RESULTS:

A low temperature, no limitation of D$_2$O is observed in good agreement with the low T$_s$ determined by 10 NMR at 310 K: 22.0 ms and 32.4 ms for 2 gadolinium complex and Zn$^{2+}$.

The compounds are less stable than the Cd-DTPA as proven by their faster transmetalation against Zn$^{2+}$ and Cd$^{2+}$, respectively. All 10 NMRD profiles are quite similar for the 3 complexes: their $T_1$ at 20 kHz is slightly higher than for the parent compound.

INRODUCTION:

The T1D of the Cd-DTPA-diamicidine complex was determined in the presence of TDO and of the two bisamides Cd-DTDA-BMA 2 (R=NH$_2$) and Cd-DTDA-BMA 3 (R=NHCH$_3$).

Figure 1: Structure of the parent complex Cd-DTDA (R=O) and of the two bisamides Cd-TTDA-BMA 2 (R=NH$_2$) and Cd-DTDA-BMA 3 (R=NHCH$_3$).

Two new Cd-TTDA-bisamide complexes which could be further substituted to enhance their specificity in the context of molecular imaging.

The exchange lifetime $T_1$'s significantly shorter than Cd-DTPA $T_1$'s (10 ms) [1, 2]. This work reports the synthesis and the physicochemical characterization of the highest relaxivity after motion restriction by covalent or non-covalent binding. Recent works have shown that derivatives of Cd-TTDA have the ability to restrict the motion of a gadolinium complex and Zn$^{2+}$.

NMR Laboratory, Department of Organic Chemistry, University of Mons-Hainaut, B-7000 Mons

Sophie LAURENT, Luke VANDER ELST and Robert N. MULLER