## **Electronic Supporting Information (ESI) for:**

Investigation of novel pesticides with insecticidal and antifungal activity: design, synthesis and SAR studies of novel benzoyl pyrimidinylurea derivatives

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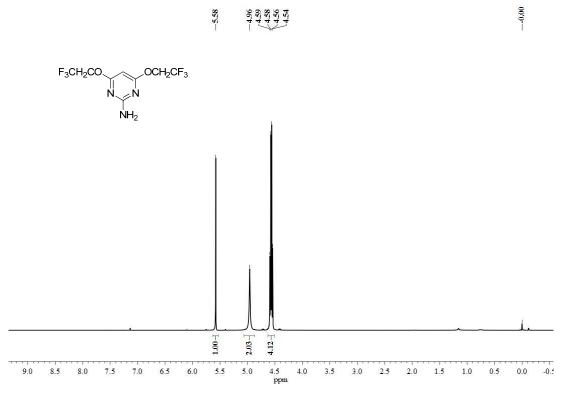


Figure S1  $^{1}$ H NMR spectra of compound Ia

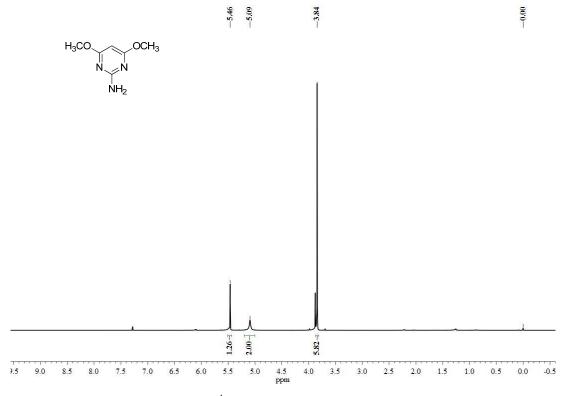


Figure S2 <sup>1</sup>H NMR spectra of compound Ib

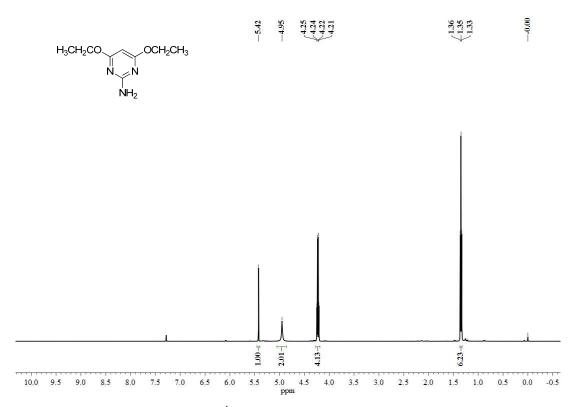


Figure S3 <sup>1</sup>H NMR spectra of compound Ic

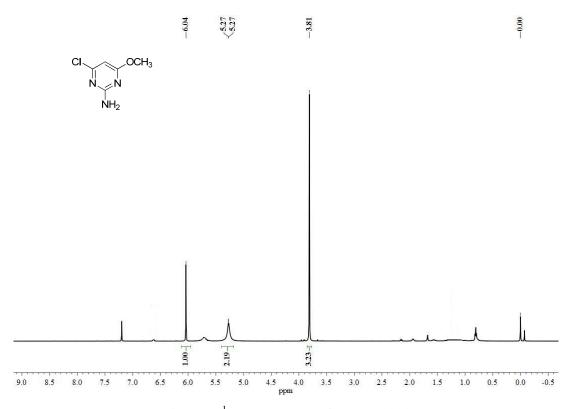


Figure S4  $^1$ H NMR spectra of compound Id

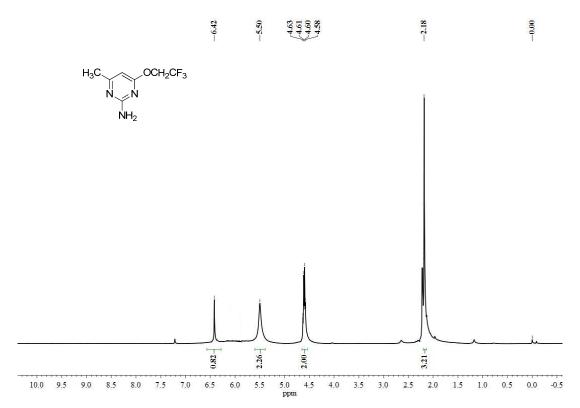


Figure S5  $^{1}$ H NMR spectra of compound Ie

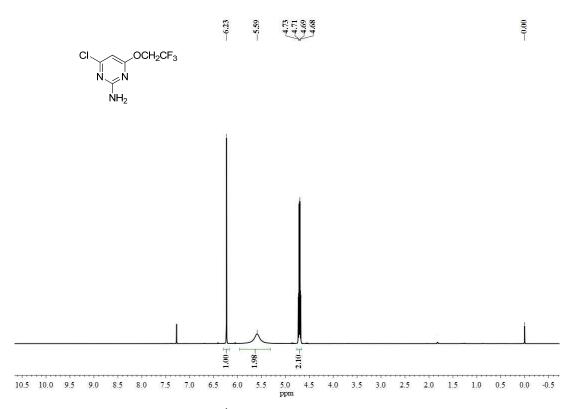


Figure S6  $^1$ H NMR spectra of compound If

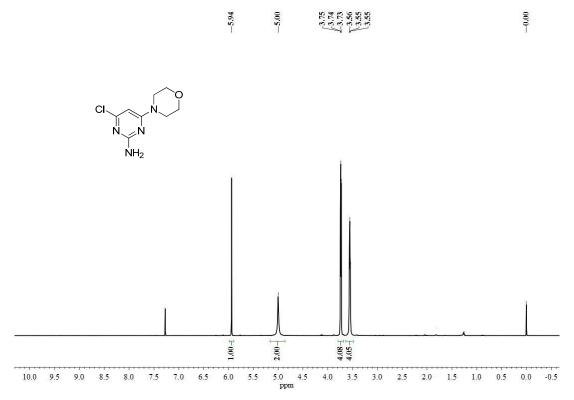


Figure S7  $^{1}$ H NMR spectra of compound Ig

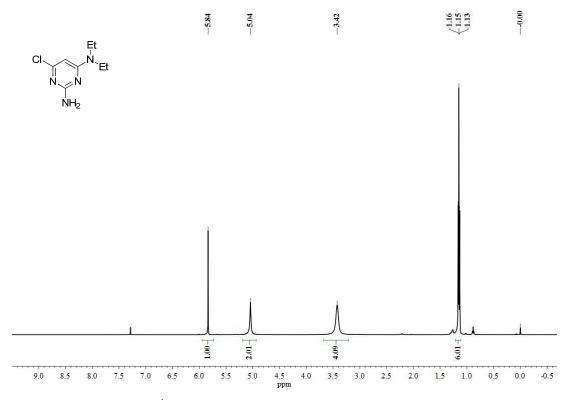


Figure S8 <sup>1</sup>H NMR spectra of compound Ih

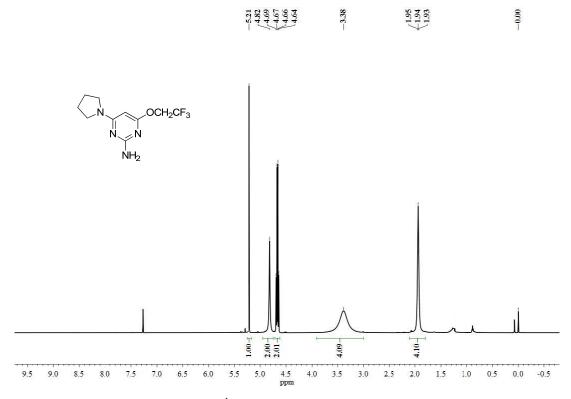


Figure S9  $^1$ H NMR spectra of compound Ii

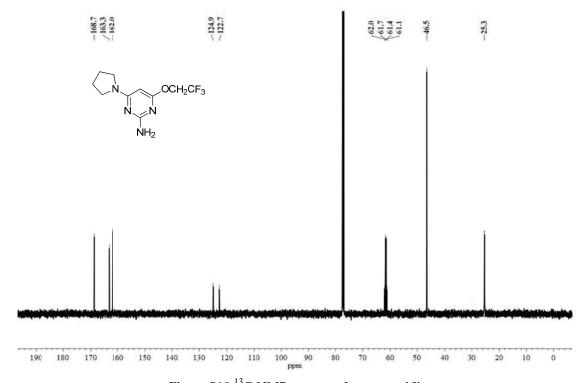


Figure S10  $^{13}\mbox{C}$  NMR spectra of compound Ii

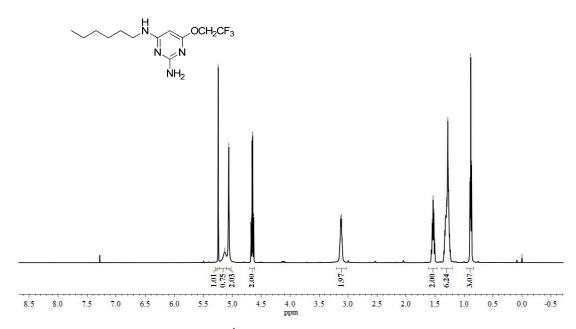


Figure S11 <sup>1</sup>H NMR spectra of compound Ij

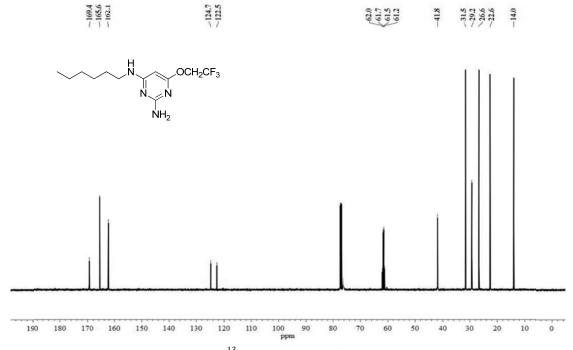


Figure S12  $^{13}$ C NMR spectra of compound Ij

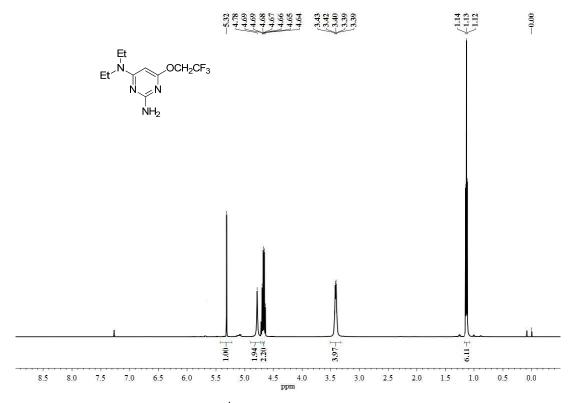


Figure S13  $^{1}$ H NMR spectra of compound Ik

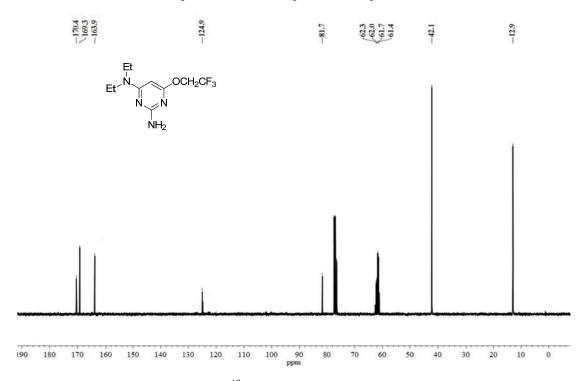


Figure S14  $^{13}$ C NMR spectra of compound Ik

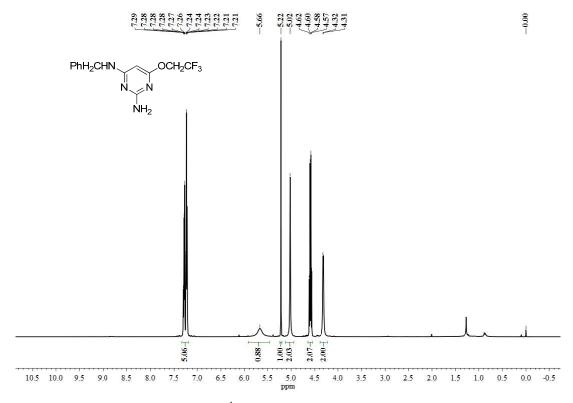


Figure S15 <sup>1</sup>H NMR spectra of compound Il

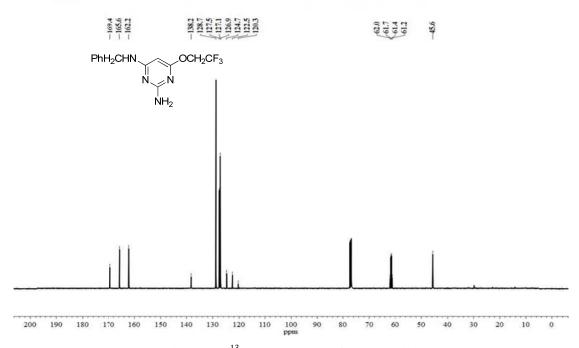


Figure S16  $^{13}\mbox{C}$  NMR spectra of compound Il

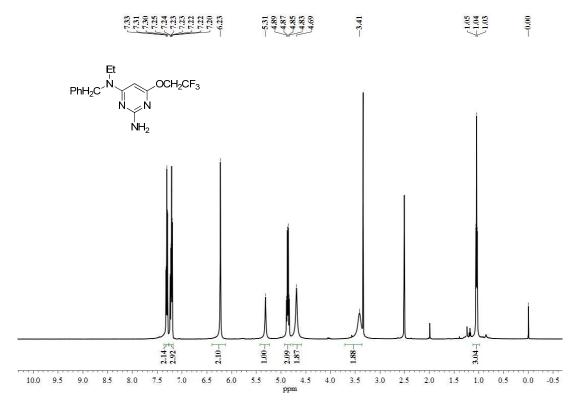


Figure S17 <sup>1</sup>H NMR spectra of compound Im

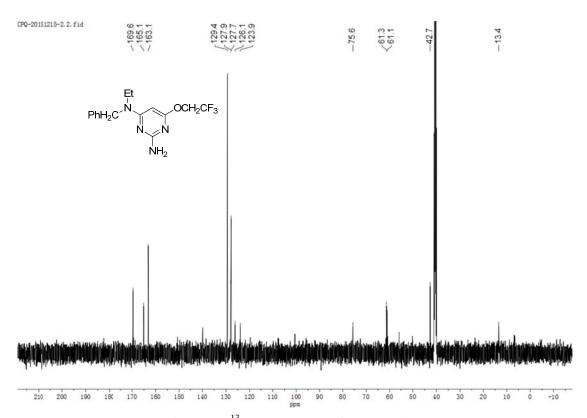


Figure S18  $^{13}$ C NMR spectra of compound Im

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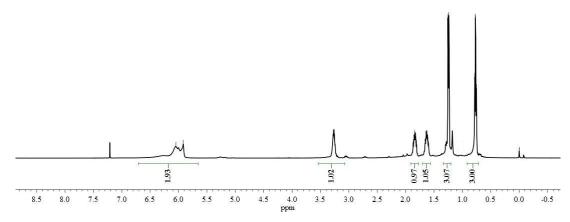


Figure S19 <sup>1</sup>H NMR spectra of compound In

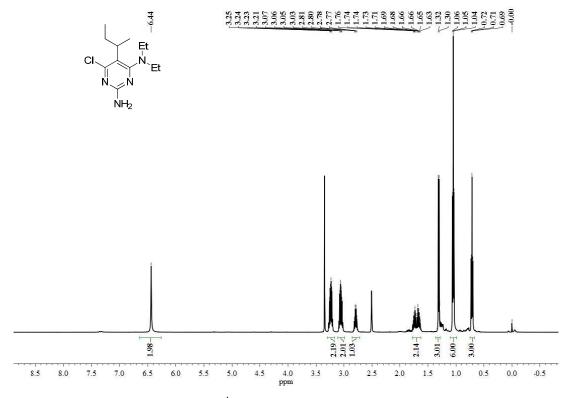


Figure S20  $^1$ H NMR spectra of compound Io

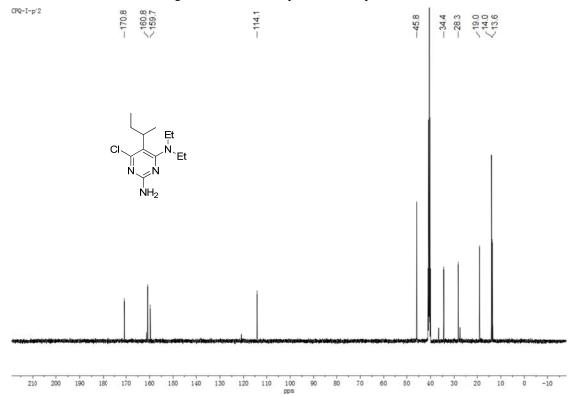
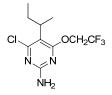


