## **Supporting Information**

## **General Procedures**

<sup>1</sup>H-NMR and <sup>13</sup>C-NMR spectra were recorded on a Varian NMR spectrometers operating at 300 MHz or 500 MHz for <sup>1</sup>H, and 75 MHz or 125 MHz for <sup>13</sup>C. All chemical shifts were measured in CDCl<sub>3</sub> and DMSO-d6 as solvents. High resolution mass spectroscopic data were acquired on an Agilent 6220 ESI-TOF with electro spray ionization (ESI) mode.





Figure S2. <sup>13</sup>C-NMR of compound 12a.





Figure S3. HRMS of compound 12a.



**Figure S4.** <sup>1</sup>H-NMR of compound **12b**.





Figure S5. <sup>13</sup>C-NMR of compound 12b.



+ESI Scan (0.120-0.168 min, 5 scans) Frag=180.0V 21174\_2218\_RavMS52\_ESI.d Subtract x10.6 Full spectrum 1.65-476.2906 1.6-1.55-1.5-1.45-1.4-1.35-Ξ 1.3-1.25-1.2-1.15-1.1-1.05-റ 0.95-0.9-0.85-0.8-0.75-12b 0.7 0.65-0.6-0.55-0.5-0.45-0.4-0.35-0.3-0.25-498.2726 0.2-0.15-273.2205 0.1-562.3263 0.05-647.1967 741.8920 448.2831 973.5546 536.1673 237.0772 319.2236 371.0988 832.2410 Π 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600 625 650 675 700 725 750 775 800 825 850 875 900 325 950 375 1000 1025 1050 1075 1150 1125 1150 1125 1150 Counts vs. Mass-to-Charge (m/z) UF Mass Spectrometry Facility 2/13/2014 CD

Figure S6. HRMS of compound 12b.

**Figure S7.** <sup>1</sup>H-NMR of compound **12c**.



Figure S8. <sup>13</sup>C-NMR of compound 12c.



Figure S9. HRMS of compound 12c.



**Figure S10.** <sup>1</sup>H-NMR of compound **12d**.



Figure S11. <sup>13</sup>C-NMR of compound 12d.





Figure S12. HRMS of compound 12d.

Figure S13. <sup>1</sup>H-NMR of compound 13a.



Figure S14. <sup>13</sup>C-NMR of compound 13a.





Figure S15. HRMS of compound 13a.



**Figure S17.** <sup>13</sup>C-NMR of compound **13b**.



![](_page_17_Figure_0.jpeg)

Figure S18. HRMS of compound 13b.

**Figure S19.** <sup>1</sup>H-NMR of compound **13c**.

![](_page_18_Figure_1.jpeg)

Figure S20. <sup>13</sup>C-NMR of compound 13c.

![](_page_19_Figure_1.jpeg)

![](_page_20_Figure_0.jpeg)

Figure S21. HRMS of compound 13c.

**Figure S22.** <sup>1</sup>H-NMR of compound **13d**.

![](_page_21_Figure_1.jpeg)

Figure S23. <sup>13</sup>C-NMR of compound 13d.

![](_page_22_Figure_1.jpeg)

![](_page_23_Figure_0.jpeg)

Figure S24. HRMS of compound 13d.