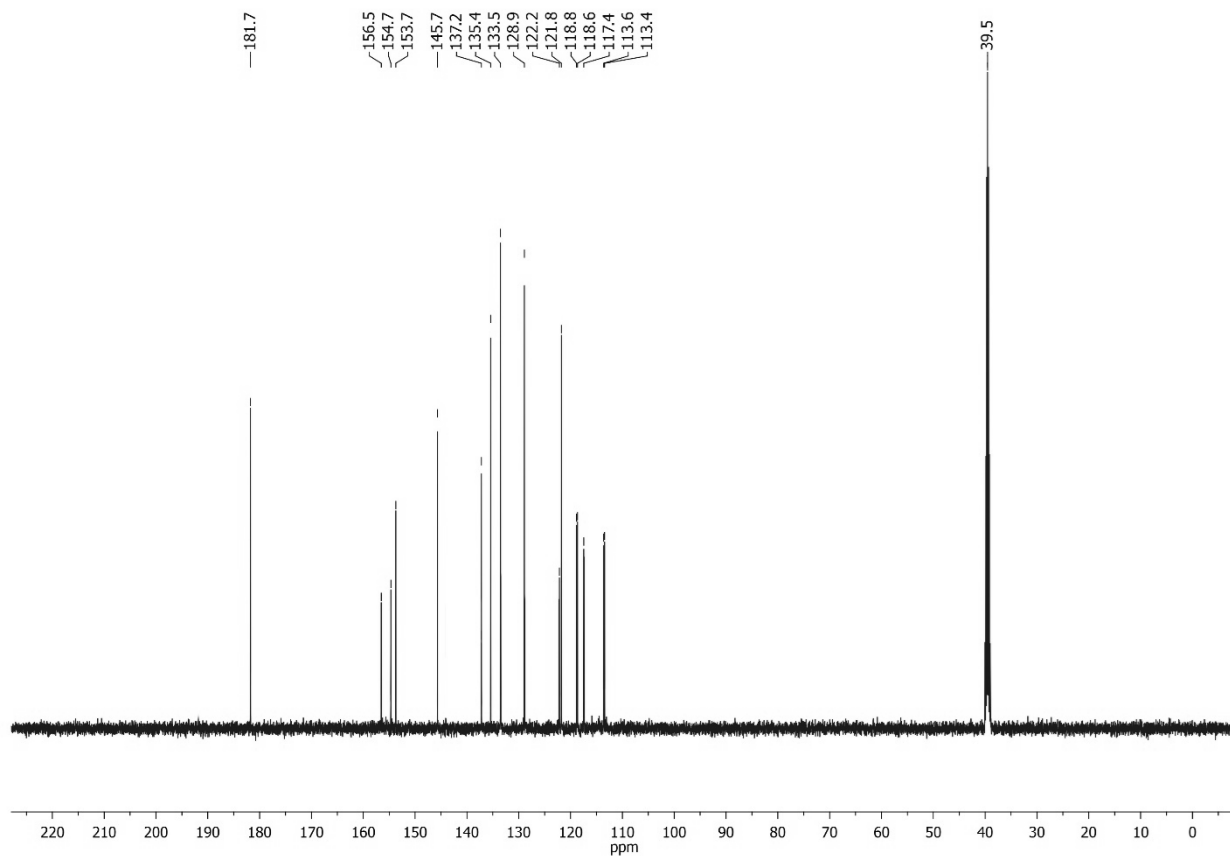


**(E)-3-(5-Fluoro-2-hydroxyphenyl)-1-(2-thienyl)prop-2-en-1-one (1j)**

$^1\text{H}$  NMR (500 MHz,  $\text{DMSO}-d_6$ )

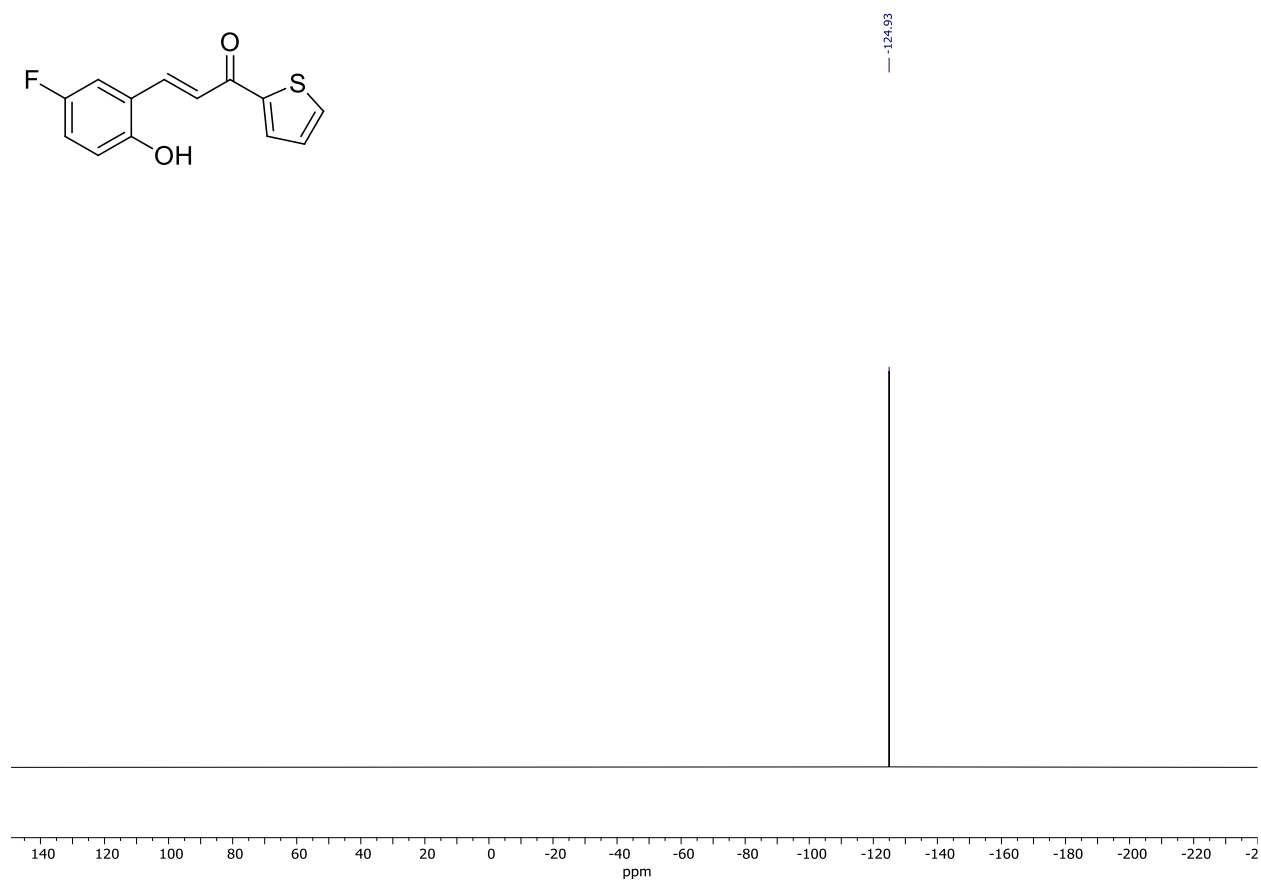
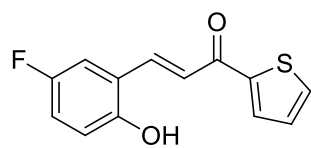


$^{13}\text{C}$  NMR (126 MHz,  $\text{DMSO}-d_6$ )



**(E)-3-(5-Fluoro-2-hydroxyphenyl)-1-(2-thienyl)prop-2-en-1-one (1j)**

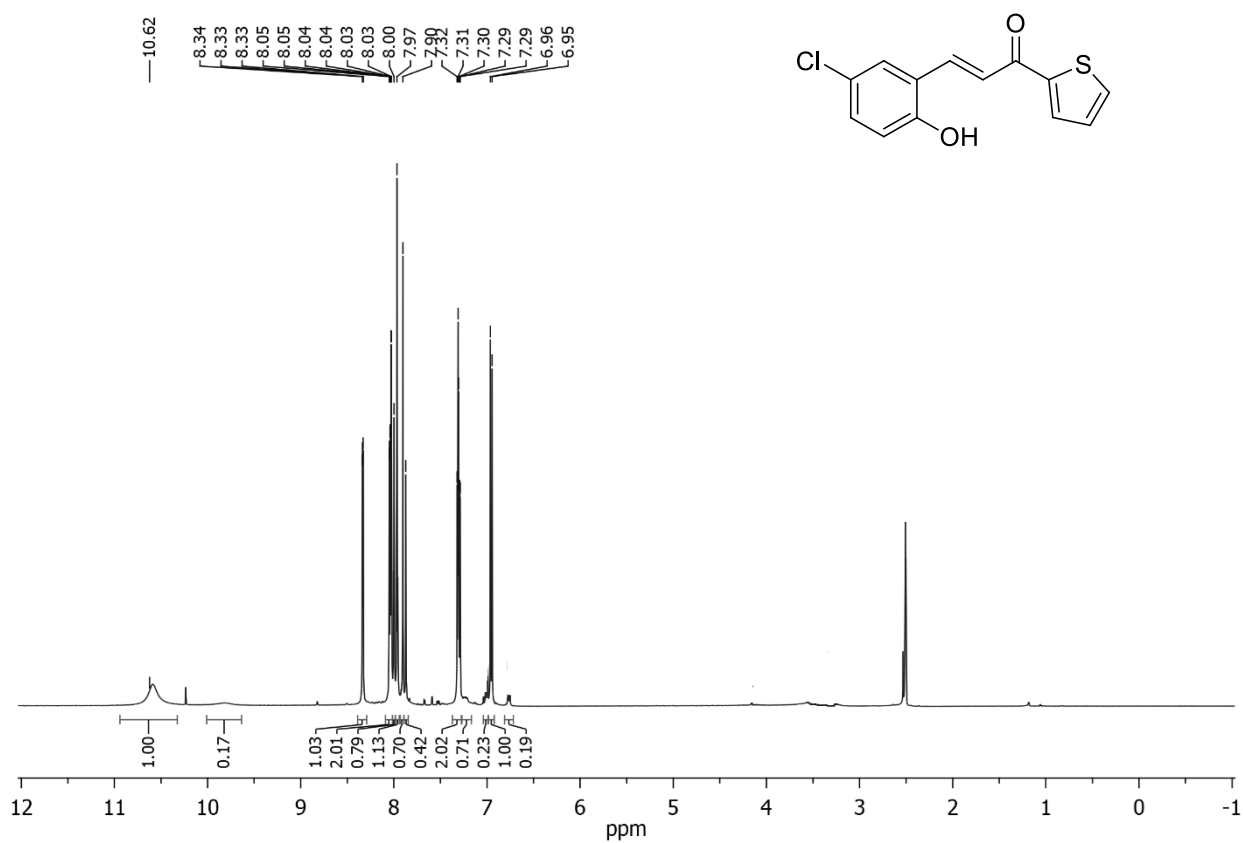
<sup>19</sup>F NMR (471 MHz, DMSO-*d*<sub>6</sub>)



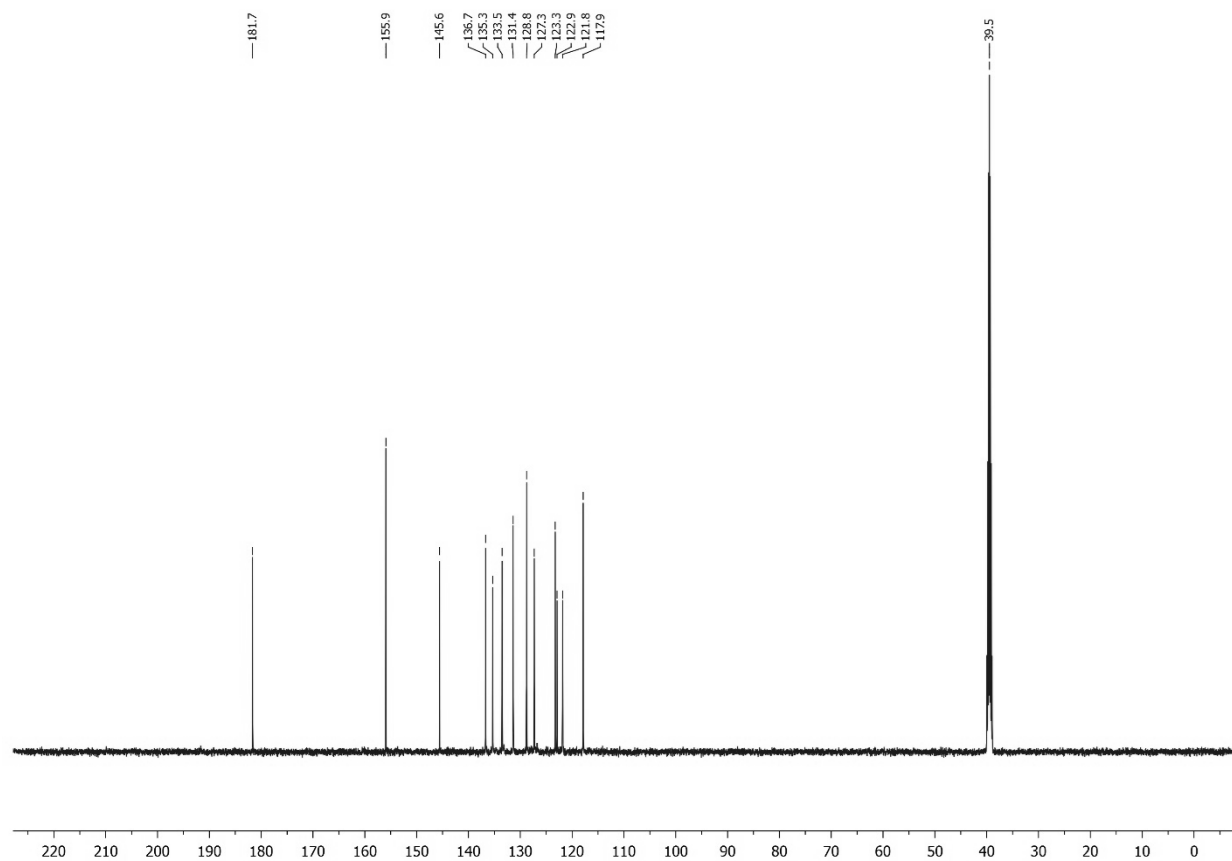


**(E)-3-(5-Chloro-2-hydroxyphenyl)-1-(2-thienyl)prop-2-en-1-one (1k)**

$^1\text{H}$  NMR (500 MHz,  $\text{DMSO}-d_6$ )

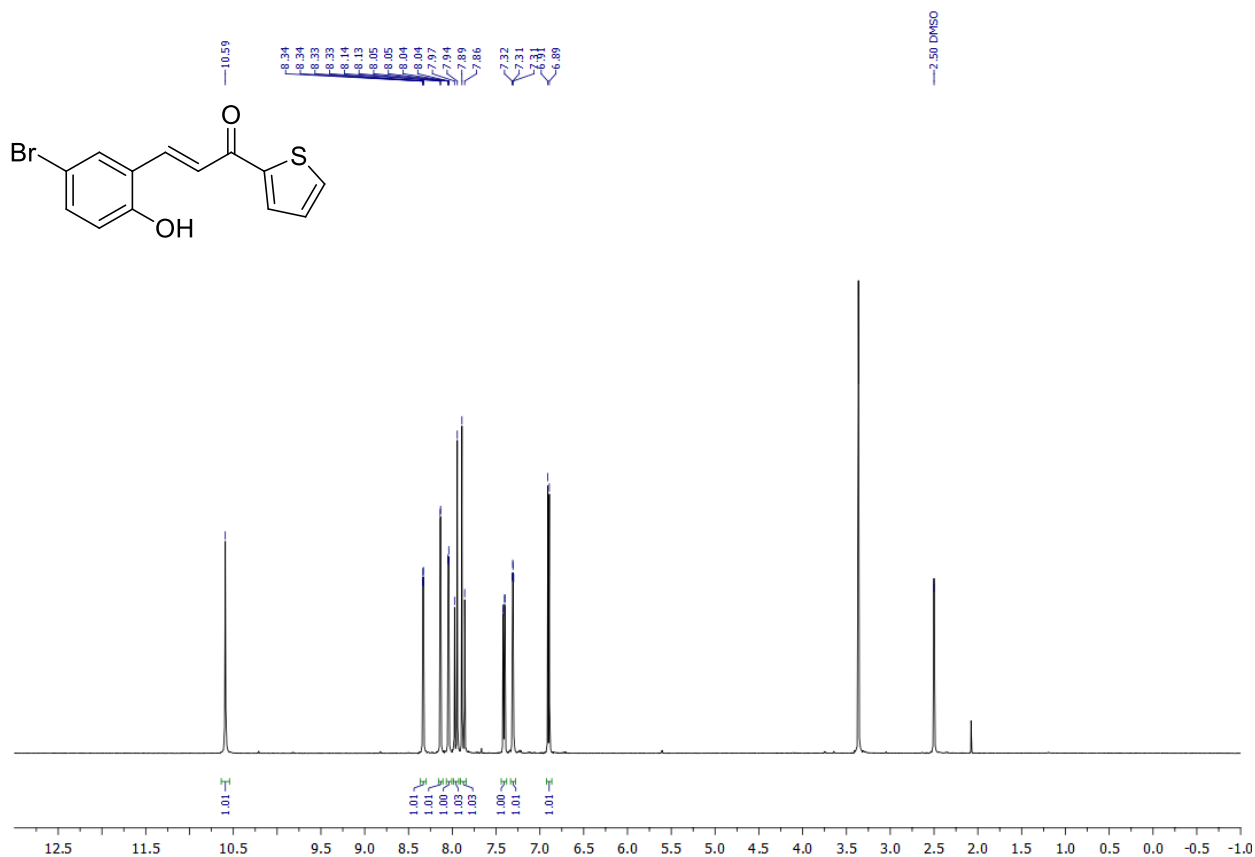


$^{13}\text{C}$  NMR (126 MHz,  $\text{DMSO}-d_6$ )