Figure S21 <sup>13</sup>C NMR spectra of compound Io





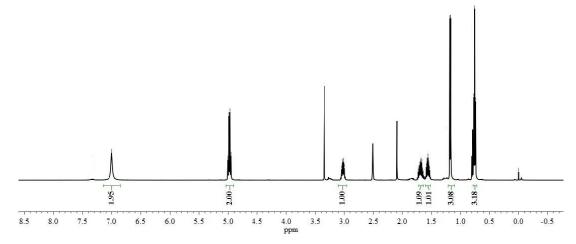


Figure S22 <sup>1</sup>H NMR spectra of compound Ip

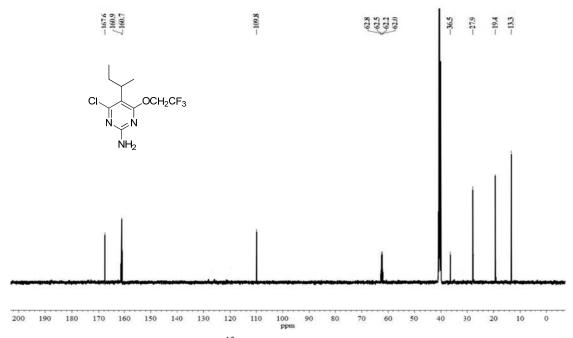


Figure S23 <sup>13</sup>C NMR spectra of compound Ip



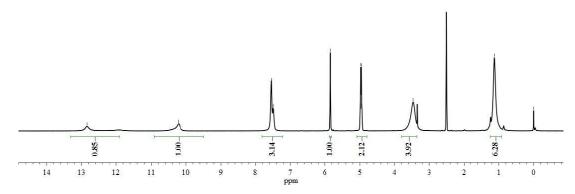


Figure S24 <sup>1</sup>H NMR spectra of compound 32a

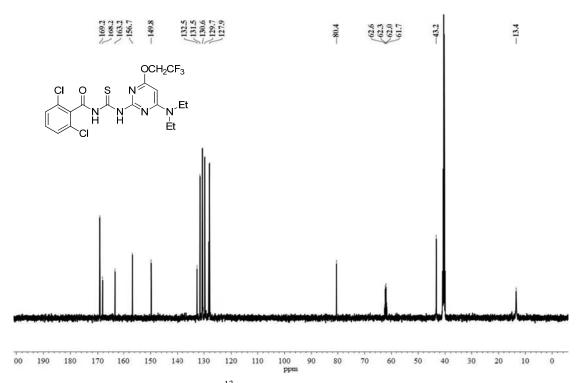


Figure S25  $^{13}$ C NMR spectra of compound 32a

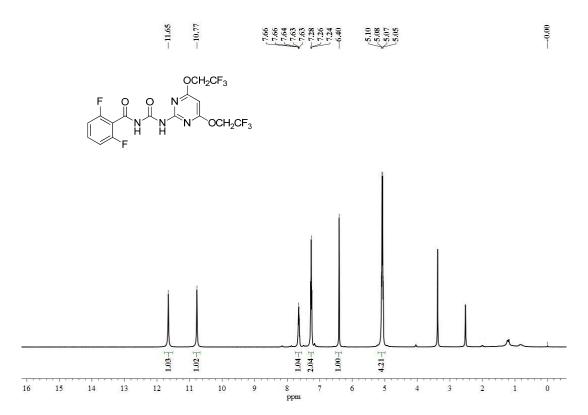


Figure S26 <sup>1</sup>H NMR spectra of compound 1

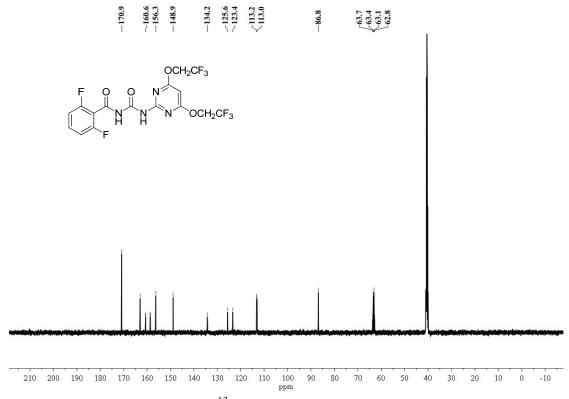


Figure S27 <sup>13</sup>C NMR spectra of compound 1

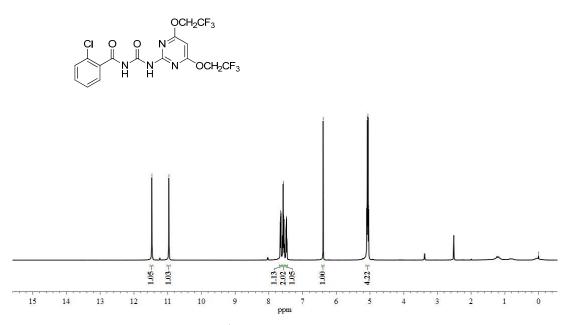


Figure S28 <sup>1</sup>H NMR spectra of compound 2

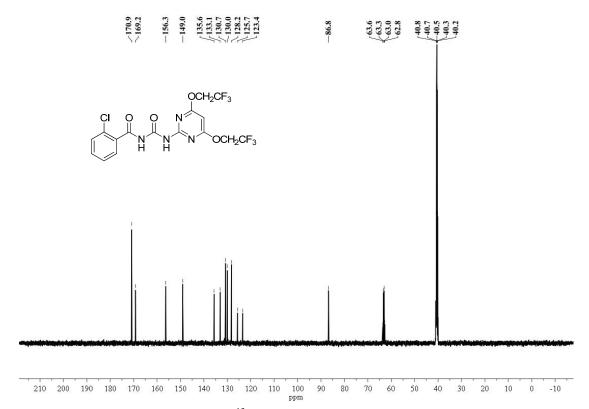


Figure S29 <sup>13</sup>C NMR spectra of compound 2

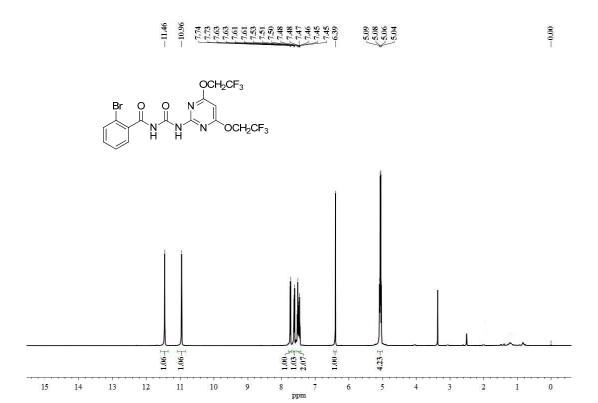


Figure S30  $^{1}$ H NMR spectra of compound 3

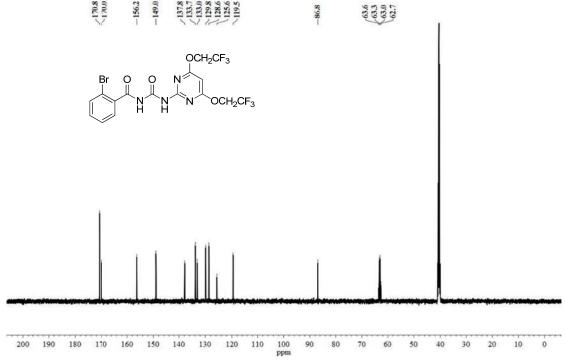


Figure S31  $^{13}$ C NMR spectra of compound 3

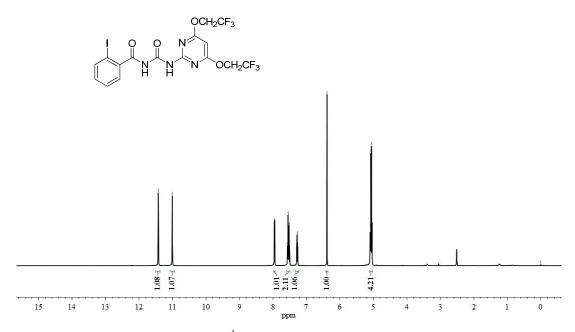


Figure S32  $^{1}$ H NMR spectra of compound 4

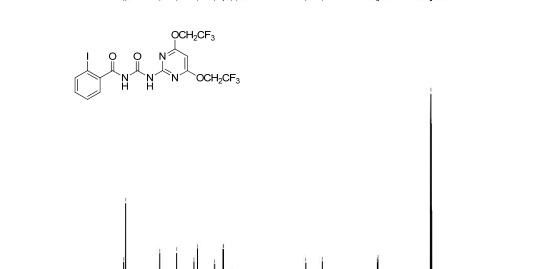
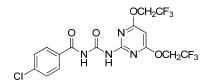


