

Supplementary Materials:

Impact of N-Alkylamino Substituents on Serotonin Receptor (5-HTR) Affinity and Phosphodiesterase 10A (PDE10A) Inhibition of Isoindole-1,3-dione Derivatives

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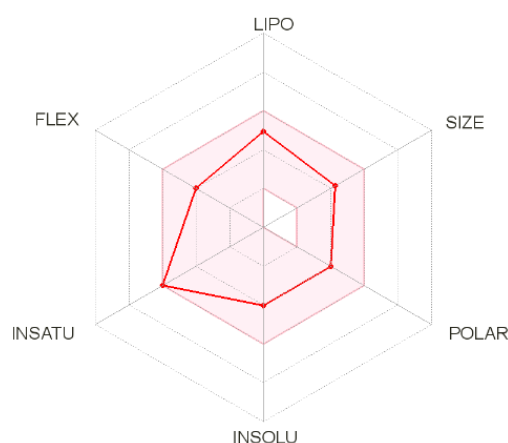


Figure 1. A spider graph of drug-like parameters of compound 18 (source: swissadme website: <http://www.swissadme.ch/>).

Supplementary materials for *in vivo* pharmacology

Table 1. Effects of papaverine and compound 18 on spontaneous locomotor activity in CD-1 mice.

| Number of movements | Minutes of the test | Vehicle | | Papaverine (40 mg/kg) | | Papaverine (60 mg/kg) | | Cmpd 18 (60 mg/kg) | |
|---------------------|---------------------|---------|---------|-----------------------|----------------------|-----------------------|----------------------|--------------------|----------------------|
| | 10 | 1157.2 | ± 81.1 | 43.1 | ± 16.6 ^d | 7.1 | ± 5.2 ^d | 176.2 | ± 28.8 ^d |
| | 20 | 1849.6 | ± 153.7 | 170.2 | ± 63.8 ^d | 24.6 | ± 14.6 ^d | 285.0 | ± 77.4 ^d |
| | 30 | 2448.3 | ± 236.7 | 571.9 | ± 128.2 ^d | 47.5 | ± 31.0 ^d | 659.6 | ± 193.0 ^c |
| | 60 | 3666.7 | ± 354.2 | 2260.8 | ± 306.6 ^a | 200.4 | ± 172.1 ^d | 1875.4 | ± 474.0 ^a |

Data are expressed as the mean ± S.E.M. ^ap<0.05, ^cp<0.001, ^dp<0.0001 versus respective vehicle-treated group (one-way ANOVA followed by Bonferroni's *post-hoc* test).