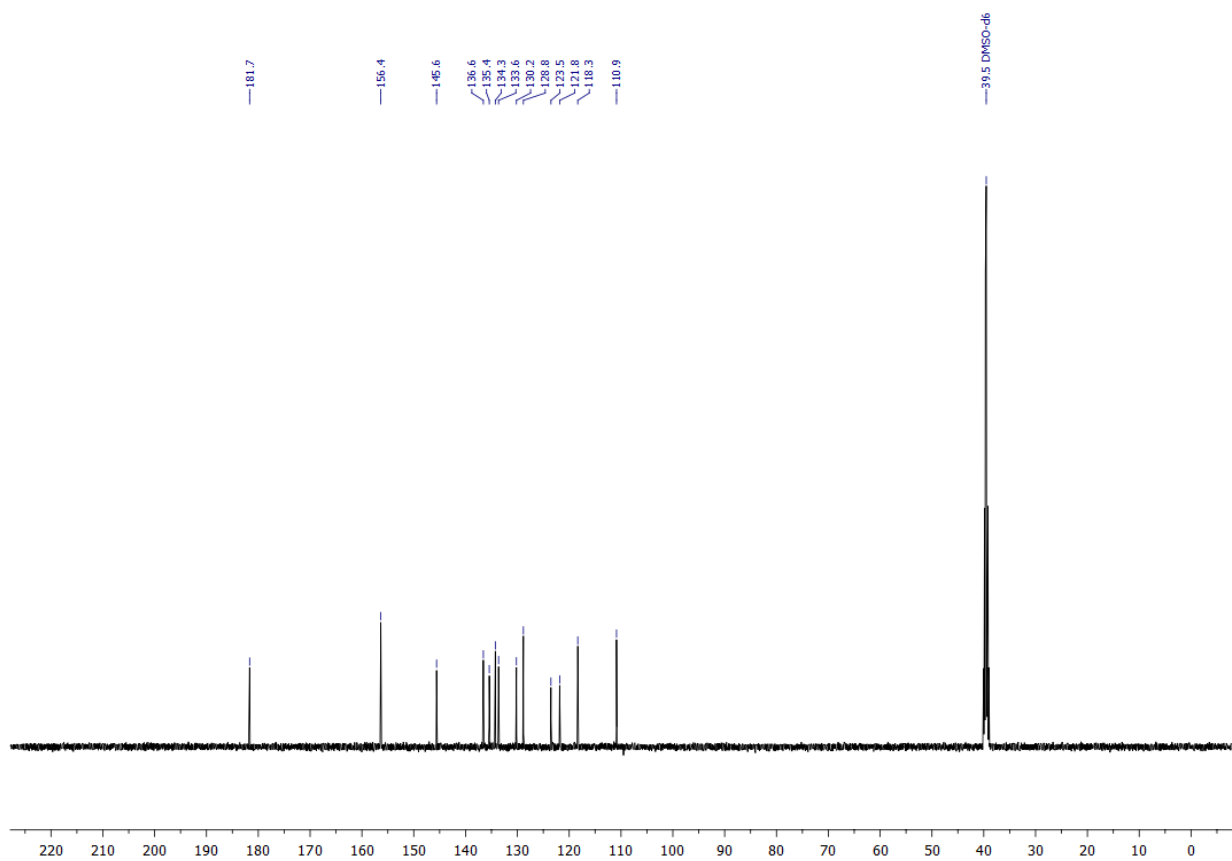


**(E)-3-(5-Bromo-2-hydroxyphenyl)-1-(2-thienyl)prop-2-en-1-one (11)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

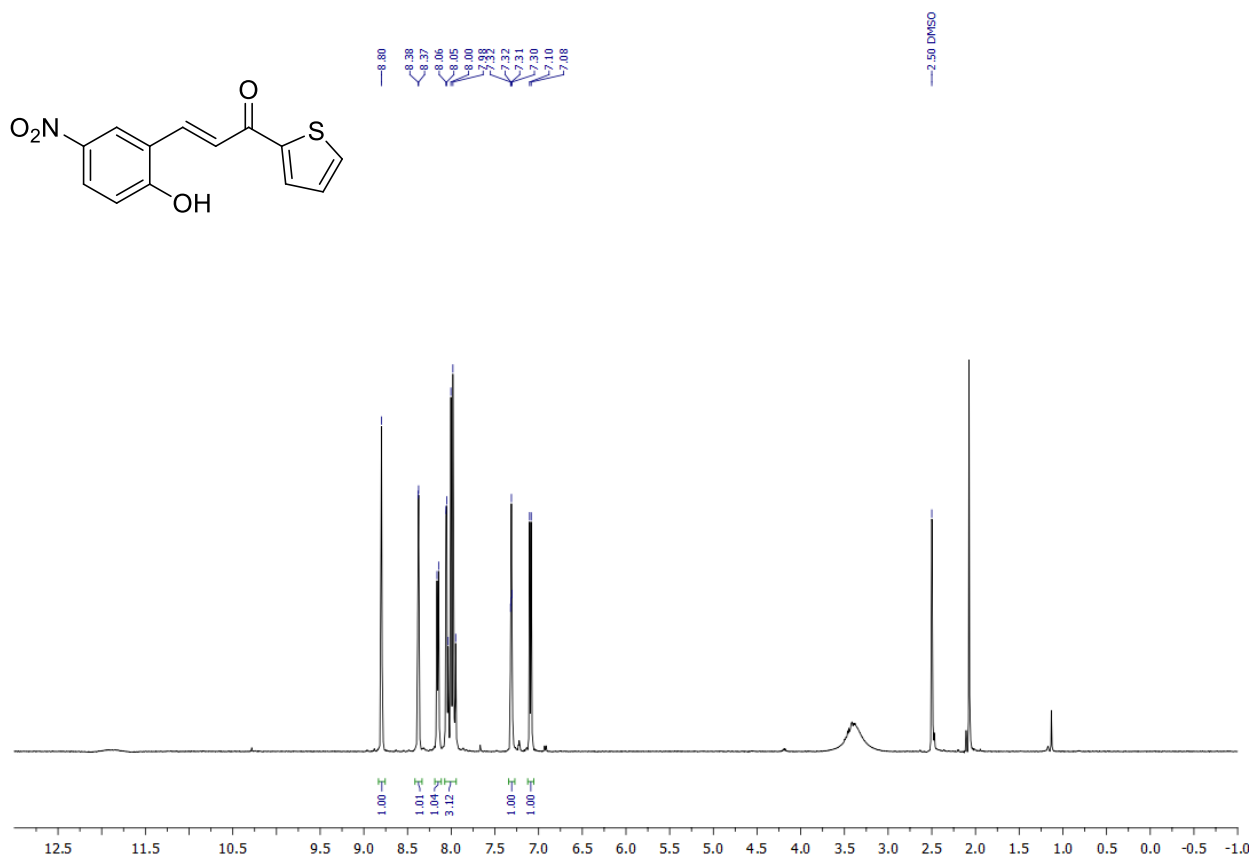


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

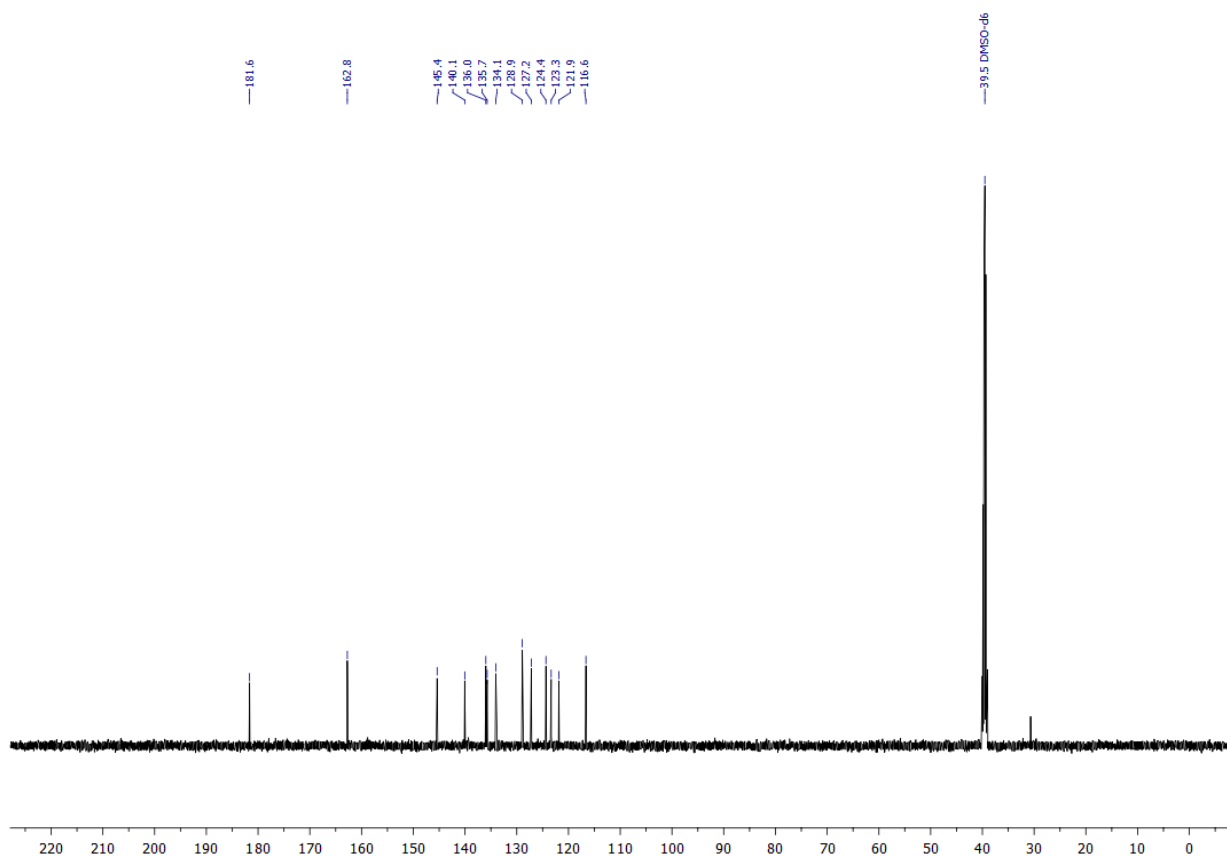


**(E)-3-(2-Hydroxy-5-nitrophenyl)-1-(2-thienyl)prop-2-en-1-one (1m)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

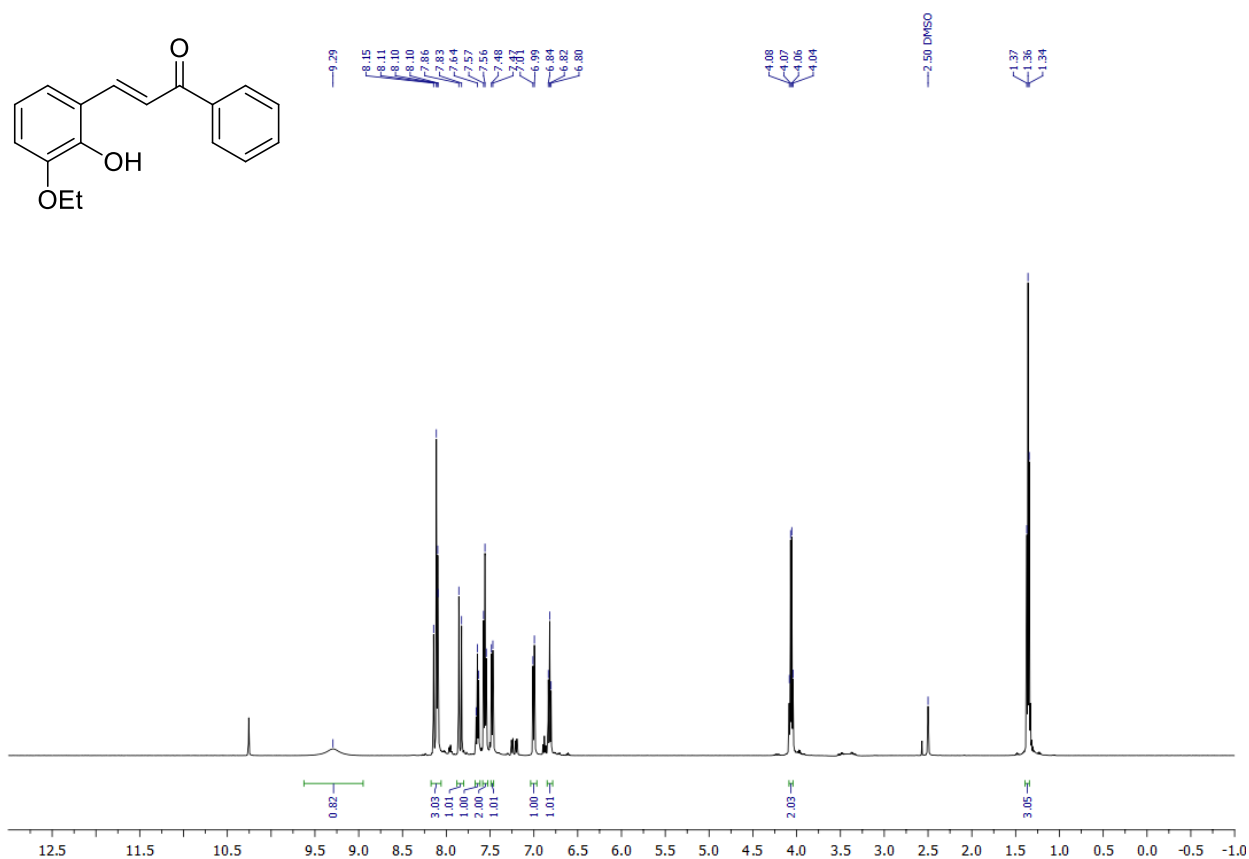


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

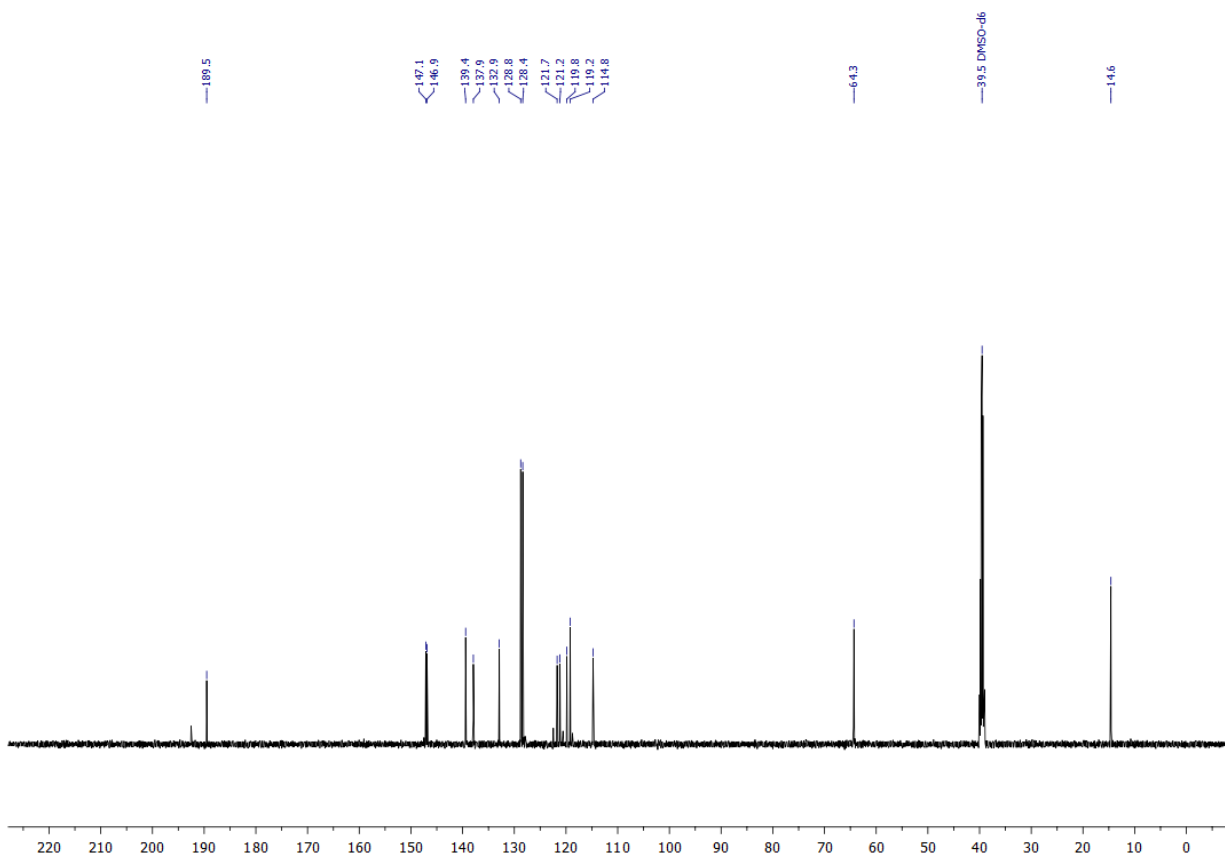


**(E)-3-(3-Ethoxy-2-hydroxyphenyl)-1-phenylprop-2-en-1-one (1o)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

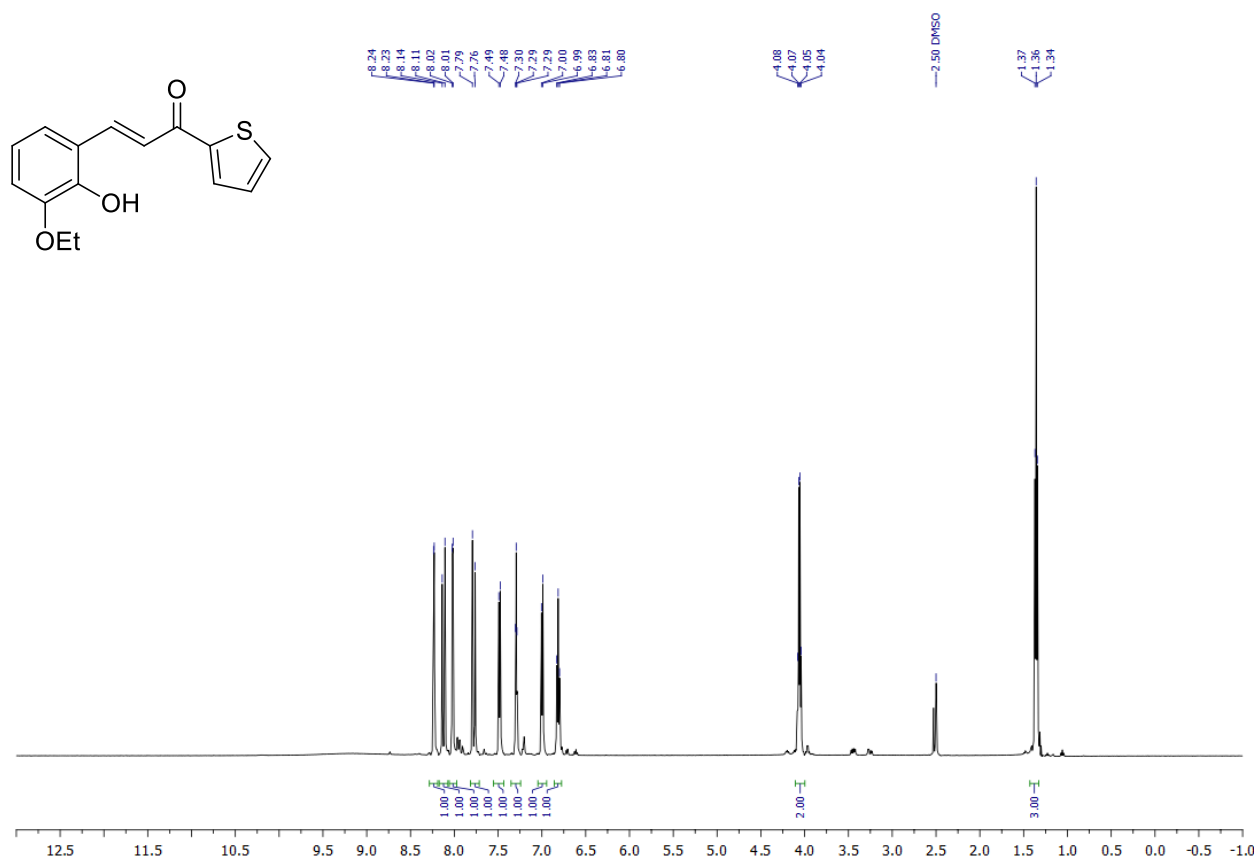


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

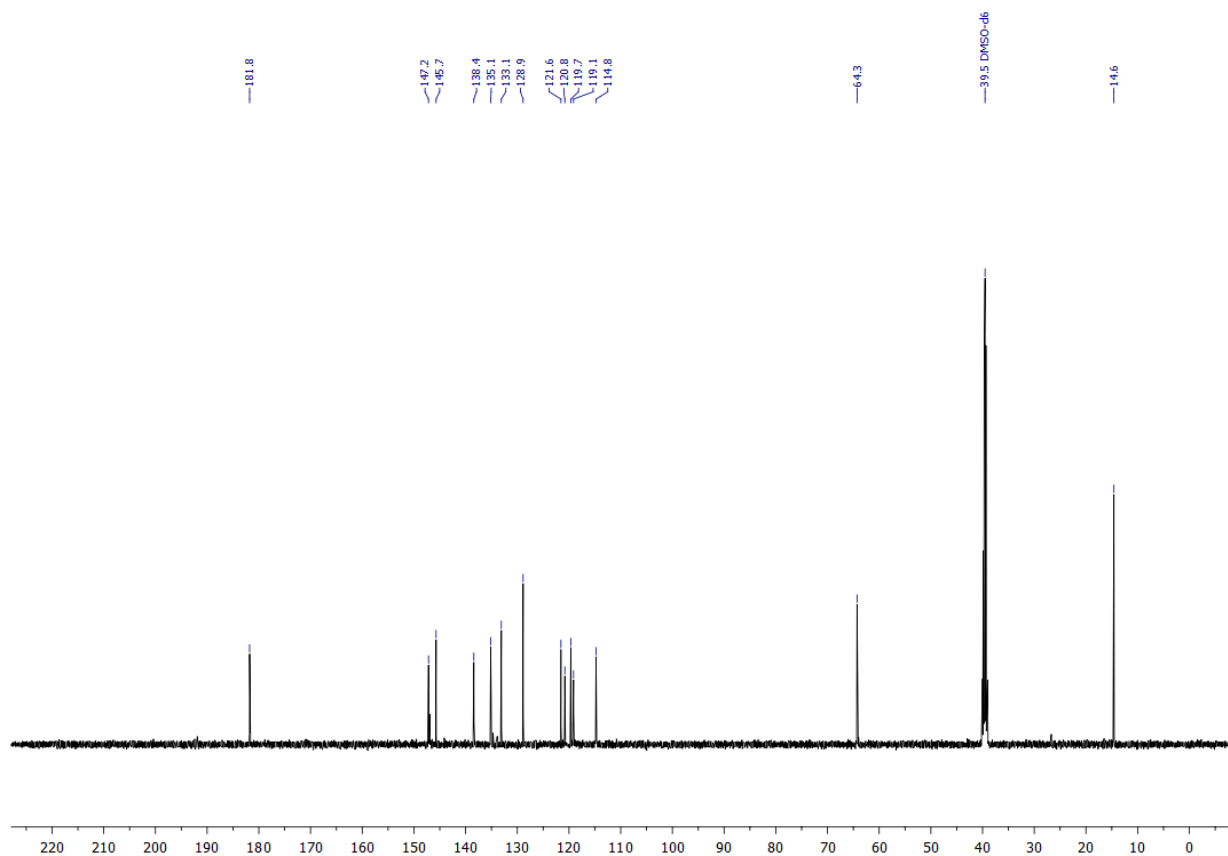


**(E)-3-(3-Ethoxy-2-hydroxyphenyl)-1-(2-thienyl)prop-2-en-1-one (1p)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