Figure S33  $^{13}$ C NMR spectra of compound 4

210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm





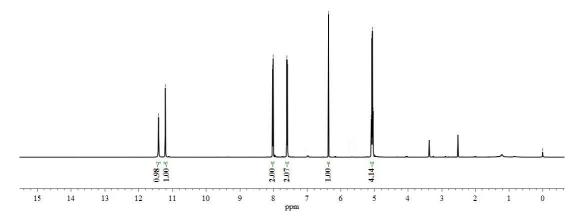


Figure S34 <sup>1</sup>H NMR spectra of compound 5

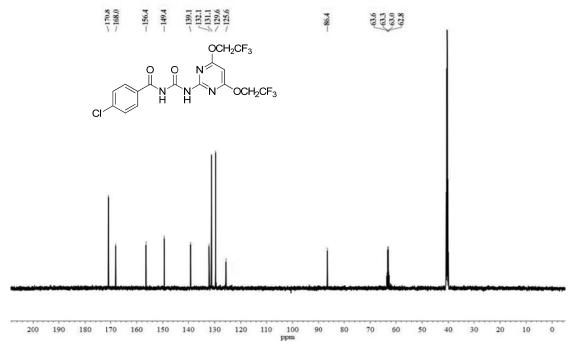


Figure S35  $^{13}$ C NMR spectra of compound 5

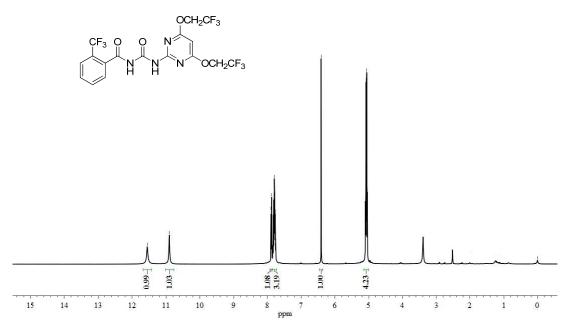


Figure S36 <sup>1</sup>H NMR spectra of compound 6

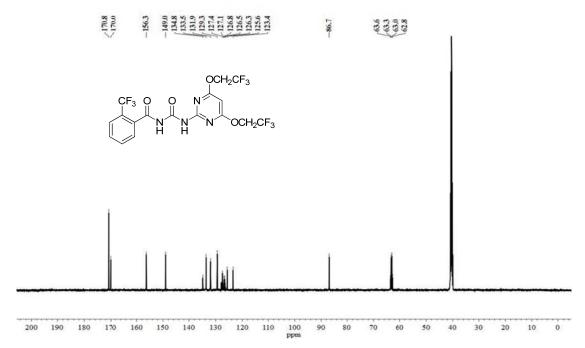


Figure S37 <sup>13</sup>C NMR spectra of compound 6

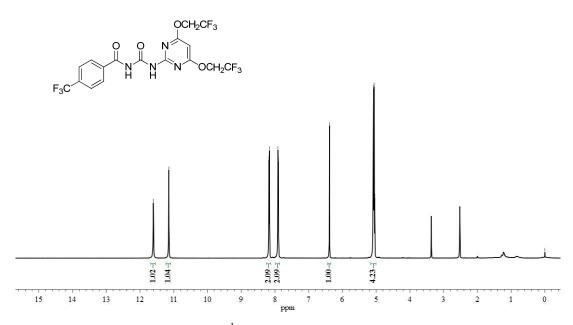


Figure S38 <sup>1</sup>H NMR spectra of compound 7

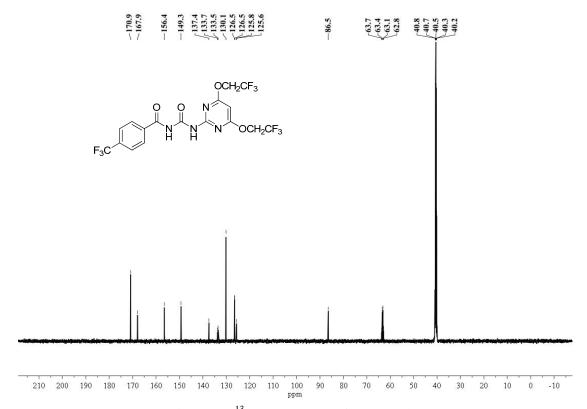


Figure S39  $^{13}$ C NMR spectra of compound 7

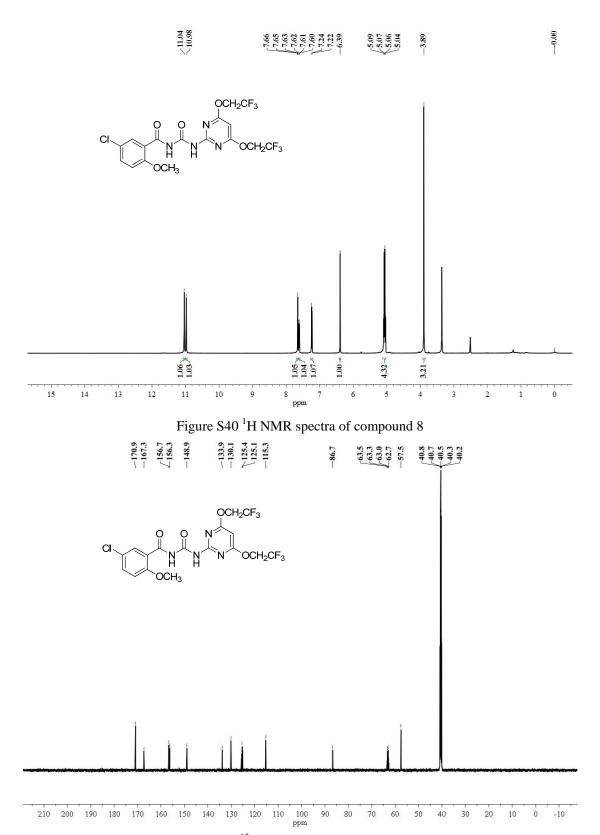


Figure S41  $^{13}$ C NMR spectra of compound 8

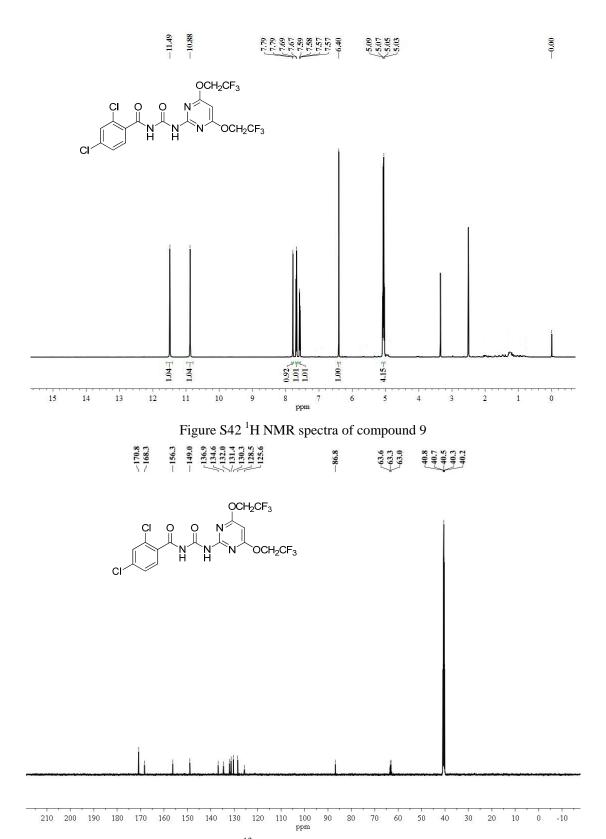


Figure S43 <sup>13</sup>C NMR spectra of compound 9

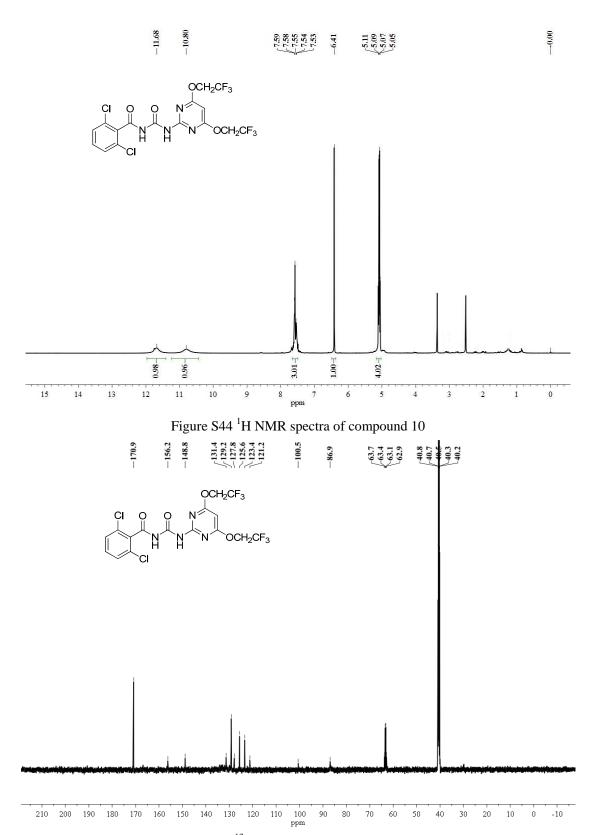
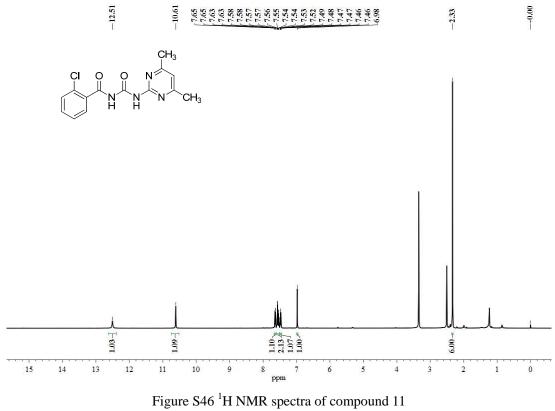
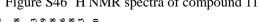