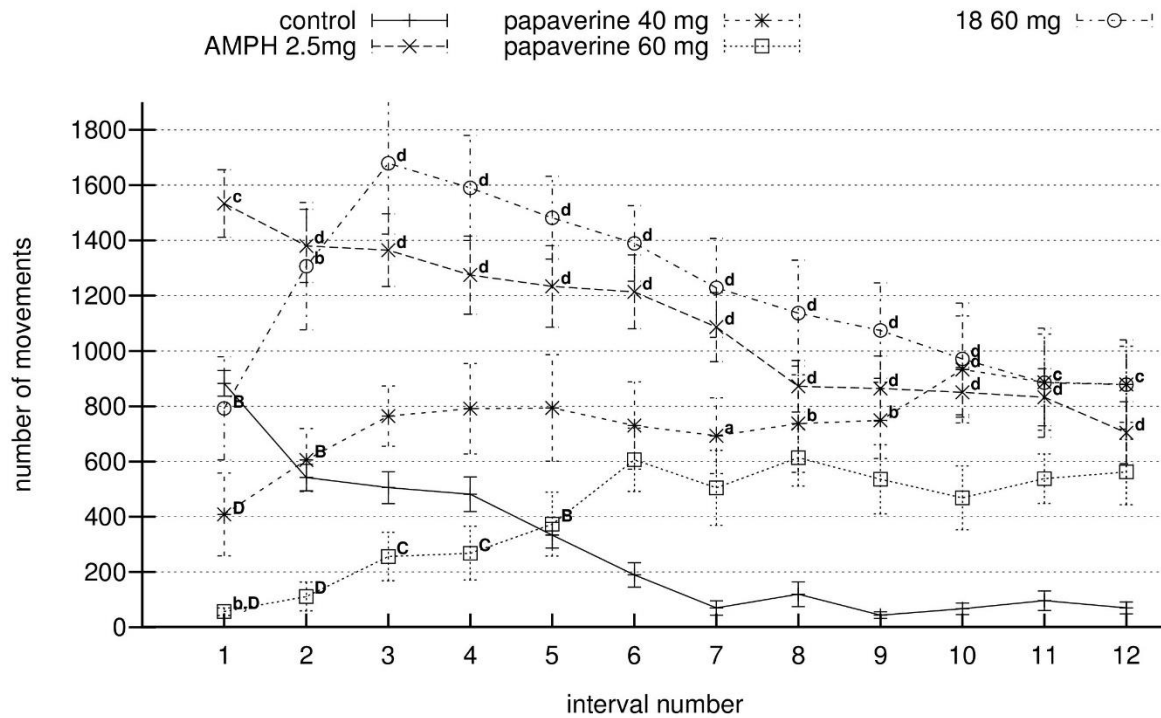
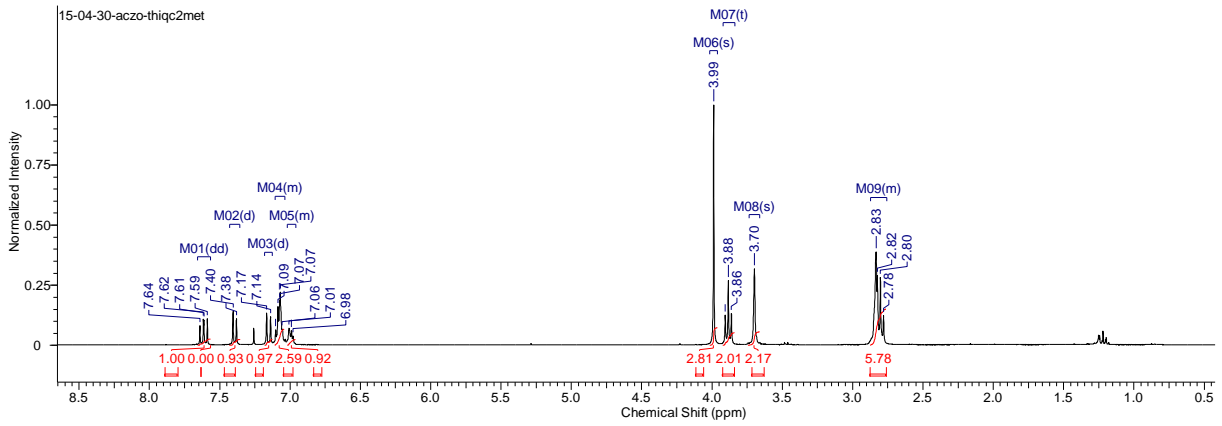