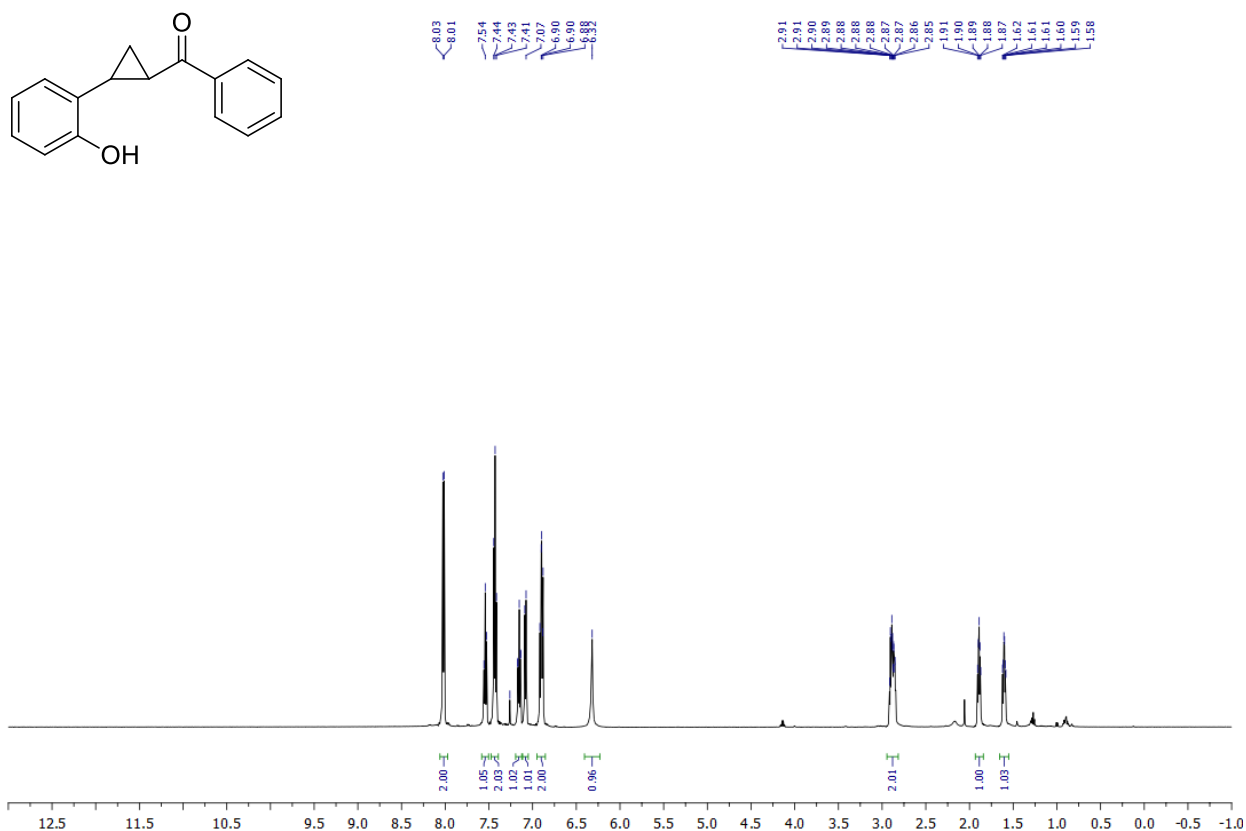


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

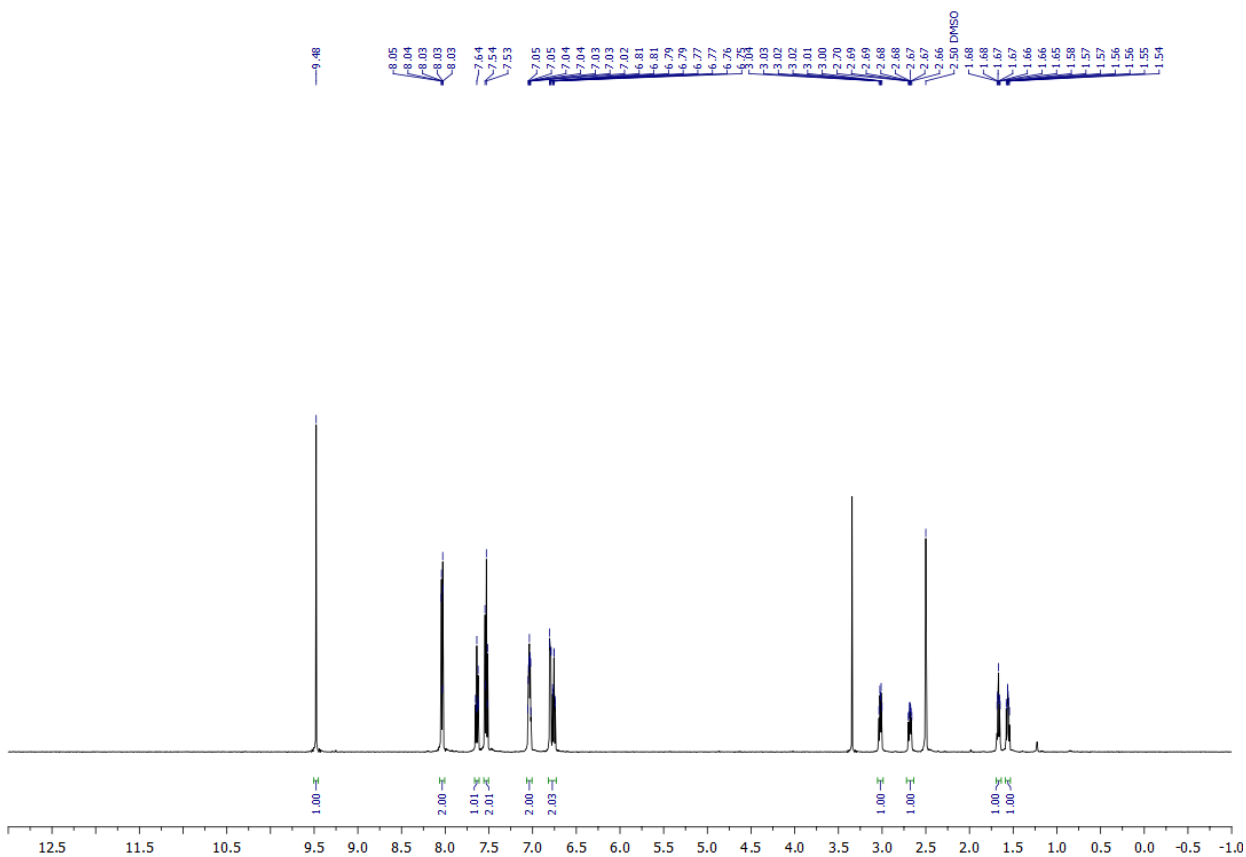


**[(1*RS*,2*RS*)-2-(2-Hydroxyphenyl)cyclopropyl](phenyl)methanone (2a)**

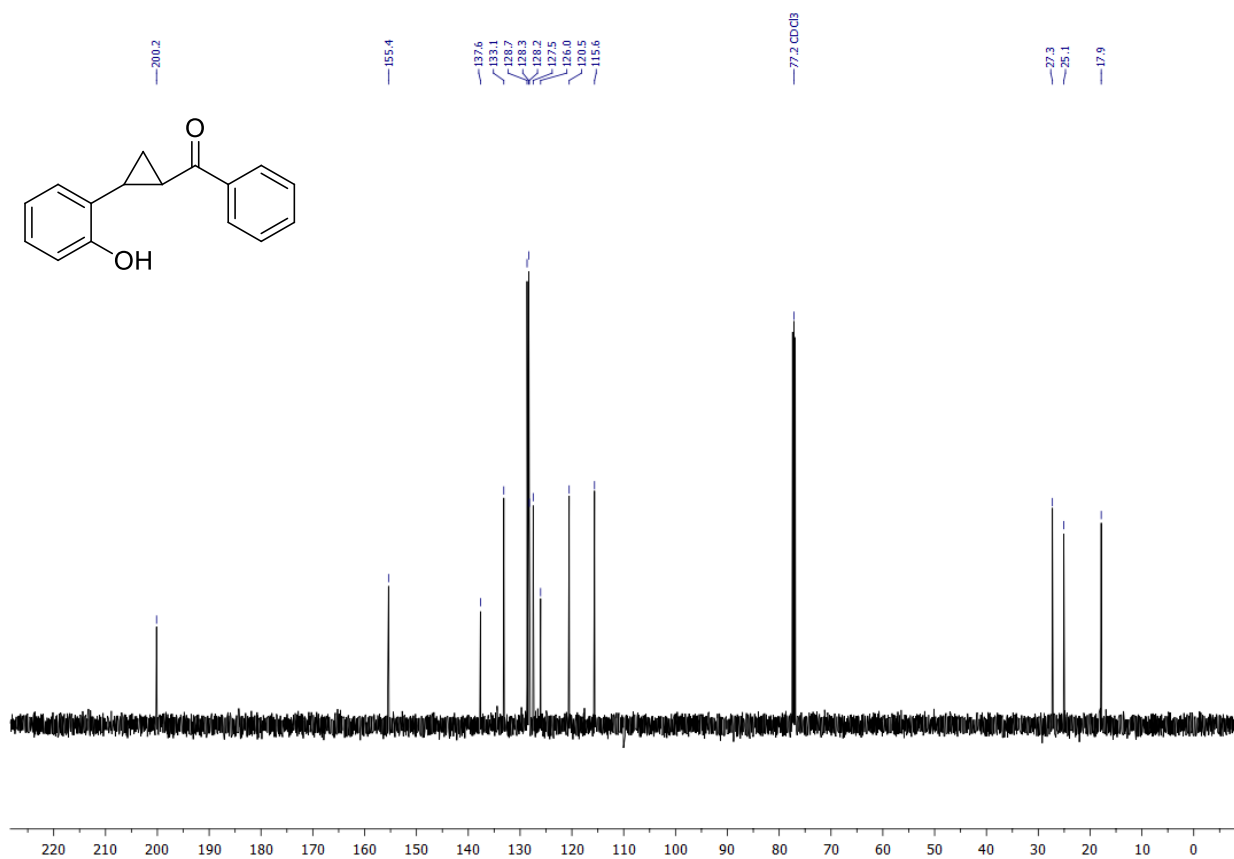
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

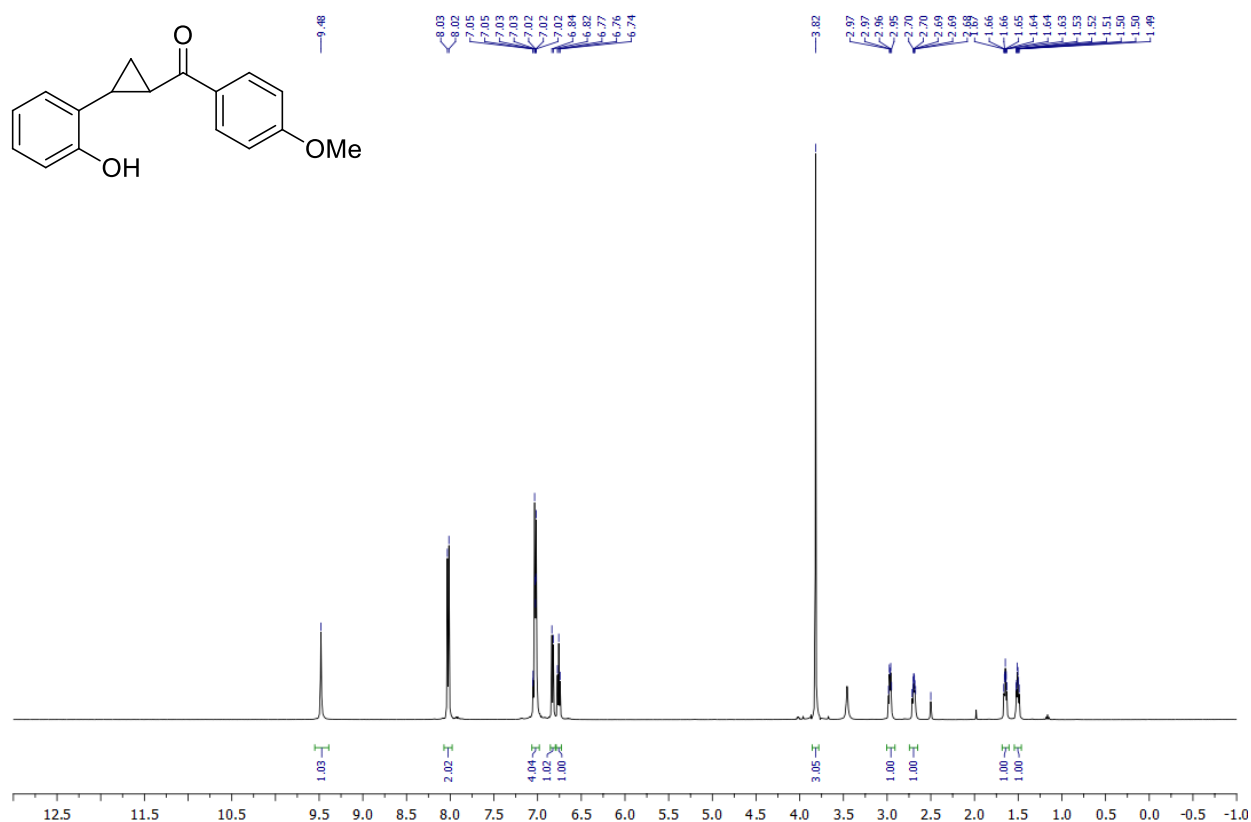


$^{13}\text{C}$  NMR (126 MHz,  $\text{CDCl}_3$ )

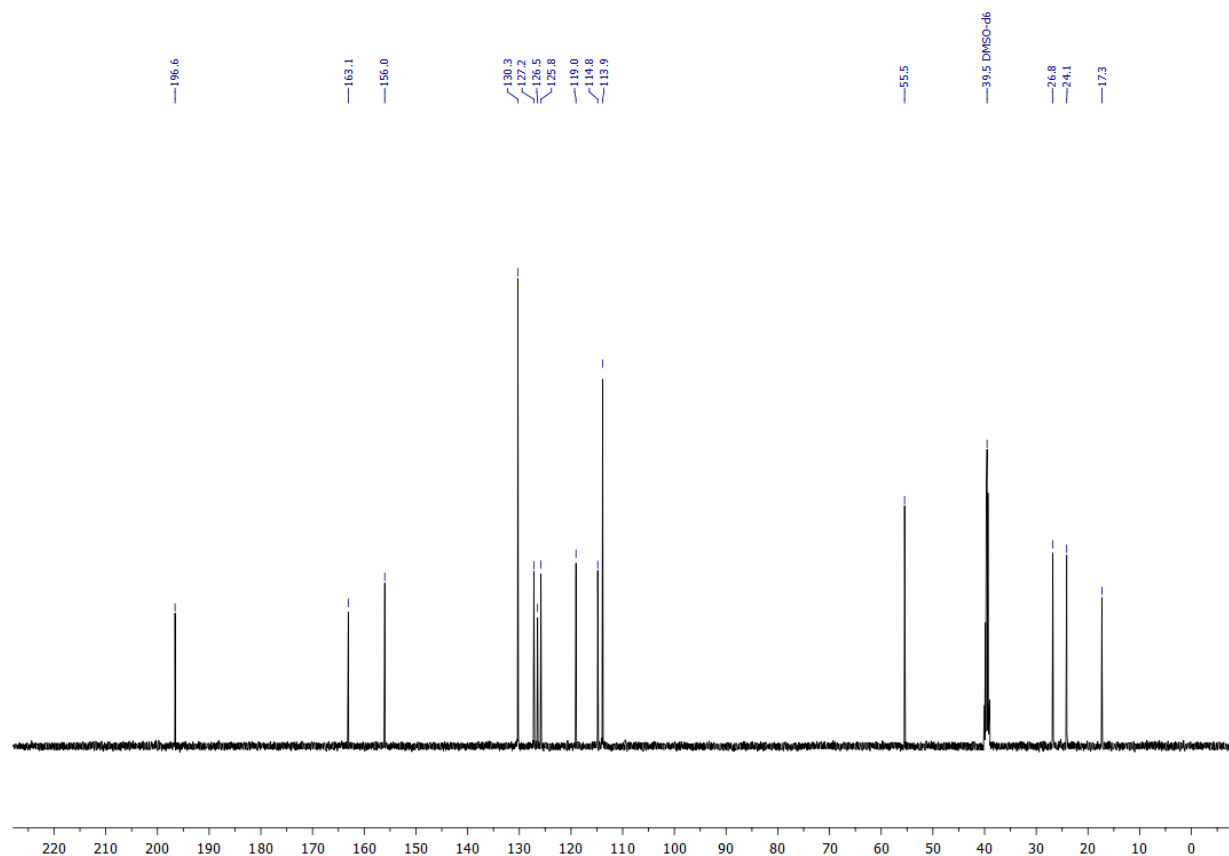


**[(1*RS*,2*RS*)-2-(2-Hydroxyphenyl)cyclopropyl](4-methoxyphenyl)methanone (2b)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)



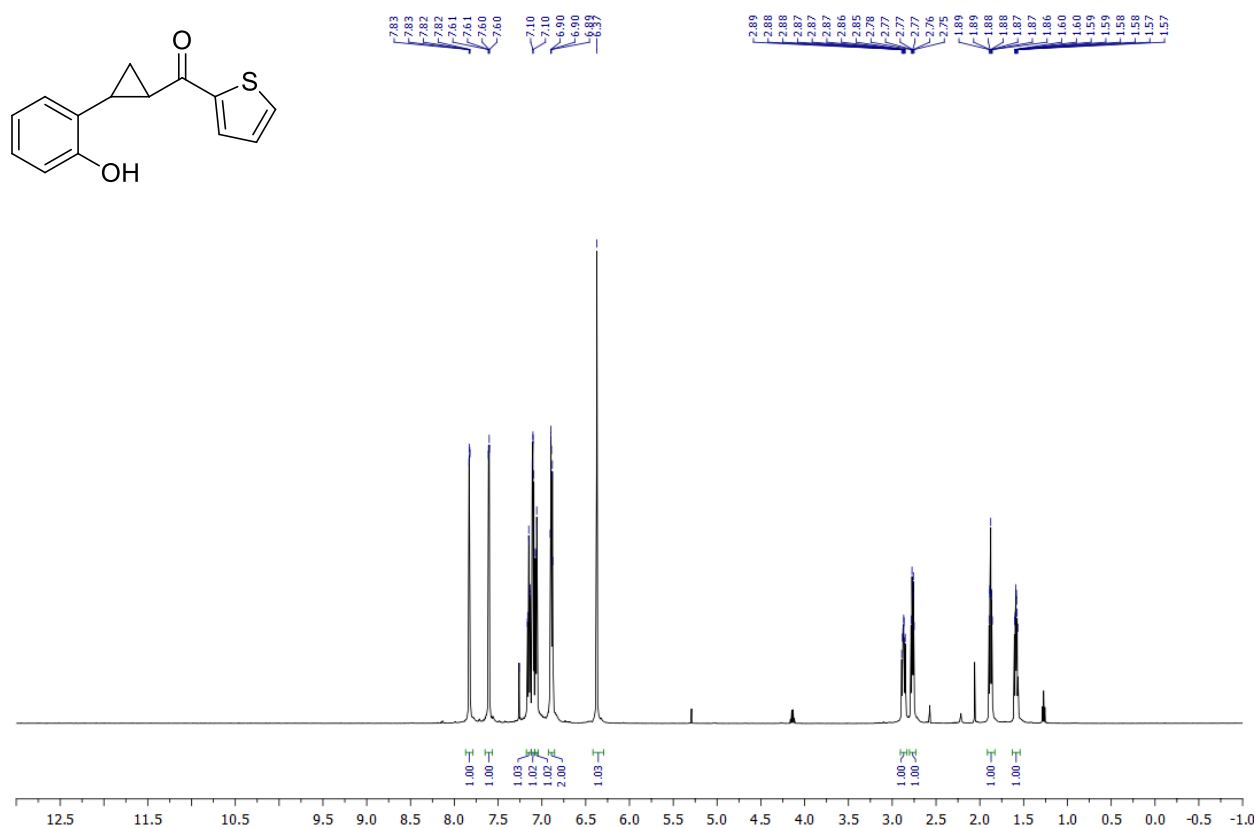
<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)



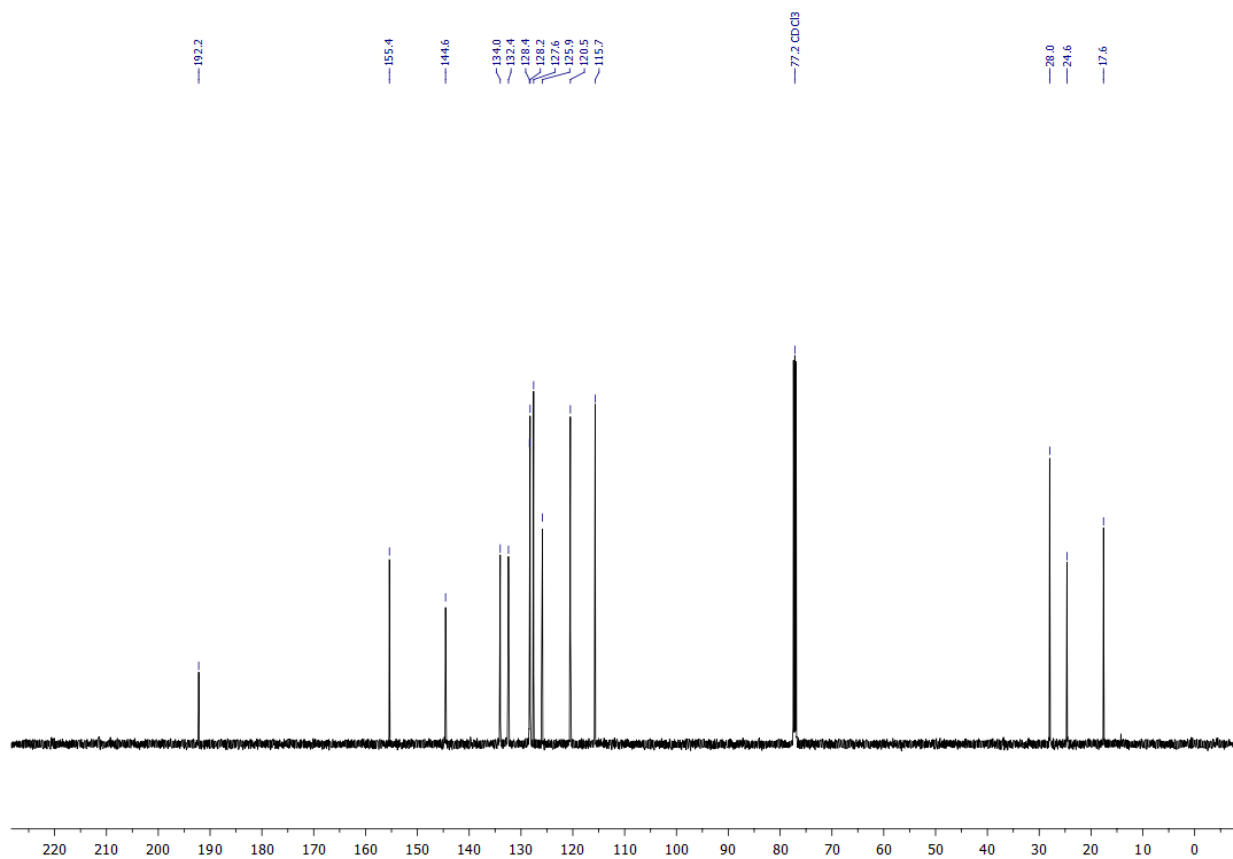


**[(1*RS*,2*RS*)-2-(2-Hydroxyphenyl)cyclopropyl](thiophen-2-yl)methanone (2c)**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)