Figure S45  $^{13}$ C NMR spectra of compound 10





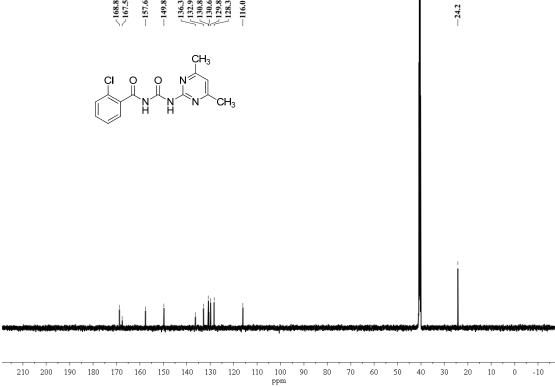


Figure S47  $^{13}$ C NMR spectra of compound 11

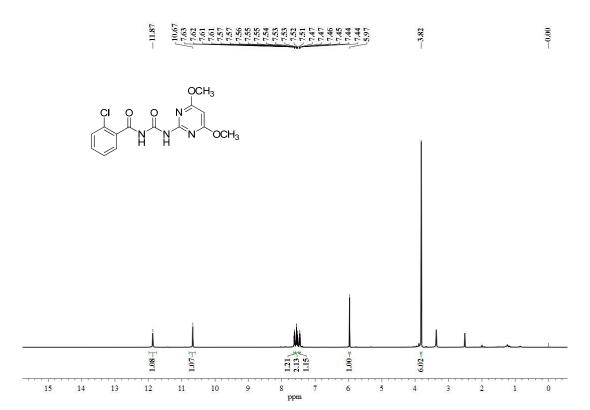


Figure S48 <sup>1</sup>H NMR spectra of compound 12

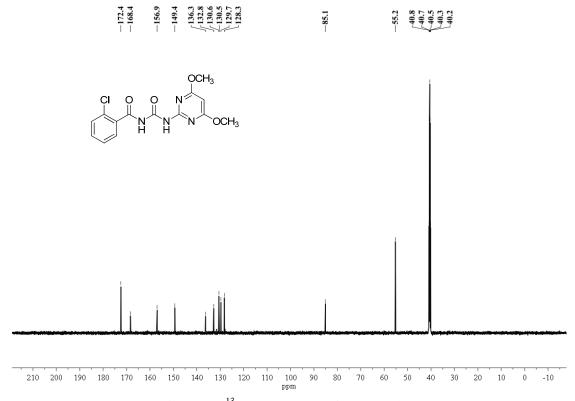


Figure S49  $^{13}$ C NMR spectra of compound 12

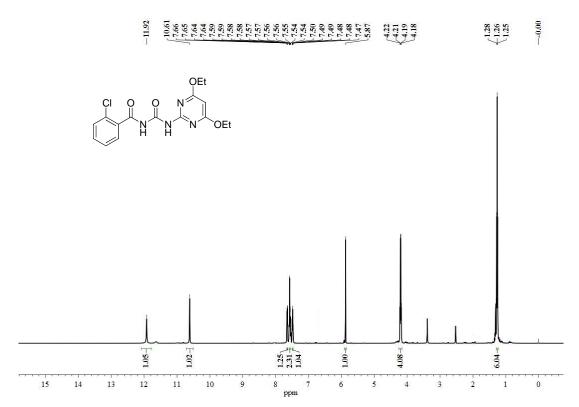


Figure S50  $^1$ H NMR spectra of compound 13

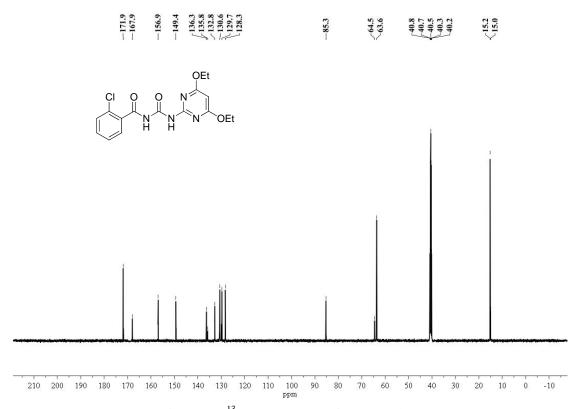


Figure S51  $^{13}$ C NMR spectra of compound 13

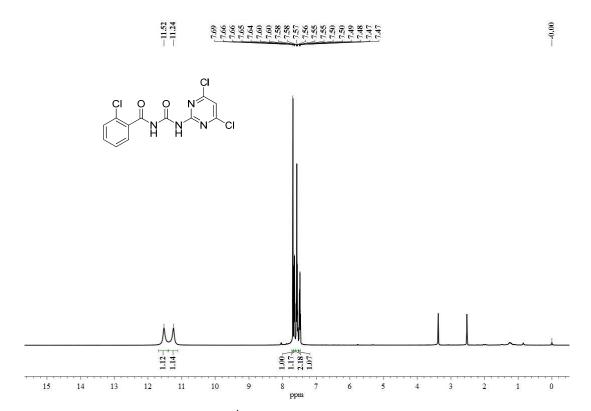


Figure S52 <sup>1</sup>H NMR spectra of compound 14

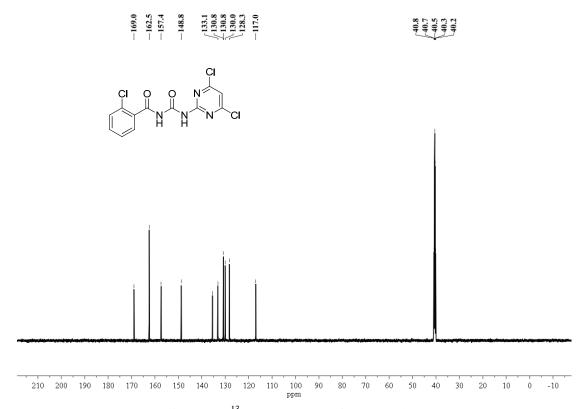


Figure S53  $^{13}$ C NMR spectra of compound 14

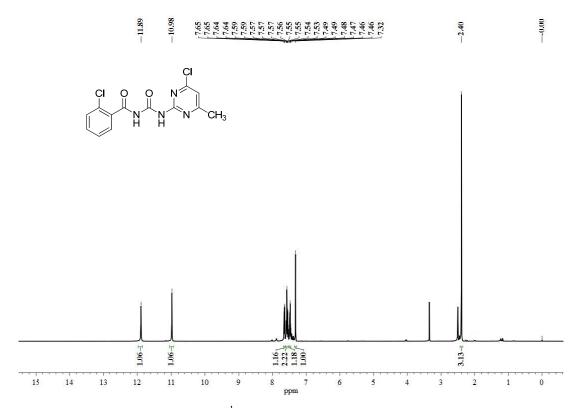


Figure S54 <sup>1</sup>H NMR spectra of compound 15

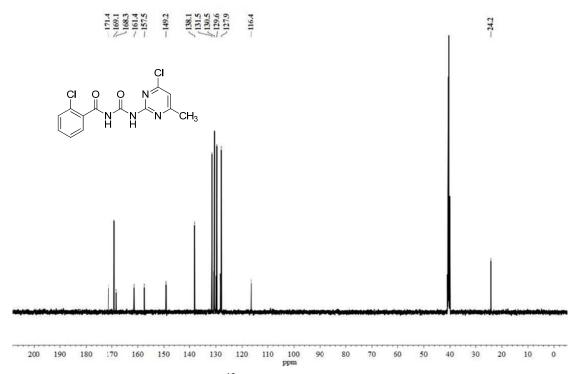


Figure S55  $^{13}$ C NMR spectra of compound 15

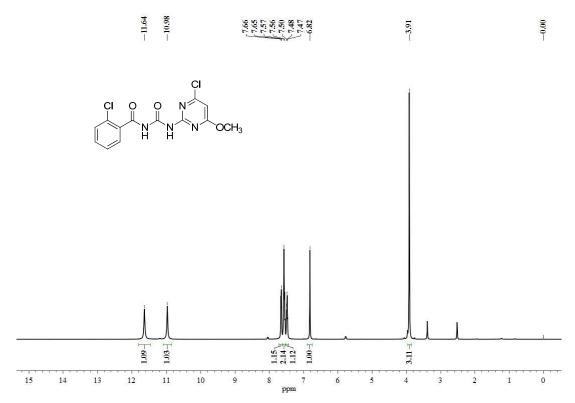


Figure S56  $^{1}$ H NMR spectra of compound 16

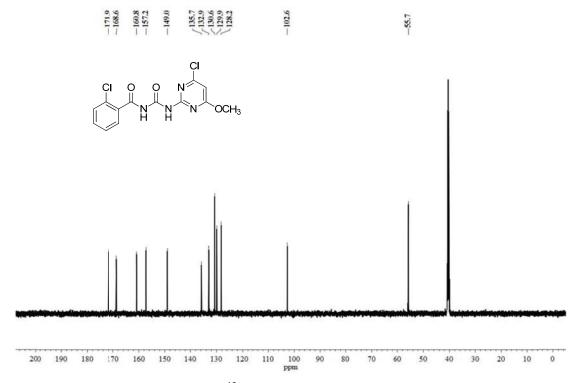


Figure S57  $^{13}$ C NMR spectra of compound 16

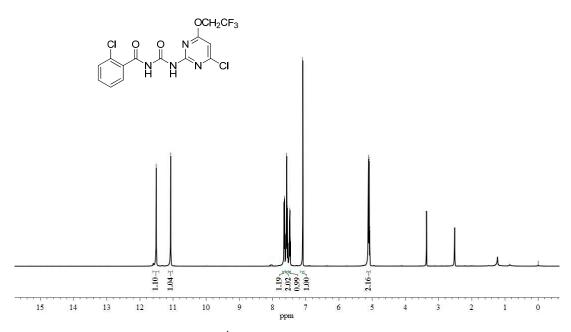


Figure S58  $^{1}$ H NMR spectra of compound 17

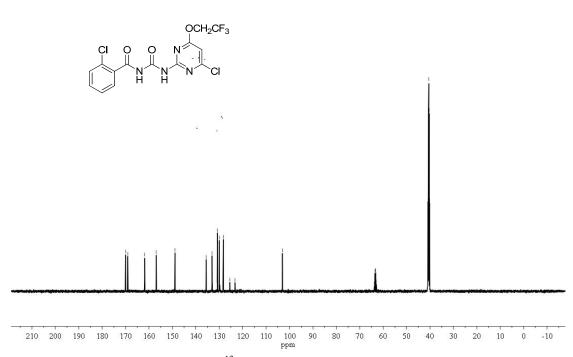


Figure S59 <sup>13</sup>C NMR spectra of compound 17

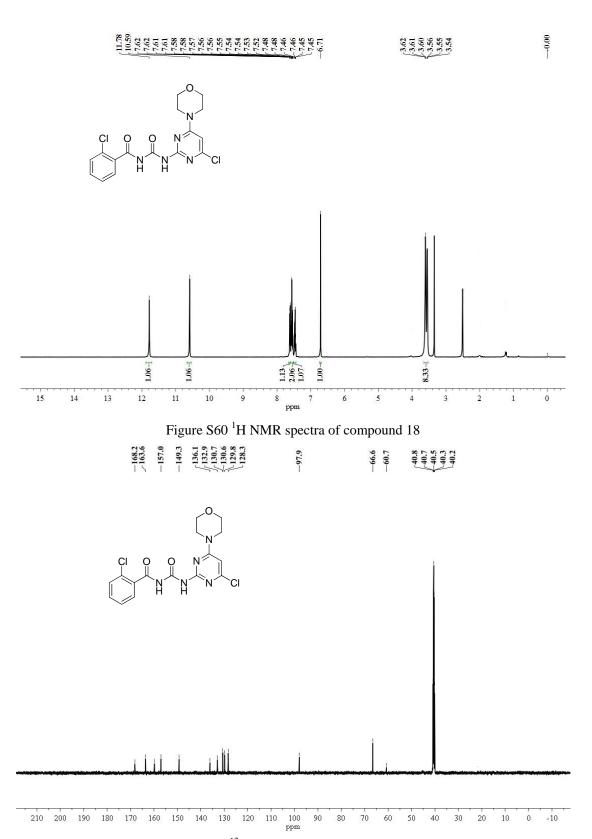


Figure S61  $^{13}$ C NMR spectra of compound 18

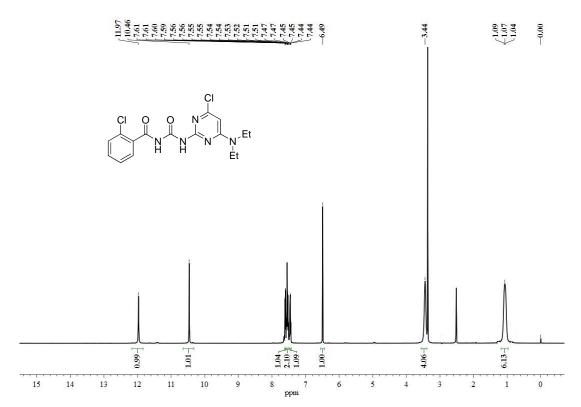


Figure S62 <sup>1</sup>H NMR spectra of compound 19

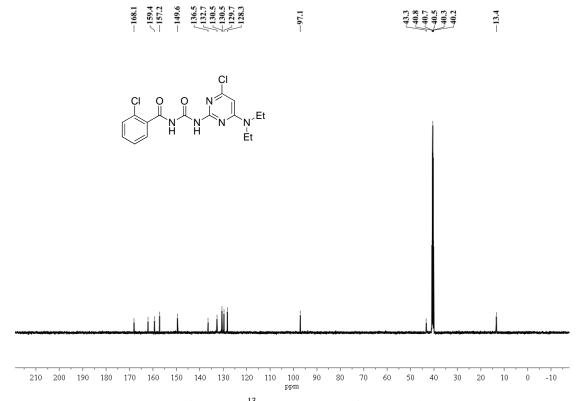
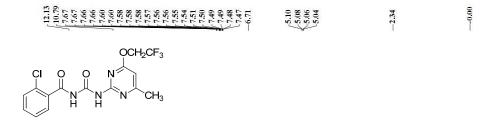