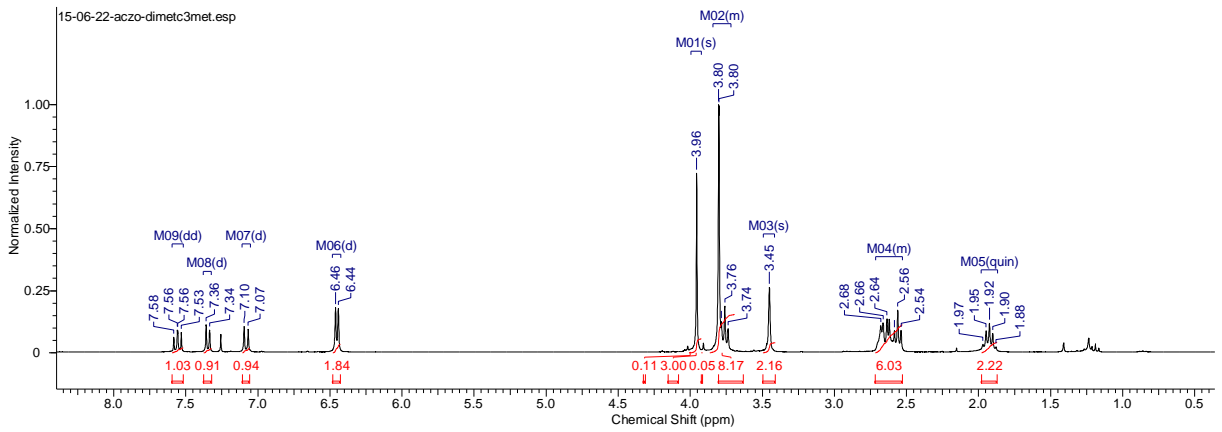
Figure 2. Effects of papaverine and compound 18 on *d*-amphetamine-induced hyperlocomotor activity in CD-1 mice. Data are expressed as the mean of the number of movements measured in 10-min intervals of two papaverine-treated groups (at doses of 40 and 60 mg, respectively) and compound 18-treated group (at a dose of 60 mg) ± S.E.M. ^ap<0.05, ^bp<0.01, ^cp<0.001, ^dp<0.0001 versus respective control vehicle-treated group, ^Bp<0.01, ^Cp<0.001, ^Dp<0.0001 and respective AMPH-treated group (one-way ANOVA followed by Bonferroni's *post-hoc* test). AMPH – *d*-amphetamine.