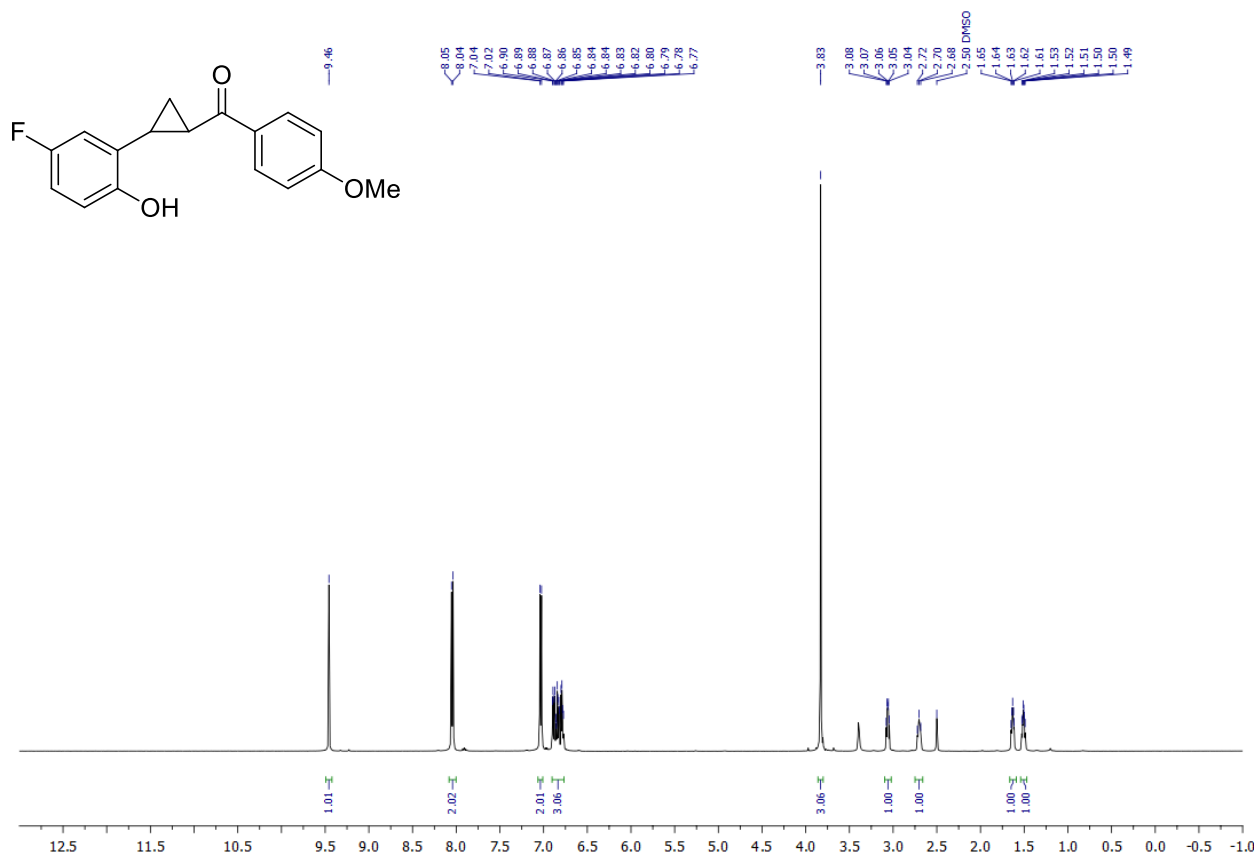


<sup>13</sup>C NMR (126 MHz, CDCl<sub>3</sub>)

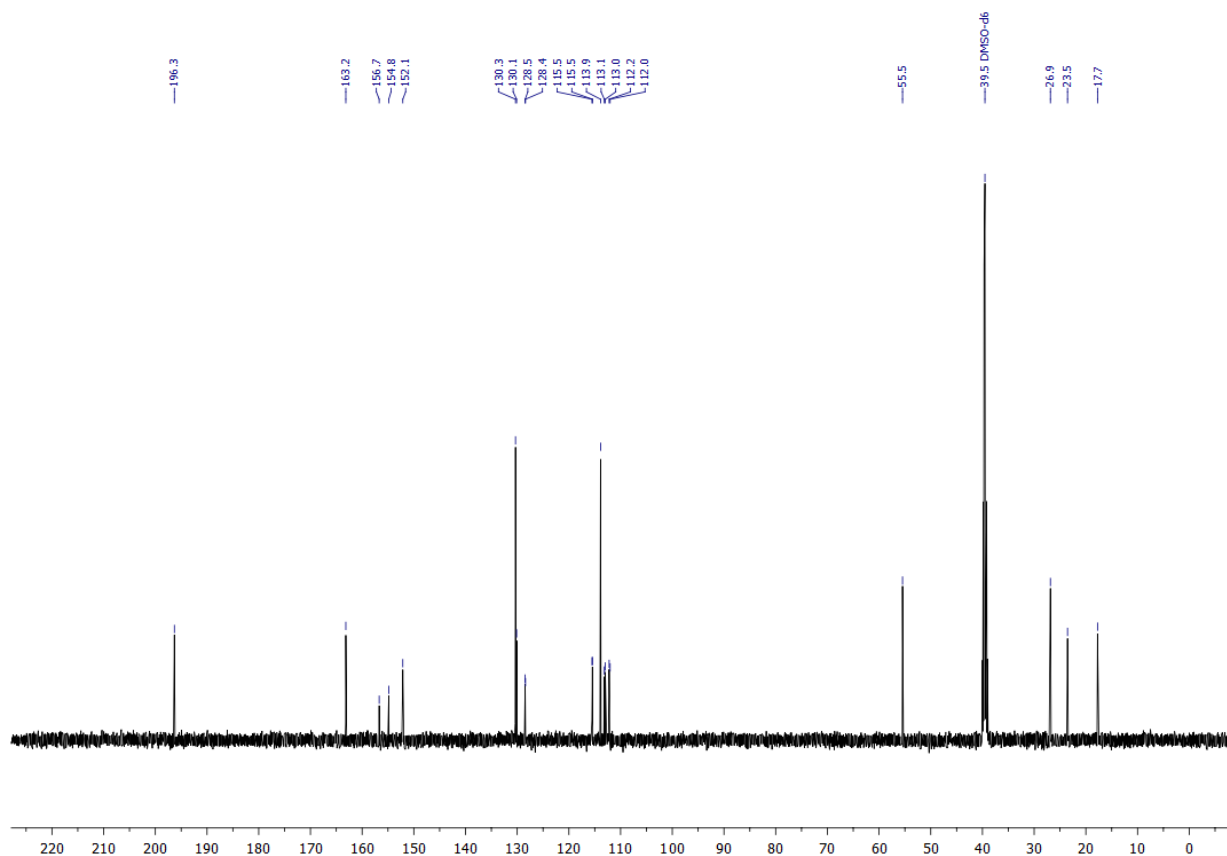


**[(1*RS*,2*RS*)-2-(5-Fluoro-2-hydroxyphenyl)cyclopropyl](4-methoxyphenyl)methanone (2d)**

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

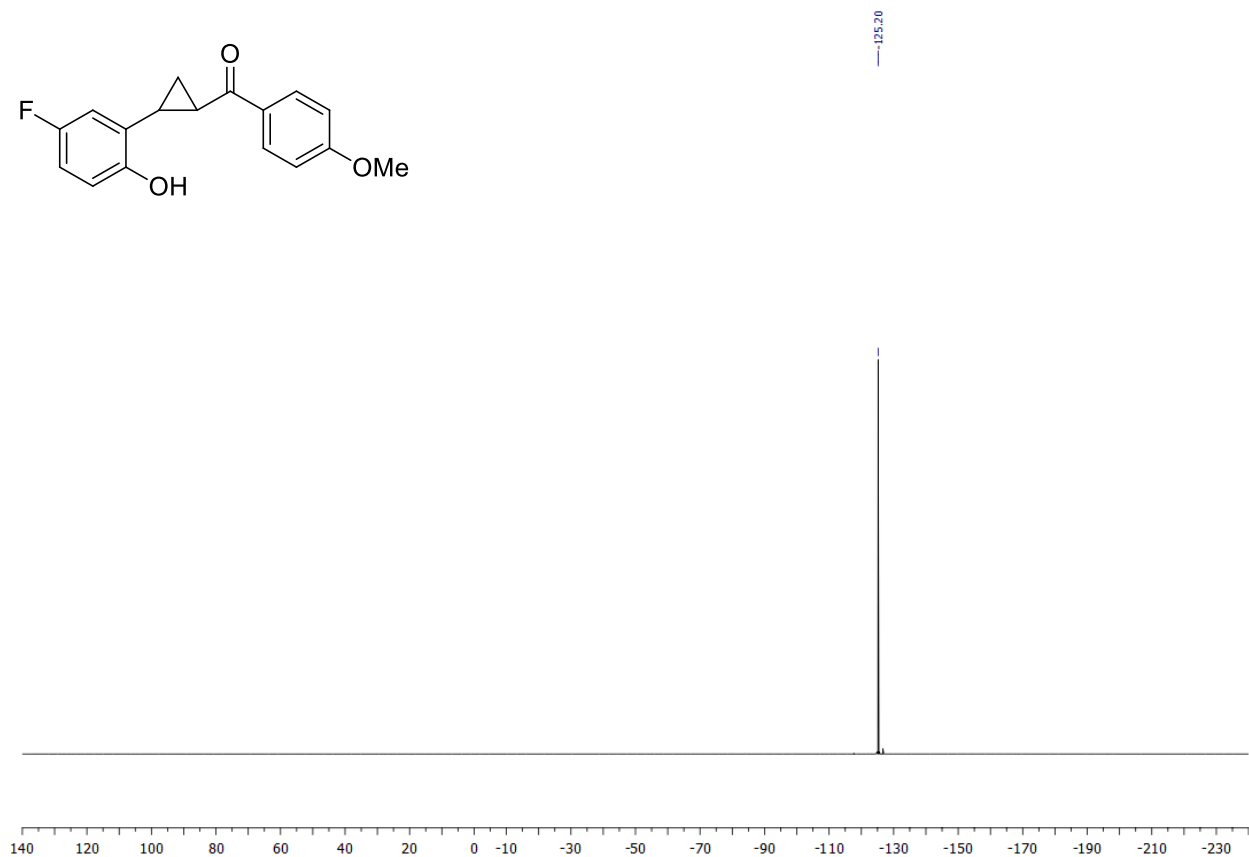


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)



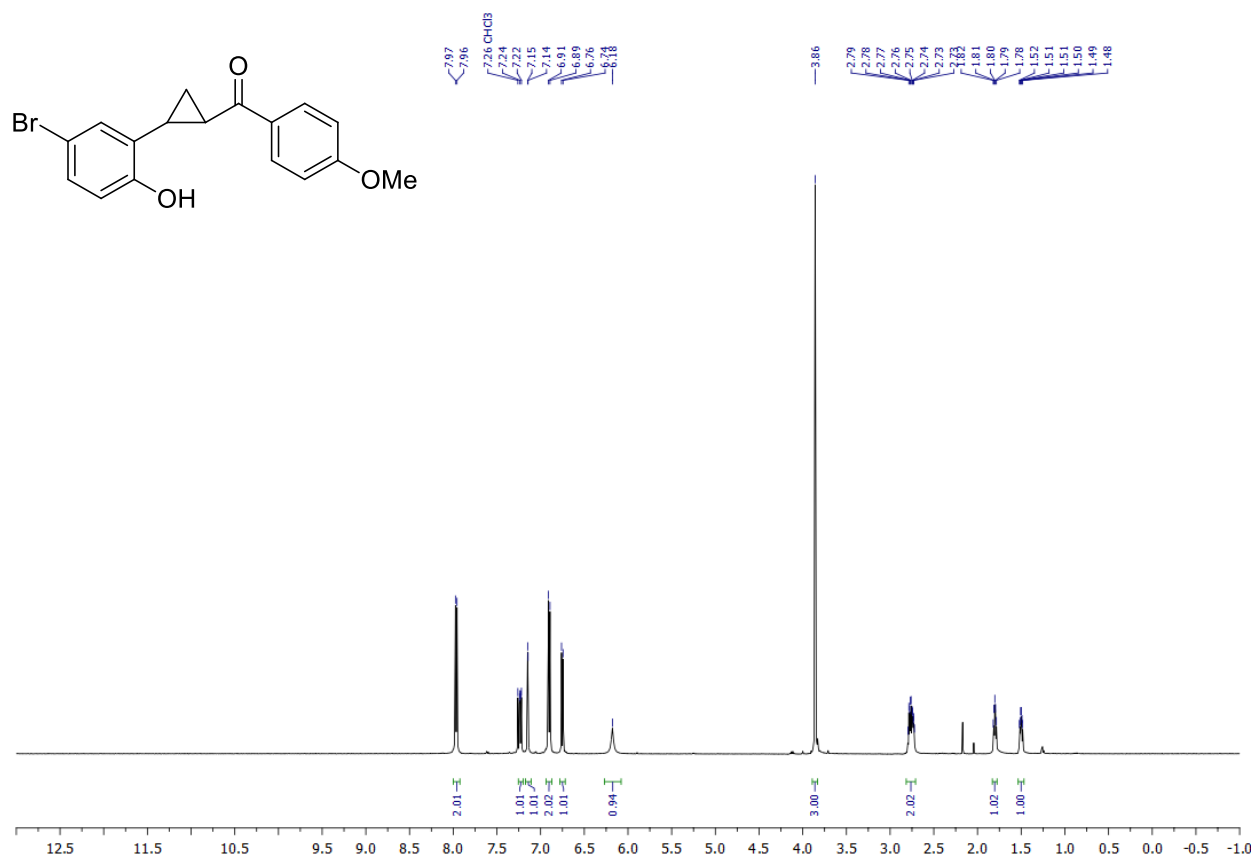
***[(1*RS*,2*RS*)-2-(5-Fluoro-2-hydroxyphenyl)cyclopropyl](4-methoxyphenyl)methanone (2d)***

<sup>19</sup>F NMR (471 MHz, DMSO-*d*<sub>6</sub>)

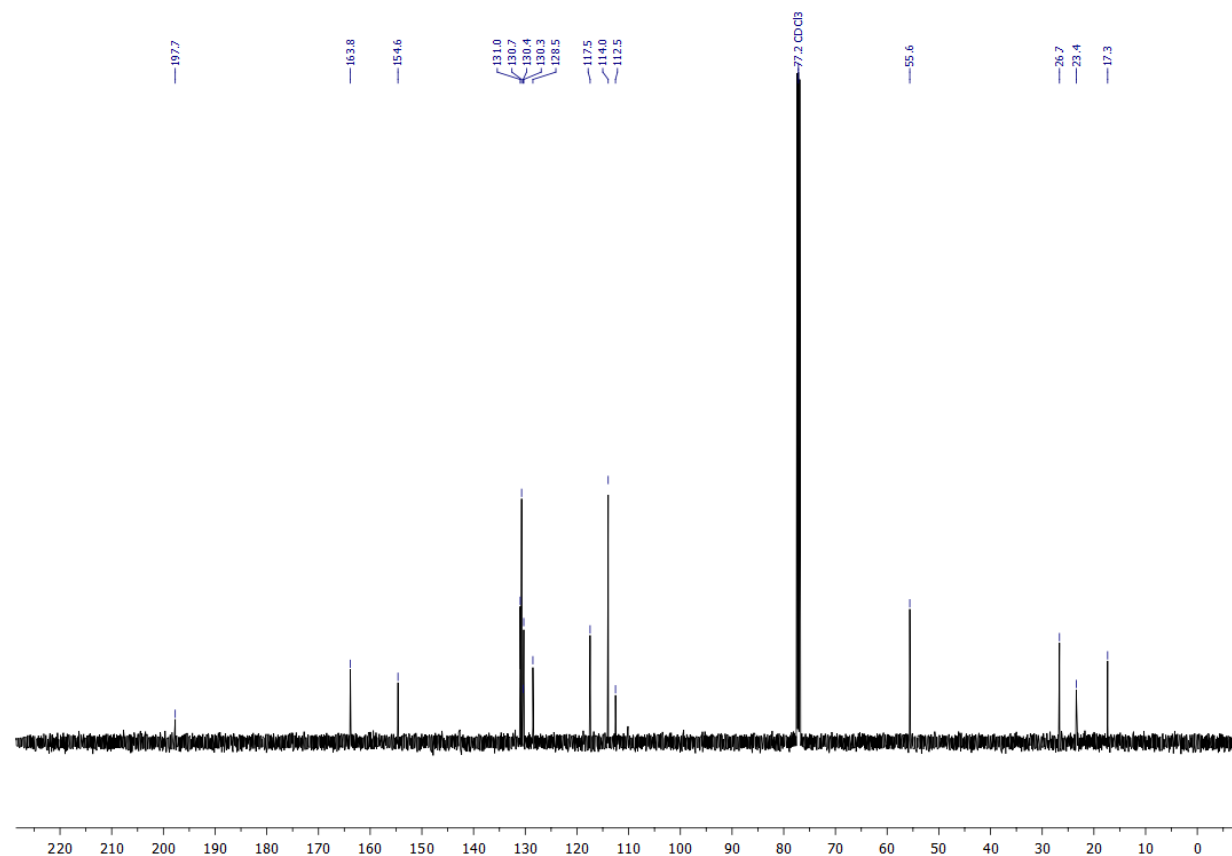


**[(1*RS*,2*RS*)-2-(5-Bromo-2-hydroxyphenyl)cyclopropyl](4-methoxyphenyl)methanone (2e)**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)

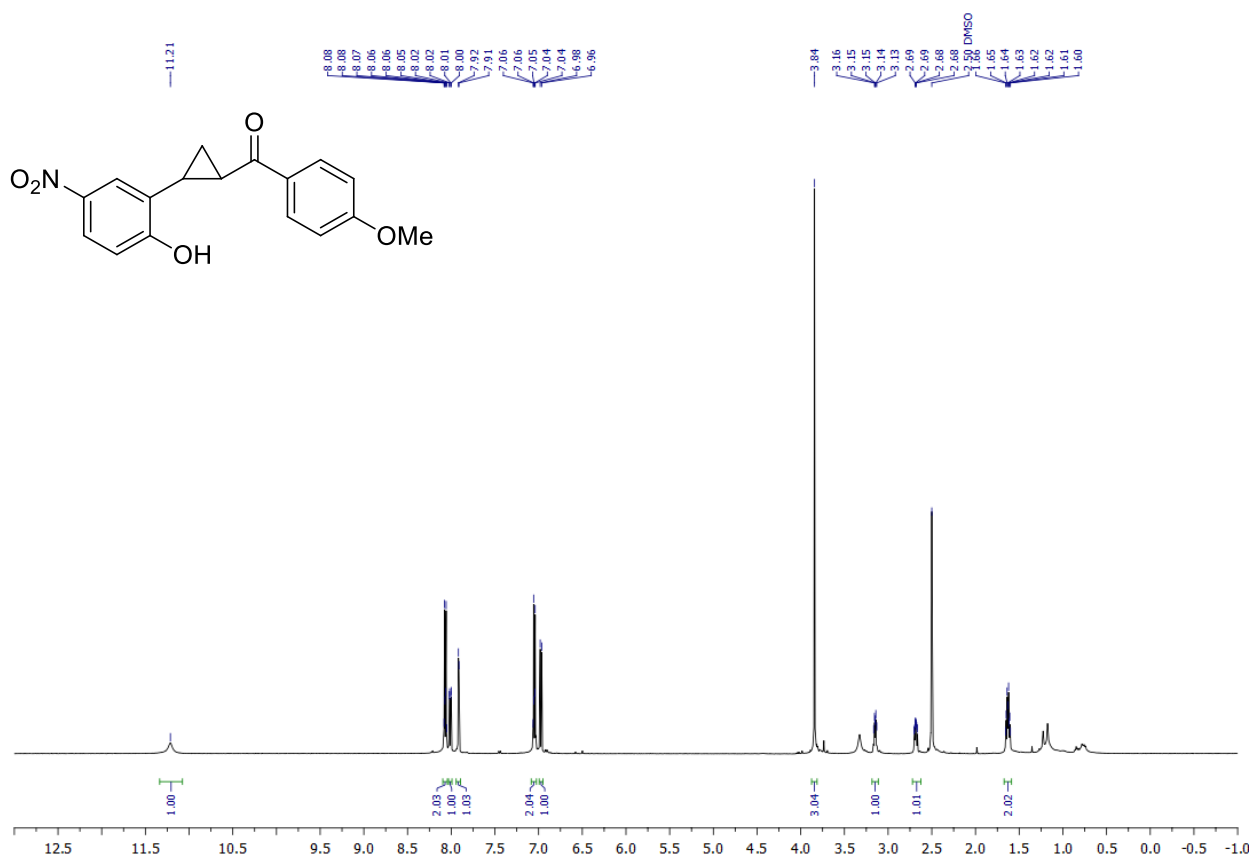


<sup>13</sup>C NMR (126 MHz, CDCl<sub>3</sub>)