Figure S63  $^{13}$ C NMR spectra of compound 19



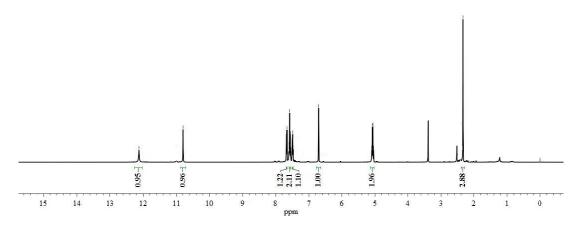


Figure S64 <sup>1</sup>H NMR spectra of compound 20

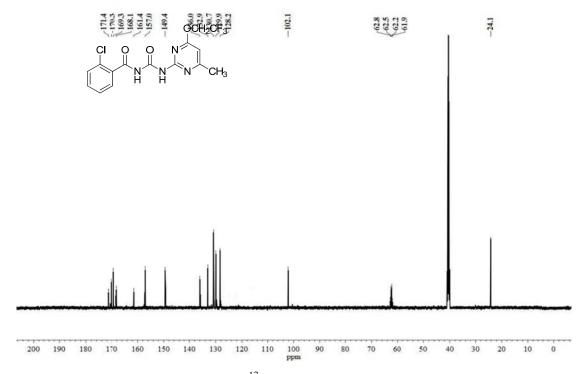


Figure S65  $^{13}$ C NMR spectra of compound 20

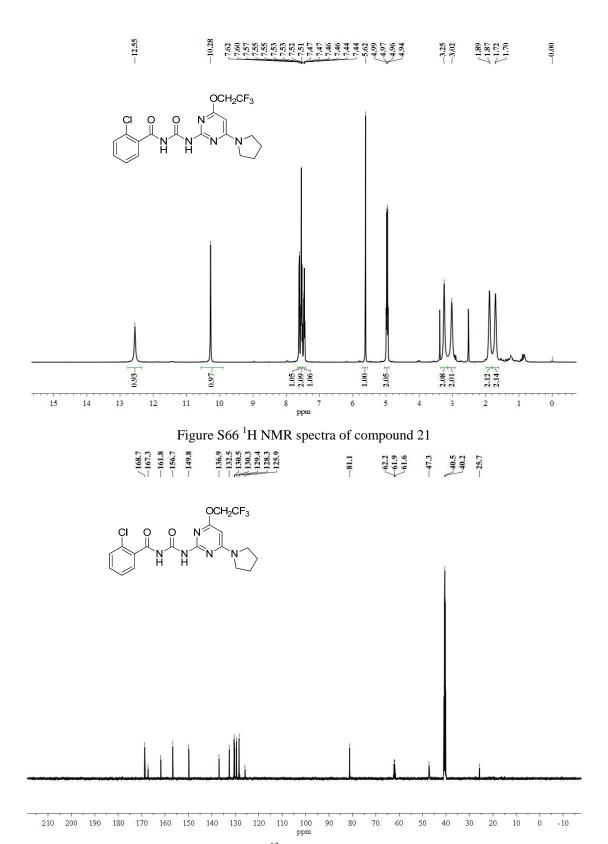
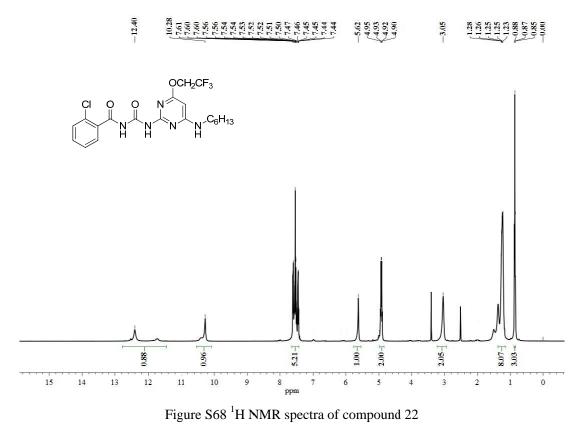