Examples of NMR spectra

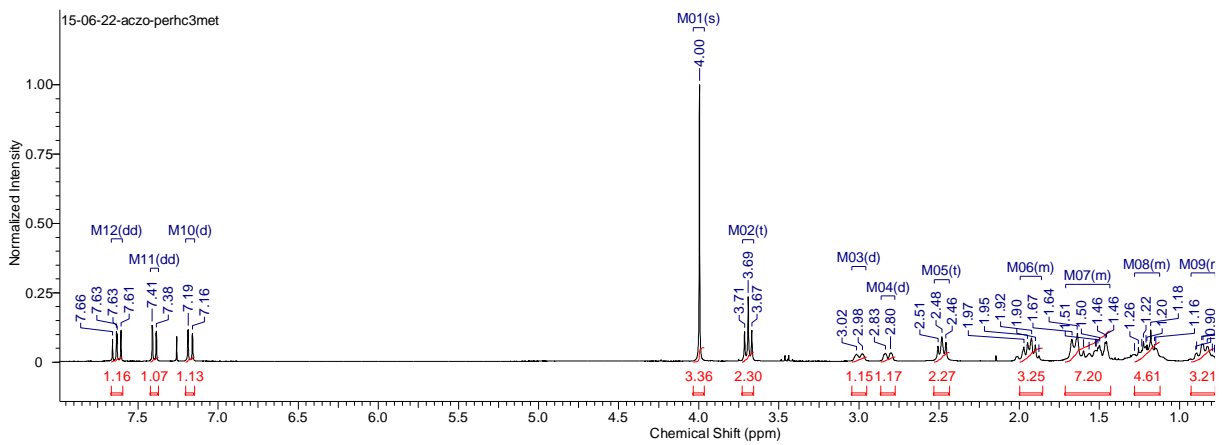
Compound 4



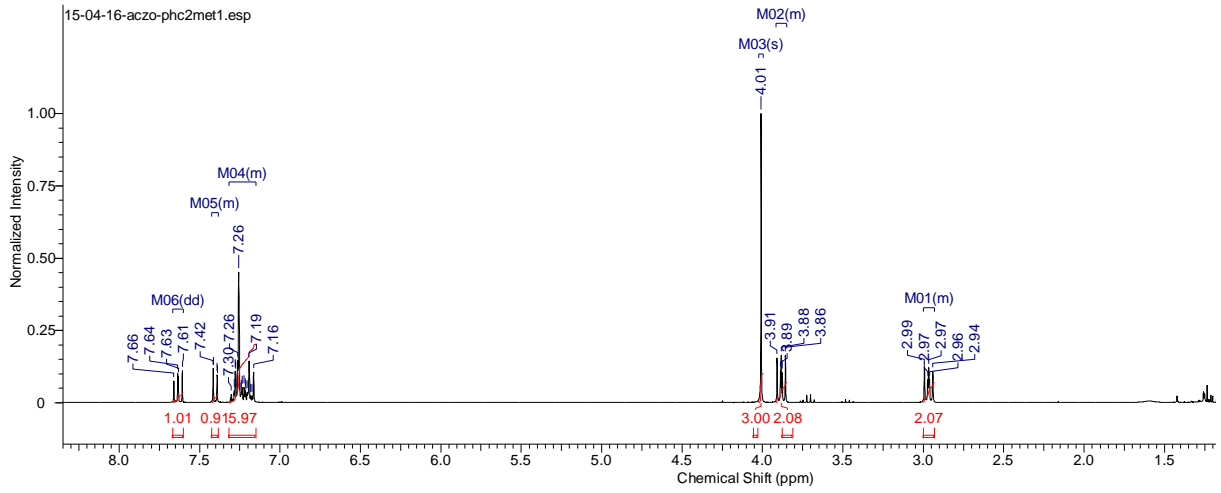
Compound 6



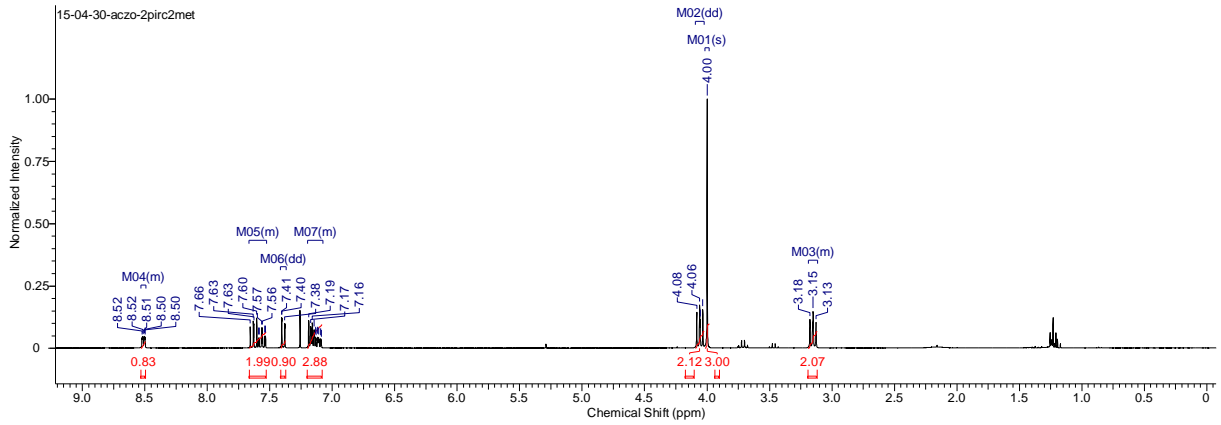