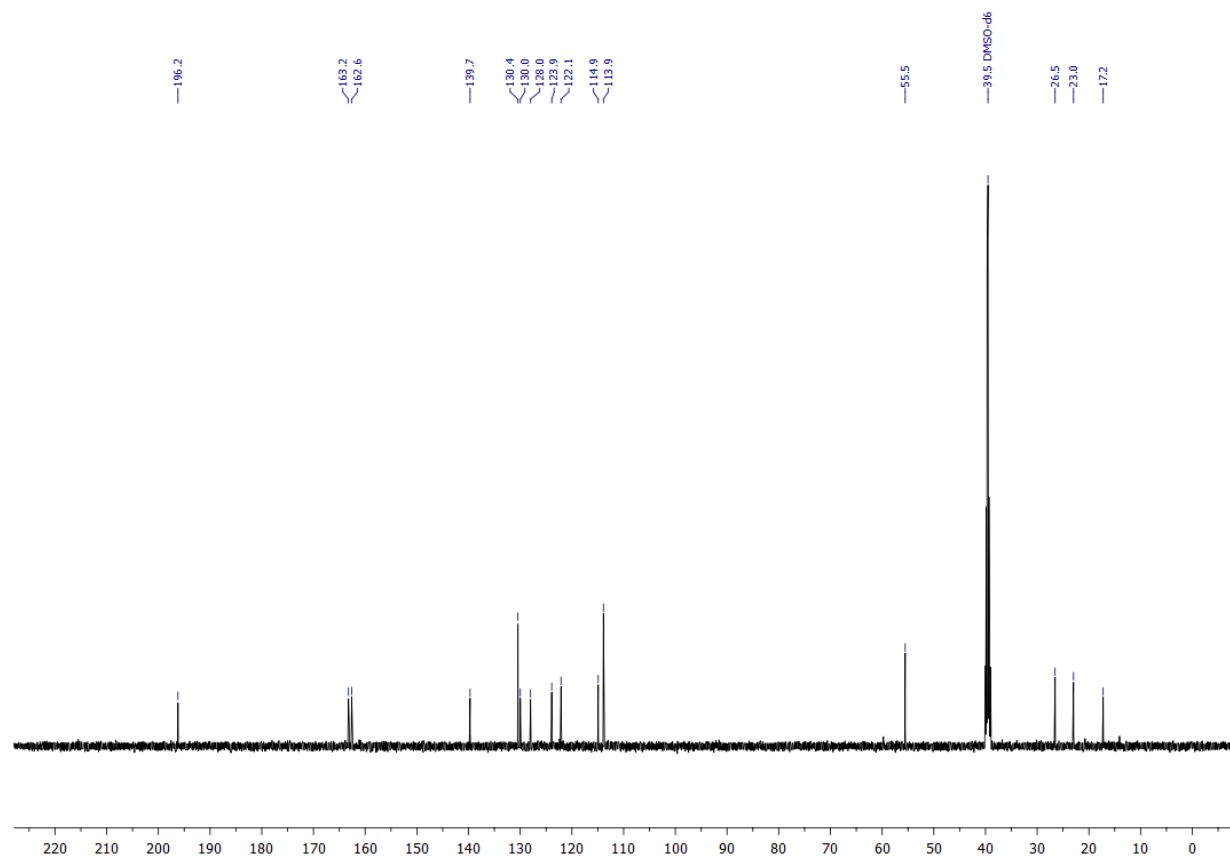


***[(1*RS*,2*RS*)-2-(2-Hydroxy-5-nitrophenyl)cyclopropyl](4-methoxyphenyl)methanone (2f)***

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

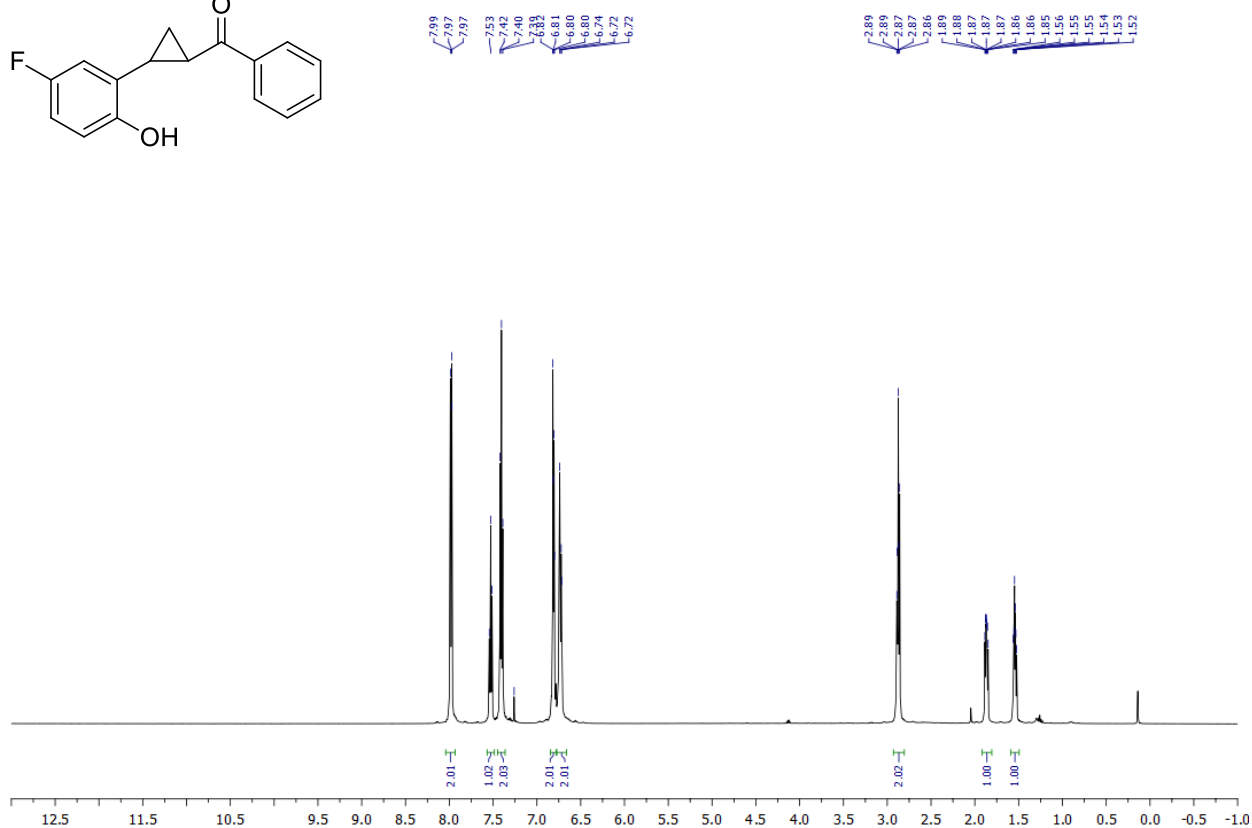
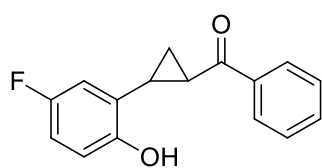


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

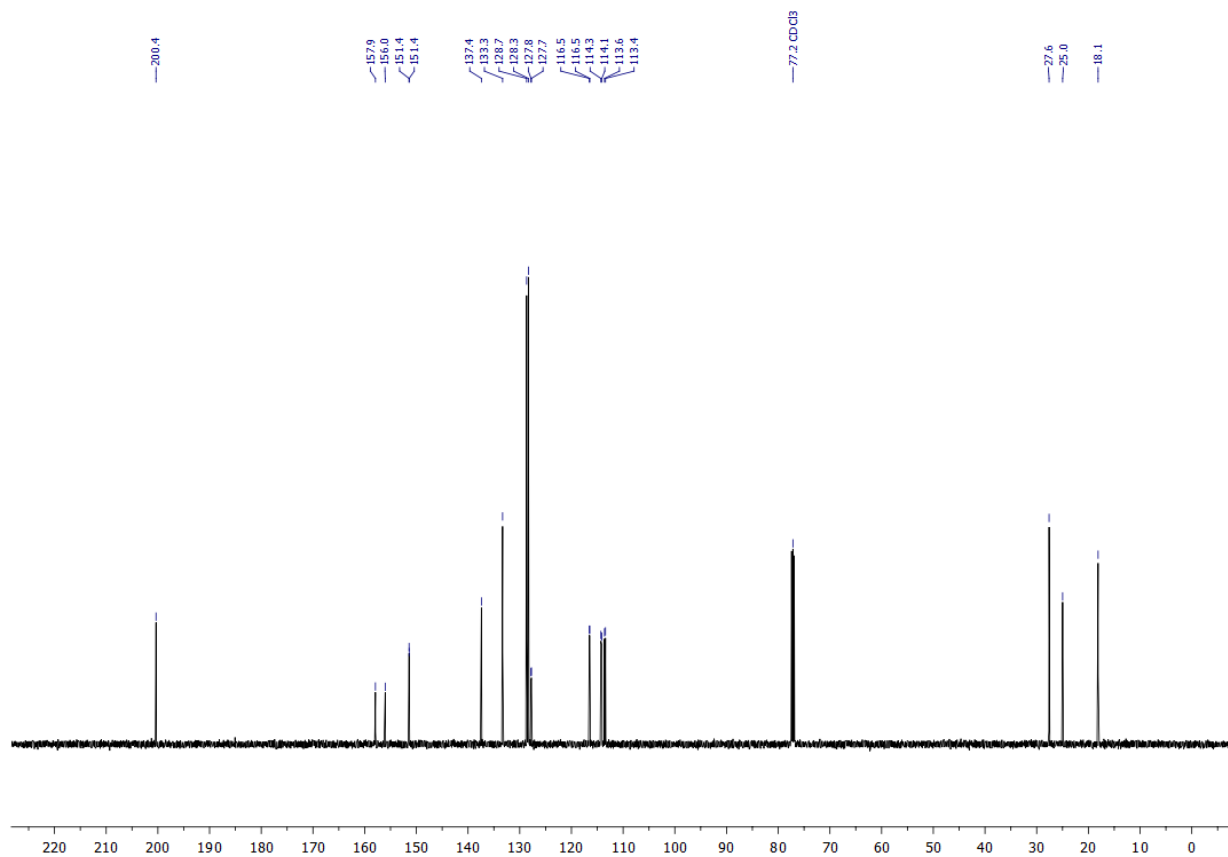


**[(1*RS*,2*RS*)-2-(5-Fluoro-2-hydroxyphenyl)cyclopropyl](phenyl)methanone (2g)**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)

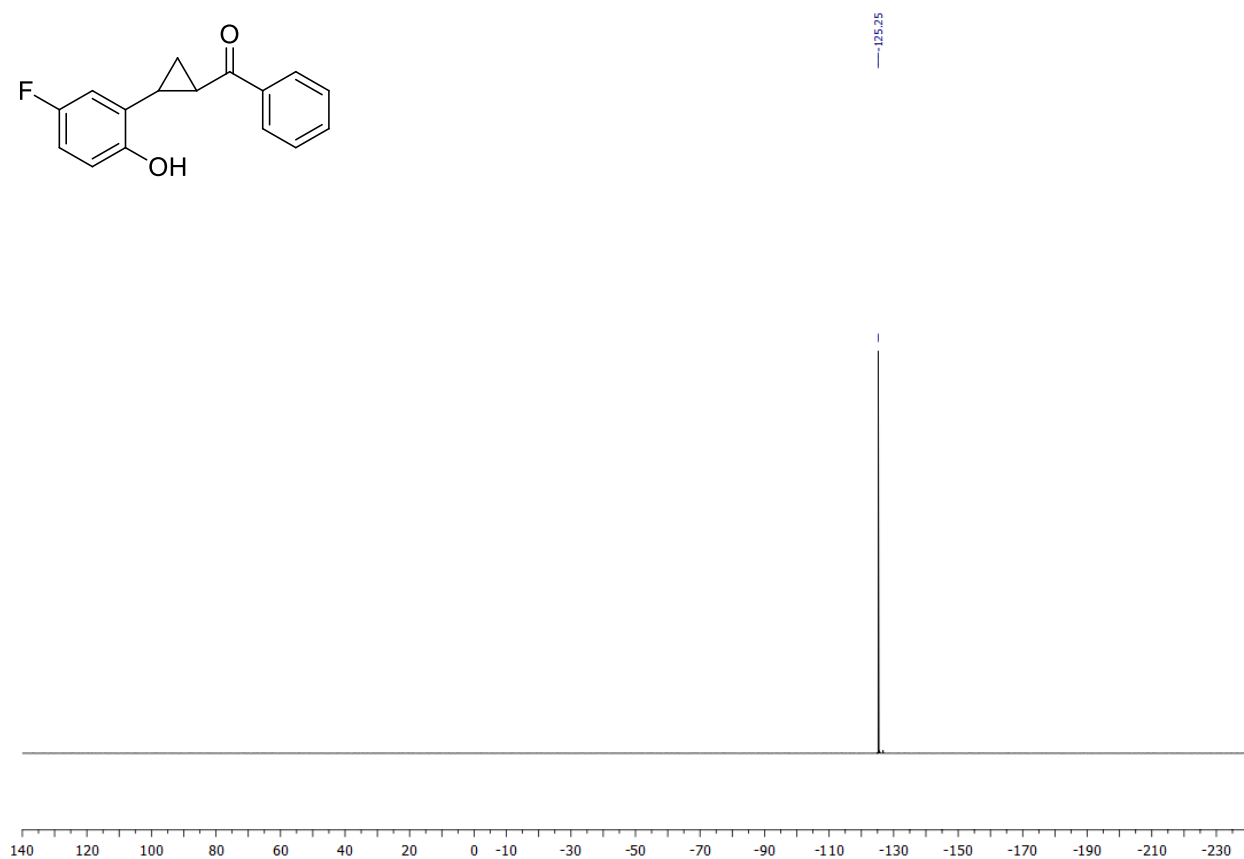
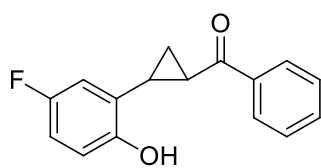


<sup>13</sup>C NMR (126 MHz, CDCl<sub>3</sub>)



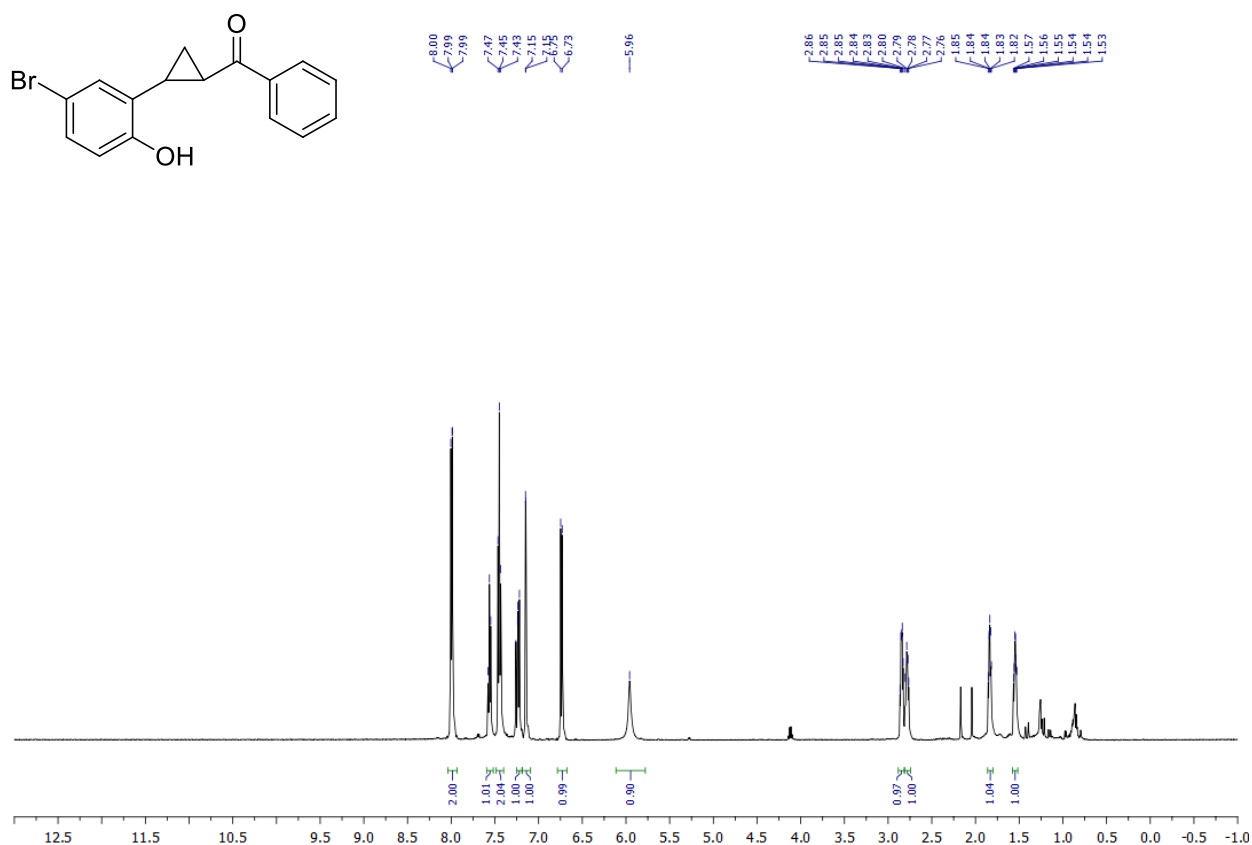
***[(1*RS*,2*RS*)-2-(5-Fluoro-2-hydroxyphenyl)cyclopropyl](phenyl)methanone (2g)***

<sup>19</sup>F NMR (471 MHz, CDCl<sub>3</sub>)

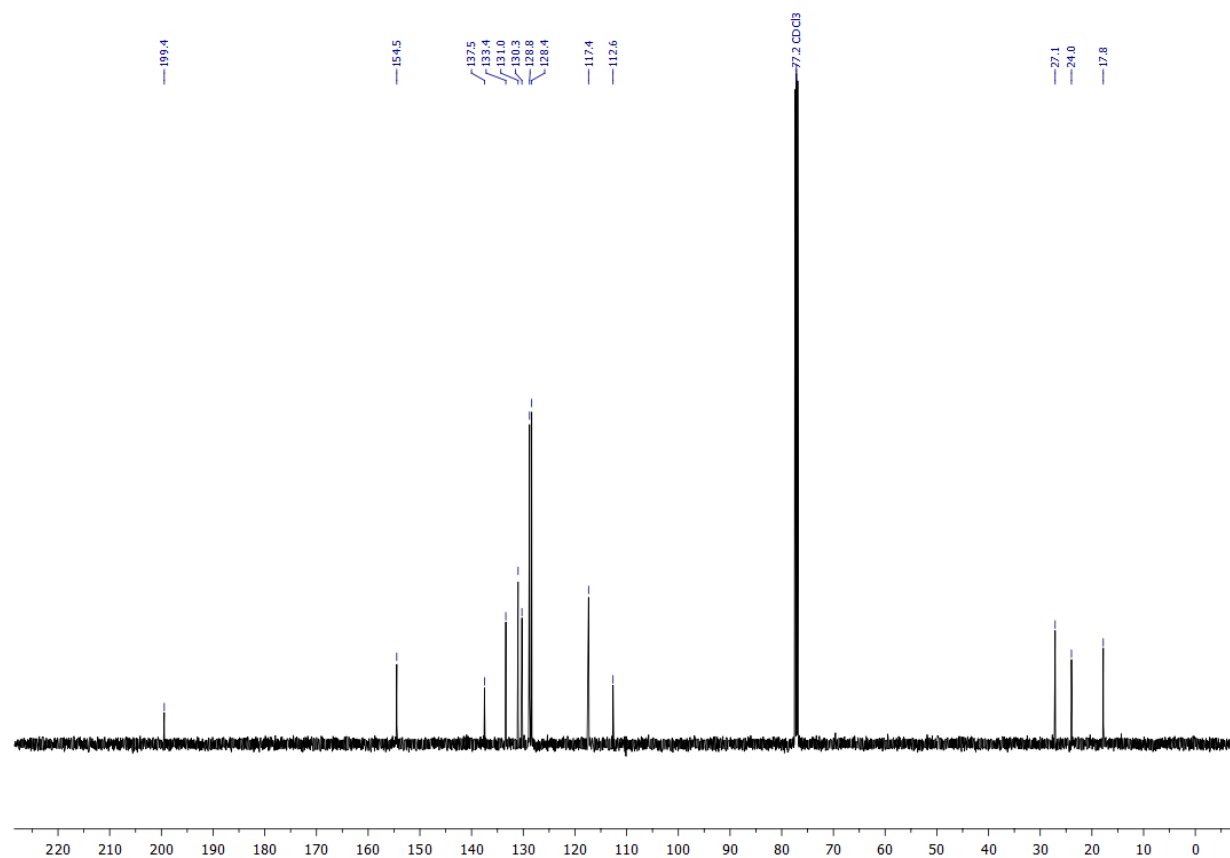


**[(1*RS*,2*RS*)-2-(5-Bromo-2-hydroxyphenyl)cyclopropyl](phenyl)methanone (2h)**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