Figure S67  $^{13}$ C NMR spectra of compound 21



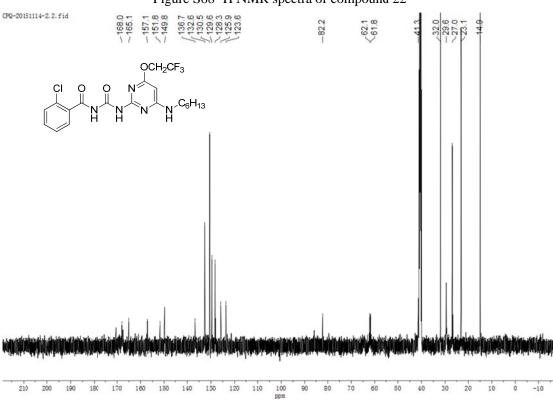


Figure S69 <sup>13</sup>C NMR spectra of compound 22

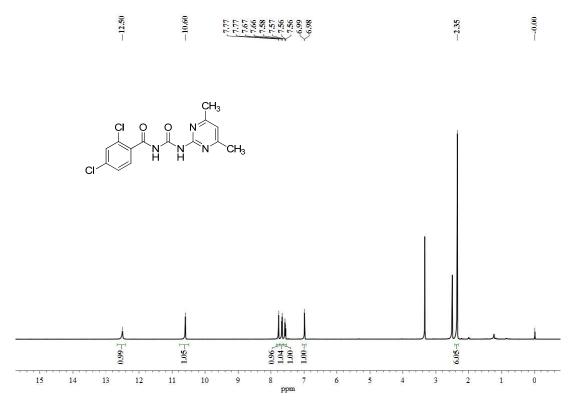


Figure S70 <sup>1</sup>H NMR spectra of compound 23

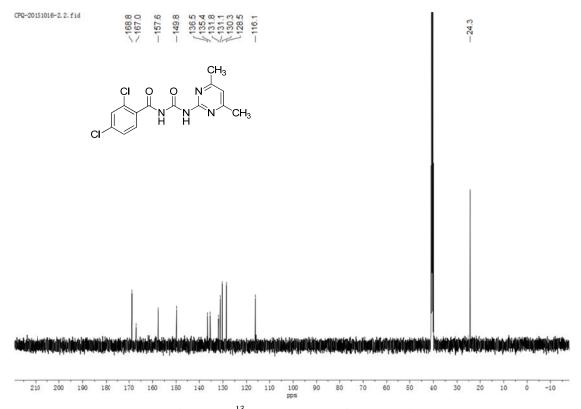


Figure S71 <sup>13</sup>C NMR spectra of compound 23

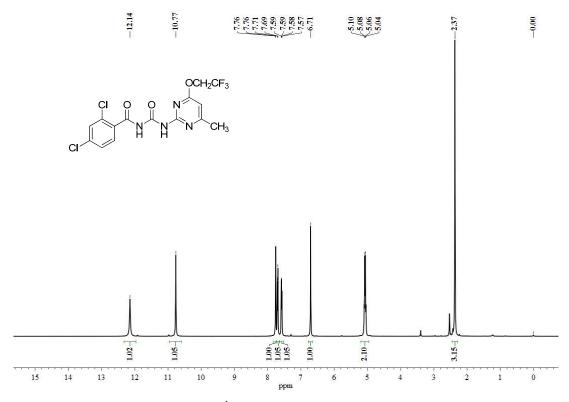


Figure S72  $^{1}$ H NMR spectra of compound 24

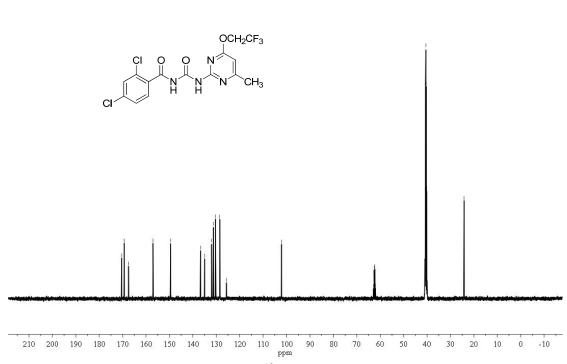


Figure S73  $^{13}$ C NMR spectra of compound 24

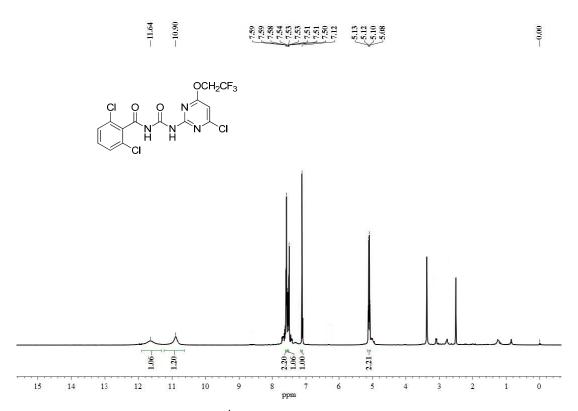


Figure S74 <sup>1</sup>H NMR spectra of compound 25

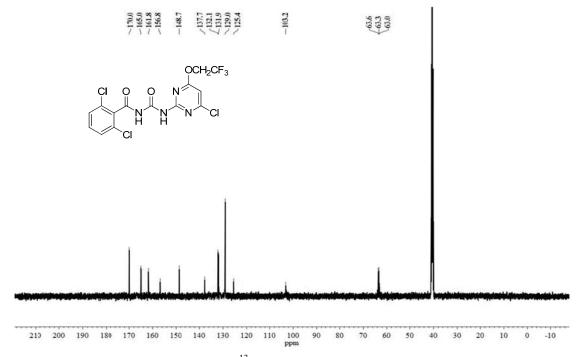


Figure S75  $^{13}$ C NMR spectra of compound 25

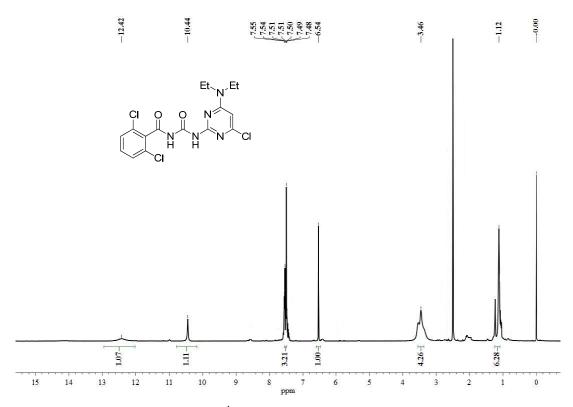


Figure S76 <sup>1</sup>H NMR spectra of compound 26

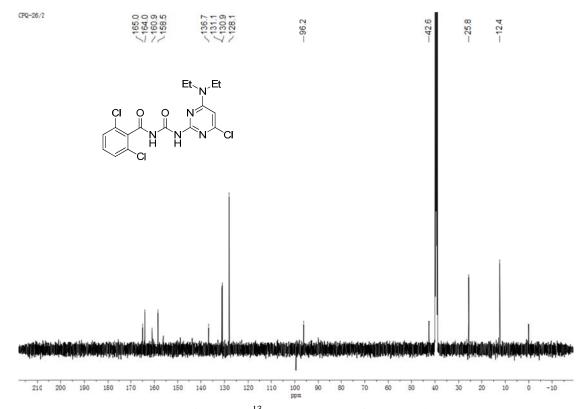


Figure S77  $^{13}$ C NMR spectra of compound 26

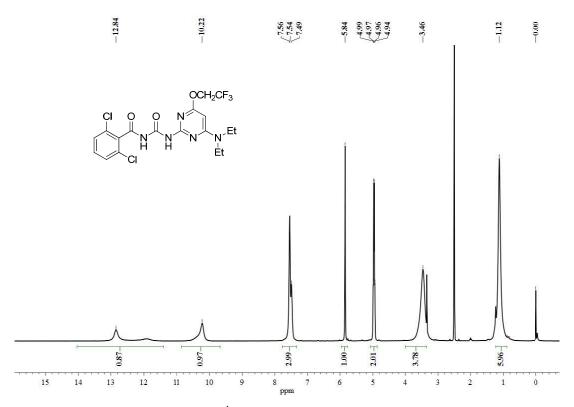


Figure S78 <sup>1</sup>H NMR spectra of compound 27

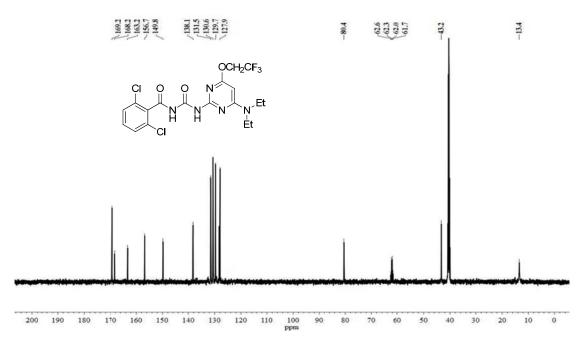
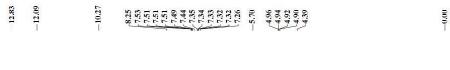