Compound 8



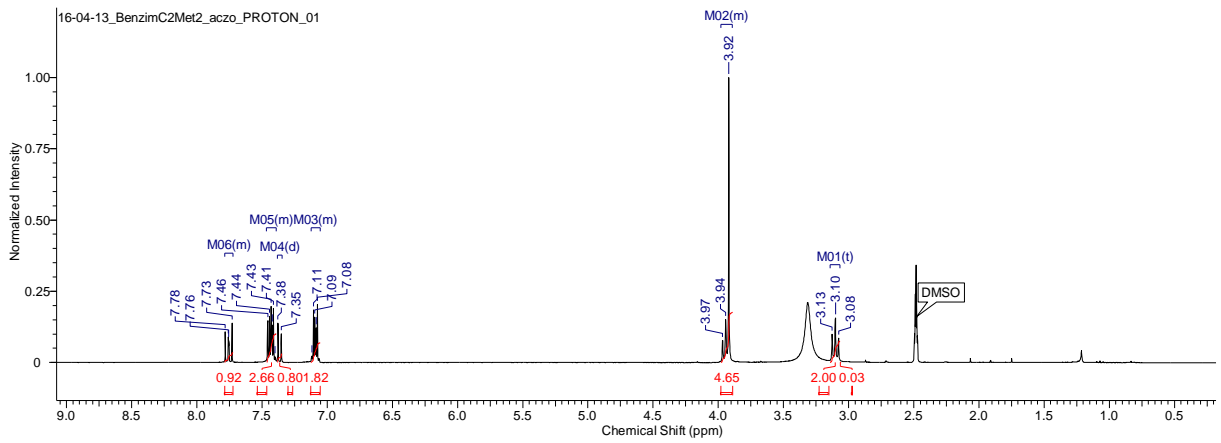
Compound 12



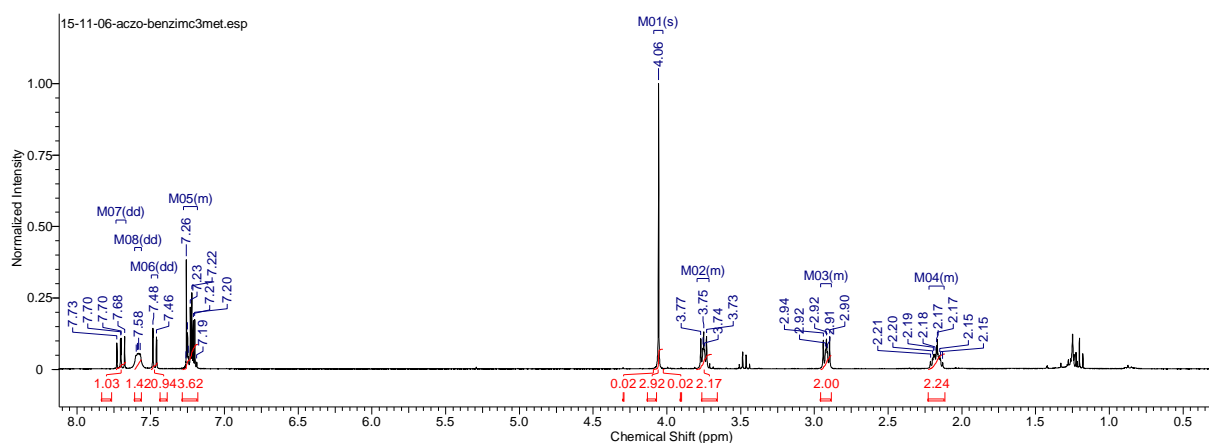
Compound 13