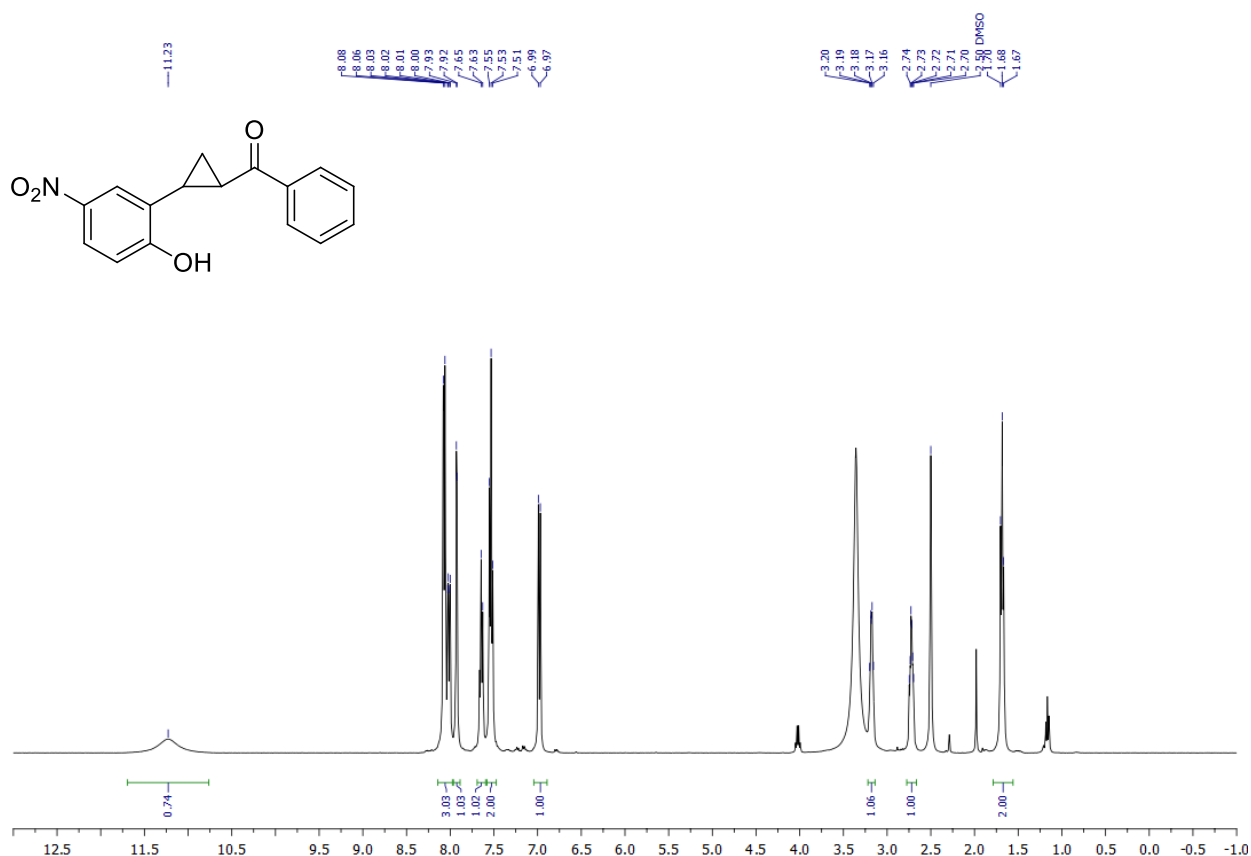
<sup>13</sup>C NMR (126 MHz, CDCl<sub>3</sub>)



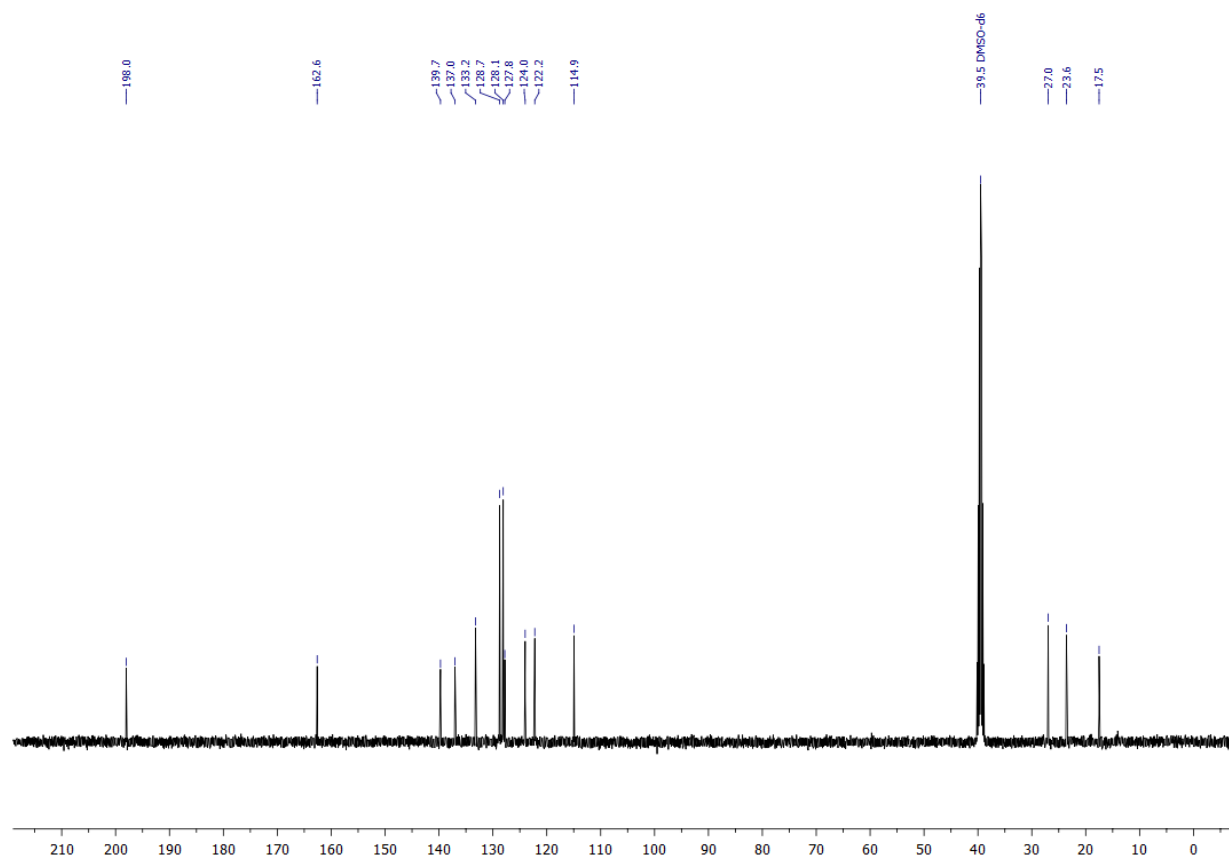


**[(1*R*,2*R*)-2-(2-Hydroxy-5-nitrophenyl)cyclopropyl](phenyl)methanone (2i)**

<sup>1</sup>H NMR (400 MHz, DMSO-*d*<sub>6</sub>)

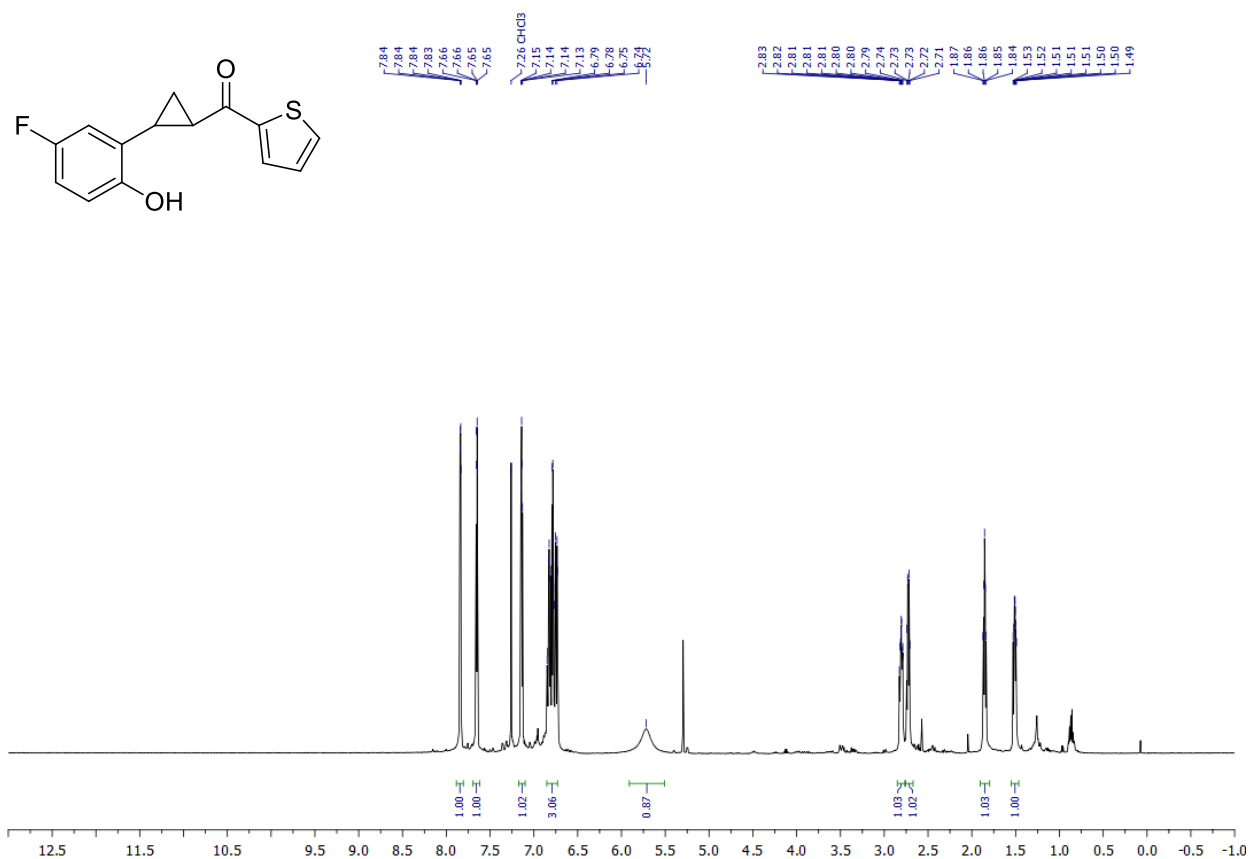


<sup>13</sup>C NMR (101 MHz, DMSO-*d*<sub>6</sub>)

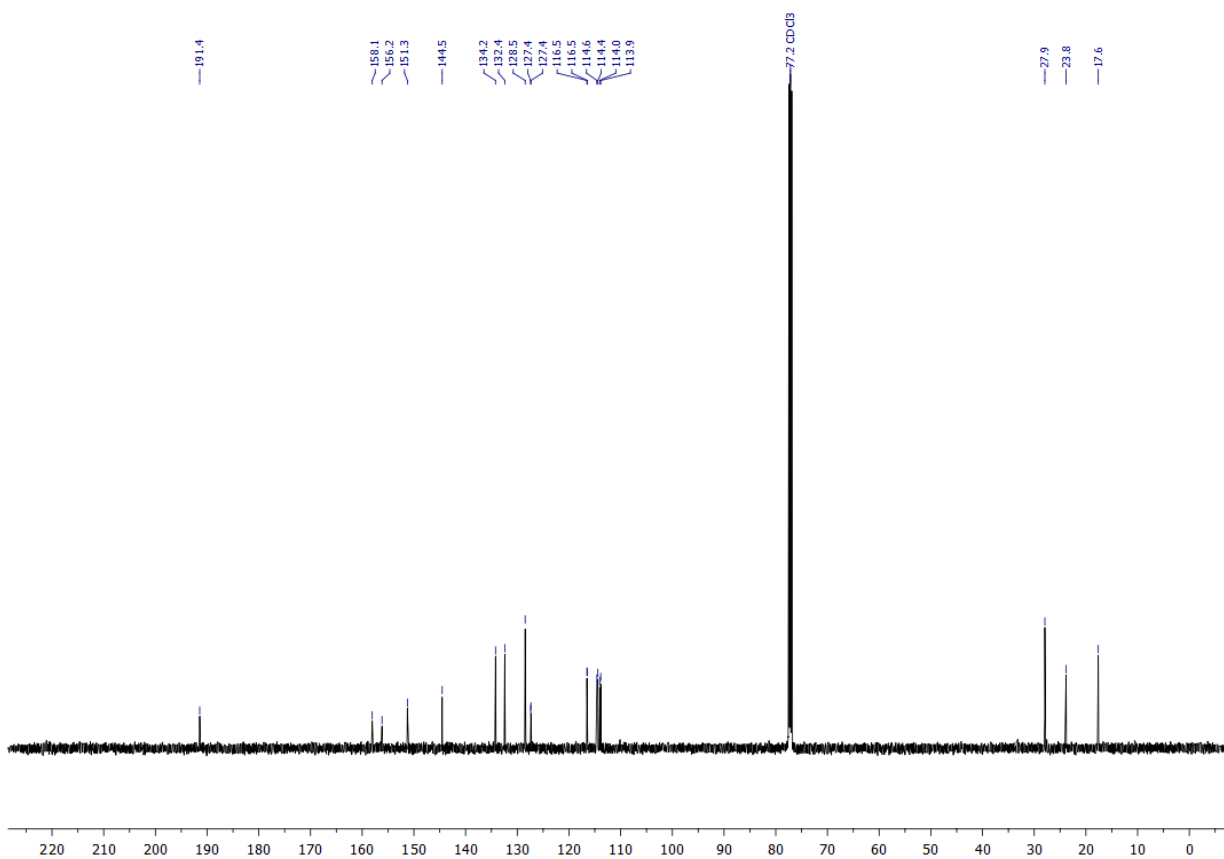


**[(1*RS*,2*RS*)-2-(5-Fluoro-2-hydroxyphenyl)cyclopropyl](thiophen-2-yl)methanone (2j)**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)

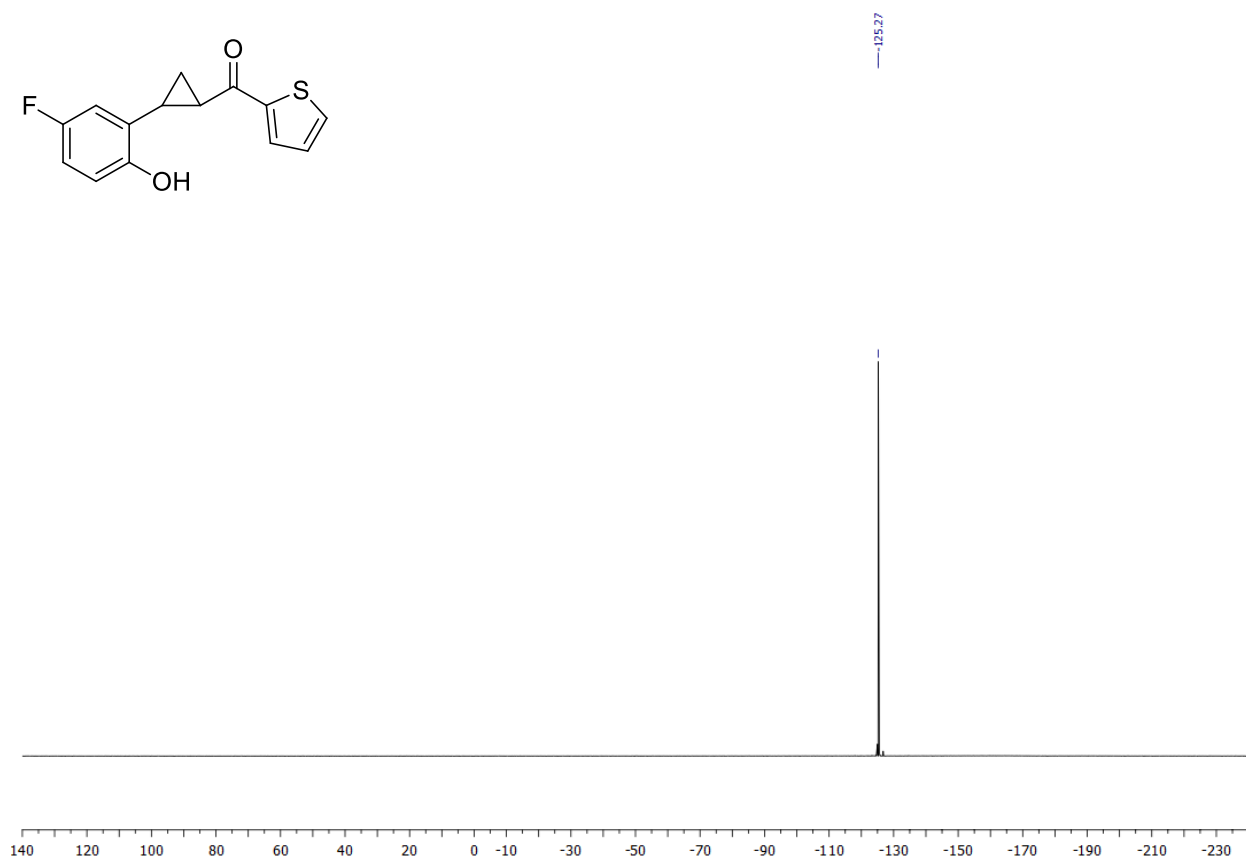
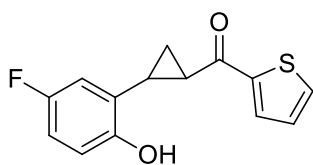


<sup>13</sup>C NMR (126 MHz, CDCl<sub>3</sub>)



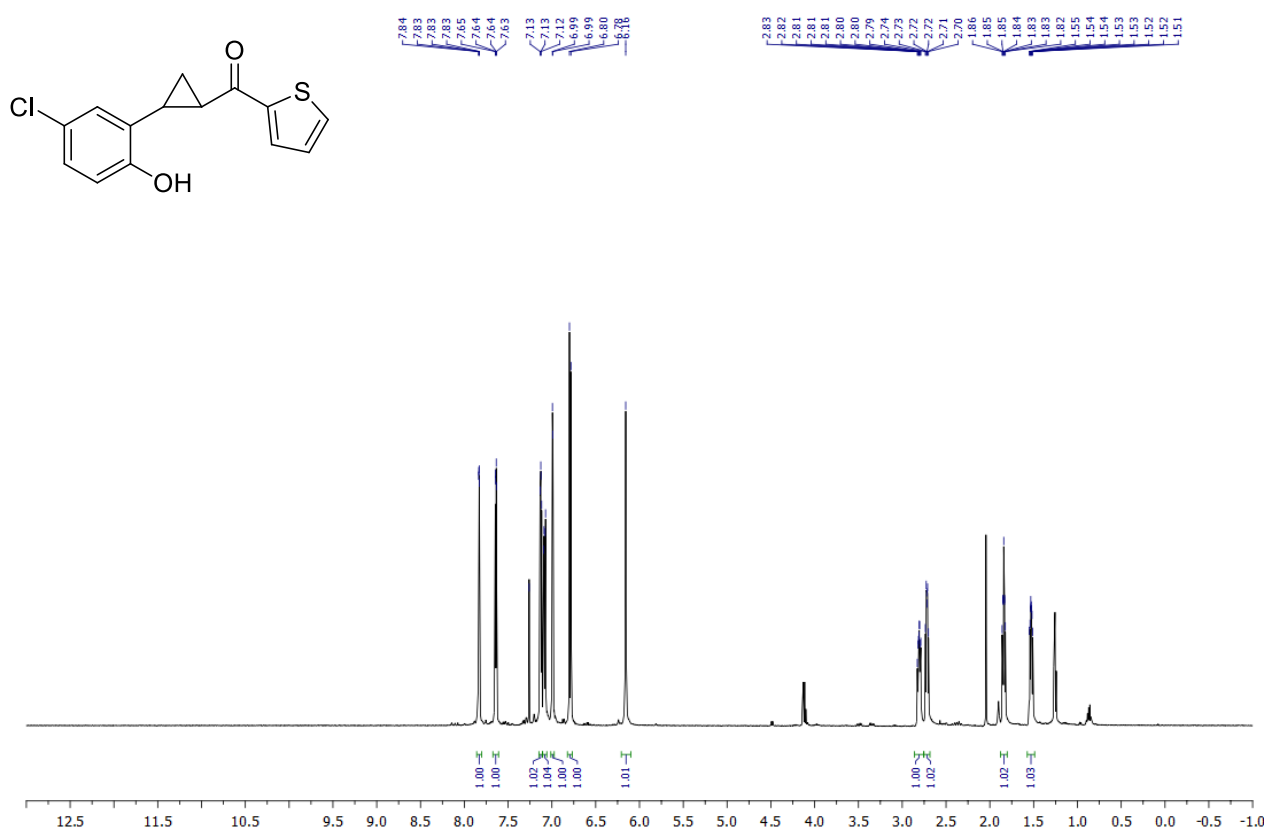
***[(1*RS*,2*RS*)-2-(5-Fluoro-2-hydroxyphenyl)cyclopropyl](thiophen-2-yl)methanone (2j)***