Figure S79  $^{13}$ C NMR spectra of compound 27



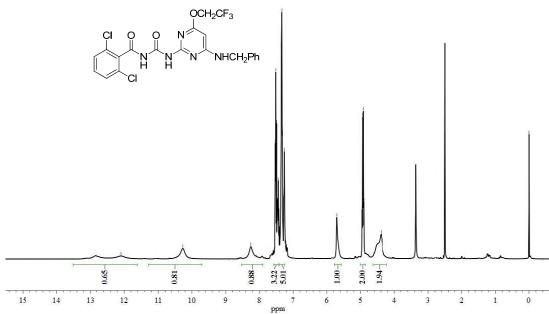


Figure S80 <sup>1</sup>H NMR spectra of compound 28

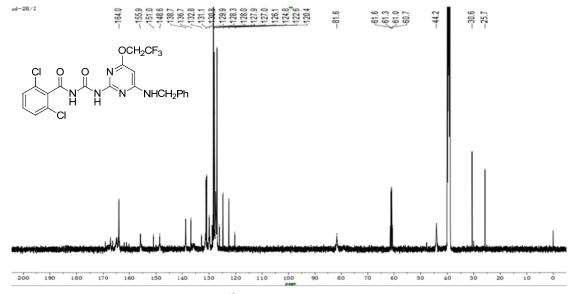


Figure S81  $^{13}$ C NMR spectra of compound 28

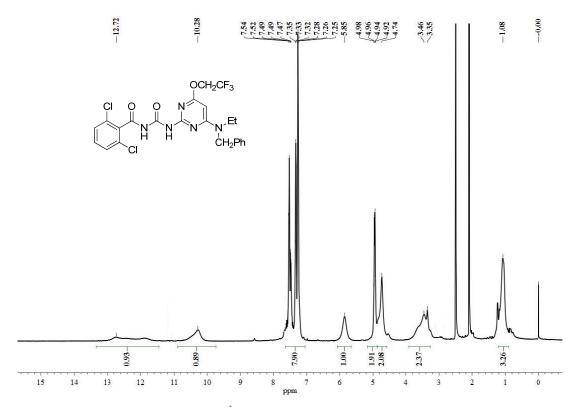


Figure S82 <sup>1</sup>H NMR spectra of compound 29

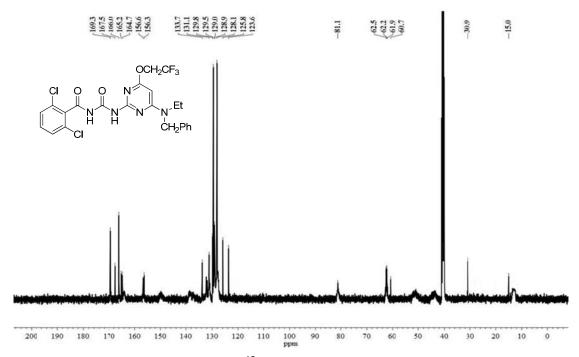


Figure S83  $^{13}$ C NMR spectra of compound 29

## 10.00

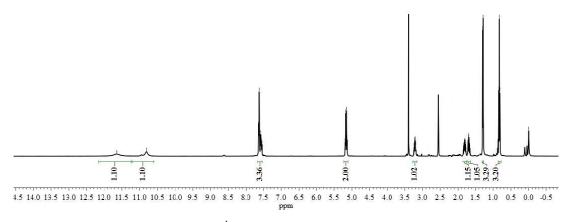


Figure S84 <sup>1</sup>H NMR spectra of compound 30

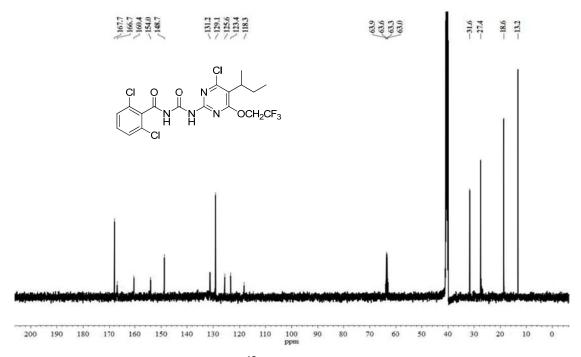


Figure S85  $^{13}$ C NMR spectra of compound 30

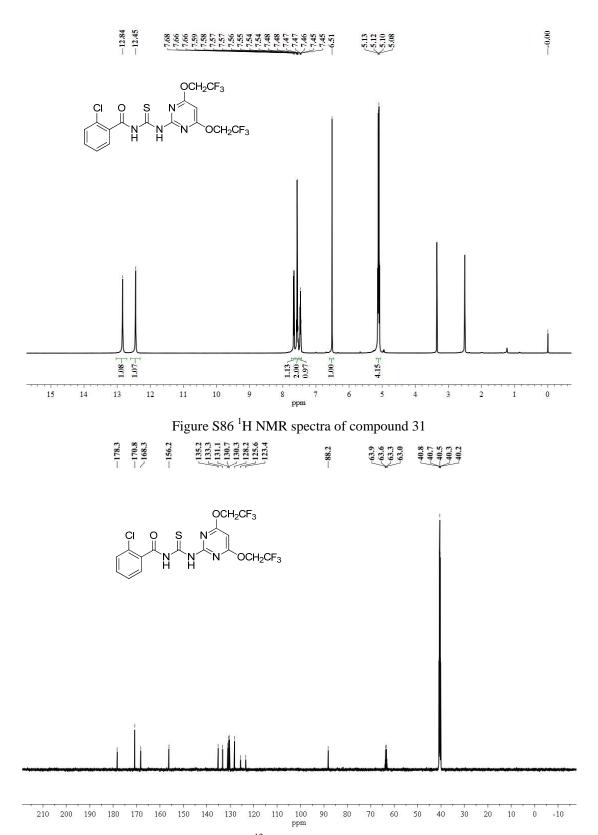


Figure S87  $^{13}$ C NMR spectra of compound 31

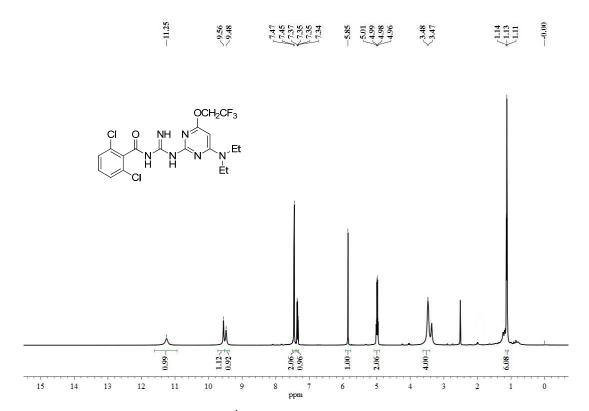


Figure S88 <sup>1</sup>H NMR spectra of compound 32

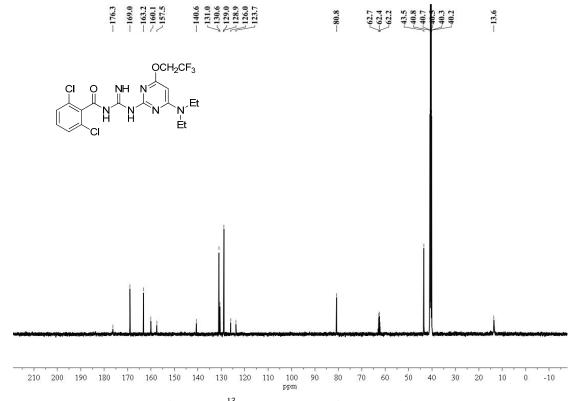


Figure S89  $^{13}$ C NMR spectra of compound 32

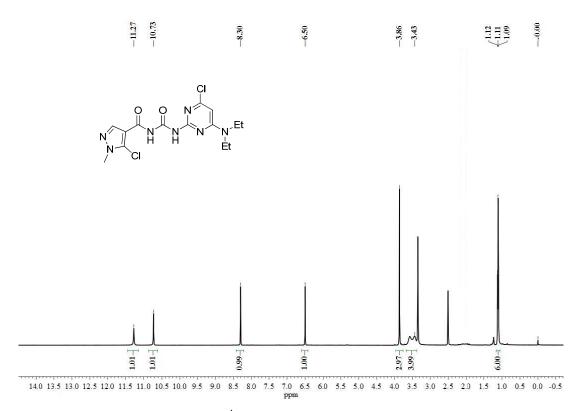


Figure S90 <sup>1</sup>H NMR spectra of compound 33

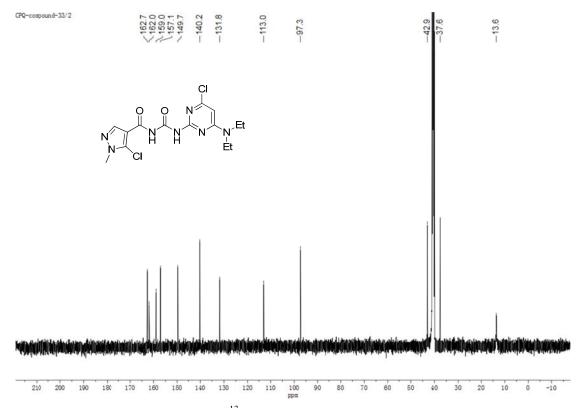