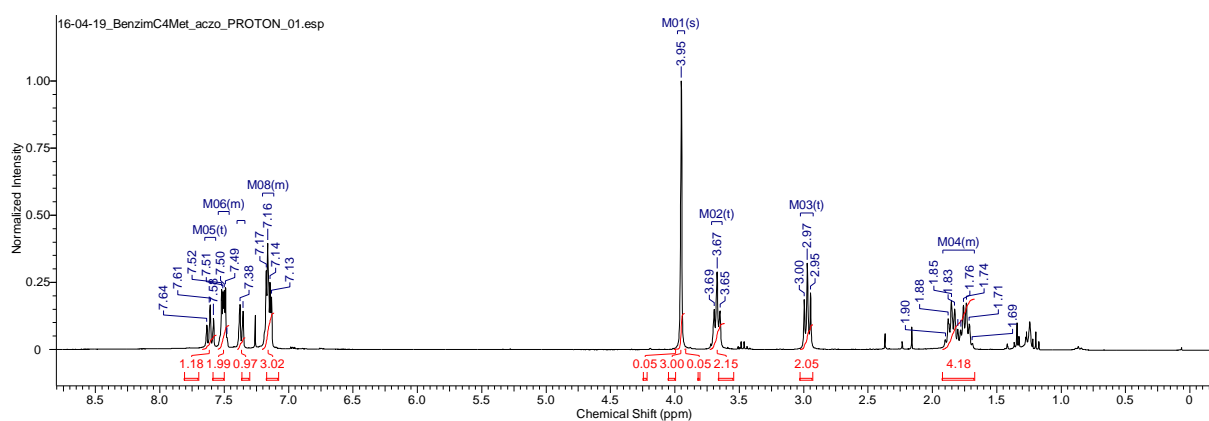
Compound 15



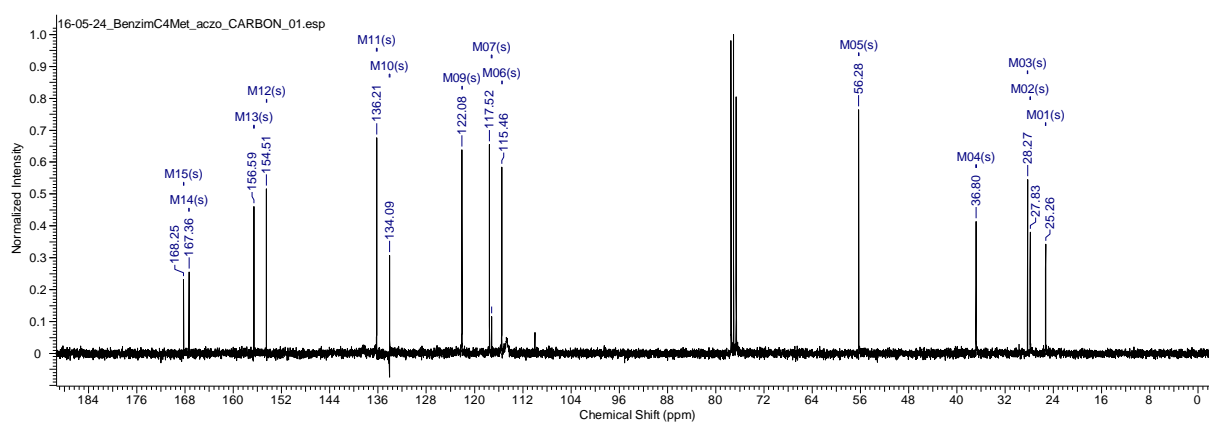
Compound 17



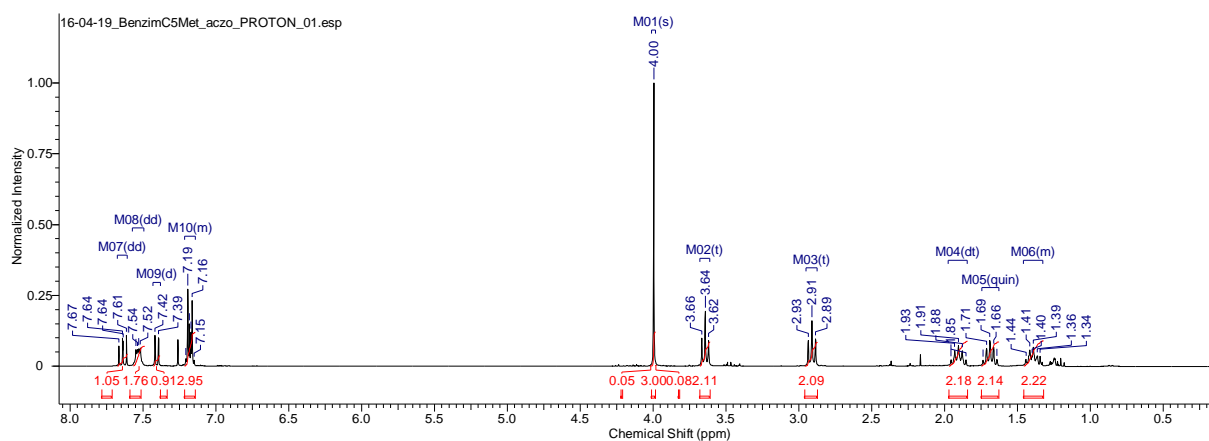
Compound 18 (H NMR)