<sup>19</sup>F NMR (471 MHz, CDCl<sub>3</sub>)

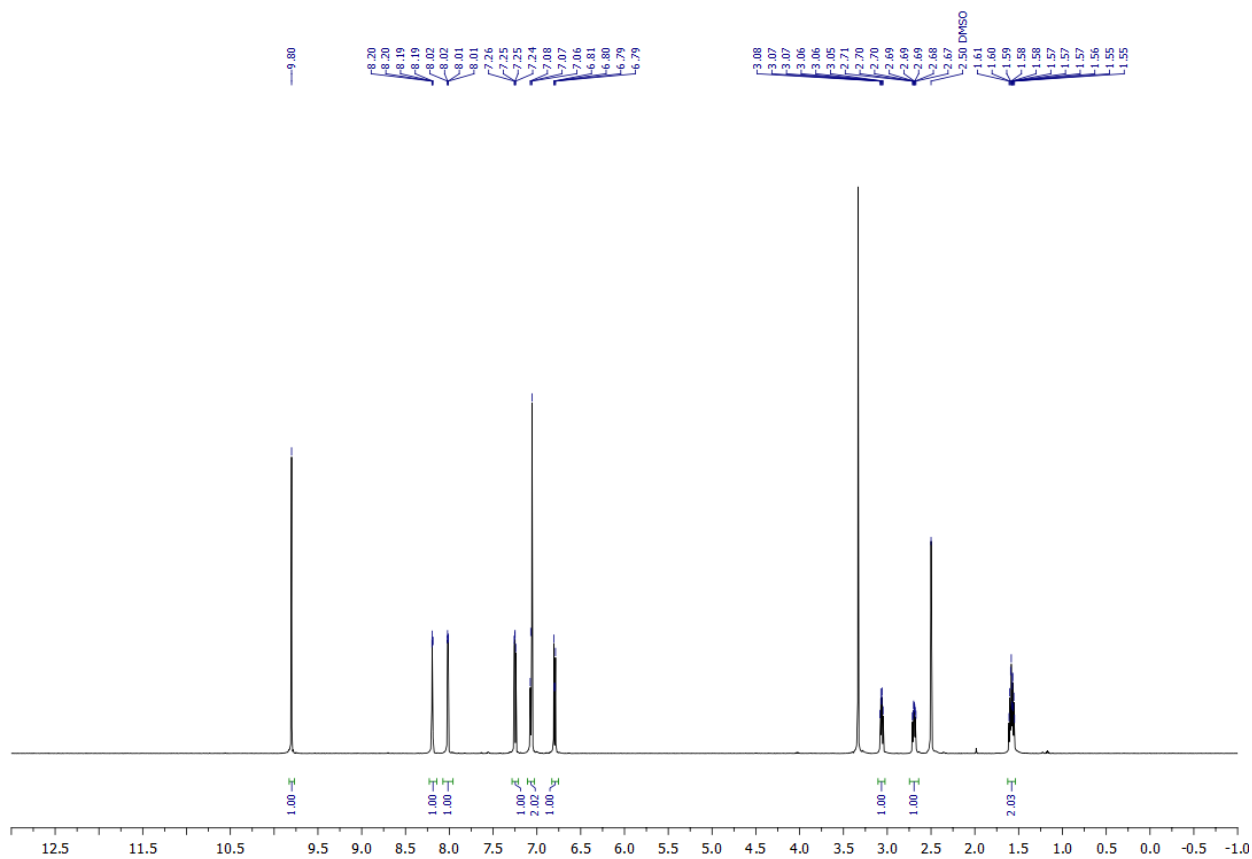


**[(1*RS*,2*RS*)-2-(5-Chloro-2-hydroxyphenyl)cyclopropyl](thiophen-2-yl)methanone (2k)**

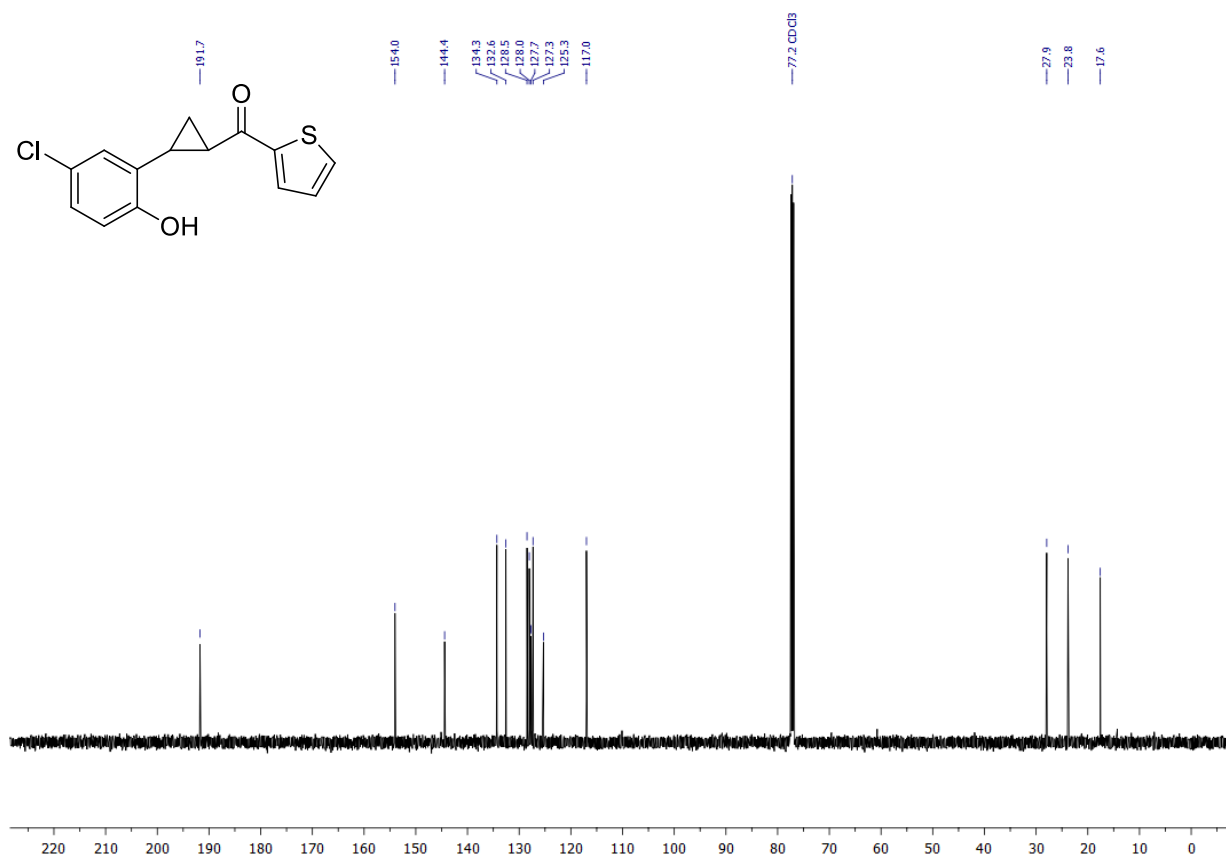
<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



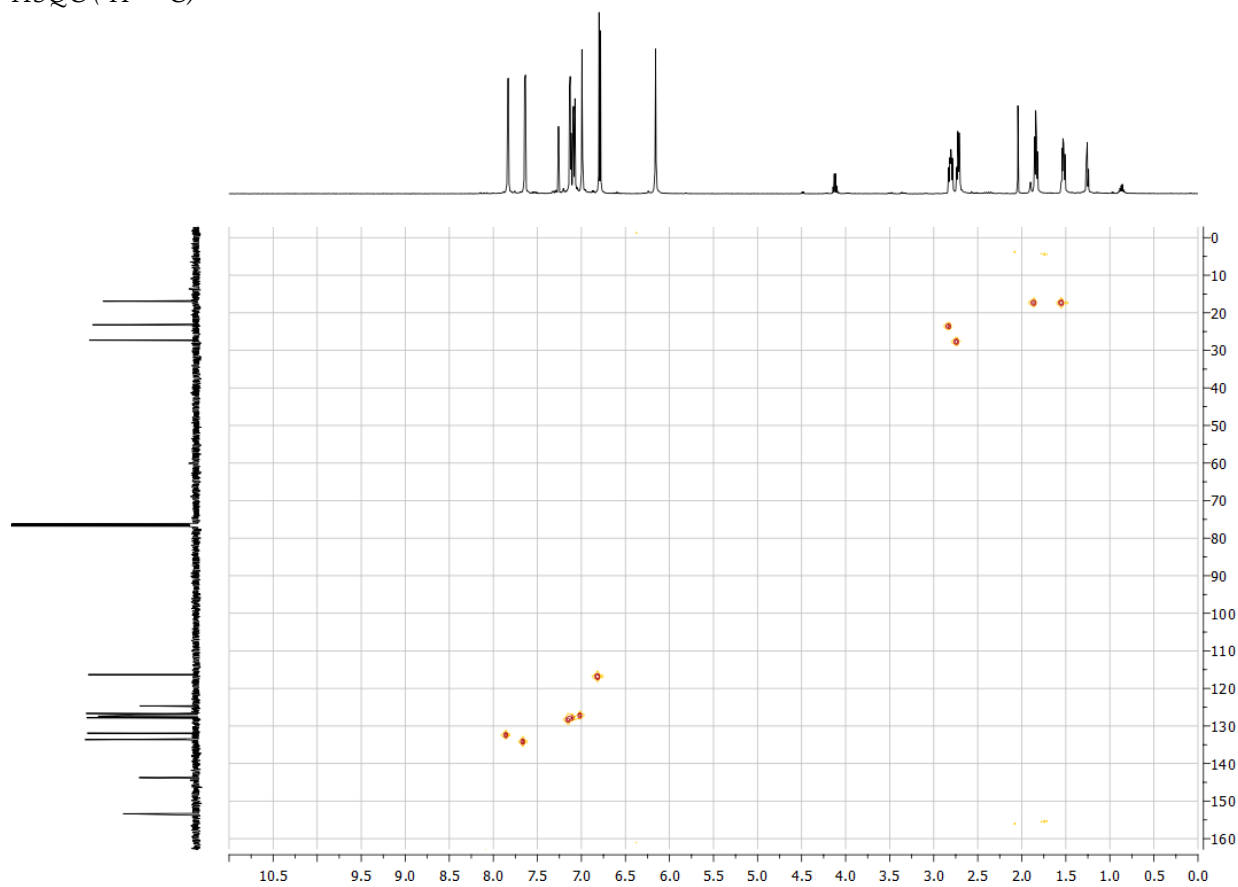
<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)



$^{13}\text{C}$  NMR (126 MHz,  $\text{CDCl}_3$ )

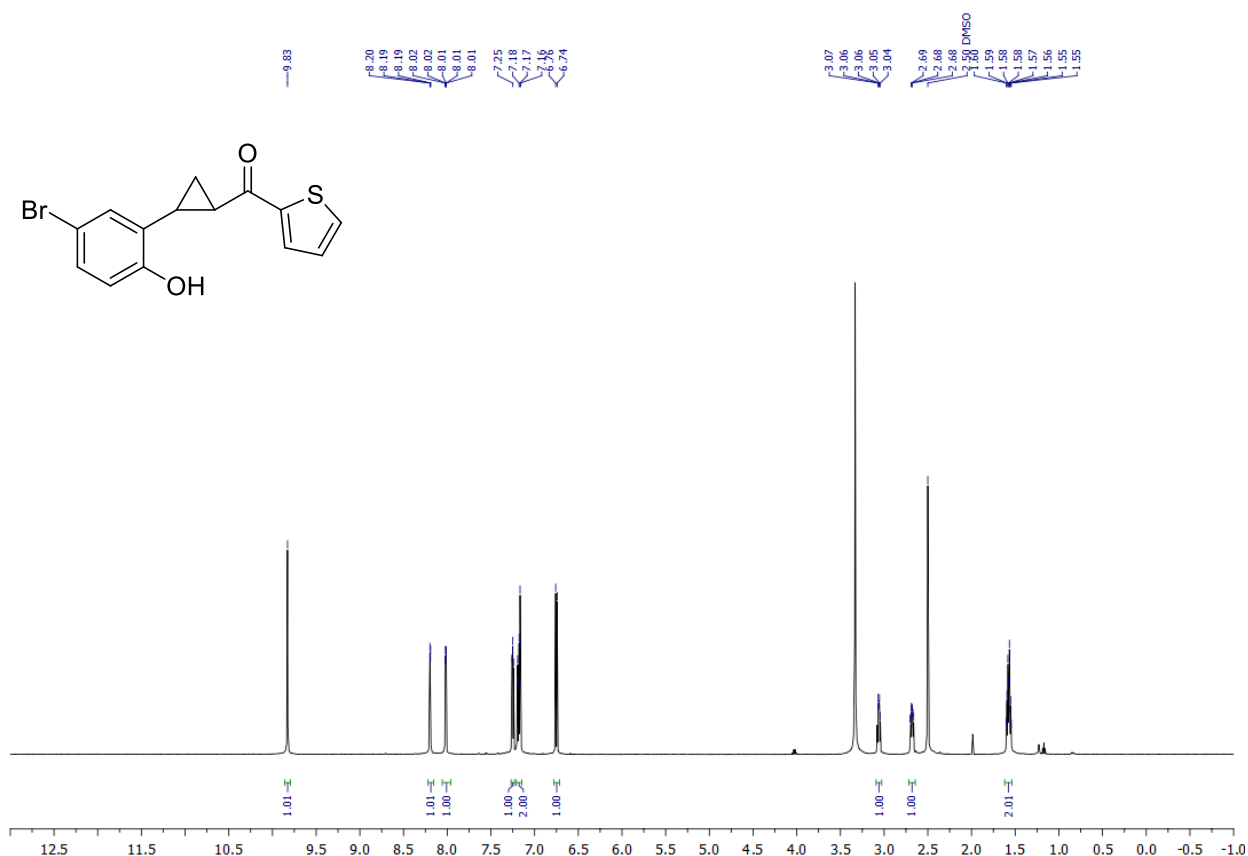


HSQC ( $^1\text{H}$  -  $^{13}\text{C}$ )

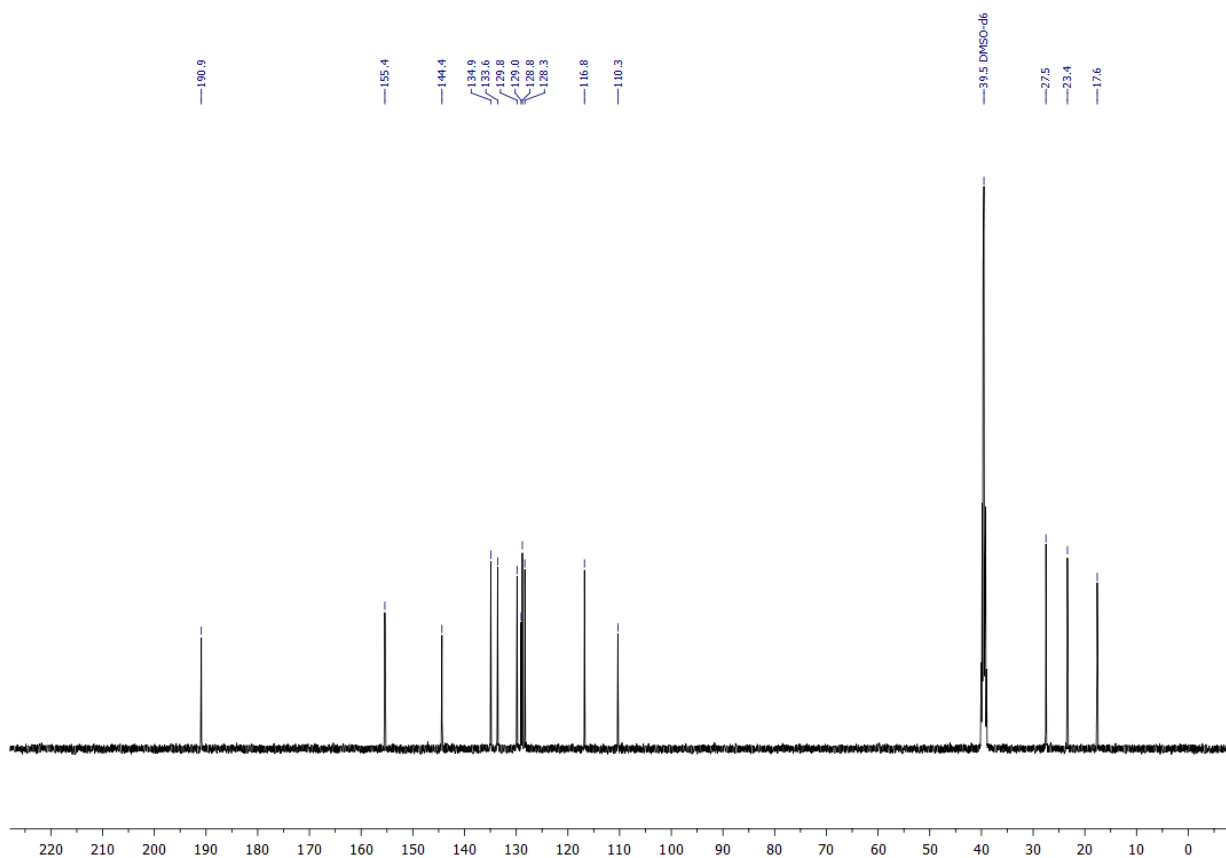


**[(1*R*,2*R*)-2-(5-Bromo-2-hydroxyphenyl)cyclopropyl](thiophen-2-yl)methanone (21)**

<sup>1</sup>H NMR (500 MHz, DMSO-d<sub>6</sub>)

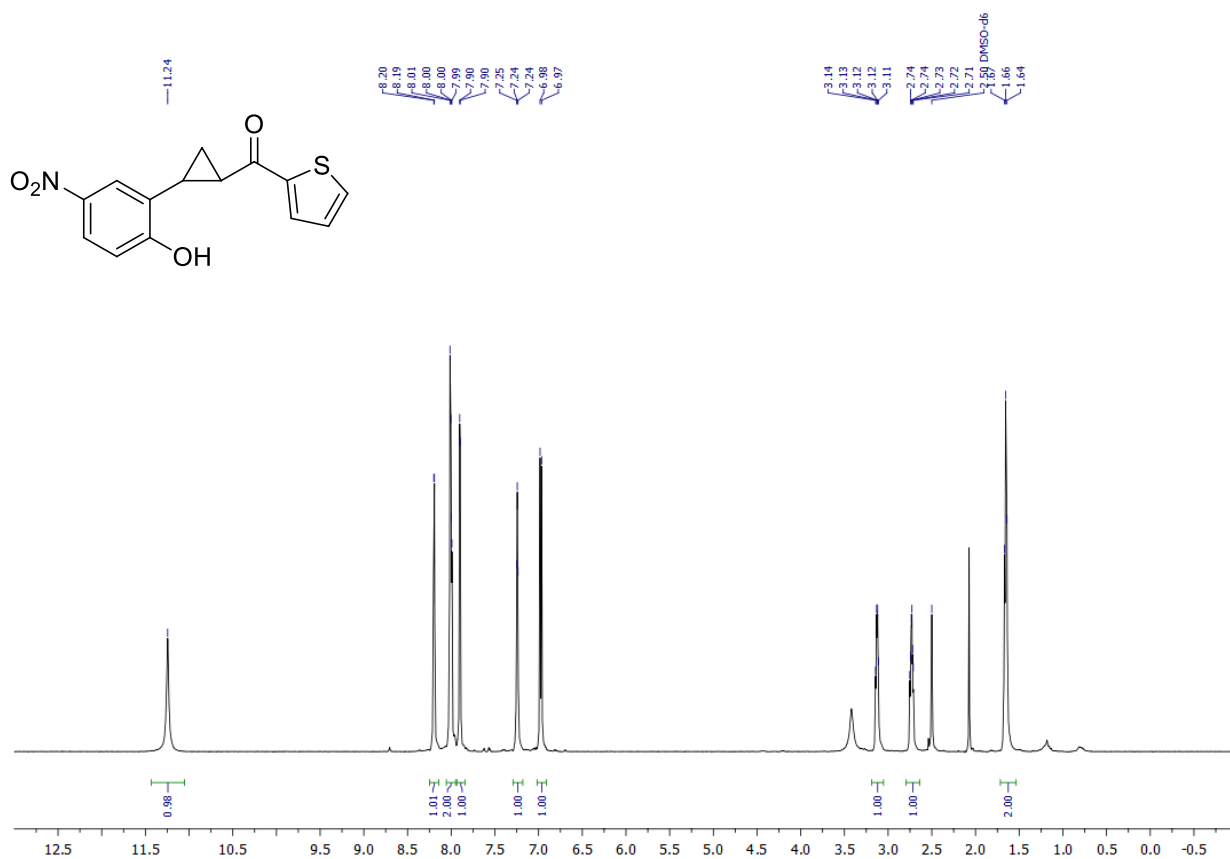


<sup>13</sup>C NMR (126 MHz, DMSO-d<sub>6</sub>)