Figure S91  $^{13}$ C NMR spectra of compound 33

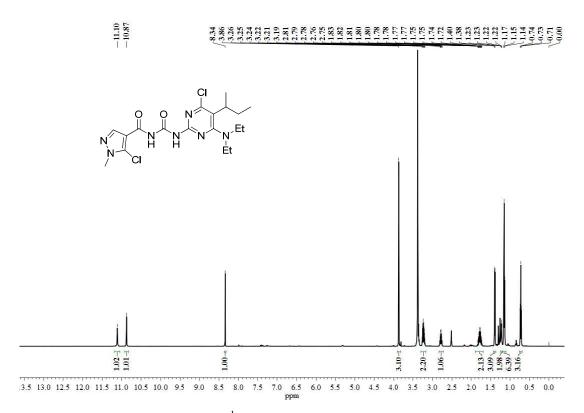


Figure S92 <sup>1</sup>H NMR spectra of compound 34

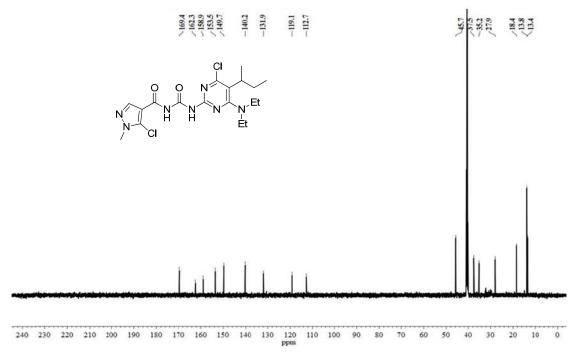


Figure S93 <sup>13</sup>C NMR spectra of compound 34

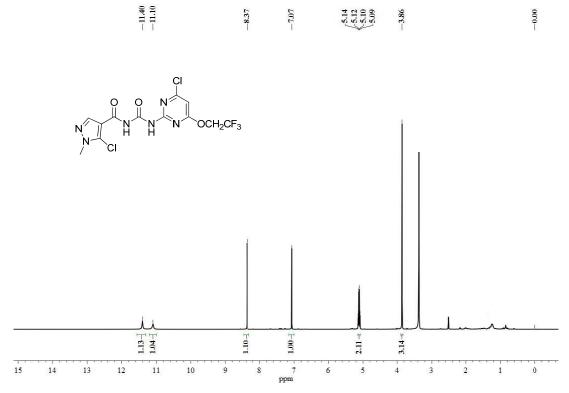


Figure S94  $^{1}$ H NMR spectra of compound 35

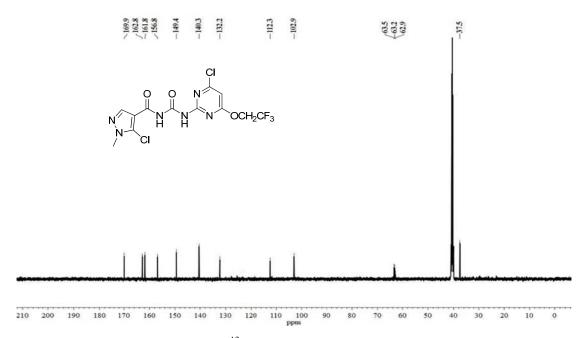


Figure S95  $^{13}$ C NMR spectra of compound 35

## -11.49 -12.49 -13.48 -14.49 -1

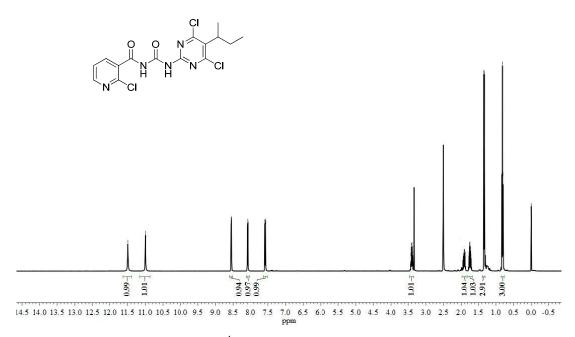


Figure S96 <sup>1</sup>H NMR spectra of compound 36

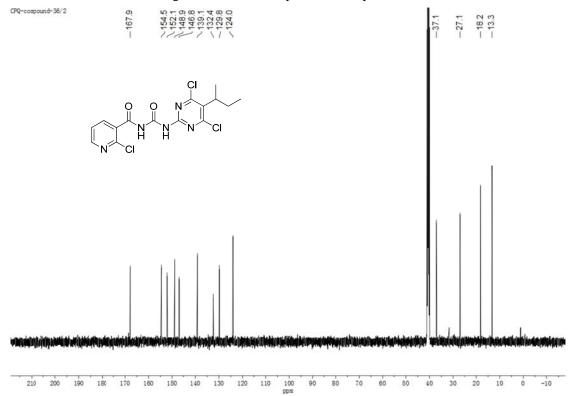


Figure S97 <sup>13</sup>C NMR spectra of compound 36

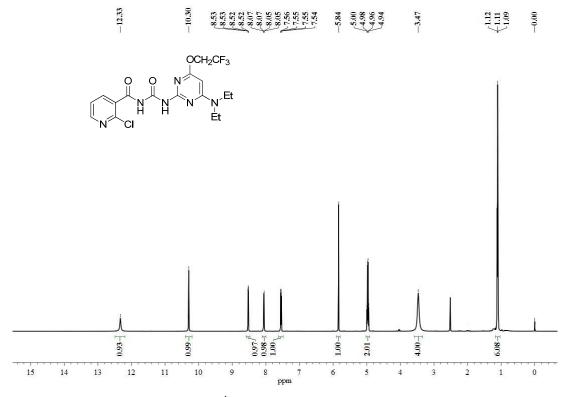


Figure S98  $^{1}$ H NMR spectra of compound 37

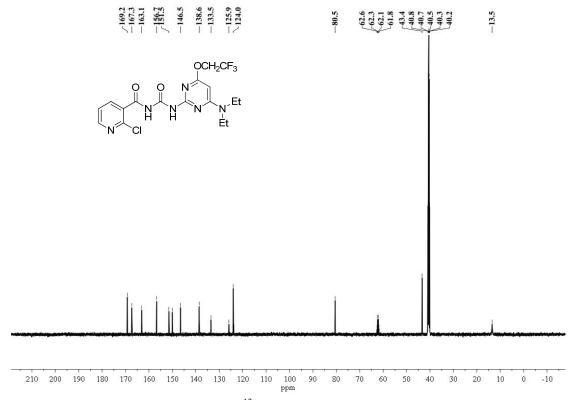


Figure S99 <sup>13</sup>C NMR spectra of compound 37

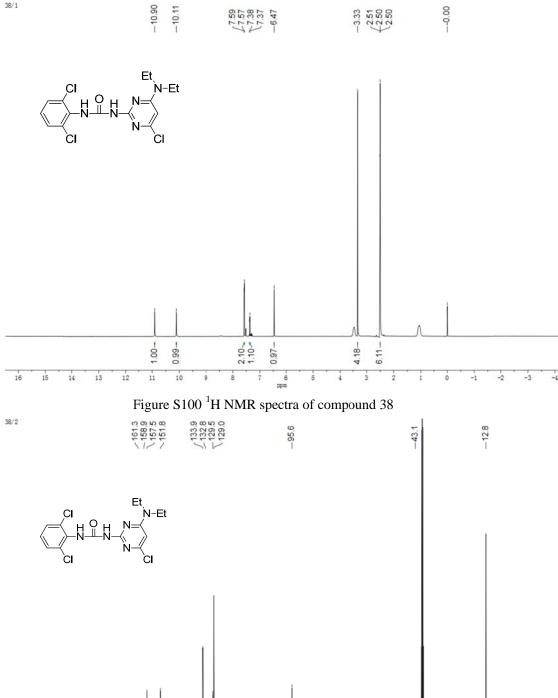


Figure S101  $^{13}$ C NMR spectra of compound 38

170 160 150 140 130 120 110 100 90 ppm



Figure S102 Photo for Protective activity of compounds