## Supporting Information for

A Structural and Spectroscopic Study of Reactions between Chelating Zinc-Binding Groups and Mimics of the MMP and ADAM Catalytic Sites: The Coordination Chemistry of Metalloprotease Inhibition

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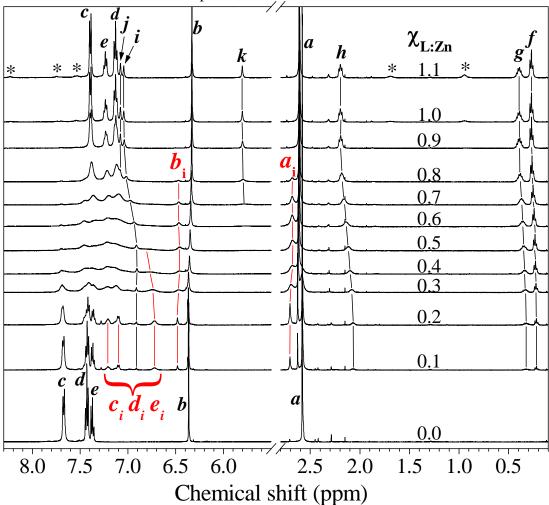
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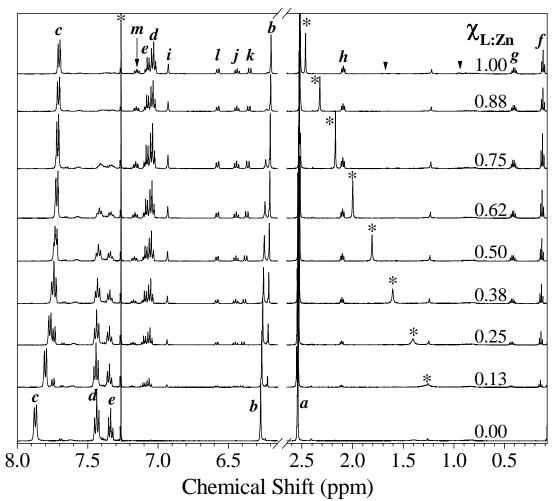
Running title: Interaction of zinc-binding ligands with  $[Tp^{Ph,Me}Zn(OH_n)]^{(n-1)+}$ 

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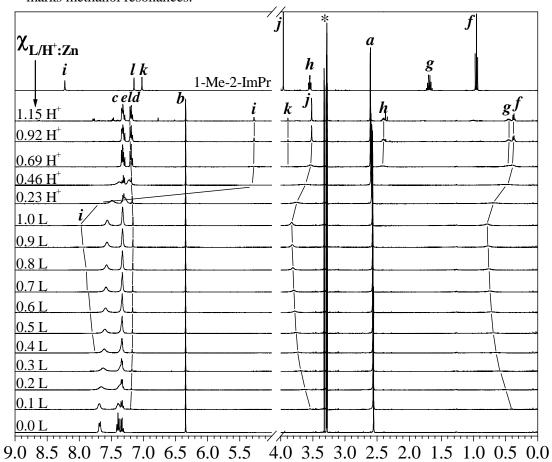
**Figure S1.** 500 MHz <sup>1</sup>H NMR spectra tracking the titration of [Tp<sup>Ph, Me</sup>ZnOH] with 4-ImHPr in CD<sub>3</sub>OD at 25.0 °C. Solid lines mark resonances from bound 4-ImPr, dotted lines indicate the intermediate species, and \* marks resonances due to free 4-ImHPr.



**Figure S2.** <sup>1</sup>H NMR spectra tracking titration of [Tp<sup>Ph,Me</sup>ZnOH] in CDCl<sub>3</sub> with a CD<sub>3</sub>OD solution of 2-HOPhPr at 25 °C. Residual water is indicated by \*. Arrow heads indicate resonances from unbound 2-HOPhPr.



**Figure S3.** <sup>1</sup>H NMR spectra tracking the titration of [Tp<sup>Ph,Me</sup>ZnOH] with 1-Me-2-ImPr and HClO<sub>4</sub> in CD<sub>3</sub>OD at 25 °C. The solid lines track the indicated 1-Me-2-ImPr resonances. Assignments of i and k in the final titration spectra are tentative. \* marks methanol resonances.



Chemical Shift (ppm)