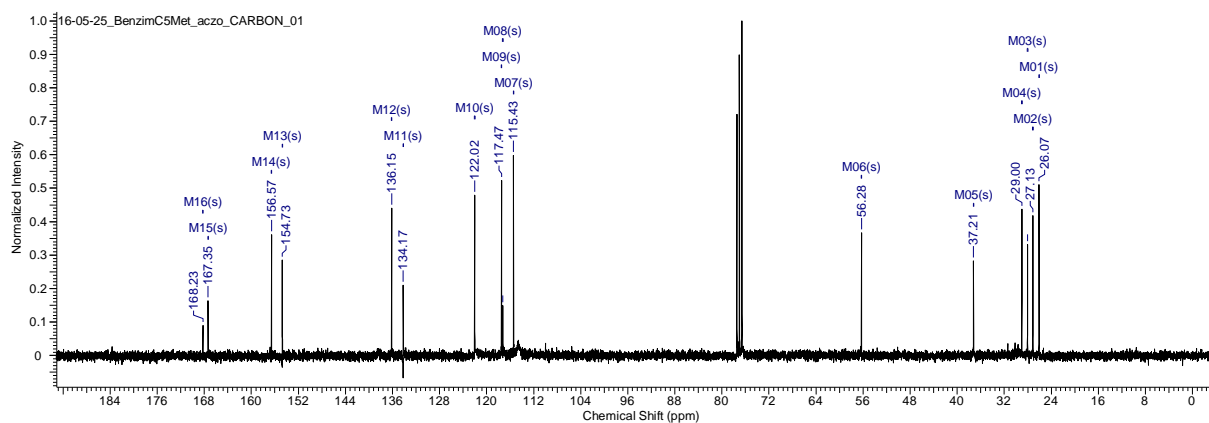
Compound 18 (C NMR)



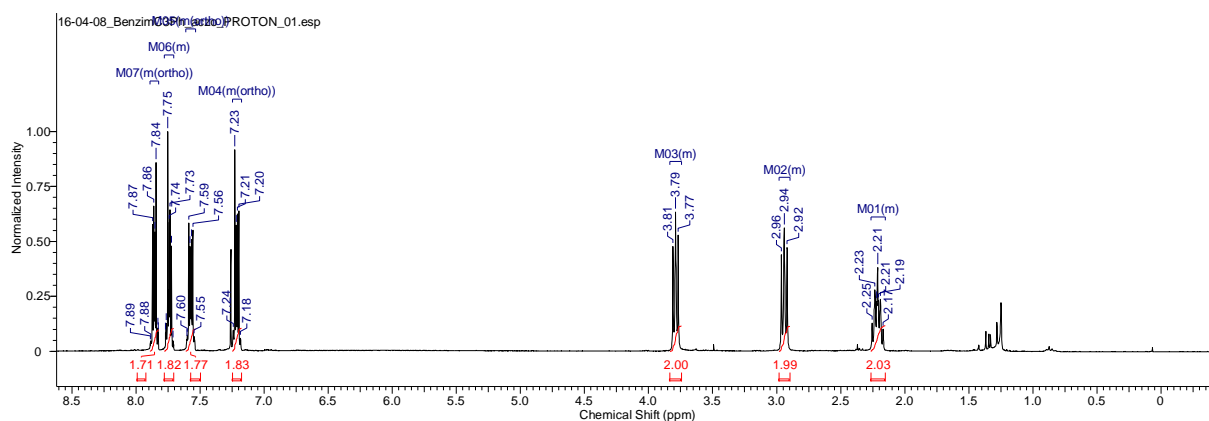
Compound 19 (H NMR)



Compound 19 (C NMR)



Compound 21



Compound 23