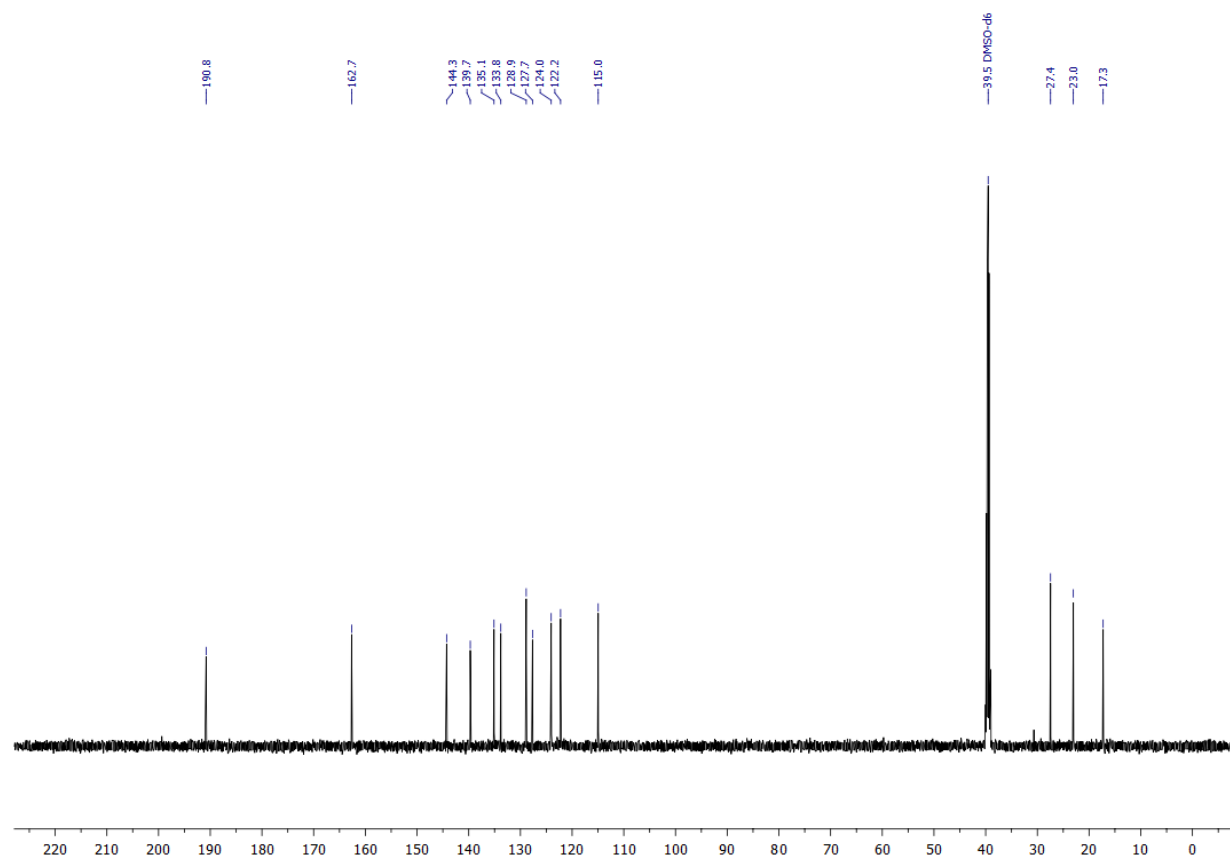


***[(1R,2R)-2-(2-Hydroxy-5-nitrophenyl)cyclopropyl](thiophen-2-yl)methanone (2m)***

$^1\text{H}$  NMR (500 MHz,  $\text{DMSO}-d_6$ )

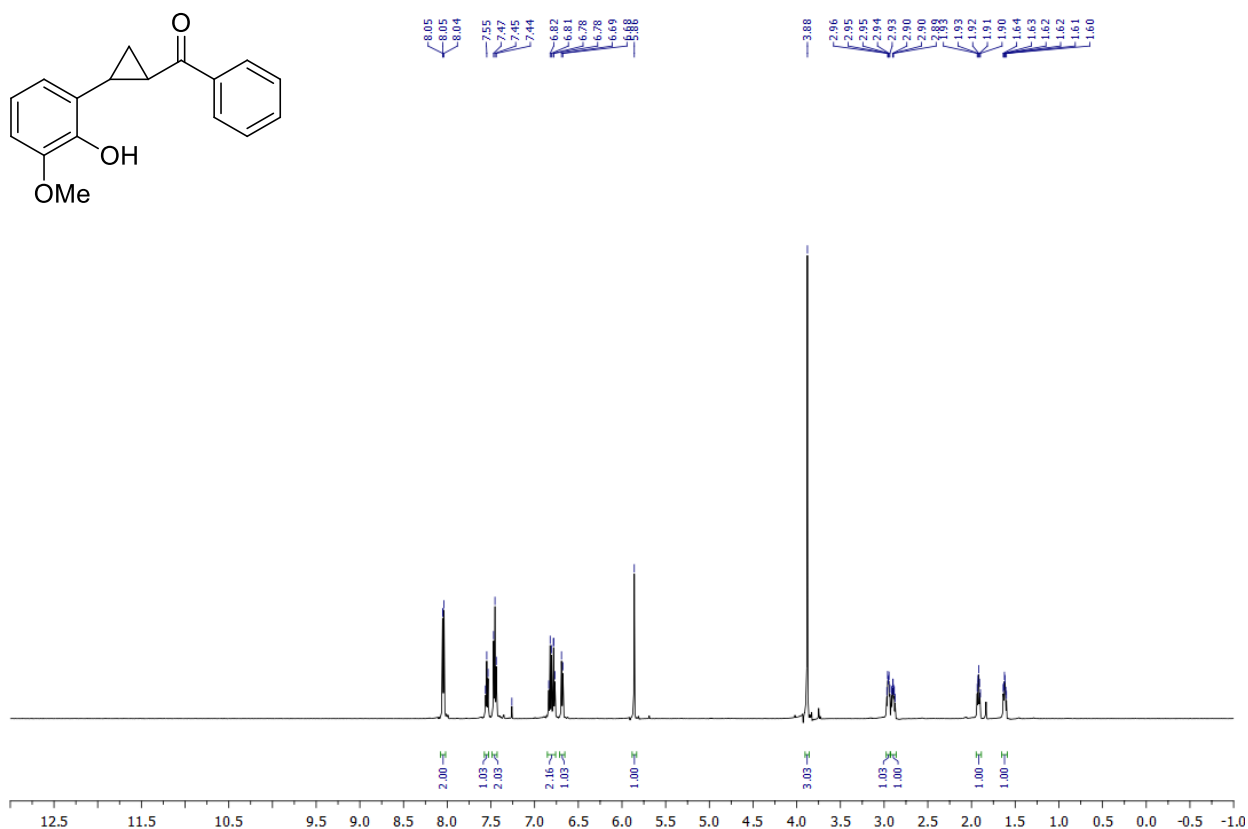


$^{13}\text{C}$  NMR (126 MHz,  $\text{DMSO}-d_6$ )

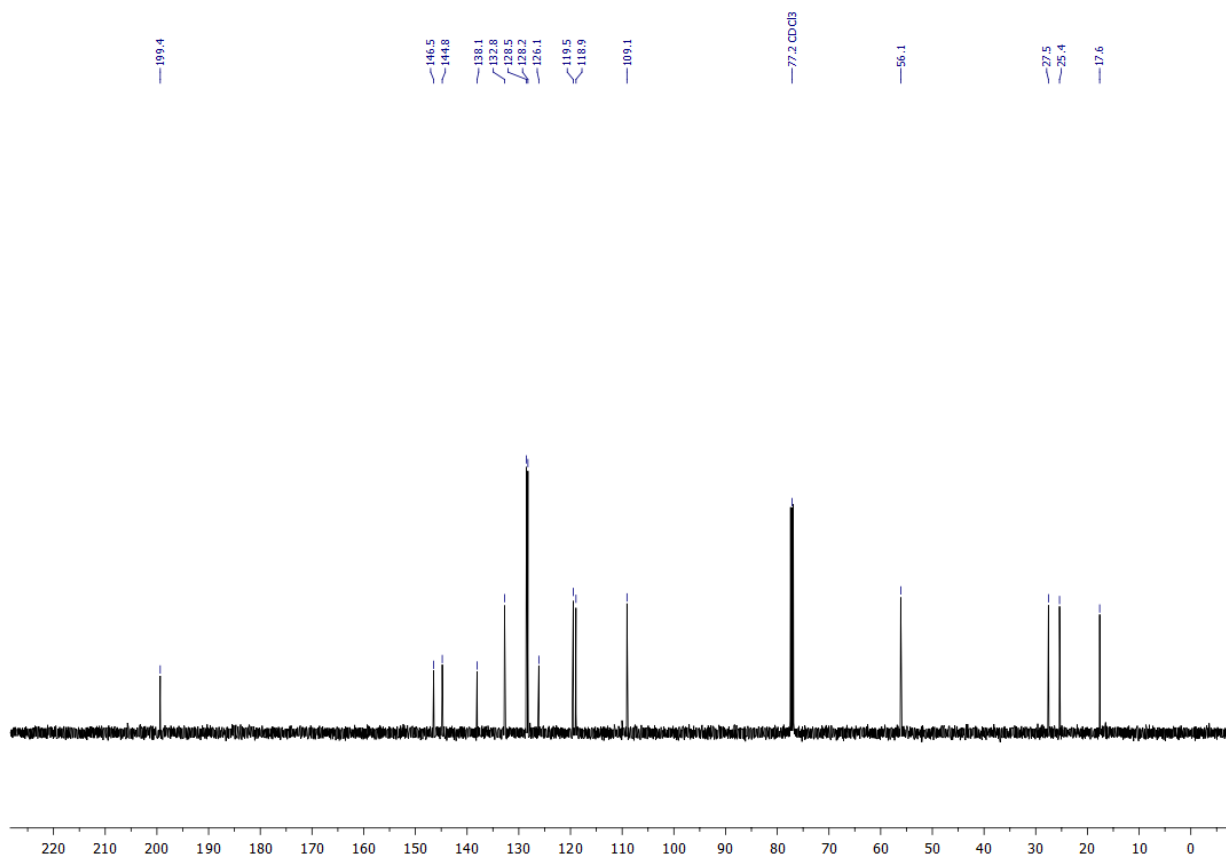


**[(1*RS*,2*RS*)-2-(2-Hydroxy-3-methoxyphenyl)cyclopropyl](phenyl)methanone (2n)**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



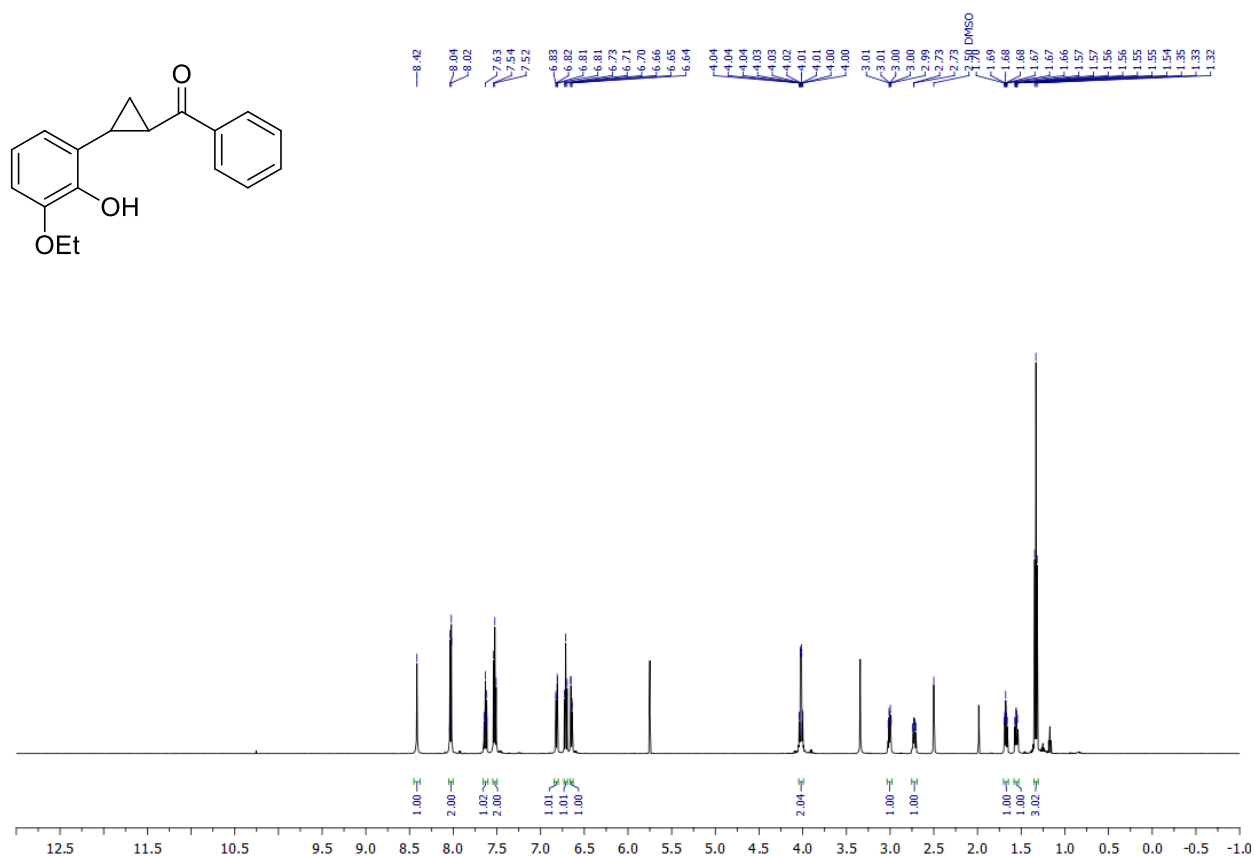
<sup>13</sup>C NMR (126 MHz, CDCl<sub>3</sub>)



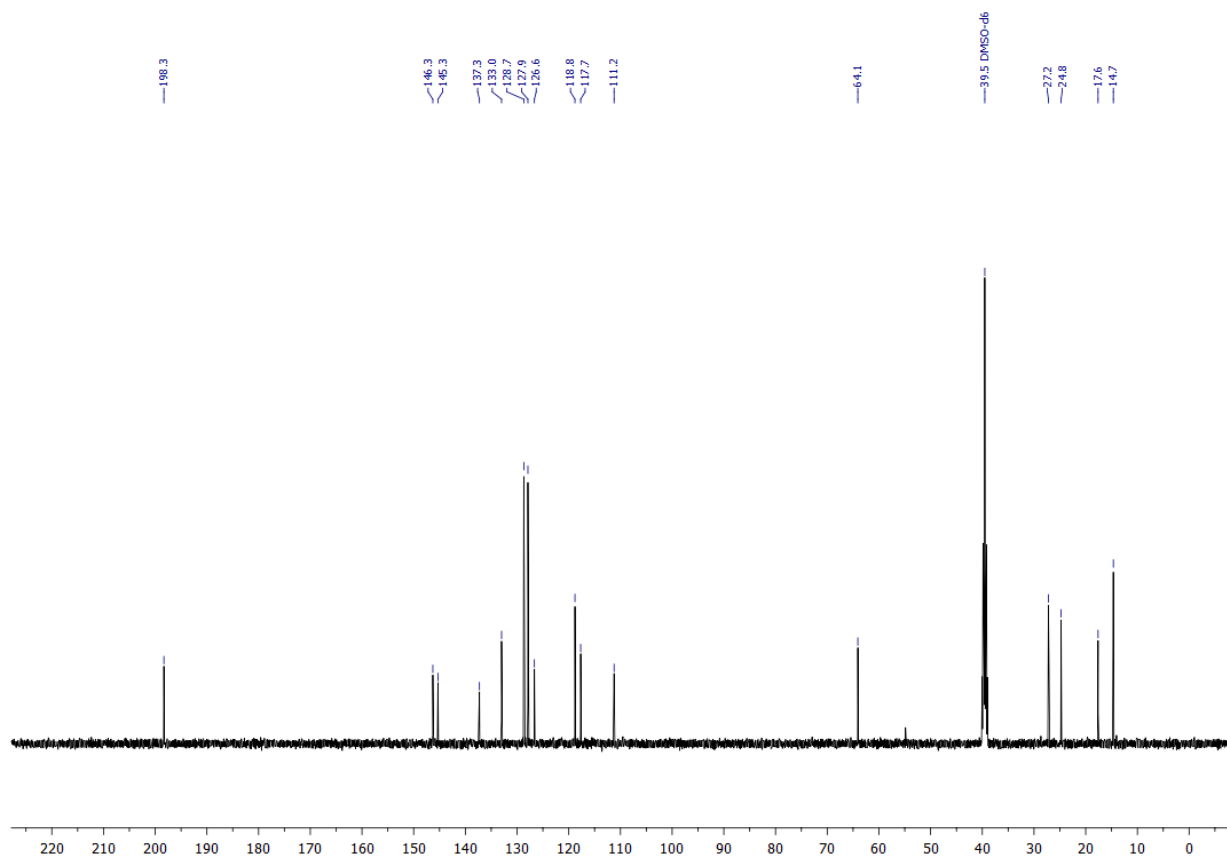


***[(1R,2R)-2-(3-Ethoxy-2-hydroxyphenyl)cyclopropyl](phenyl)methanone (2o)***

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)

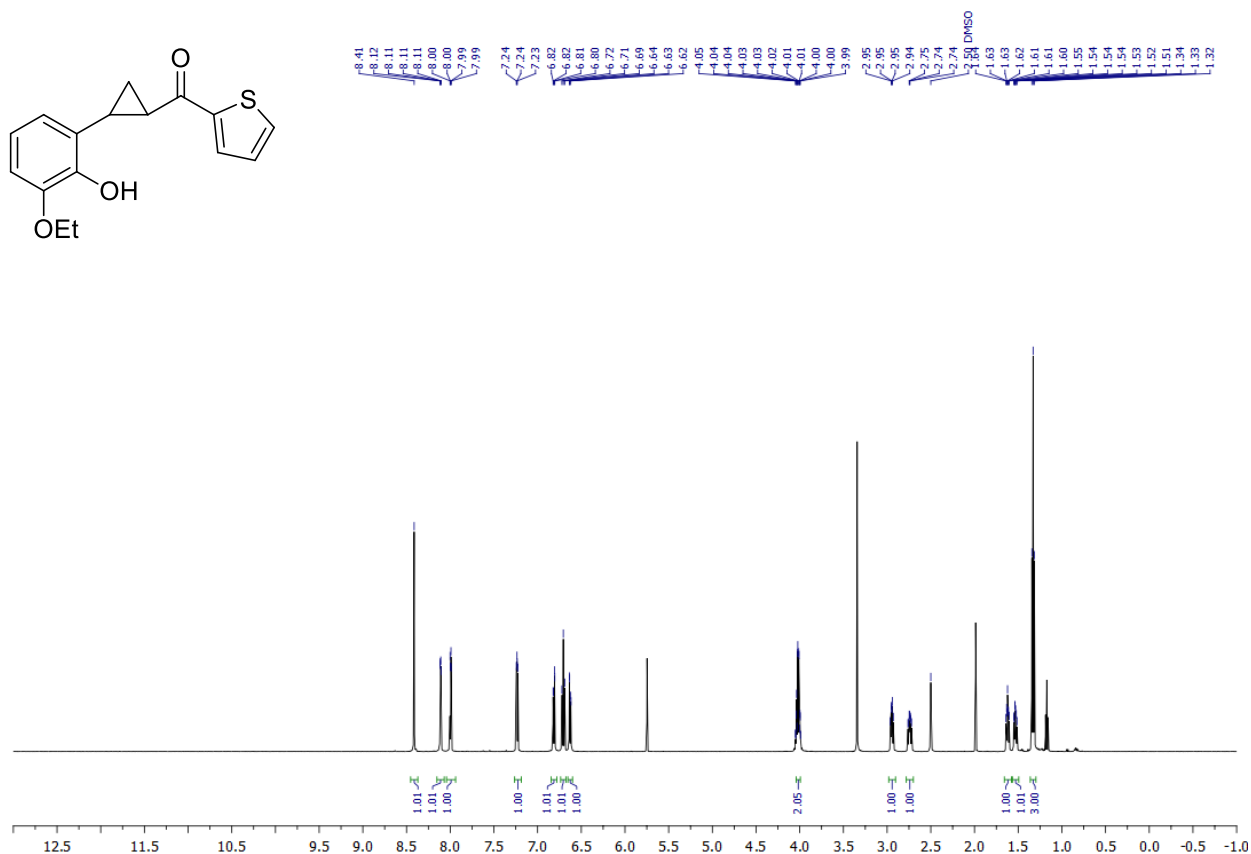


<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)



***[(1*R*,2*R*)-2-(3-Ethoxy-2-hydroxyphenyl)cyclopropyl](thiophen-2-yl)methanone (2p)***

<sup>1</sup>H NMR (500 MHz, DMSO-*d*<sub>6</sub>)



<sup>13</sup>C NMR (126 MHz, DMSO-*d*<sub>6</sub>)

