## **Supplementary Materials**

<sup>1</sup>H and <sup>13</sup>C-NMR spectra of the compounds **2**, **3**, **4** and **5a**–i.



**Figure S1.** <sup>1</sup>H-NMR of **2** in D<sub>2</sub>O and CD<sub>3</sub>OD.





100 90 f1 (ppm) 

**Figure S3.** <sup>1</sup>H-NMR of **3** in CD<sub>3</sub>Cl.



Figure S5. <sup>1</sup>H-NMR of 4 in CDCl<sub>3</sub>.







Figure S7. <sup>1</sup>H-NMR of 5a in CDCl<sub>3</sub>.



**Figure S9.** <sup>1</sup>H-NMR of **5b** in CDCl<sub>3</sub>.



Figure S11. <sup>1</sup>H-NMR of 5c in CDCl<sub>3</sub>.









Figure S15. <sup>1</sup>H-NMR of 5e in CDCl<sub>3</sub>.



Figure S18. <sup>13</sup>C-NMR of 5f in CDCl<sub>3</sub>.



Figure S17. <sup>1</sup>H-NMR of 5f in CDCl<sub>3</sub>.











Figure S21. <sup>1</sup>H-NMR of 5h in CDCl<sub>3</sub>.



Figure S23. <sup>1</sup>H-NMR of 5i in CDCl<sub>3</sub>.